

Cisco HyperFlex Systems



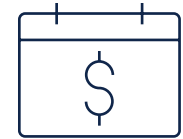
App-centric, cloud operations platform



Optimization features for increased performance



Agility and easy management at scale



Efficiency and cost savings

Power and simplicity for applications, anywhere

Today's applications are diverse and distributed, living across a complex, multidomain world—from enterprise data centers and private and public clouds, to campus, branch, and edge locations. Because these applications form your organization's persona, you need the right infrastructure underneath to enable cloud-native approaches and help to drive your digital reach.

Cisco HyperFlex systems with Intel Xeon Scalable processors deliver hyperconvergence with power and simplicity for any application, anywhere. Engineered with Cisco Unified Computing System (Cisco UCS) technology, and managed through the Cisco Intersight cloud operations platform, Cisco HyperFlex systems can power your applications and data no matter where they reside, optimize operations from your core data center to the edge and into public clouds, and increase agility by accelerating DevOps practices.

Cisco HyperFlex is certified as an Intel Select Solution for Hybrid Cloud.



Cisco HyperFlex systems with Intel Xeon Scalable processors



Benefits

- **Delivers any application to any location at any scale** with a predictable and secure hyperconverged platform
- **Simplifies and optimizes management** with the power of data, analytics, and cloud-based management
- **Adjusts to ever-changing business needs** with innovative and adaptive infrastructure

What's New?

Cisco HyperFlex systems support:

- **Cisco HyperFlex Application Platform.** The software provides an enterprise-grade, multitenant, 100 percent upstream Kubernetes environment without the cost and complexity of licensing underlying virtualization software and manually integrating hardware and software components. Because the platform uses the integrated data platform, the complexity of persistent storage for containers is eliminated. The underlying storage is provided by the Cisco HyperFlex HX Data Platform that protects your data with all of the platform's enterprise storage features.
- **Cisco Intersight Workload Optimizer.** This feature helps ensure continuous health of applications across on-premises and cloud environments. The intelligent software continuously analyzes workload consumption, costs, and compliance constraints and automatically allocates resources in real time to support application performance. You can determine when, where, and how to move and resize workloads, maximize elasticity with public cloud resources, and quickly model infrastructure and workload growth scenarios to determine how much infrastructure you will need and when you will need it.

The solution

Our platform includes hybrid, all-flash, all-NVMe, and edge 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. These faster-to-deploy, simpler-to-manage, and easier-to-scale systems provide a unified pool of infrastructure resources to power your applications as your business needs dictate.

Designed to help you bridge the gap

Cisco HyperFlex systems help you bridge the gap by providing the IT capabilities you need to thrive in an always-on world (Figure 1):

- **App-centric platform:** You can deliver any app, to any location, at any scale, both predictably and securely. Our infrastructure delivers cloud-like resource delivery that complements what you get from the cloud, so you can differentiate your services from the competition.
- **Cloud operations platform:** A cloud operating model helps you manage distributed operations at scale, from physical and virtual infrastructure deployment to workload placement and resource optimization based on real-time analysis of application performance. With true IT as a service, your business can deliver more applications in more locations.
- **Adaptable infrastructure:** Open, future-proof infrastructure supports your applications. A hyperconverged application platform is optimized to deliver cloud-native apps delivered

as microservices Traditional application hosting supports both VMware vSphere and Microsoft Windows Server Hyper-V virtual machines. Together, these capabilities support the DevOps processes that your teams are embracing and opens the door to more growth opportunities.

Unlocks the power of hyperconvergence

Cisco HyperFlex supports a wide range of workloads and use cases. Innovations at every layer—from a fully integrated, multitenant Kubernetes environment, all NVMe nodes, and unique hardware data compression acceleration, to flexible GPU acceleration—give you the foundation you need in your data center, remote locations, and edge-computing environments.

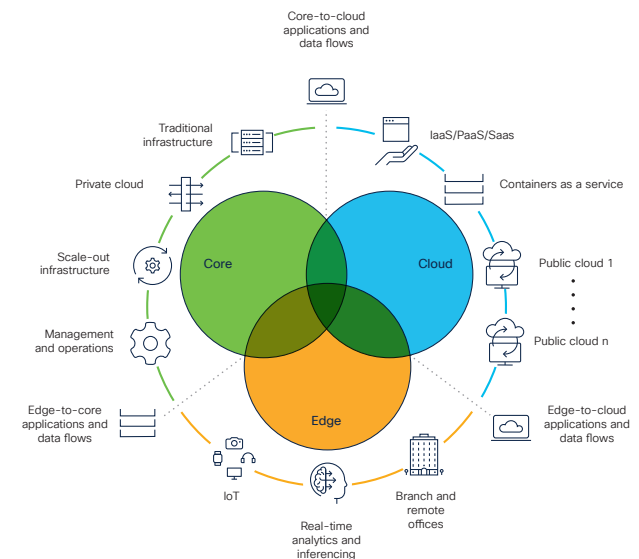


Figure 1 Cisco HyperFlex systems support the data center core, cloud, and edge.

What's New, continued

- **Core data center enhancements.** The data platform now supports iSCSI storage, with initiators in Microsoft Windows, Linux, virtual machines, physical servers, and container persistent volumes able to draw on this block-based storage approach
- **Edge computing enhancements.** New, more storage- and GPU-dense enable support for more data at the edge, and N:1 native backup helps keep your data safe in your core data center as well. Security enhancements further harden edge locations.

Engineered on Cisco UCS

Cisco UCS provides a single point of connectivity and hardware management that integrates Cisco HyperFlex nodes into a single unified cluster. The system is self-aware and self-integrating so that when a new component attached, it is automatically incorporated into the cluster. Rather than requiring you to configure each element in the system manually through a variety of element managers, Every aspect of a node's personality, configuration, and connectivity is set through management software. You can choose the combination of CPU, flash memory, graphics

acceleration, and disk storage resources you need to deliver an optimal infrastructure for your applications. And incremental scalability allows you to start small and scale up and out as your needs grow.

