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Cisco Compute Hyperconverged X-Series System with Nutanix

Benefits

- **Simplify operations** with a solution that combines the operational simplicity of hyperconverged software with the efficiency and flexibility of a modular system

- **Increase agility** and respond to the dynamic needs of your business with a solution that is inherently easy to scale and includes support for future generations of processors, storage, accelerators, networking technologies, and SaaS innovations

- **Improve sustainability** with a solution that is engineered to be more energy efficient and can be easily upgraded and reused, lowering the consumption of power and raw materials when compared to traditional rack servers
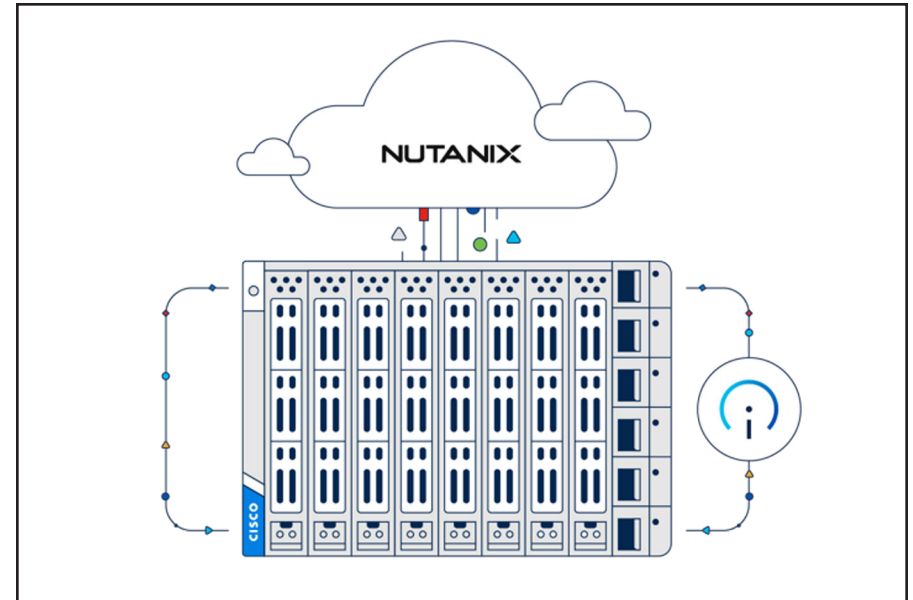

Figure 1.   Cisco Compute Hyperconverged X-Series with Nutanix

Overview

Organizations strive to simplify operations and improve the efficiency of their IT infrastructure in order to reduce costs, improve agility, and provide superior customer experiences. Simple and efficient IT infrastructure offers better scalability, allowing for growth with minimal complexity. Simplification leads to fewer errors, easier troubleshooting, and enhanced security due to reduced vulnerabilities. Additionally, a flexible infrastructure supports business agility, enabling rapid adaptation to market changes, and fostering innovation. Energy-efficient and operationally efficient IT infrastructures also help in reducing the environmental impact and support sustainability initiatives.

However, the number and variability of applications, combined with security and scalability requirements, and highly distributed IT environments are making it more complex and costly to operate IT infrastructure. IT teams need simplified infrastructure and operational solutions, from the data center to the edge, that are engineered to scale easily, meet the needs of modern applications, improve operational efficiency, and improve sustainability. Without the right infrastructure and operational strategy and approach, your environment will just continue to be more complex and costly.

Simple, flexible, and sustainable Hyperconverged Infrastructure (HCI)

Cisco and Nutanix have partnered to introduce the industry's first hyperconverged solution using a modular blade architecture. The Cisco Compute Hyperconverged X-Series System solution combines the operational simplicity of the Nutanix Cloud Platform with the flexibility and efficiency of

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the award-winning Cisco UCS® X-Series Modular System, enabling organizations to easily deploy, scale, and upgrade hyperconverged clusters with a more sustainable, future-ready solution. There is also the Cisco Compute Hyperconverged X-Series Direct for edge, retail, and small/remote-office use cases.

What it does

The Cisco Compute Hyperconverged X-Series System combines the operational simplicity of Nutanix Cloud Platform (NCP) with the efficiency, flexibility, and sustainability of the Cisco UCS X-Series Modular System. The X-Series system comprises modular components that can be assembled into systems through the Cisco Intersight® cloud-operations platform.

The Cisco Compute Hyperconverged X-Series System is engineered to be adaptable and future-ready. With a midplane-free design, the system achieves I/O connectivity using frontloading, vertically oriented compute and accelerator nodes that intersect with horizontally oriented I/O connectivity modules in the rear of the chassis. In the front of the chassis, the Cisco Compute Hyperconverged X210c M7 All NVMe Nodes with Intel® Xeon® Scalable Processors offer compute density and storage capacity in a single form factor.

In the rear of the chassis, a unified Ethernet fabric is provided using UCS® 9108 Intelligent Fabric Modules. The **UCS X-Fabric Technology**, provides PCIe Gen 4 industry-standard protocols for GPU accelerators. Interconnections can be easily updated with new modules supporting faster Ethernet, PCIe Gen 5, and CXL.

The Cisco Compute Hyperconverged X-Series Direct is a self-contained system with a pair of integrated fabric interconnects that can be used if you do not want top-of-rack fabric interconnects and need to support edge, retail, and small or remote-office use cases.

The Cisco UCS X-Series system is designed with sustainability in mind and equipped with power delivery and cooling innovations designed to reduce material waste and energy consumption.

Solution components

Cisco Compute Hyperconverged X-Series with Nutanix is made up of the following items:

- Nutanix Cloud Platform (NCP), which includes Nutanix Cloud Infrastructure (NCI) and Nutanix Cloud Manager (NCM)

- Cisco Compute Hyperconverged X9508 Chassis

  - Two Intelligent Fabric Modules (IFMs) for unified Ethernet fabric or

  - Two Cisco UCS 9108 Intelligent Fabric Modules

    - Both 25Gps and 100Gbps are available; 100Gbps for X-Direct

- One or more of the following nodes: up to eight two-socket Cisco Compute Hyperconverged X210c M7 All NVMe Nodes

- Hypervisor support: Nutanix Acropolis Hypervisor (AHV) and VMware vSphere

- Systems management:

  - Cisco Intersight Infrastructure Service

- Optional components:

  - Cisco UCS X-Fabric modules

  - PCIe node with GPU support used in conjunction with the Cisco UCS X-Fabric modules

    - GPU support: NVIDIA L4, L40S, and A16

Learn more

For additional information on Cisco Compute Hyperconverged X-Series and Cisco Compute Hyperconverged X-Series Direct, refer to the **https://www.cisco.com/site/us/ en/products/computing/hyperconverged/ nutanix/index.html.**

For information on Cisco Compute Hyperconverged with Nutanix, visit **cisco.com/go/computehyperconverged.**