Modernizing computing infrastructure

Cisco's computing portfolio

Businesses need modern computing infrastructure to keep up with changing business demands while driving innovation. Cisco's breadth of computing solutions provides all the resources your IT team needs to excel today and lead in the future— while increasing performance, lowering TCO and simplifying management. With modern servers, hyperconverged infrastructure, edge and multicloud solutions, SaaS management, optimization software, and more, Cisco can power all your application workloads, anywhere you need them.

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Cisco Unified Computing System (Cisco UCS)

A computing architecture designed for IT innovation and business acceleration

Cisco UCS combines servers, networking, and management in a cohesive system where form factor is irrelevant. You choose what's best for your application: blade, rack, storage, or multi-node server. This common operating environment enables optimization for traditional workloads, data analytics, and cloud-native applications—with open APIs for broad interoperability and unparalleled automation.

- Available in 1, 2, or 4 CPU configurations

- Unified management with Cisco UCS Fabric Interconnects or stand-alone management with Cisco Intersight

- Cisco Validated Designs help you pick the right configurations for enterprise applications, virtual desktop environments, databases, and more

- Support for VMware vSphere/ESXi, Microsoft Hyper-V, and other major operating systems

- Deploy converged infrastructure or hyperconverged infrastructure (Cisco HyperFlex)

B-Series
The industry's highest-density, most flexible and expandable modular 2- and 4-socket blade servers

C-Series
1U, 2U, and 4U options that size to your workload, PCIe, and storage needs

S-Series
A dense storage server supporting up to 840 TB of storage with one or two server nodes

Key features and benefits

 Lower TCO

 Easy to deploy and manage

 Easy to scale

 Performance for any application

Cisco UCS M5 servers support

- 2nd Gen Intel® Xeon® Scalable processors or AMD EPYC™ CPUs
- New security features
- More NVMe drive support
- Ethernet speeds up to 100Gbps

Cisco UCS supports critical data center initiatives

- Increasing use of server virtualization
- Data center consolidation
- IT infrastructure orchestration and automation
- Building a private or hybrid cloud infrastructure
- Implementing a "software-defined data center" strategy

"We now spend 40 percent less time on maintenance and training, releasing our engineers to focus on revenue-generating innovations like new product offers and service improvements."

Matthew Chesterton
CEO, OffsiteDataSync

For more information

Learn more about Cisco UCS | Explore Cisco UCS in-depth

Cisco HyperFlex

Hyperconverged Infrastructure engineered on the Cisco UCS platform

Cisco HyperFlex combines compute, networking, and storage in an easy-to-manage system that delivers consistently high performance to power any application, anywhere. Co-engineered hardware and software—along with powerful data optimization features—brings the full potential of hyperconvergence to a wide range of workloads and use cases. The Cisco HyperFlex HX Data Platform combines cluster storage devices into a single, distributed, multi-tier, object-based data store. And with simplified scalability and manageability, HyperFlex offers cloud-like agility and pay-as-you-grow economics for on-prem, virtualized environments.

Hyperconverged infrastructure built for your specific needs

- Powerful management options include HX Connect, Cisco Intersight and plugins for vCenter or Windows Admin Center

- Available in Hybrid, All Flash, and ALL NVMe nodes

- Built on the Cisco UCS platform, utilizing Cisco UCS Fabric Interconnects

- Can be easily scaled by adding one node at a time to a cluster, up to 64 nodes (new components are automatically recognized and incorporated into the cluster)

- Support for VMware vSphere/ESXi or Hyper-V

- Ideal for multicloud environments with Kubernetes support, multicloud services, and integrations with cloud providers