Support for any type of workload

Agility and massive scalability make Cisco HyperFlex systems well suited for hosting any type of workload, from virtual desktops and server virtualization deployments, to artificial intelligence and machine learning applications and test and development environments.

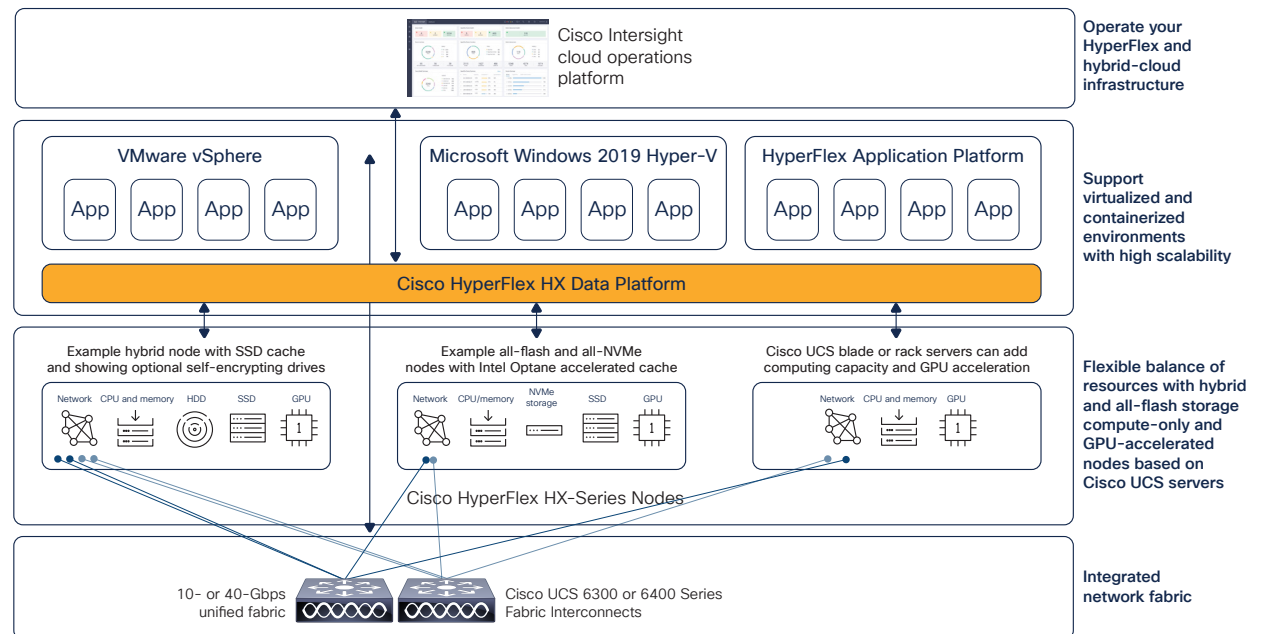


Figure 2 Cisco HyperFlex systems support virtualized and containerized applications and let you choose the exact combination of resources to power your enterprise applications

Certified Intel Select Solution

Cisco HyperFlex is now certified as an Intel Select Solution for Hybrid Cloud. Built on Intel Xeon Scalable processors and using Intel Optane Solid State Drives, HyperFlex has been verified as optimized infrastructure for hybrid cloud strategies.



Learn more

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

Learn how Cisco HyperFlex systems with Intel Xeon Scalable processors can enable your digital transformation at [cisco.com/go/hyperflex](https://www.cisco.com/go/hyperflex).

Powered by next-generation data technology

The Cisco HyperFlex HX Data Platform combines the cluster's storage devices into a single distributed, multitier, object-based data store. A self-healing architecture replicates data for high availability, remediates hardware failures, and alerts IT administrators so that problems can be resolved quickly and your business can operate.

- **Enterprise-class data management features** include deduplication, compression, thin provisioning, fast space-efficient clones, snapshots, native replication, and integration with backup solutions from leading vendors.
- **Stretch clusters** span geographic distance with continuous operation in the event of a data center failure with no data loss.
- **Dynamic data placement** optimizes resilience and performance by allowing all cluster resources to participate in I/O responsiveness.
- **Continuous data optimization with always-on data deduplication and compression** help increase resource usage and provide headroom for data scaling, without affecting performance.
- **Securely encrypted storage** optionally encrypts the caching and persistent layers of the data platform. Integrated with key management software or passphrase-protected keys, encryption of data at rest supports compliance with industry and government regulations.

- **Multiprotocol support** includes direct iSCSI connectivity to the data platform, providing enhanced support for Microsoft Windows Server failover clustering, Oracle software, Microsoft Exchange Server, and Kubernetes support. Support for iSCSI also extends access to external iSCSI devices to virtual machines supported on your HyperFlex cluster.

Managed through the cloud

Cisco Intersight provides an essential control point that simplifies operations across on-premises data centers, edge sites, and public clouds. This software-as-a-service platform consists of modular services that bridge applications with infrastructure. You can:

- **Gain instant access** to all of your clusters regardless of where they are deployed
- **Correlate visibility and management** across bare-metal servers, hypervisors, Kubernetes, and serverless and application components,
- **Transform operations** with artificial intelligence to reach the scale and velocity you need
- **Collaborate and work smarter and faster** by automating lifecycle workflows
- **Support compliance and governance** with extensible, open capabilities that natively integrate with third-party platforms and tools
- **Proactively respond to impending issues** with a recommendation engine that determines when you need to scale capacity