



Cisco Compute Hyperconverged with Nutanix

HCIAF220C M6 All-NVMe/All-Flash Server

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<https://www.cisco.com/c/en/us/products/hyperconverged-infrastructure/compute-hyperconverged/datasheet-listing.html>



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OVERVIEW

Cisco Compute Hyperconverged with Nutanix is a hyperconverged infrastructure solution integrating Cisco's best-in-class compute (Cisco Unified Computing System), datacenter networking, and SaaS infrastructure management platform (Cisco Intersight) with Nutanix's market-leading hyperconverged storage software, Nutanix Cloud Platform.

The Cisco Compute Hyperconverged with Nutanix family of appliances delivers pre-configured UCS servers that are ready to be deployed as nodes to form Nutanix clusters in a variety of configurations. Each server appliance contains three software layers: UCS server firmware, hypervisor (Nutanix AHV), and hyperconverged storage software (Nutanix AOS).

Physically, nodes are deployed into clusters, with a cluster consisting of Cisco Compute Hyperconverged All-Flash Servers. Clusters support a variety of workloads like virtual desktops, general-purpose server virtual machines in edge, data center and mission-critical high-performance environments.

The HClAF220C M6 All-NVMe/All-Flash Server extends the capabilities of Cisco's Compute Hyperconverged portfolio in a 1U form factor with the 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake), 16 DIMM slots per CPU for 3200-MHz DDR4 DIMMs with DIMM capacity points up to 128GB.

Cluster Scale:

Nutanix clusters can be scaled out to the max cluster server limit documented by Nutanix. The minimum depends on the management mode.

Drives

There are two server to choose from:

- **HClAF220C-M6SN (All-NVMe)** (see [Figure 1 on page 4](#)):
 - Up to 10 front NVMe SSDs (only).
- **HClAF220C-M6S (All-Flash)** (see [Figure 1 on page 4](#)):
 - Up to 10 front SFF SAS/SATA SSDs

These servers can be interconnected and managed in two different ways:

UCS Managed mode: The nodes are connected to a pair of Cisco UCS® 6400 Series or a pair of Cisco UCS 6500 Series fabric interconnects and managed as a single system using UCS Manager. The minimum number of nodes in such a cluster is three. These clusters can support both general-purpose deployments and mission-critical high-performance environments.



NOTE: One-node and two-node clusters are not supported with this solution.

Intersight Standalone mode: The nodes are connected to a pair of Top-of-Rack (ToR) switches and servers are centrally managed using Cisco Intersight®. While a minimum of three nodes are required to deploy a standard Nutanix cluster, we also offer an option to deploy a single node cluster and a two-node cluster for Edge and branch locations and situations that already have a high-performance network fabric installed. Refer to Nutanix documentation on [single node](#).

See [Figure 1 on page 4](#) for front and rear views of the HClAF220C M6 All-NVMe/All-Flash Server.

Figure 1 HClAF220C M6 All-NVMe/All-Flash Server

HClAF220C-M6SN (All-NVMe)

10 front drives are All-NVMe (only) drives

Front View (see [Figure 2 on page 5](#) for details)



HClAF220C-M6S (All-Flash)

10 front drives are SAS/SATA SDDs drives

Front View (see [Figure 3 on page 6](#) for details)



Rear View (one half-height riser version) (see [Figure 4 on page 8](#) for details)



Rear View (three half-height riser version) (see [Figure 5 on page 9](#) for details)



Rear View (two full-height riser version) (see [Figure 6 on page 10](#) for details)