- Cisco Validated Designs help you pick the right HyperFlex configurations for enterprise applications, virtual desktop environments, databases and more
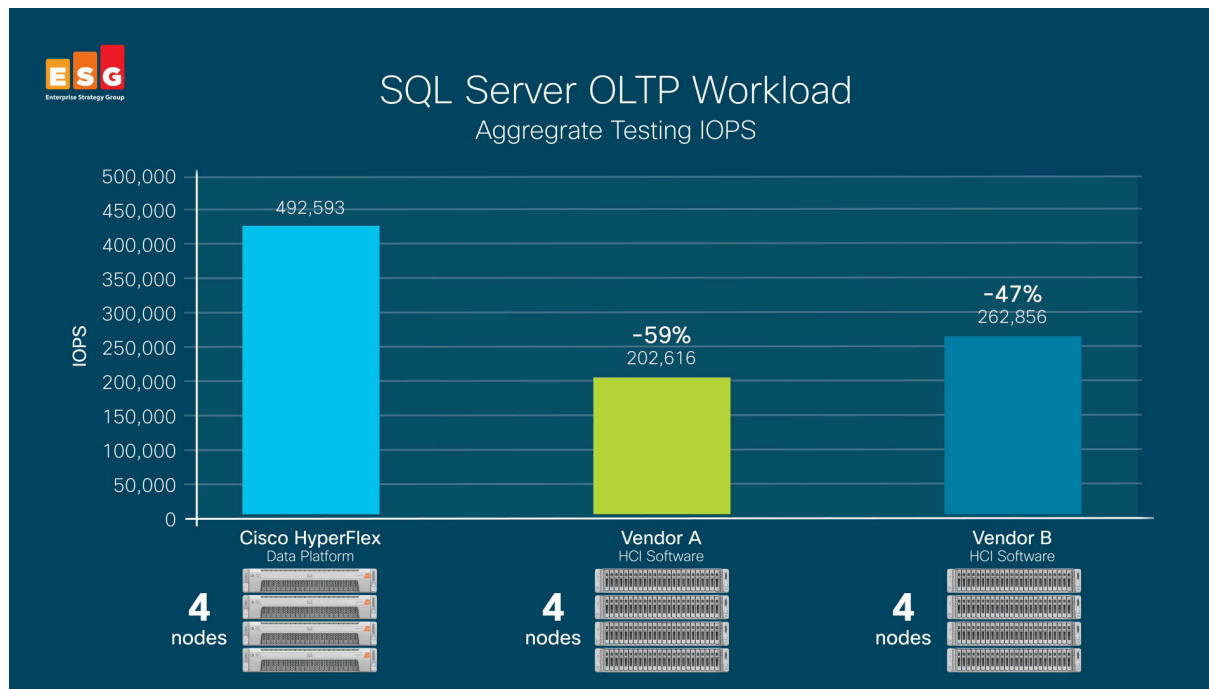
Cisco HyperFlex Edge

HyperFlex Edge is optimized for the unique requirements of distributed operations—with cluster sizes of 2 to 4 nodes—and can utilize existing 1Gb or 10Gb networking.

Did you know...

You can run Cisco UCS as compute- and/ or GPU-only nodes in the same clusters as HyperFlex nodes—so you can easily match your clusters to your exact needs, while not paying for anything you don't need (like additional HCI software licensing).

HyperFlex vs other HCI solutions

ESG Enterprise Strategy Group

SQL Server OLTP Workload
Aggregrate Testing IOPS

492,593 — Cisco HyperFlex Data Platform — 4 nodes

−59% 202,616 — Vendor A HCI Software — 4 nodes

−47% 262,856 — Vendor B HCI Software — 4 nodes

IOPS axis: 0; 50,000; 100,000; 150,000; 200,000; 250,000; 300,000; 350,000; 400,000; 450,000; 500,000

For more information

Learn more about HyperFlex

See how other customers are using HyperFlex

Explore HyperFlex models in detail

Key features and benefits

- Proven, industry-leading HCI performance to power any application

- Easy to deploy and manage

- Flexible scalability to add resources independently

- Lower TCO compared to 3-tier or other hyperconverged offerings

- Built with integrated UCS Fabric Interconnects to ensure networking performance

"Our ERP response time has improved by 50% post deployment and we have been able to reclaim almost 80% of our capacity."

