



Hyperconverged Infrastructure:

Your Digital Transformation Building Block

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What started as “digital” transformation has blossomed into a trend that’s driving organizations to become “digital businesses.” Using emerging technologies like analytics, machine learning, and an on-demand approach to delivering IT services, many organizations are moving to a cloud model to implement this transformation. Organizations that leverage the cloud can accelerate product development, speed innovation, and empower workers to be more productive.

While public cloud services make sense for scalable infrastructure and application deployment options, there are challenges. Public cloud infrastructures are managed differently from enterprise data centers, creating major operational challenges for organizations that want to combine clouds into a single managed infrastructure. Combining cloud infrastructure—public, private, or at the edge—with legacy infrastructures that are expensive, complicated, and inflexible, adds more complexity to data centers and makes it difficult for IT to manage.

IT leaders are turning to hyperconverged infrastructure (HCI) to accelerate the transformation of data centers and meet the needs of digital business. HCI provides scale-out, software-defined infrastructure to run all key data center functions in a tightly integrated software layer that spans on-premise and public cloud environments. HCI simplifies operations through automation and policy-based management, lowers costs compared to traditional storage and frees up capital and employees to pursue innovation projects.

HCI steps in where public cloud was once considered the answer. Public cloud is a key component for transformation, but concerns about cost, data governance and risk of a single cloud provider held back workload migration to the cloud. Organizations need cloud-like agility on-premises, and the ability to seamlessly link all of their deployments.

How HCI Accelerates Your Business

Consolidation of compute assets provided massive savings that helped fund investment in shared storage systems—storage area networks (SAN) and network-attached storage (NAS). But it still leaves the typical data center with separate silos of expertise and management responsible for different components: compute, storage, and networks.

HCI converges core data services on flash-accelerated, industry-standard servers—delivering services that previously required purpose-built hardware. With HCI, no specialized skillsets are required, freeing up manpower for strategic projects and enabling faster delivery of services with reduced overhead, while consolidating hardware to reduce the data center footprint.



SIMPLE EVOLUTION

HCI powered by VMware vSAN is a core building block in VMware's Software-Defined Data Center (SDDC) that extends across systems, whether deployed at the edge, the core, or the cloud. For VMware customers, who in some cases, have virtualized as much as 75% of server farms, VMware vSAN represents a simple evolution—as it is the only vSphere native software for HCI.

BROADEST FLEXIBILITY AND INVESTMENT PROTECTION

By opting to extend their resources with vSAN, VMware customers take advantage of the broadest flexibility. With the industry's largest HCI ecosystem, vSAN has certified solutions with your preferred server vendor, and supports all-flash and next-gen storage media technologies providing protection on your existing data center investments.

IT organizations typically make up-front 5-year capacity buys when purchasing storage arrays to lock in costs, which makes it very difficult to respond to unanticipated storage demands and needs. With HCI, IT can buy the compute and storage needed for the short-term add performance and capacity as needed. It's easier to add and update flash-optimized, hyperconverged infrastructure that

leverages the latest hardware technologies and provides the performance needed for business-critical applications on premise or in the cloud.

HYBRID CLOUD

VMware vSAN helps organizations evolve seamlessly to the modern data center leveraging hybrid cloud operating models and vSphere native storage. Due to the fact that it requires no new tools to integrate with the VMware SDDC stack, customers are able to protect their current and future infrastructure investments. With unified management of virtualized assets, users gain operational efficiencies and optimized storage utilization through storage policy-based management.

Supported by hundreds of public cloud vendors, vSAN ensures consistent operations from edge to core to cloud, regardless of the underlying infrastructure, or where the compute assets are physically located. That makes adoption simple and immediate, with no need for retraining, new tools or refactoring of applications.

Tested and Trusted; Industry Leadership

According to [IDC data](#), HCI powered by vSAN comprises the largest portion of the hyperconverged systems market. With more than 17,000 VMware customers using vSAN for a variety of use cases, including business-critical applications like Oracle, Exchange, and SAP, it is a proven and thoroughly tested HCI solution. Other top use cases include centralized management of remote office/branch office IT services, disaster recovery operations, and virtual desktop infrastructure (VDI).

Performance and total cost of ownership are top considerations when designing hyperconverged infrastructure solutions. That's why VMware vSAN paired with Intel® Xeon® Scalable processors and Intel® Optane™ technology provides an optimal solution for a digital enterprise. The combination provides the highest performance in all-flash storage and software-defined infrastructure. Intel® Optane™ SSD will help break storage and caching bottlenecks, while enabling faster, consistent performance and linear scalability.

With VMware providing day one support for Intel® Optane™ SSD DC P4800X, vSAN users were able to take immediate advantage of the performance and reliability benefits of the first Optane-based SSD.

Gartner has positioned VMware as a Leader in the [2018 Magic Quadrant for Hyperconverged Infrastructure](#) and references the broadest set of hyperconverged solutions. VMware was also recognized as a Leader in [The Forrester Wave: Hyperconverged Infrastructure](#) and cited for a rich feature set and tight integration with the VMware stack.

To learn more about virtualizing compute, storage, and networking with VMware's industry leading hyperconverged infrastructure solution, as well as how you can leverage your next server refresh to make this shift, go to [Hit Refresh](#).