



# WHY HYPERCONVERGED INFRASTRUCTURE IS RIGHT FOR YOUR BUSINESS

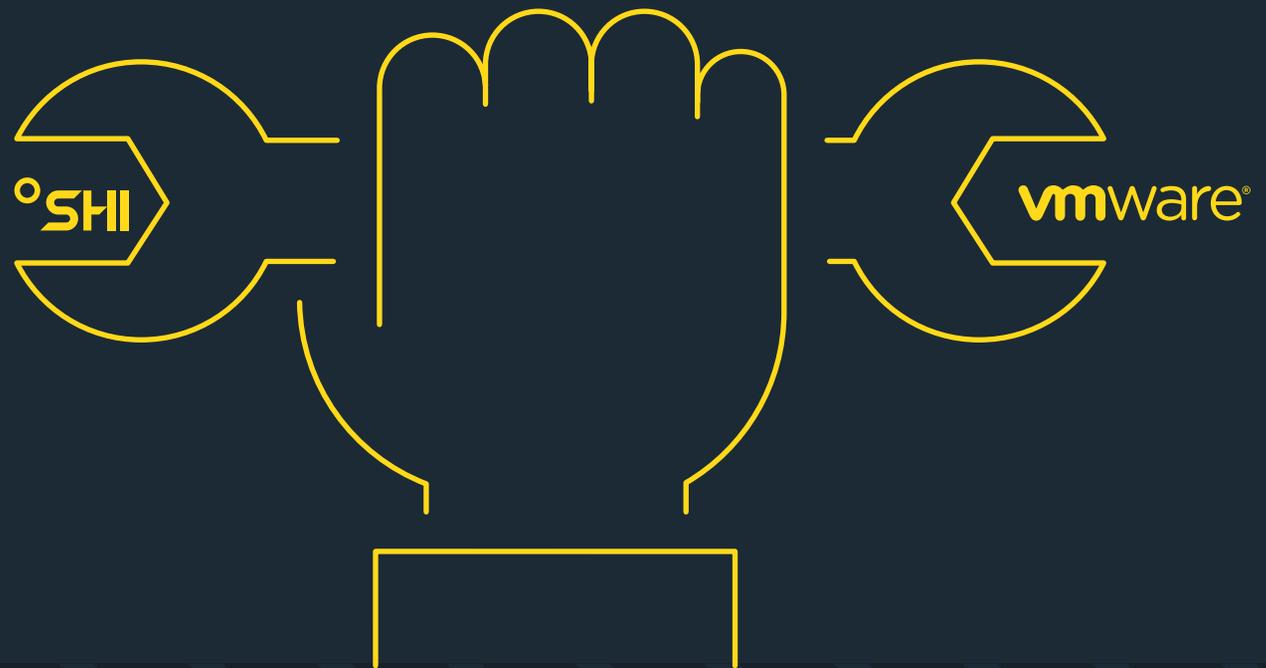
EBOOK

THIS IS INNOVATION AT WORK



## POWER YOUR WORKLOADS, CLOUDS, AND DEVICES WITH THE SHI-VMWARE PARTNERSHIP

SHI and VMware have teamed up to offer you state-of-the-art technologies with expert strategy, deployment, integration, implementation, and management. With our technical expertise and guidance, you can speed up your business growth and realize your full potential.



As delivery solutions architects, many engineers get into deep conversations with customers regarding their technology roadmap and overall business initiatives while performing delivery engagements onsite. One popular topic that often arises is hyperconverged infrastructure (HCI).

Many organizations are intrigued by HCI, while others are a bit hesitant, instead choosing to trust their proven three-tiered architecture due to various business and workload requirements. The questions our solution architects field most frequently are:

Will HCI support all our mission-critical workloads and hybrid cloud initiatives?

How will HCI impact my budget?

How does HCI perform, and does my staff need to be trained?

The best way to approach these questions is to look at how hyperconverged infrastructure differs from traditional three-tiered architecture.



# HYPERCONVERGED VS. THREE-TIERED ARCHITECTURE



## COMPONENTS

A hyperconverged system combines compute, storage, and network with several hypervisor options. The “nodes” share their local storage over a private network, forming an available cluster without the investment of shared storage.

With three-tiered architecture, compute, shared storage, and networking are purchased separately to create the same cluster.



## BUDGET

The simplicity and cost savings of the HCI model are undeniable. Since HCI is software-defined and easy to install, it reduces both capital and operational expenses while delivering comparable performance and availability to three-tiered architecture.

With three-tiered architecture, the cost of building and maintaining the compute and storage infrastructure is higher for both capex and opex expenditures.



## PERFORMANCE

Due to data locality, hyperconverged systems compete with even the fastest storage area network (SAN).

While many times larger, a shared storage array must deal with the latency of the fabric infrastructure to send and receive data (north-south traffic). A hyperconverged host can obtain the same data locally (east-west traffic), without traversing a fabric network or additional network hops, which triggers latency.

HCI is not only here to stay, but it also has a place in every organization’s data center. But before making decisions, it’s important you understand how HCI relates to your business requirements and overall initiatives.

## THE BENEFITS OF HYPERCONVERGED INFRASTRUCTURE



1

**HCI solutions provide excellent management and monitoring tools in a single box, allowing for simpler troubleshooting, monitoring, maintenance, upgrades, and provisioning.**

The entire stack is software defined. Automation tools have far fewer objects and components to interact with. A single systems administrator can support the entire stack, and compatibility is not an issue.

With HCI, one vendor supports everything. There's no passing the buck from vendor to vendor when support is needed. Lifecycle management usually includes hardware firmware updates, as well as software updates. All combinations of hardware, firmware, and software are tested, validated, and supported.

## THE BENEFITS OF HYPERCONVERGED INFRASTRUCTURE



2

**Cost savings. By purchasing fewer components and managing them from a single pane of glass, HCI reduces capex and opex.**

There are no additional procurement or support costs for storage arrays and fibre channel (FC) switches. There's also reduced need for:

- Rack space, resulting in lower data center costs
- Network switch ports, resulting in fewer switches (and their associated maintenance costs) overall
- Power connections, resulting in fewer power distribution units (PDUs) and uninterruptible power supply (UPS), leading to power and cooling savings

In addition, there is much less planned downtime for upgrades and maintenance, which allows the organization to perform these without much disruption to the business, while keeping applications online. Moreover, with HCI's single pane of glass management, there is much less need to have a dedicated SME and extensive training to administrate the environment, thus shifting the good portion of administration costs toward more business-related projects and tasks, as defined by the enterprise.

## THE BENEFITS OF HYPERCONVERGED INFRASTRUCTURE

3

**Built-in cloud agility. Seamless cloud integration is a core component of HCI.**

Moving workloads with a single click of a button to and from the public cloud allows for unprecedented scalability and flexibility. While this is certainly possible with three-tier technology, many HCI vendors license this type of software in their standard package offering, right out of the box.



## IS HYPERCONVERGED RIGHT FOR YOUR BUSINESS?

### There are a lot of factors to consider.

If simplicity and cost savings are your top priorities, HCI might be your best bet, as it can significantly reduce your IT footprint and save capex and opex if done correctly.

Hyperconverged is no longer a disruptive idea; it's an essential component of a complex and evolving IT landscape. HCI and three-tiered architecture can co-exist while providing a robust, hybrid cloud environment to effectively meet every business requirement.

It's important to evaluate your organization's long-term strategy and business requirements, including growth predictions, use of public cloud, power, cooling, skills/training, and more.

SHI's technical expertise can help you optimize your solution based on your business requirements and goals.

**Contact us** to start a conversation.





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