Suresh D
CEO, Spark Minda Technical Centre
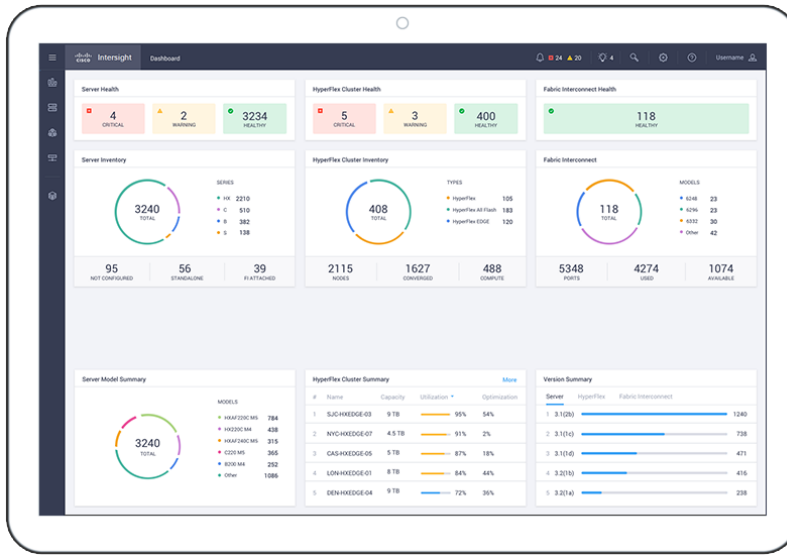
Cisco Intersight

Cloud-based management for the data center, edge, and remote locations

Manage your infrastructure anywhere with Cisco Intersight software as a service

Competition is driving IT organizations to deliver applications and services faster and more efficiently than ever before. Operations teams need to support existing applications while managing next-generation applications and workloads that require computing at the edge, branch offices, and public and private cloud environments, as well as in the data center. This requirement to implement distributed applications supported by distributed computing is creating a growing gap between what these environments require and the expertise, processes, and tools to support them.

The Cisco Intersight solution delivers a new era of computing for Cisco UCS and Cisco HyperFlex systems. This adaptive, cloud-powered management platform enables you to be anywhere and act everywhere. It delivers pervasive simplicity at a global level with connected technical support, so daily activities are easier for everyone. Cisco Intersight is an open platform that can be integrated with third-party tools and infrastructure to enable agile delivery, so IT can empower businesses to respond quickly to change.

Key features and benefits

Pervasive simplicity

- Simplify the user experience by managing your infrastructure regardless of where it is installed

- Reduce the complexity and manual effort required to deploy, upgrade, and maintain your servers and hyperconverged infrastructure

- Automate updates to Cisco HyperFlex cluster firmware, software, and hypervisor updates to reduce complexity and manual efforts

Actionable intelligence

- Use best practices to enable faster, proactive IT operations

- Gain actionable insight for ongoing improvement and problem avoidance

- Learn and evolve to deliver greater capabilities and improved insights that help you proactively manage your distributed environment

Agile delivery

- Respond quickly to new requests

- Deploy in the data center and at the edge with massive scale

- Continuous Integration/ Continuous Delivery (CI/CD) for rapid development, delivery and customer feedback
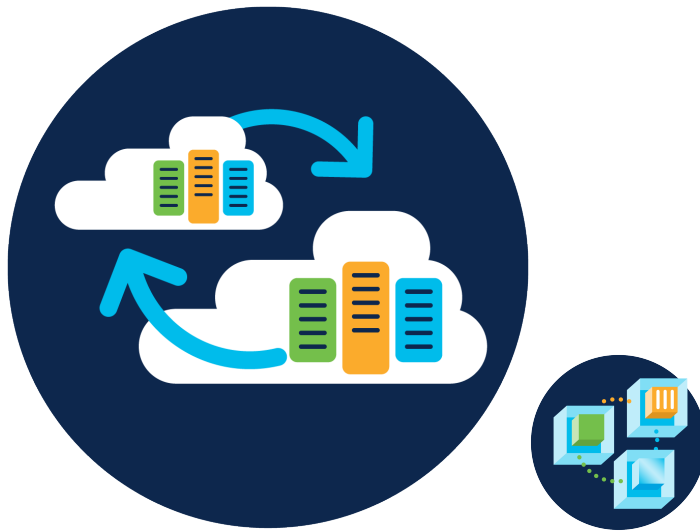
Did you know...

Intersight provides a Cloud Witness at no cost for HyperFlex Edge 2-node deployments, ensuring data accuracy and eliminating the cost of having a physical witness, which is required by competing 2-node solutions.