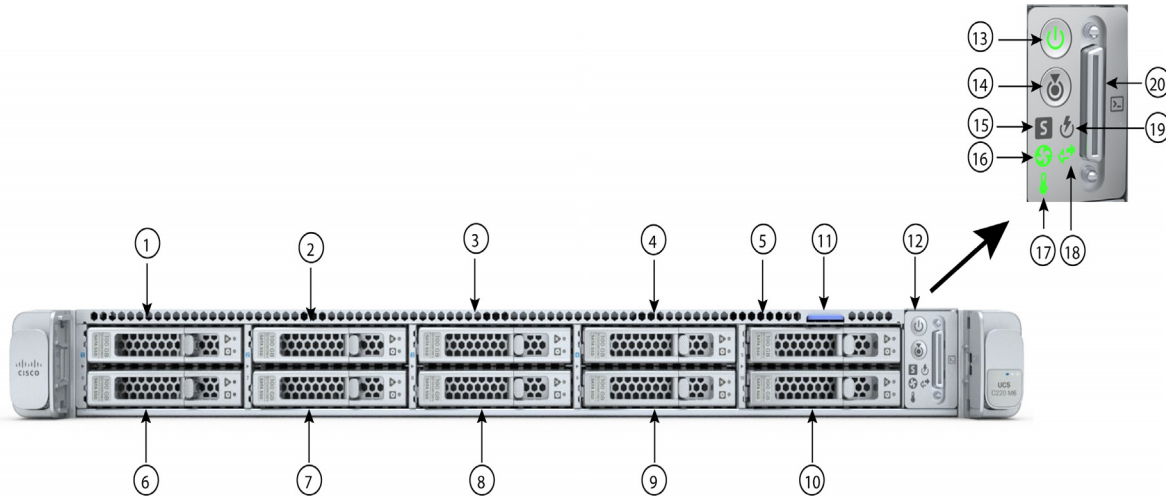


DETAILED VIEWS

Chassis Front View - HClAF220C-M6SN (All-NVMe)

Figure 2 shows the front view of the HClAF220C-M6SN (All-NVMe) server node.

Figure 2 Chassis Front View

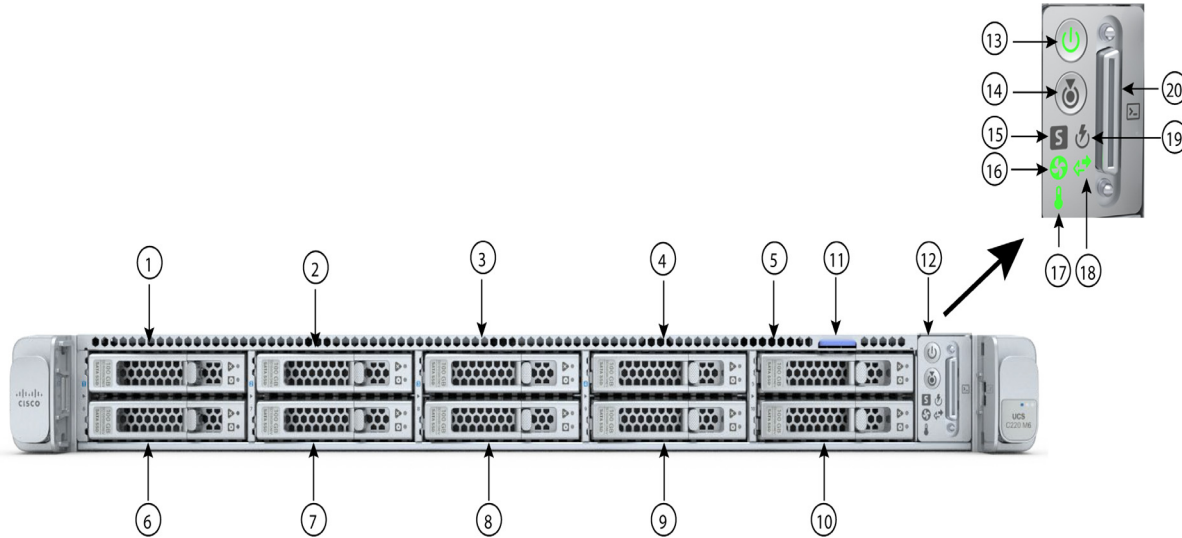


1 - 10	Drive bays 1 - 10 support NVMe PCIe drives (only)	16	Fan status LED
11	Asset tag location	17	Temperature status LED
12	Control panel	18	Network link activity LED
13	Power button/power status LED	19	Power supply status LED
14	Unit Identification button/LED	20	KVM connector (used with KVM cable that provides two USB 2.0, one VGA, and one serial connector)
15	System status LED	-	-

Chassis Front View - HCIAF220C-M6S (All-Flash)

Figure 2 shows the front view of the HCIAF220C-M6S (All-Flash) server node.

