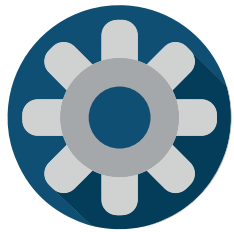


Cisco HyperFlex Systems



Ready for
any application



Ready for
any cloud



Ready for
any scale

Hyperconverged multicloud platform

You need infrastructure that can adapt to match the speed of your business— whether deploying enterprise applications or containers in multicloud environments. Cisco HyperFlex™ systems with Intel® Xeon® Scalable processors deliver hyperconvergence with the power and simplicity for any application, on any cloud, and at any scale. Engineered on the Cisco Unified Computing System™ (Cisco UCS®), Cisco HyperFlex systems deliver the agility, scalability, and pay-as-you-grow economics of the cloud with the benefits of on-premises infrastructure.

The solution

Our platform includes hybrid or all-flash configurations, an integrated network fabric, and powerful data optimization features that bring the full potential of hyperconvergence to a wide range of workloads and use cases, from validated enterprise applications to edge computing. Our solution is faster to deploy, simpler to manage, and easier to scale than the current generation of systems. It is ready to provide you with a unified pool of infrastructure resources to power applications as your business needs dictate.

Cisco HyperFlex™
Systems with Intel®
Xeon® Scalable
processors



Cisco HyperFlex Systems

- **Any application.** Validated designs for enterprise applications; support for containerized, cloud, and multihypervisor applications
- **Any cloud.** Tools for cloud mobility including deployment, monitoring, and application placement
- **Any scale.** Higher scaling limits and tools for greater resiliency and availability across geographies

What's new?

Here are the enhancements we have incorporated into our 3rd-generation product:

- **Multihypervisor support.** We now support Microsoft Windows Server 2016 Hyper-V including failover clustering and backup software integration.
- **Containerized application support.** A prepackaged Kubernetes platform enables containers-as-a-service for multicloud deployment. A FlexVolume driver enables persistent data.
- **Enterprise application validation.** Our engineering team has developed Cisco® Validated Designs that demonstrate our readiness for Oracle Database, Microsoft SQL Server, Microsoft Exchange Server, and both Citrix and VMware virtual desktop environments.
- **Flexible multicloud services.** These features support deployment to any cloud with application performance monitoring, application placement, and cloud mobility services. Cisco Intersight integration. Configure, deploy, manage, and monitor global operations from a single HTML 5 interface.

Any application, anywhere

Our solution's foundation is a purpose-built, high-performance, low-latency data platform that adapts to support all of your applications (Figure 1). We support your virtualized and containerized applications in any cloud. They are supported whether they run in Microsoft Windows Server 2017 Hyper-V or VMware vSphere environments; or Docker containers with Kubernetes.

Cisco® Validated Designs give you the benefit of pretested enterprise application deployment using the best practices developed by Cisco engineers. Cisco Validated Designs help you speed deployment and reduce risk for virtual desktop environments (Citrix or VMware), Oracle Database and Microsoft SQL Server, big data applications including Splunk and SAP HANA, and graphics-accelerated high-performance computing applications.