Learn More

For more information

Intersight

Getting started

Multicloud integration

Optimized for on-prem, multiple clouds, and containerized applications

Applications are quickly transitioning to collections of microservices—often in containers—that can run in any environment and any location (core, cloud, or edge). Cisco's computing solutions integrate with these applications, helping you orchestrate and optimize on-prem infrastructure, multiple clouds, and containerized applications.

Cisco UCS and Cisco HyperFlex support integration with popular cloud providers:

- AWS
- Google Cloud
- IBM Cloud
- Azure Cloud
- And more

Cloud Orchestration

Cisco CloudCenter provides a cloud management platform to simplify lifecycle management of multicloud applications, workflows, and their infrastructure.

Containers/Kubernetes Environments

Cisco infrastructure solutions deliver:

- A modern, common infrastructure platform for containers with support for Kubernetes Platforms:
  - Cisco Container Platform
  - Google Anthos
  - OpenShift
- Enterprise-grade building block support and software-defined storage/computing to simplify adoption of containerized applications and microservices.

Key features and benefits

Reliable, persistent storage

Simplified infrastructure

Independent scaling

Centralized, cloud-based management

Orchestration and optimization tools

(learn more in the next section)

Did you know...

Cisco HyperFlex running Cisco Container Platform is the only complete hardware and software stack that's SAP-certified for container deployment of SAP Data Hub.

For more information

Learn more about creating a multicloud environment with Cisco HyperFlex

Explore Cisco's multicloud portfolio and learn how to secure your environment
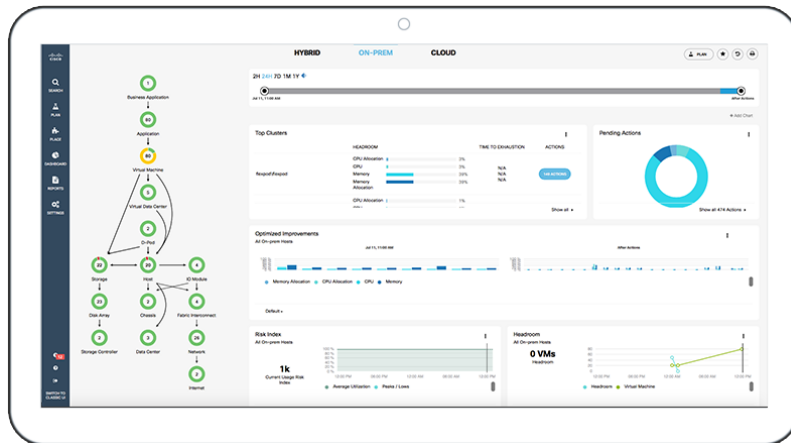
Cisco Workload Optimization Manager

The next wave of IT automation
with self-managed workloads

Today's data center and cloud environments are complex and highly dynamic. Managing performance, cost, and compliance is a challenge— but Cisco Workload Optimization Manager provides intelligent software that enables your workloads to self-manage so IT can run lean and fast.

Cisco Workload Optimization Manager drives continuous health in dynamic data center environments, whether on-prem or in a public cloud. It provides automatable recommendations that adjust infrastructure resources at every layer of the stack to maximize performance for your applications.

Cisco Workload Optimization Manager includes integrations with Cisco data center solutions, including Cisco UCS, Cisco HyperFlex, and Cisco AppDynamics.

Key features and benefits

- Gain detailed visibility into data center resource utilization to understand workload demand.

- Automate workload placement, scaling, and capacity to assure performance and maximize efficiency.

- Continuously align resources with the most demanding workloads.

- Run what-if scenarios and model growth plans to predict future data center requirements.

- Get broad visibility into application performance and understand how your infrastructure is being utilized—by leveraging Cisco Workload Optimization Manager integrations with Cisco UCS Director, UCS Manager, Cisco Tetration™, and AppDynamics®.

- Manage resources across the data center and public clouds from one platform.