Figure 3 Chassis Front View



1 - 10	Drive bays 1 - 10 support SAS/SATA solid state drives (SSDs) ¹	16	Fan status LED
11	Asset tag location	17	Temperature status LED
12	Control panel	18	Network link activity LED
13	Power button/power status LED	19	Power supply status LED
14	Unit Identification button/LED	20	KVM connector (used with KVM cable that provides two USB 2.0, one VGA, and one serial connector)
15	System status LED	-	-

Notes:

1. NVMe + SSD configuration is not supported.

Detailed Chassis Rear Views

Figure 4 shows the details of the rear panel for the HCIAF220C M6 All-NVMe/All-Flash Server with one rear half-height PCIe riser.

Figure 5 shows the details of the rear panel for the HCIAF220C M6 All-NVMe/All-Flash Server with three rear half-height PCIe risers.

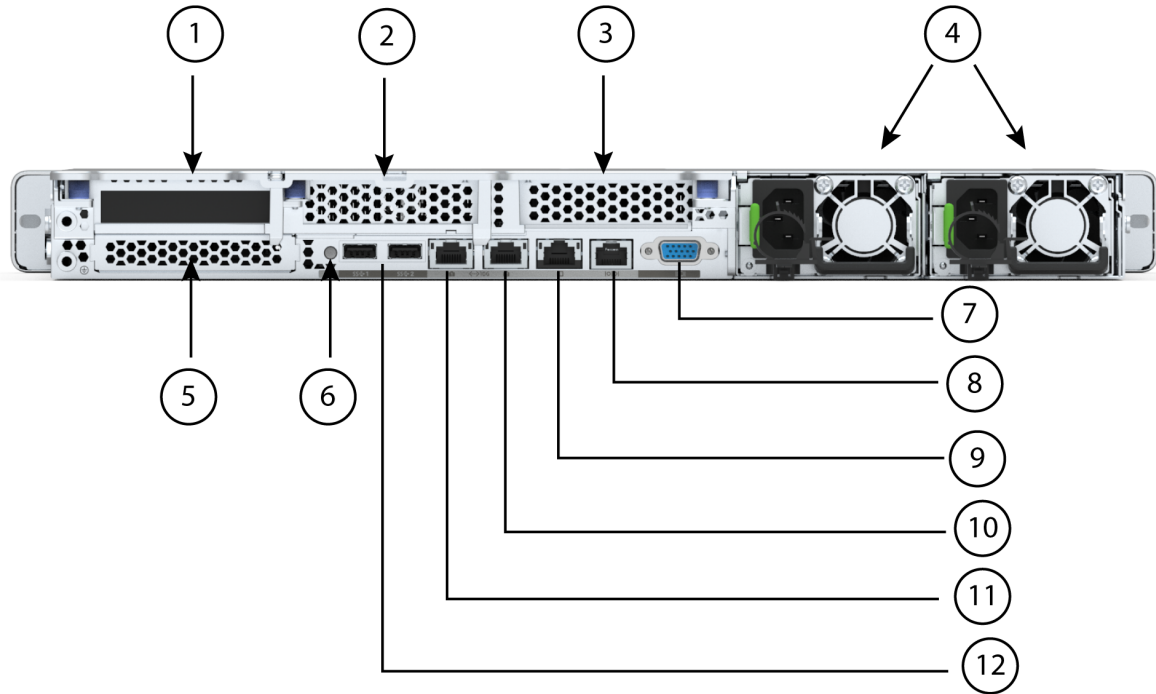
Figure 6 shows the details of the rear panel for the HCIAF220C M6 All-NVMe/All-Flash Server with two rear full-height PCIe risers.

One Half-Height Riser



NOTE: By default, 1-CPU server comes with only one half-height riser 1 installed. 2-CPU servers support all three half-height risers.

