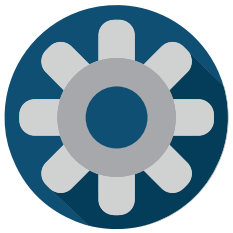
Hyperconvergence for Enterprise Apps

Accelerate your mission-critical applications with our fully engineered all-NVMe solution



Fully engineered solution

Ready for your mission-critical applications

All-NVMe storage architecture

Delivers performance for latency-sensitive applications

Bring your data center into the future with all-NVMe hyperconvergence.

If you have been on the sidelines waiting to put your mission-critical workloads onto a hyperconverged platform, the time to reconsider that decision is now. The next frontier of performance, reliability, and capacity is here today with Cisco HyperFlex™ systems. We have engineered the Cisco HyperFlex HX220c M5 All NVMe Node from the hardware platform through the software stack to deliver a platform that replicates the simplicity, scalability, and pay-as-you-grow advantages of hyperconvergence but with a dramatically new level of performance and readiness for the future.

First fully engineered hyperconverged platform

There is a big difference between running off-the-shelf software on a commodity server and what we have created: the first fully engineered hyperconverged platform optimized for NVMe storage from the hardware to the firmware to the data platform software. The result is a high-performance, highly reliable, available, and serviceable (RAS) platform ready to meet your biggest challenges.

Cisco HyperFlex™ Systems with Intel® Xeon® Scalable processors

All-NVMe solutions

- **The future is here.** Support your most latency-sensitive applications with the simplicity of hyperconvergence.
- **Fully engineered.** We have designed an integrated platform to fully support NVMe technology with increased performance, reliability, availability, and serviceability.

We deliver more

Our all-NVMe storage solution delivers more of what you need to propel mission-critical workloads:

71% more IOPS **37% lower latency**
for a simulated Oracle OLTP workload compared to our previous-generation all-flash node[1]

57% more IOPS **34% lower latency**
for a Microsoft SQL Server workload compared to our previous-generation all-flash node[1]

15% more storage efficiency
due to less storage needed when using the Cisco HyperFlex Acceleration Engine[2]

1. See ESG Report: Mission-Critical Workload Performance Testing of Cisco HyperFlex All NVMe with Intel Optane SSD on the Cisco Unified Computing System Platform
2. Based on Cisco internal testing

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Fully engineered platform

We use a holistic system approach for integrating Cisco HyperFlex HX Data Platform software with Cisco HyperFlex HX220c M5 All NVMe Nodes. The result is the first fully engineered hyperconverged appliance based on NVMe storage.

- **Capacity storage.** The data platform's capacity layer is supported by Intel 3D NAND NVMe SSDs. These drives provide 8 or 32 TB of raw capacity per node. Integrated directly into the CPU through the PCIe bus, they eliminate the latency of disk controllers and the CPU cycles needed to process SAS and SATA protocols. Without a disk controller to insulate the CPU from the drives, we have implemented RAS features by integrating the Intel Volume Management Driver into the data platform software. This engineered solution handles surprise drive removal, hot pluggability, locator LEDs, and status lights.
- **Cache.** A cache must be even faster than the capacity storage. For the cache and the write log, we use Intel Optane DC P4800X SSDs for more I/O operations per second (IOPS) and more consistency than standard NAND SSDs, even in the face of high-write bursts.
- **Compression.** The optional Cisco HyperFlex Acceleration Engine offloads compression operations from the Intel Xeon Scalable CPUs, freeing more cores to improve virtual machine density, lowering latency, and reducing storage needs. This helps you get even more value from your investment in an all-NVMe platform.
- **High-performance networking.** Most hyperconverged solutions consider networking as an afterthought. We consider it essential for achieving consistent workload performance. That's why we fully integrate a 40-Gbps unified fabric into each cluster using Cisco UCS® fabric interconnects for high-bandwidth, low-latency, and consistent-latency connectivity between nodes.
- **Automated deployment and management.** This is provided through Cisco Intersight™, a software-as-a-service management platform that can support all of your clusters from the cloud to wherever they reside—the data center to the edge. If you prefer local management, you can host the Cisco Intersight Virtual Appliance, or you can use Cisco HyperFlex Connect management software.

Deploy today

Cisco HyperFlex HX220c M5 All NVMe Nodes extend the HyperFlex portfolio with unmatched virtual machine density and the capability to power even the most performance-sensitive workloads. With the simplicity of hyperconvergence ready to support your Tier-1 applications, you can use the same management model for all of your data center, remote office, branch office, industrial, and edge locations.

Learn more

cisco.com/go/hyperflex