Learn more about Cisco Workload Optimization Manager
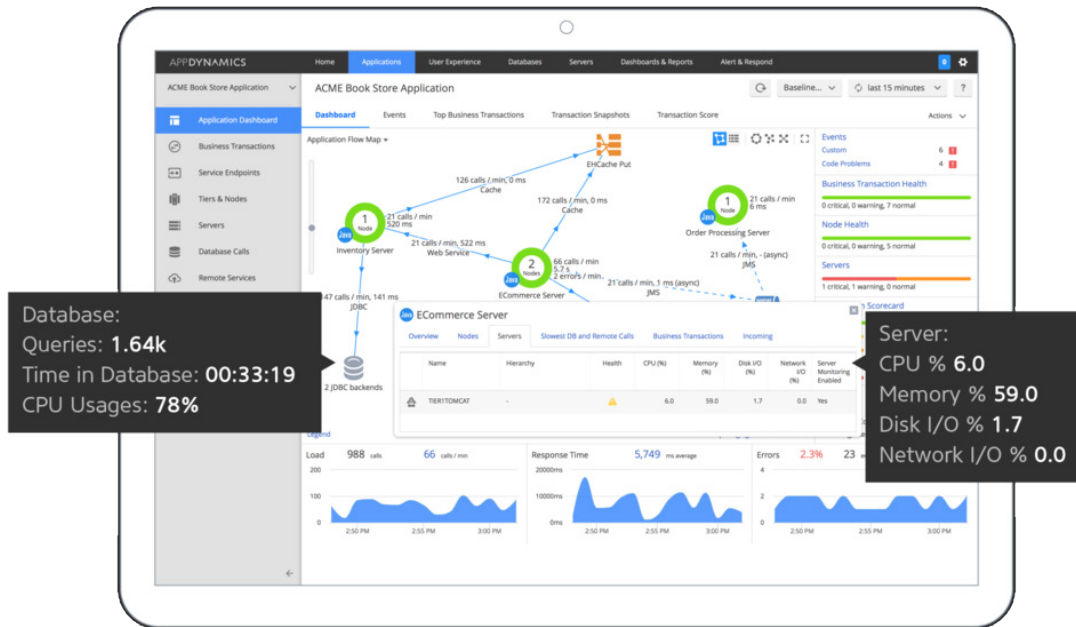
AppDynamics

A smarter approach to performance management

AppDynamics is an application and business performance monitoring platform that ensures every part of multi-cloud environments—from software to infrastructure to business outcomes—is highly visible, optimized, and primed to drive growth. AppDynamics works throughout your environment to discover individual business transactions and create a complete view of your application topology, across all public/private clouds and on-prem environments. Detailed performance and business metrics are generated with machine learning anomaly detection alerts to help identify the root causes of issues.

Key features and benefits

- Help developers understand how code is performing
- Detect issues before they impact customers
- Deliver real-time performance metrics
- Visualize maps of your application environments

Learn more about AppDynamics
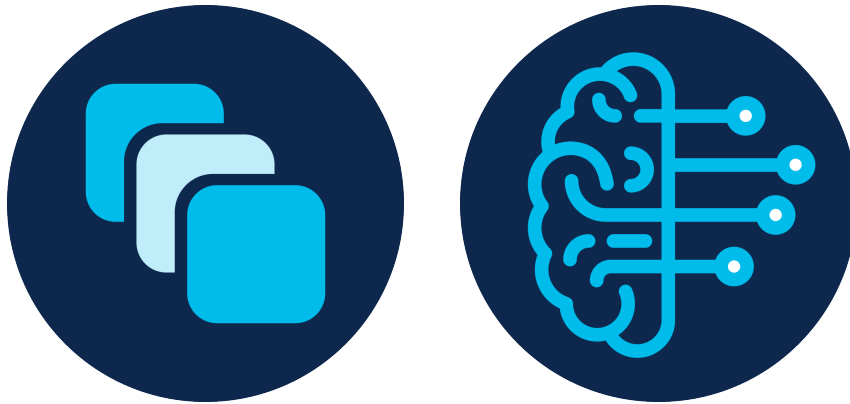
Application and database workloads

Cisco's computing portfolio is designed to handle all your workloads

From enterprise apps and databases to virtual desktops to AI/ML, Cisco's tested and validated solutions provide the right resources for the applications that power your business.

Enterprise apps and databases

Data resides where it's created and accessed: at the edge, in the cloud, and in the core data center. Build a bridge to this data and your enterprise apps with scalable, high-performance infrastructure from Cisco.

