Transform infrastructure and operations

Cisco Webex App
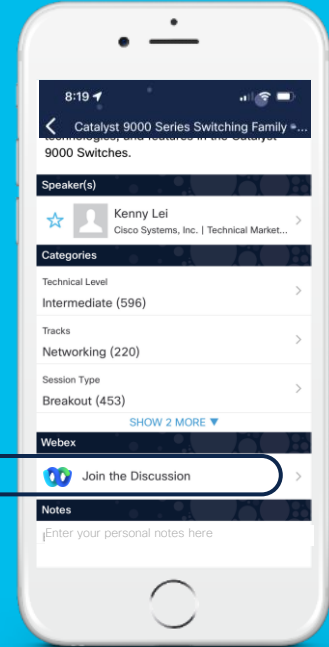
Questions?
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Webex spaces will be moderated
until February 24, 2023.

The new infrastructure and operations paradigm

Scalable Operations
Any app. Any location.

Velocity
Speed of infra & app delivery

IT Agility
Modern, cloud-based operations
for distributed IT teams

Application growth & diversity
Making IT an adaptable resource

HYBRID

Persistent challenges for IT

Architectural silos
spawn islands of
infra and operations

Application diversity
drives infrastructure
diversity

Fragmented
technologies impede
time to value

Reduced visibility,
increased cost
and risk

Specialized systems
increase operational
complexity
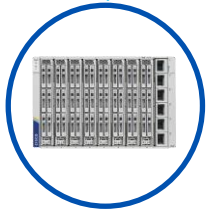
Valuable IT energy
wasted on platform
integration

Cisco UCS & UCSX

What we've announcing

Greater flexibility for
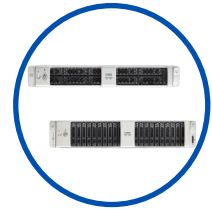modern workloads

Application acceleration
without compromises

More performance for a
wide range of workloads

New X-Series GPUs with
X-Fabric

UCS X-Series Compute Nodes

UCS C-Series Servers

Cisco Intersight

Transforming Infrastructure and Operations

Cisco UCS X-Series momentum

"UCS X-Series brings together the best of rack and blade servers, supports the need of modern apps, and helps businesses improve operational agility, efficiency, and scale…"
– IDC

Fastest to $300M!

Success

Modernization	50.1% Blade Market Share*	700+	100%	13,000+
Reduces total power consumption of M4 servers by up to ~31%	Extended market share lead	Unique customers	Intersight attach	Nodes
	31%	7%	225+	4,000+
	New/dormant customers	Rack adoption	Production customers	Servers on-line

Innovations

X-Series sustainability benefits	5th Gen Fabric	GPU on compute node	GPU Node
Produces ~50% lower raw materials vs. 3 generations of rack servers	100G end-to-end	Two Nvidia T4	UCS X-Fabric Technology

UCS X-Series: 7th Gen Benefits

Simple
Cloud managed, without rigid hardware config rules

Flexible
Combines the best of blade and rack servers

Future-ready
Built to easily adopt next generation technologies

Up to Lower Power **31%**

~50% More Sustainable

Up to Better Performance **64%**

1 Control Point in the Cloud

CISCO Live!

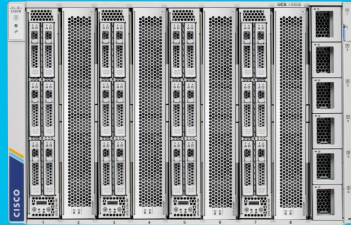# New 7th Gen UCS Servers and GPU support

X-Series Compute Nodes

UCS X210c M7
(2-socket)

UCS X410c M7
(4-socket)

Run any app with adaptable system

PCIe Nodes with Intel Data Center Flex Series GPU and UCS X-Fabric Technology

Accelerate modern apps

UCS C-Series Servers

UCS C220 M7 Rack Server

UCS C240 M7 Rack Server

Run more apps in a familiar form factor
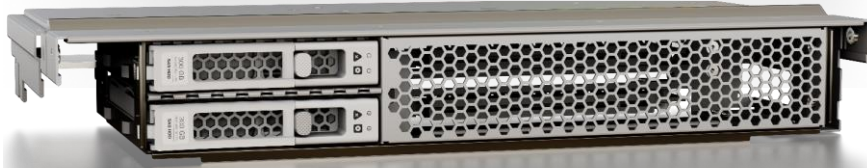
UCS X210c M7 Compute Node

