

Cisco Integrated System for Microsoft Azure Stack

Cisco® Integrated System for Microsoft Azure Stack delivers a hybrid cloud solution that accelerates growth and simplifies management and control, all backed by two trusted technology innovators.

There is no better infrastructure than Cisco Unified Computing System™ (Cisco UCS®) to deliver on the promise of cloud computing solutions and the power of Microsoft Azure cloud. With Cisco Integrated System for Microsoft Azure Stack, you get the power of the world's most robust cloud platform on a computing system designed to provide optimal performance for virtual workloads and deliver on that promise: Cisco UCS.

Cisco Integrated System for Microsoft Azure Stack will help accelerate your business growth and innovation with an efficient, elastic cloud consumption model that meets the growing needs of your stakeholders. Free up essential IT resources from low-value administrative tasks and achieve full control of your new hybrid environment through automation and policy-based management tools. Bolster confidence in your IT environment supported by Cisco and Microsoft—proven innovators and trusted technology partners that are the market leaders in hybrid cloud infrastructures.

Cisco Integrated System for Microsoft Azure Stack delivers these benefits

- **The power of Microsoft Azure in your data center:** Hybrid cloud agility for Microsoft Azure services enables on-premises governance, security, and performance. Developers can create an agile Microsoft Platform-as-a-Service (PaaS) environment with API portability and a user interface identical to that of the Azure public cloud.
- **Only fully redundant Azure Stack:** Commodity Azure Stack system designs have numerous single points of failure: the Baseboard Management Controller (BMC) or management switch and the Hardware Life cycle Host (HLH) or systems management server. With Cisco's integrated approach to Azure Stack, there are no single points of failure throughout the entire platform. BMC/management switching and general systems management is embedded within the fabric interconnects. We install the solution in your data center in your own system rack using a highly technical device called a laptop.
- **Industry-leading performance:** Cisco's fully integrated Azure Stack has been designed to deliver industry-leading performance by using 40 Gigabit Ethernet (GE) end to end, from the network interface card in the server through to the Top-of-Rack (ToR) switch while integrating Non-Volatile Memory express (NVMe) in each server to help ensure maximum performance and maximum virtual machine density, and to allow growth of the cluster. Customers have the choice of hybrid storage of the new all-flash storage option leveraging the latest servers and Intel® Xeon® Scalable processors up to 28 cores or sockets.
- **Best of breed technology end to end:** Utilizing Cisco Nexus® 9000 cloud-scale switching technology enables you to be ready for next-generation network analytics and security capabilities and to easily grow your platform.

- **Automated installation procedure:** Cisco UCS service profiles, integrated policy, templates, and open APIs enable administrators to easily deploy servers with exactly the same configuration from firmware versions to BIOS settings. These technologies have enabled Cisco to develop freely available deployment tools to help ensure an automated, consistent configuration of your Azure Stack in minutes using Cisco best practices.

Microsoft Azure Stack on the system designed for cloud: Cisco UCS

Cisco Azure Stack is built on industry-leading server technology: Cisco UCS. With proven operational advantages, 40 percent faster infrastructure deployment, and 38 percent reduction in ongoing management costs compared to conventional server infrastructure, Cisco UCS is built for rapid scalability and hybrid cloud workloads with policy-based management, API-enabled automation, and hardware abstraction. Table 1 lists the features and benefits of Cisco Integrated System for Microsoft Azure Stack.

Table 1. Features and benefits of Cisco Integrated System for Microsoft Azure Stack

Feature	Benefit
The power of Microsoft Azure in your data center	Hybrid cloud agility for Microsoft Azure services enables on-premises governance, security, and performance. Developers can create an agile Microsoft PaaS environment with API portability and identical user interface to the Azure public cloud.
No single points of failure	Commodity system designs use a single BMC switch and system management server. Cisco embeds the BMC capability in its servers and fabric interconnects. Cisco UCS Manager runs on a pair of fabric interconnects, avoiding the need to invest in an HLH.
Maximized performance within the cluster	Incorporating NVMe Peripheral Component Interconnect (PCI) cards with the server nodes and 40 GE from the Network Interface Card (NIC) through the ToR switch, we can position your organization to maximize the performance of each cluster and allow for future growth and virtual machine density. Cisco offers the option of all-flash storage to further maximize performance.
Your data center standards used for best benefit	Cisco Nexus networking switches and technology extend your networking standard to the Azure Stack. Our system is installed in your system racks.
Automated installation scripts	Service profile templates automate the complete setup of your system. These templates reduce setup time from hours to minutes and incorporate best practices.
Microsoft Azure Stack on the system designed for cloud: Cisco UCS	The solution is built for rapid scalability and hybrid cloud workloads with policy-based management, API-enabled automation, and hardware abstraction. Proven operational advantages are proven, with 40 percent faster infrastructure deployment and 38 percent reduction in ongoing management costs compared to conventional server infrastructure.

Cloud-ready, integrated system for Microsoft Azure Stack

Cisco Integrated System for Microsoft Azure Stack delivers accelerated growth and innovation, simplified management and control, and earned confidence and trust, all backed by two trusted technology innovators.