SAP

Run traditional SAP apps with better performance or migrate to SAP HANA with SAP-certified infrastructure.
Learn more

Microsoft

Use validated designs for Cisco infrastructure to ensure that the latest versions of Microsoft SQL Server run at peak performance.
Learn more

Oracle

Improve IOPS and latency of Oracle Database and boost Oracle RAC performance.
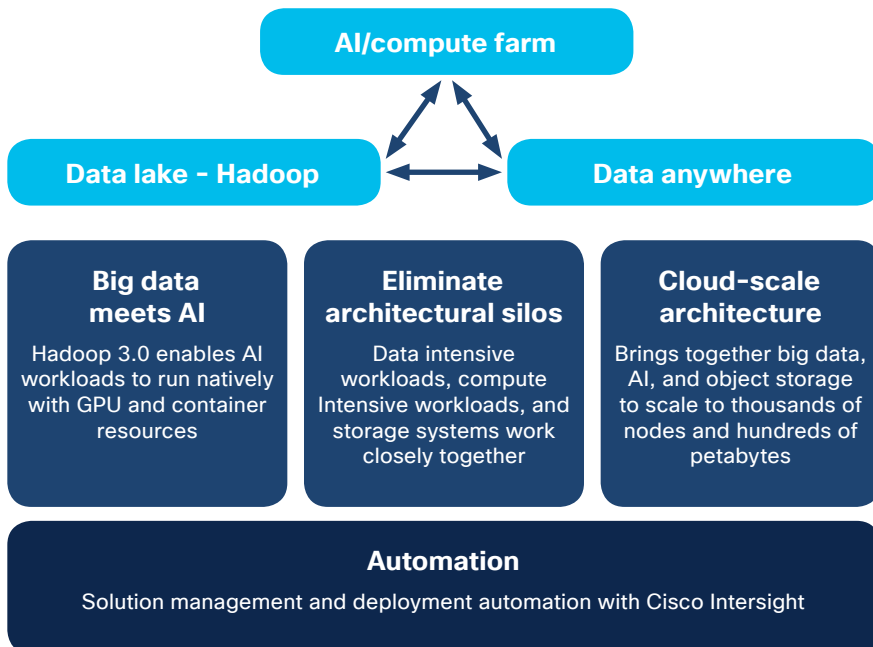Learn more

"Our investment in Cisco UCS and SAP HANA is key to generating significant returns on our deployment of analytical applications and specifically in our ability to run more efficient trade promotions."

Lori Plate
Director of Enterprise Applications, Johnsonville Sausage

Cisco Data Intelligence Platform
Big data meets AI

AI/compute farm

Data lake - Hadoop **Data anywhere**

Big data meets AI	**Eliminate architectural silos**	**Cloud-scale architecture**
Hadoop 3.0 enables AI workloads to run natively with GPU and container resources	Data intensive workloads, compute Intensive workloads, and storage systems work closely together	Brings together big data, AI, and object storage to scale to thousands of nodes and hundreds of petabytes

Automation
Solution management and deployment automation with Cisco Intersight

The Cisco Data Intelligence Platform (CDIP) is a cloud-scale architecture that brings together big data, AI and compute farm, and storage tiers to work together as a single entity, while also being able to scale independently to address IT issues in the modern data center.

AI/ML: Get faster insights and increase business value with Cisco's data center solutions designed specifically for AI/ML. Learn More

Big data: Integrate your infrastructure with IBM Big Data Insights, SAS, Splunk, and other big data solutions. Learn More

Virtual desktops

Whether you're running Citrix Virtual Apps and Desktops or VMware Horizon, you can modernize your virtual desktop infrastructure with Cisco's data center solutions. With consistent performance, pay-as-you-grow economics, and NVIDIA GPUs, you can securely enable rich experiences for your users anywhere.

Learn more about desktop virtualization

Find the best Cisco Validated Design for your virtual desktop environment

"Before, it would take 15-20 minutes to open each design file. Now it only takes four minutes."

Clint Nagy
Project Engineer, Mayfran International

"From hardware to licensing to human resources, the overall cost of HyperFlex and UCS is better for us and we can pass those savings on to our customers."

Marc-André Lapierre
Founder and CEO, Malicis

Find validated designs for additional workloads that run on Cisco UCS or Cisco HyperFlex

Explore additional applications that you can run on Cisco Computing Solutions