Flexible server for all your workloads

Two-socket modular server
4th Gen Intel® Xeon® Scalable CPUs
with 50% more cores than M6
Up to 8 TB of capacity using 256 GB DDR5 DIMMs
Up to six SAS/SATA/NVMe drives
Plus 2 SATA / NVMe internal boot drives
Up to 200 Gbps Unified Fabric

UCS X210c M7 Compute Node – GPU

Run modern apps in less space

High-density form factor supports a wide range of workloads

Up to two Nvidia T4 GPUs for AI inferencing, data analytics, and graphics

Up to 2 Intel Data Center GPUs

Cloud operated with Cisco Intersight

UCS X410c M7 Compute Node

Designed for scale-up applications

Four-socket modular server

4th Gen Intel® Xeon® Scalable CPUs

Up to 16 TB of capacity using 256 GB DDR5 DIMMs
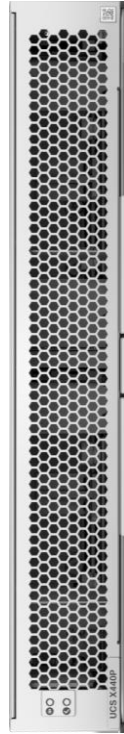
Up to six SAS/SATA/NVMe drives

Up to 200 Gbps Unified Fabric
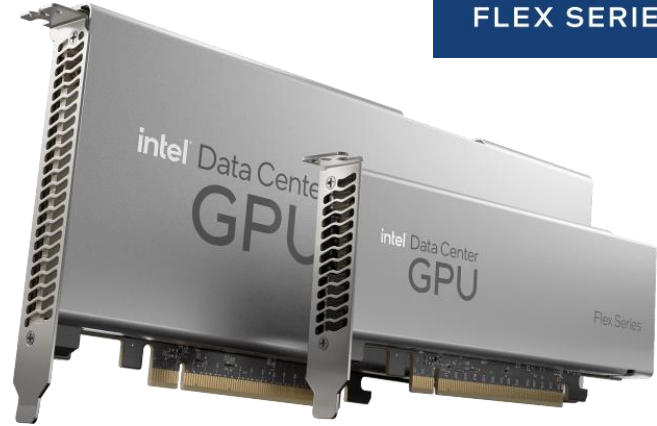
Connect up to 2x X440p PCIe nodes

Intel Flex 140 and 170 GPU

- X-Series
  - X440P with 4x Intel Flex 140
  - X440P with 2-4x Intel Flex 170*
  - Supported as part of Riser B
- C-Series
  - C220M7 with Flex 140
  - C240M7 with Flex 170

Main use case VDI and Video transcode

UCS X440p

Flex 140 GPU: HHHL, 75W PCIe
Flex 170 GPU: FHFL, 150W PCIe

* Final number may vary

UCS X-Fabric Technology and PCIe Nodes with GPU

PCIe node supports up to
- 4x Intel Data Center GPU Flex 140
- x Intel Data Center GPU Flex 170
- 2x Nvidia A16
- 2x Nvidia A40
- 4x Nvidia T4
- 2x Nvidia A100

UCS X-Fabric Technology
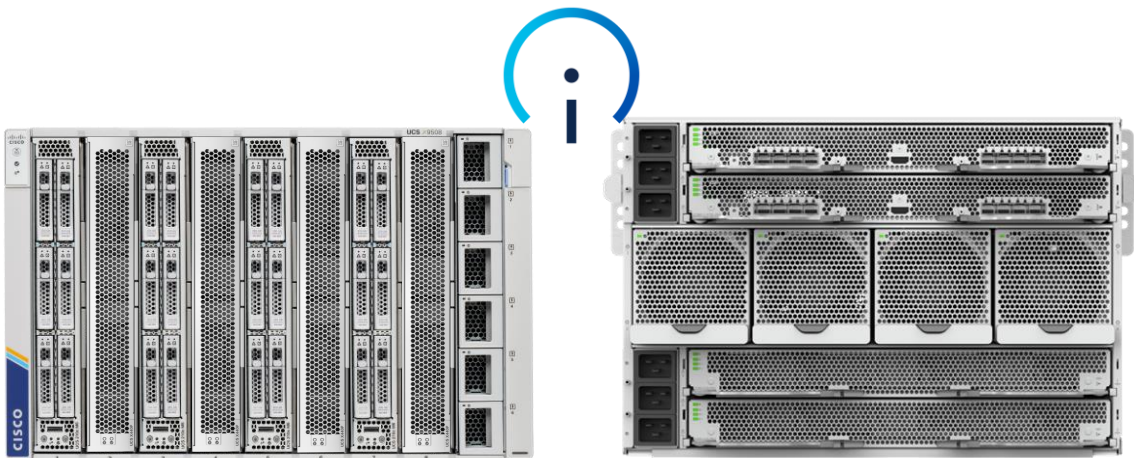
✓ Based on native PCIe Gen. 4