Figure 4 Chassis Rear View (one half-height, 3/4 length PCIe riser)



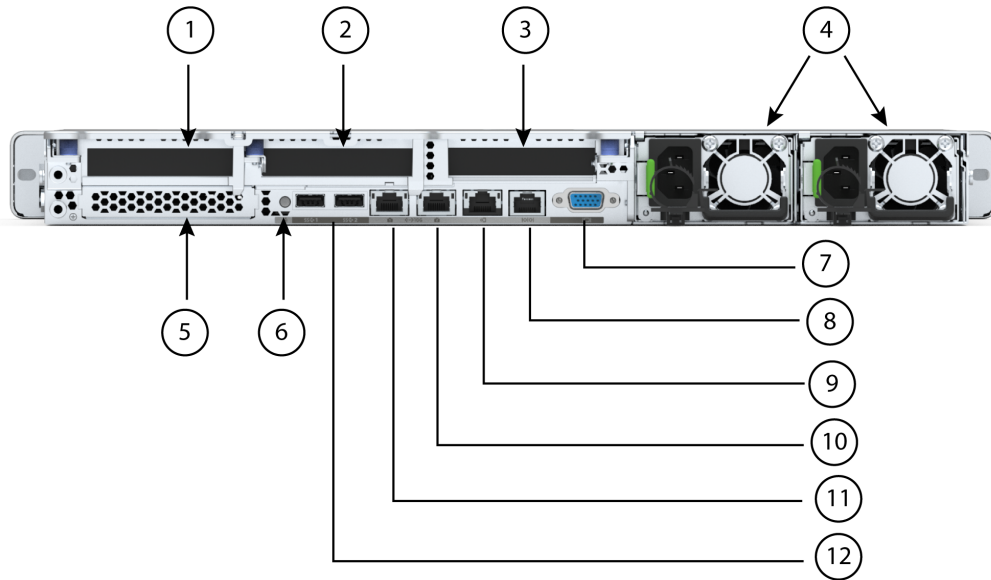
1	Riser 1 (CPU1 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot ■ Slot 1 is half-height, 3/4 length, x16 	7	VGA display port (DB15 connector)
2	Riser 2 blanking panel	8	COM port (RJ45 connector)
3	Riser 3 blanking panel	9	1GBE dedicated Ethernet management port
4	Power supplies (two, redundant as 1+1)	10 - 11	Dual 1/10GBE Ethernet ports (LAN1, LAN2) LAN1 is left connector, LAN2 is right connector
5	Modular LAN on motherboard (mLOM)	12	USB 3.0 ports (two)
6	System ID pushbutton/LED	-	-

Three Half-Height Risers



NOTE: Only 2-CPU server support all three half-height risers.

Figure 5 Chassis Rear View (three half-height, 3/4 length PCIe risers)



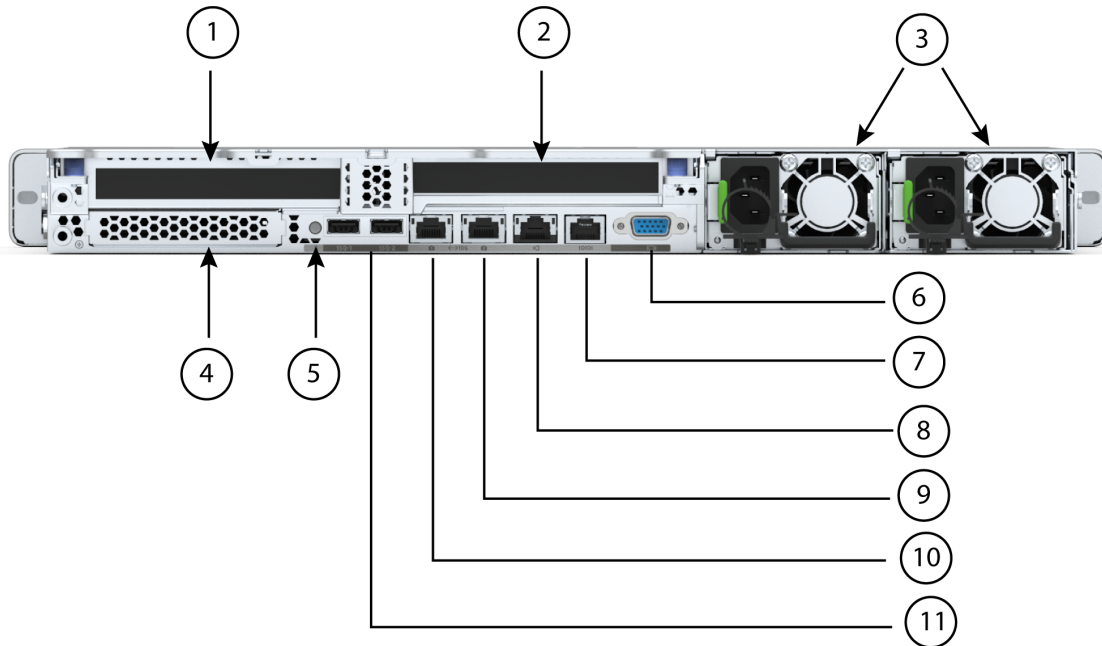
1	Riser 1 (CPU1 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 1) ■ Slot 1 is half-height, 3/4 length, x16 	7	VGA display port (DB15 connector)
2	Riser 2 (CPU1 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 2) ■ Slot 2 is half-height, 3/4 length, x16 	8	COM port (RJ45 connector)
3	Riser 3 (CPU2 control) <ul style="list-style-type: none"> ■ Supports one PCIe slot (slot 3) ■ Slot 3 is half-height, 3/4 length, x16 	9	1GBE dedicated Ethernet management port
4	Power supplies (two, redundant as 1+1)	10 - 11	Dual 1/10GBE Ethernet ports (LAN1, LAN2) LAN1 is left connector, LAN2 is right connector
5	Modular LAN on motherboard (mLOM)	12	USB 3.0 ports (two)
6	System ID pushbutton/LED	-	-