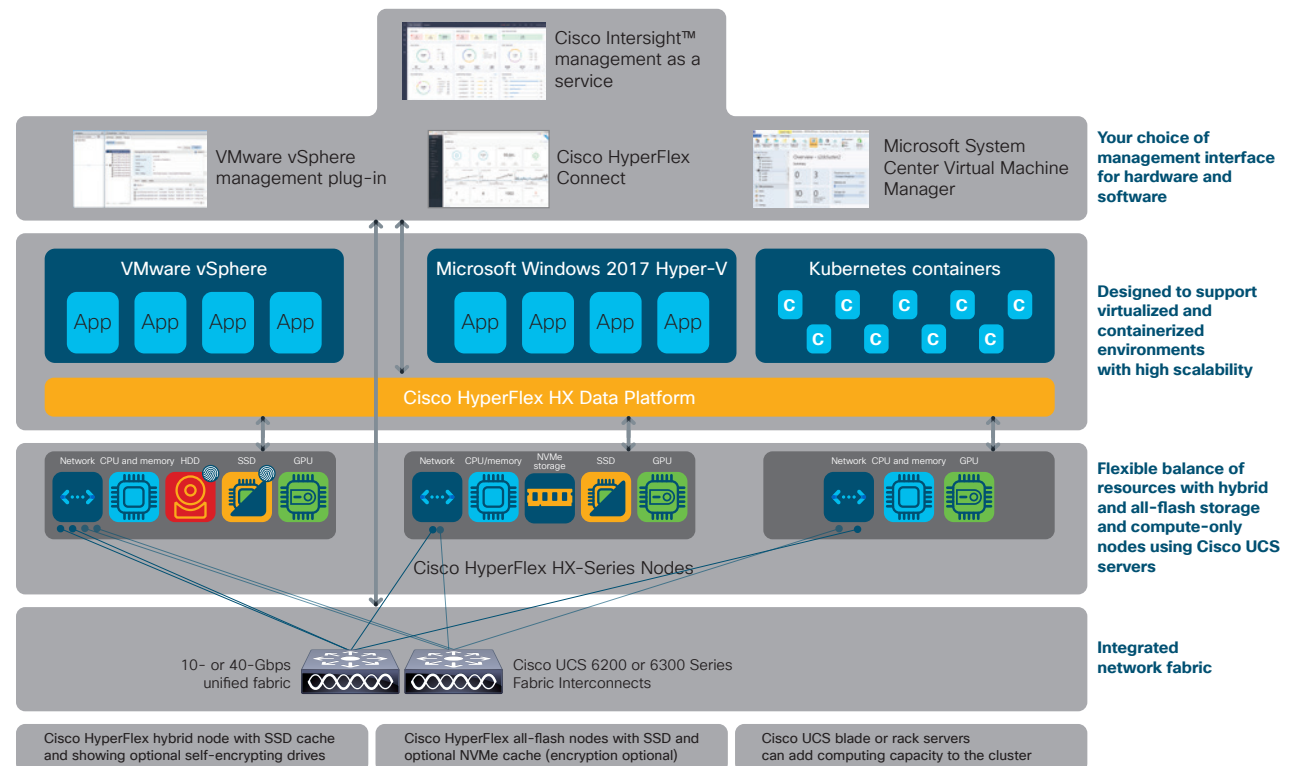


Figure 1 Cisco HyperFlex Systems support virtualized and containerized applications with a wide range of management options

What's new, continued

- **Increased scale and resiliency.** To support any application, the platform has been expanded to support up to 64 nodes in a cluster with added resiliency in the fully-automated logical availability zones. Individual nodes can be configured with higher capacity through large-form-factor drives.
- **Stretch clusters.** Active-active clusters stretched across geographic distance with integrated failover.
- **Cloud-based deployment.** Cisco Intersight™ management as a service supports deploying Cisco HyperFlex systems from the cloud, enabling you to install your hardware in any datacenter and install and configure remotely.

Complete end-to-end solution

Designed with an end-to-end software-defined infrastructure approach, the platform eliminates the compromises found in other hyperconverged products. We combine software-defined computing using Cisco UCS® servers, software-defined storage using the powerful Cisco HyperFlex HX Data Platform software, and software-defined networking (SDN) using Cisco® unified fabric, which integrates smoothly with Cisco Application Centric Infrastructure (Cisco ACI™).

With hybrid or all-flash configurations, and self-encrypting drive options, Cisco HyperFlex systems deliver a preintegrated cluster that is up and running in an hour or less and that scales resources independently to closely match your application resource needs (Figure 1). Our solution supports your applications in Microsoft Hyper-V, VMware vSphere, and containerized deployments in private cloud or in multicloud environments. Cisco HyperFlex Edge delivers a simple, low-cost option for remote and branch-office locations.

Engineered on the Cisco UCS platform

Cisco UCS provides a single point of connectivity that integrates Cisco HyperFlex HX-Series all-flash or hybrid nodes and a variety of Cisco UCS servers into a single unified cluster. We give you

the flexibility to choose the combination of CPU, flash memory, graphics acceleration, and disk storage resources you need to deliver an optimal infrastructure for your applications. Incremental scalability allows you to start small and scale up as your needs grow. You gain the cost savings and performance advantages of Cisco UCS with the flexibility to choose among the solutions offered by the broad Cisco UCS management partner ecosystem.

Powered by next-generation data technology

The Cisco HyperFlex HX Data Platform combines the cluster's solid-state disk (SSD) drives and hard-disk drives (HDDs) into a single distributed, multitier, object-based data store. The HX Data Platform uses a self-healing architecture that replicates data for high availability, remediates hardware failures, and alerts your IT administrators so that problems can be resolved quickly and your business can continue to operate.

- **In-cluster synchronous replication** stripes and replicates data across the cluster so that data availability is not affected if single or multiple components fail (depending on the replication factor configured).
- **Compression and deduplication** that is always on, helping to reduce storage requirements.
- **Space-efficient, pointer-based snapshots and clones** facilitate backup operations.

“HyperFlex’s approach ensures high performance of Microsoft SQL and Oracle databases and critical applications with faster delivery of the environment, lower costs, and more effective management.”

Edivaldo Rocha
CEO
CorpFlex
[Read the story](#)

- **Logical availability zones** increase availability for larger clusters by automatically partitioning the physical cluster into logical zones and then intelligently placing data to increase cluster resiliency to node and component failures.
- **Stretch clusters** support deployment into two geographically split locations for active-active operations even through a data center failure.
- **Thin provisioning** that allows large data volumes to be created without dedicated storage, enabling a “pay-as-you-grow” procurement model.
- **Self-encrypting drive options** securely store data at rest in coordination with enterprise key management software.
- **Native replication** transfers virtual machine data to local or remote clusters for backup or disaster-recovery purposes. It integrates with third-party disaster recovery software.
- **Data protection API** integration so that enterprise backup tools can protect your data.

Simplified system and data management

Our system integrates storage functions into existing management tools, allowing instant provisioning and cloning for dramatically simplified daily operations. It also improves control with advanced automation and orchestration capabilities and robust reporting and analytics features that deliver improved visibility and insight into IT operations.

You can configure, deploy, manage, and monitor global operations from Cisco Intersight™, a centralized, cloud-based management portal capable of providing monitoring, provisioning, and advanced analytics for troubleshooting and proactive fault detection.

All of your cluster operations can be managed with locally hosted Cisco HyperFlex Connect. Virtual-machine-level management is supported in Microsoft System Center Virtual Machine Manager (SCVMM), Microsoft Hyper-V Manager, or the VMware vSphere plug-in.

Next Steps

To deploy any application, in any cloud, and at any scale, contact your Cisco sales representative or authorized partner.

Learn more about how Cisco HyperFlex systems with Intel Xeon Scalable processors can enable your digital transformation at cisco.com/go/hyperflex.