- **Single-vendor source:** All major system components are designed, developed, manufactured by Cisco. Controlling the product roadmaps and management interface points provides long-term confidence.
- **Systems management:** Cisco UCS Manager is embedded within the fabric interconnect. A separate systems management server is not required, saving you money, space, and power in your data center.
- **Freedom of choice for Azure Services:** Purchase direct from Microsoft or through a Microsoft Cloud Service Partner.
- **Ease of scalability:** With the Microsoft support node addition coming in future releases, you can use Cisco UCS Manager to add a system node to a cluster without professional services assistance.
- **Proven operational advantages:** Infrastructure deployment is 40 percent faster and ongoing management costs are reduced by 38 percent compared to conventional server infrastructure.

Table 2 provides information about system components.

Table 2. System components

Product family	Platforms supported	Cisco IOS® Feature Sets (images) supported
UCS	C240 M4L (hybrid storage)	Choice of processors from 12 to 22 cores E5-2650v4 E5-2660v4 E5-2683v4 E5-2695v4 E5-2698v4 E5-2699v4 Choice of memory per node: 256 GB, 512 GB, or 768 GB Each server has 64 TB storage capacity
	C240 M5sx (all-flash storage)	Choice of scalable processors from 12 to 28 cores 2.3 GHz 5118/105W 12C/16.50 MB Cache/DDR4 2400MHz 2.2 GHz 5120/105W 14C/19.25 MB Cache/DDR4 2400MHz 2.1 GHz 6130/125W 16C/22 MB Cache/DDR4 2666MHz 2.3 GHz 6140/140W 18C/24.75 MB Cache/DDR4 2666MHz 2.4 GHz 6148/150W 20C/27.50 MB Cache/DDR4 2666MHz 2.1 GHz 6152/140W 22C/30.25 MB Cache/DDR4 2666MHz 2.1 GHz 8160/150W 24C/33 MB Cache/DDR4 2666MHz 2.0 GHz 8164/150W 26C/35.75 MB Cache/DDR4 2666MHz 2.1 GHz 8176/165W 28C/38.50 MB Cache/DDR4 2666 MHz 2.6 GHz 6142M/150W 16C/22MB Cache/DDR4 2666 MHz 2.3 GHz 6140M/140W 18C/24.75MB Cache/DDR4 2666 MHz 2.1 GHz 8160M/150W 24C/33MB Cache/DDR4 2666 MHz 2.1 GHz 8170M/165W 26C/35.75MB Cache/DDR4 2666 MHz 2.1 GHz 8176M/165W 28C/38.50MB Cache/DDR4 2666 MHz Choice of memory per node: 384 GB, 512GB, 768GB, 1024GB, 1536 GB Choice of 30 TB, 45 TB, or 60 TB all-flash storage per node
NEXUS 9000 switch	93180LC-EX	
Cisco UCS fabric interconnect	UCS-MAFI-6332	UCS fabric interconnect which supports UCS Manager to manage your system and its workloads

System requirements

Table 3 lists the system requirements.

Table 3. System requirements

C240 M4L or C240 M5sx Server	Any increment from a minimum of 4 to a maximum of 12 (cannot mix models)
93180LC-EX Nexus 9000 switch	2 (included in the fixed bill of materials)
FMSFI – 6332 Gen 3 fabric interconnect	2 (included in the fixed bill of materials)
Onsite installation	Included

Ordering information

Table 4 provides the ordering information.

Table 4. Ordering information

Part #	Product description
Fixed Bill of Materials	Ordering is easy. Simply choose the number of server nodes (4–12), pick one of six processors, and one of three memory levels. The ordering system ensures that all nodes have the same configuration and automatically adds in all other system elements to complete your Cisco Integrated System for Microsoft Azure Stack.

Cisco and partner services for Azure Stack

Services and support are provided through Cisco and our authorized installation partners. Cisco provides all support through a coordinated resolution-and-escalation process codeveloped with Microsoft. Services from Cisco and certified partners can assist you on your cloud journey with planning and design services that align technology with business goals and can increase the accuracy, speed, and efficiency of your deployment.

Cisco Capital

Financing to help you achieve your objectives

Cisco Capital can help you acquire the technology you need to achieve your objectives and stay competitive. We can help you reduce CapEx. Accelerate your growth. Optimize your investment dollars and ROI. Cisco Capital financing gives you flexibility in acquiring hardware, software, services, and complementary third-party equipment. And there's just one predictable payment. Cisco Capital is available in more than 100 countries. [Learn more.](#)

Get started now

Start accelerating your business growth and innovation through the power of a hybrid cloud with Cisco Integrated System for Microsoft Azure Stack in your data center. Gain the benefits of Microsoft Azure Stack with a cloud-ready infrastructure solution designed for rapid scalability and cloud-native applications. Use the Cisco ONE™ Enterprise Cloud Suite Cloud Management package to automate deployment and management of applications across 20 hybrid cloud environments, including Microsoft Azure Stack and Microsoft Azure.

For more information

Visit <https://www.cisco.com/go/microsoft-azure-stack>.




Americas Headquarters
Cisco Systems, Inc.
San Jose, CA

Asia Pacific Headquarters
Cisco Systems (USA) Pte. Ltd.
Singapore

Europe Headquarters
Cisco Systems International BV Amsterdam,
The Netherlands

Cisco has more than 200 offices worldwide. Addresses, phone numbers, and fax numbers are listed on the Cisco Website at <https://www.cisco.com/go/offices>.

 Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <https://www.cisco.com/go/trademarks>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1110R)