Two Full-Height Risers



NOTE: 1-CPU server support only full-height riser 1 while 2-CPU server support both full-height risers.

Figure 6 Chassis Rear View (two full-height, 3/4-length PCIe risers)



1	Riser 1 (CPU1 control) <ul style="list-style-type: none"> Plugs into riser 1 motherboard connector Full-height, 3/4 length, x16 	6	VGA display port (DB15 connector)
2	Riser 2 (CPU2 control) <ul style="list-style-type: none"> Plugs into riser 3 motherboard connector Full-height, 3/4 length, x16 	7	COM port (RJ45 connector)
3	Power supplies (two, redundant as 1+1)	8	1GBE dedicated Ethernet management port
4	Modular LAN on motherboard (mLOM)	9 - 10	Dual 1/10GBE Ethernet ports (LAN1, LAN2) LAN1 is left connector, LAN2 is right connector
5	System ID pushbutton/LED	11	USB 3.0 ports (two)

BASE SERVER NODE STANDARD CAPABILITIES and FEATURES

Table 1 lists the capabilities and features of the base server node. Details about how to configure the server for a particular feature or capability (for example, number of processors, disk drives, or amount of memory) are provided in *CONFIGURING the SERVER, page 14*.

Table 1 Capabilities and Features

Capability/Feature	Description
Chassis	One rack unit (1RU) chassis
CPU	One or two 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake) ¹
Chipset	Intel® C621A series chipset
Memory	32 slots for registered DIMMs (RDIMMs) or load-reduced DIMMs (LRDIMMs)
Multi-bit Error Protection	This server supports multi-bit error protection.
Video	<p>The Cisco Integrated Management Controller (CIMC) provides video using the Matrox G200e video/graphics controller:</p> <ul style="list-style-type: none"> ■ Integrated 2D graphics core with hardware acceleration ■ Embedded DDR memory interface supports up to 512 MB of addressable memory (8 MB is allocated by default to video memory) ■ Supports display resolutions up to 1920 x 1200 16bpp @ 60Hz ■ High-speed integrated 24-bit RAMDAC ■ Single lane PCI-Express host interface running at Gen 1 speed
Power subsystem	<p>Up to two of the following hot-swappable power supplies:</p> <ul style="list-style-type: none"> ■ 1050 W (AC) ■ 1050 W (DC) ■ 1600 W (AC) ■ 2300 W (AC) <p>One power supply is mandatory; one more can be added for 1 + 1 redundancy.</p>
Front Panel	A front panel controller provides status indications and control buttons
ACPI	This server supports the advanced configuration and power interface (ACPI) 6.2 standard.
Fans	Eight hot-swappable fans for front-to-rear cooling

Table 1 Capabilities and Features (continued)