✓ Provides GPU acceleration to enterprise application

✓ No backplane or cables = Easily upgrades

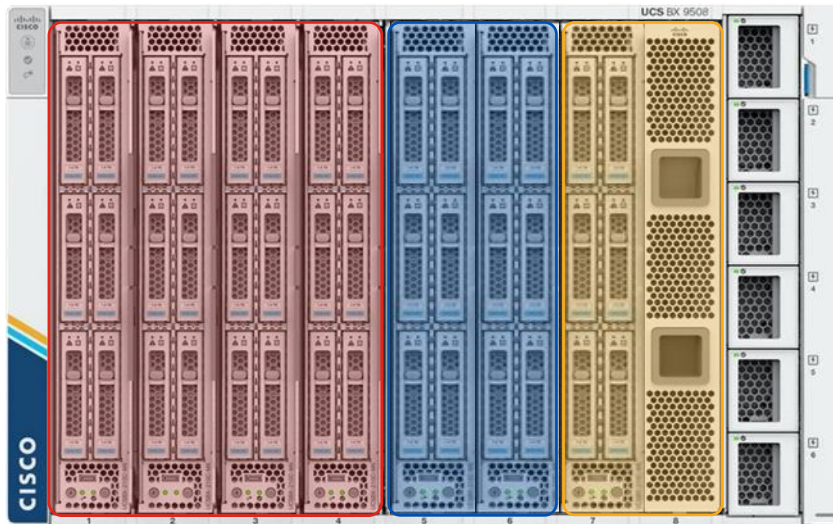# UCS X-Series with X-Fabric

Consolidate Rack Workloads

- AI/ML
- Accelerated VDI
- Big Data, SDS, Containers

+

Traditional Blade Workloads

New
~1600G
Aggregate
bandwidth

New
200G
Bandwidth to
compute node

New
24
GPUs
per Chassis

UCS C-Series

Cisco UCS C-Series M7 Servers

Dense form factors for a wide range of workloads, including virtualization, web, databases, big data analytics, cloud, and bare-metal applications

Cisco UCS C220 M7

Cisco UCS C240 M7

Up to 2x 4th Gen Intel® Xeon® Scalable processors
Up to 8TB DDR5 memory
Choice of PCIe 4.0 or 5.0 options
10/25/40/50/100/200 mLOMs & VICs
Up to 10 (C220) or 28 (C240) SAS/SATA/NVMe drives

Cisco HyperFlex

Cisco HyperFlex Innovation – Coming in 2023

Greater flexibility and operational simplicity

HyperFlex on UCS X-Series Converged Nodes

Application acceleration without compromises

7th Gen UCS Servers & New UCS X-Series GPUs

High availability configs

Intersight based witness for stretched cluster configurations

Edge solution for harsh environments

Ruggedized HyperFlex Solution for Edge

Cisco Intersight

Transforming Infrastructure and Operations

HyperFlex on UCS X-Series

Combining the flexibility of a modular system with the operational ease of HyperFlex

- **Standardize on X-Series** systems in the data center for both conventional and hyperconverged nodes

- **Achieve operational ease** through consistent cloud-based management

- **Save costs** from a future proof, sustainable system

- **Gain economies of scale** for power, cooling, cabling, rack space, and networking

- **Confidently run critical workloads** – VDI, VSI, AI|ML, near-edge (datacenter-in-a-box)

✓ *Based on Intel® Xeon® Scalable Processors*

✓ *All flash and All NVMe options*

✓ *Up to 8TB memory and 490 TB storage capacity*

✓ *Intelligent Fabric module @ 100G*

HyperFlex at the ruggedized edge

Operational simplicity of HyperFlex in a new, compact, rugged form factor built for harsh environments

- **Extend HCI edge infrastructure** into harsh and uncertain conditions with new ruggedized options

- **Consistent cluster lifecycle** management through Intersight

- **One-stop Cisco solution support**

Optional: HX compute-only node

1Gb Switch (10Gb – future)

HX converged nodes
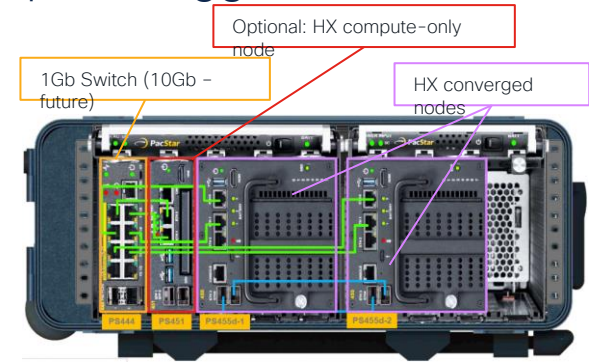
✓ Scalability: 2-, 3-, 4-node edge support, with expansion