Capability/Feature	Description
Expansion slots	<p>Three half-height riser slots</p> <ul style="list-style-type: none"> ■ Riser 1 (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), half-height, 3/4 length ■ Riser 2 (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, half-height, 3/4 length ■ Riser 3 (controlled by CPU 2): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), half-height, 3/4 length <p>Two full-height riser slots</p> <ul style="list-style-type: none"> ■ Riser 1 (controlled by CPU 1): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), full-height, 3/4 length ■ Riser 2² (controlled by CPU 2): <ul style="list-style-type: none"> • One x16 PCIe Gen4 Slot, (Cisco VIC), full-height, 3/4 length
Interfaces	<ul style="list-style-type: none"> ■ Rear panel <ul style="list-style-type: none"> • One 1Gbase-T RJ-45 management port • Two 10Gbase-T LOM ports • One RS-232 serial port (RJ45 connector) • One DB15 VGA connector • Two USB 3.0 port connectors • One flexible modular LAN on motherboard (mLOM) slot that can accommodate various interface cards ■ Front panel <ul style="list-style-type: none"> • One KVM console connector (supplies two USB 2.0 connectors, one VGA DB15 video connector, and one serial port (RS232) RJ45 connector)
Internal storage devices	<p><u>Drive storage:</u></p> <p>Two different storage configurations are orderable:</p> <p>HCIAF220C-M6SN (All-NVMe):</p> <ul style="list-style-type: none"> ■ Two to ten NVMe SSD <p>HCIAF220C-M6S (All-Flash):</p> <ul style="list-style-type: none"> ■ Two to ten SAS/SATA SSD or two to ten SED SAS/SATA SSD
Integrated management processor	<p>Baseboard Management Controller (BMC) running Cisco Integrated Management Controller (CIMC) firmware.</p> <p>Depending on your CIMC settings, the CIMC can be accessed through the 1GE dedicated management port, the 1GE/10GE LOM ports, or a Cisco virtual interface card (VIC).</p> <p>CIMC manages certain components within the server, such as the Cisco 12G SAS HBA, when installed.</p>

Table 1 Capabilities and Features (*continued*)

Capability/Feature	Description
Storage controllers	<ul style="list-style-type: none"> ■ Cisco 12G SAS HBA (for All-Flash servers): <ul style="list-style-type: none"> • No RAID support • JBOD/Pass-through Mode support • Supports up to 10 SAS/SATA internal drives
Modular LAN on Motherboard (mLOM)	<p>The dedicated mLOM slot on the motherboard can flexibly accommodate the following cards:</p> <ul style="list-style-type: none"> ■ Cisco Virtual Interface Cards
Intersight	Intersight provides server management capabilities
CIMC	Cisco Integrated Management Controller 4.2(3g) or later

Notes:

1. If NVMe drives are selected, you must also select 2 CPUs.
2. There are three PCIe riser connectors on the motherboard: they are labeled Riser 1, Riser 2, and Riser 3. If the server is configured with three half-height risers, Riser 1 plugs into Riser 1 connector, Riser 2 plugs into Riser 2 connector, and Riser 3 plugs into Riser 3 connector. If the server is configured with two full-height connectors, Riser 1 plugs into Riser 1 connector and Riser 2 plugs into Riser 3 connector. See [Risers, page 106](#) for more details.

CONFIGURING the SERVER

Follow these steps to configure the HClAF220C M6 All-NVMe/All-Flash Server:

- *STEP 1 VERIFY SERVER SKU, page 15*
- *STEP 2 SELECT MANAGMENT MODE (REQUIRED), page 16*
- *STEP 3 SELECT RISERS, page 17*
- *STEP 4 SELECT CPU(s), page 18*
- *STEP 5 SELECT MEMORY, page 22*
- *STEP 6 SELECT DRIVE CONTROLLERS, page 27*
- *STEP 7 SELECT DRIVES, page 28*
- *STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY (REQUIRED), page 32*
- *STEP 9 SELECT PCIe CARDS (OPTIONAL FOR FI MANAGED MODE), page 34*
- *STEP 10 ORDER GPU CARDS (OPTIONAL), page 37*
- *STEP 11 ORDER POWER SUPPLY, page 38*
- *STEP 12 SELECT INPUT POWER CORD(s), page 39*
- *STEP 13 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM, page 43*
- *STEP 14 ORDER SECURITY DEVICES (OPTIONAL), page 44*
- *STEP 15 SELECT HYPERVISOR, page 45*
- *STEP 16 SELECT NUTANIX SOFTWARE AND NUTANIX PROFESSIONAL SERVICES, page 46*
- *STEP 17 CISCO INTERSIGHT, page 97*

STEP 1 VERIFY SERVER SKU

Table 2 PID of Major Line Bundle (MLB)

Product ID (PID)	Description
HCI-M6-MLB	Cisco Compute Hyperconverged M6 with Nutanix MLB This major line bundle (MLB) consists of the Cisco Compute Hyperconverged Server, with Intersight and Nutanix software PIDs.