✓ Expansion: compute-only nodes (up to 1:1 ratio)

✓ Networking: 1Gb and 10Gb, single or dual switch topologies

✓ Data protection : VM datastores, iSCSI, 1:1 NR/DR, software encryption1, health checks, local edge witness

✓ Hypervisors: HXDP and ESXi

Stretched Clusters with Intersight witness

New Intersight cloud-based arbitration service replaces the need for third site assets

- Deploy an active-active disaster avoidance solution for mission critical workloads

- New Intersight cloud-based witness service mitigates the need to deploy a 3rd site in 'split-brain' scenarios

- Save costs and reduce management time by eliminating duplicate hardware at remote sites

3rd site

Witness Server

100 Mbps/ 100 ms

100 Mbps/ 100 ms

Site-B

10Gbps/5ms RTT
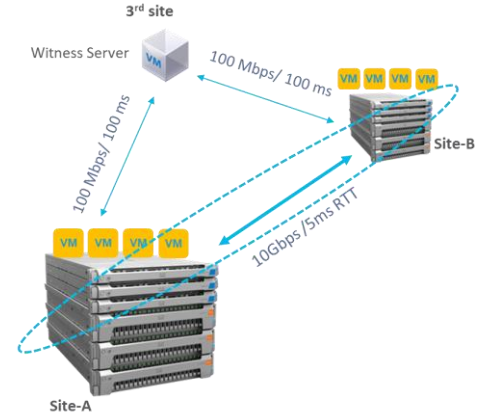
Site-A

Configuration Support: Single stretched cluster across 2 sites; Symmetric configuration; "Witness Server"; Compute-only nodes

Management: Cross site cluster creation; Non disruptive upgrades; Site awareness in HX Connect; Site specific alarm and events on single dashboard
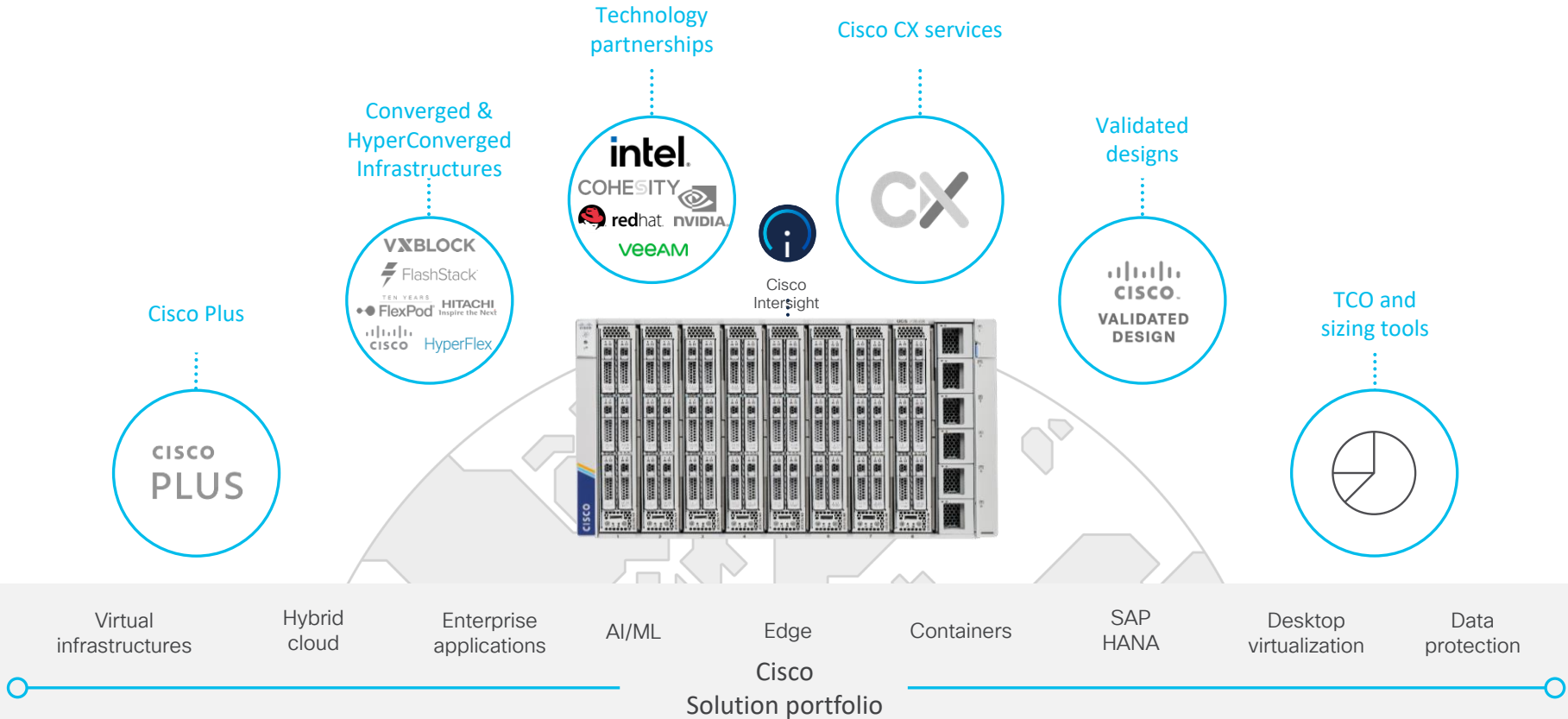
IO Path: Active-Active sites; VM Read IOs served locally; VM Write IOs sync-writes across sites; 2x copies on each site

HA Operations: Recover from a site failure; Recover from a Local failure ; Failover of VM; vMotion of VM; Split Brain handling

Closing

Computing for the next decade

Technology partnerships

Cisco CX services

Converged & HyperConverged Infrastructures

Validated designs

Cisco Plus

TCO and sizing tools

Cisco Intersight

Virtual infrastructures | Hybrid cloud | Enterprise applications | AI/ML | Edge | Containers | SAP HANA | Desktop virtualization | Data protection

Cisco Solution portfolio

Cisco Customer Experience

Accelerate your cloud transformation successfully with Cisco CX

CX expertise can help you design, develop, and deploy a hybrid cloud or multicloud strategy built for you — no matter where you are in your journey

Visit CX Cloud
to learn more

How we can help

Intersight Services

Intersight Planning and Onboarding
- Customer environment review
- Solution design workshop
- Server onboarding
- Server policy and profile creation
- Workshop summary document
- Knowledge transfer

Intersight Application Quick Start
- Deploy Intersight assist
- Configure Intersight RBAC
- Deploy and Validate clusters
- Configure any add-ons
- Document deliverables
- Knowledge transfer

Unified Computing Services X-Series

- Migration assessment
- Quick Standup

- Deployment
- Migration

Hyperflex Startup Services

HX Implementation
- Quick Start implementation
- Accelerated deployment
- Custom implementation

Intersight Planning and Onboarding
Intersight Application Quick Start

Success Tracks
- Ask-the-Expert: Getting started–Intersight and Intersight simplified operation – Hyperflex HXDP
- Accelerators: Hyperconverged Infrastructure (HCI) use case

You don't have to do it alone.
For more insight, visit the Cisco CX stand in the World of Solutions for Lightning Talks and Demos
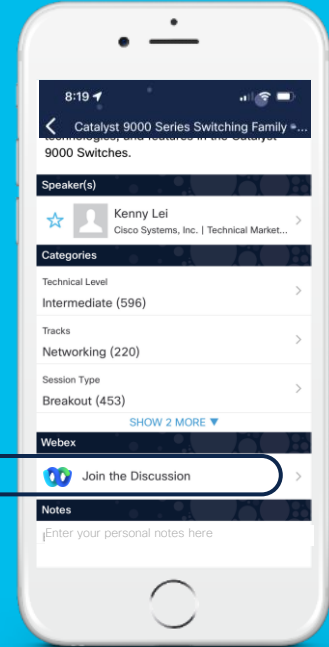
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- Please complete your session survey after each session. Your feedback is important.

- All surveys can be taken in the Cisco Events Mobile App or by logging in to the Session Catalog and clicking the "Attendee Dashboard" at

  https://www.ciscolive.com/emea/learn/sessions/session-catalog.html

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Attend any of the related sessions at the DevNet, Capture the Flag, and Walk-in Labs zones.

Visit the On-Demand Library for more sessions at ciscolive.com/on-demand.

Thank you

Are you playing the Cisco Live Game?
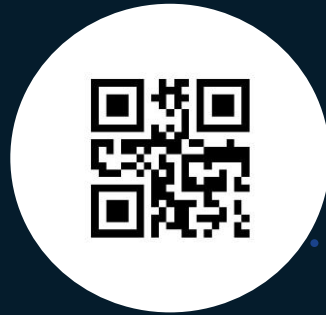
Scan the QR code and earn your
Cisco Theater points here

CISCO Live!