Verify the product ID (PID) of the server node as shown in [Table 3](#).

Table 3 PID of the HCIAF220C M6 All-NVMe/All-Flash Server Nodes

Product ID (PID)	Description
HCIAF220C-M6SN ¹ (All-NVMe)	Cisco Compute Hyperconverged HCIAF220cM6 All-NVMe server
HCIAF220C-M6S ¹ (All-Flash)	Cisco Compute Hyperconverged HCIAF220cM6 All-Flash server

Notes:

1. This product may not be purchased outside of the approved bundles (must be ordered under the MLB).

The HCIAF220C M6 All-NVMe/All-Flash Server do not include power supplies, CPUs, DIMM memory, solid-state drives (SSDs), NVMe drives, riser 1, riser 2, riser 3, tool-less rail kit, or option cards.



NOTE: Use the steps on the following pages to configure the server with the components that you want to include.

STEP 2 SELECT MANAGEMENT MODE (REQUIRED)

The available management modes are listed in [Table 4](#).

Table 4 Management Modes

Product ID (PID)	Description
HCI-FI-MANAGED	Deployment mode for Server Managed by FI
HCI-IS-MANAGED	Deployment mode for Standalone Server Managed by Intersight



NOTE:

HCI Data Center with Fabric Interconnect:

- This deployment option connects the server to Cisco Fabric Interconnects operating in UCS Manager mode. The installation for this type of deployment is performed using the Nutanix Foundation VM.
- IMC standalone and Intersight Managed modes are not currently supported with this solution and UCS Manager with FIs must be used.
- UCS 4th Gen and 5th Gen fabric interconnects (6454, 64108, 6536) are supported with this solution.
- If this deployment mode is selected, then HCI-MLOM from HCI Connectivity Mode must be selected from [STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY \(REQUIRED\), page 32](#) and additional cards should be selected from [STEP 9 SELECT PCIe CARDS \(OPTIONAL FOR FI MANAGED MODE\), page 34](#).

HCI with Intersight Standalone:

- This deployment option allows server nodes to be directly connected to existing Top of Rack (ToR) switches without the need for a pair of UCS Fabric Interconnects. The installation for this type of deployment must need Prism Central and Intersight.
- If this deployment mode is selected, then either HCI-MLOM or HCI-PCIE Connectivity Mode is must be selected from [STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY \(REQUIRED\), page 32](#)

STEP 3 SELECT RISERS

The riser PIDs are listed in [Table 5](#). Full-height risers cannot be mixed with half-height risers.

Table 5 PIDs of the Risers and Riser Blanks

Product ID (PID)	Description
Included by default (no PID)	Half-height riser 1 (controlled by CPU1) <ul style="list-style-type: none"> ■ One x16 PCIe Gen4 riser, standard PCIe, supports Cisco VIC, half-height, 3/4 length
UCSC-R2R3-C220M6	Kit containing two half-height risers (risers 2 and 3): <ul style="list-style-type: none"> ■ Riser 2: One x16 PCIe Gen4 riser, half-height, 3/4 length ■ Riser 3: One x16 PCIe Gen4 riser, supports Cisco VIC, half-height, 3/4 length
HCI-GPURKIT-C220	Kit containing a GPU mounting bracket and the following risers (risers 1 and 2): <ul style="list-style-type: none"> ■ Riser 1: One x16 PCIe Gen4 riser, supports Cisco VIC, full-height, 3/4 length ■ Riser 2: One x16 PCIe Gen4 riser, supports Cisco VIC, full-height, 3/4 length
UCSC-FBRS-C220M6	Riser 2 and Riser 3 blank panels



NOTE:

- If you do not order any risers, the system defaults to automatically include the one half-height riser shown in the table.
- If you order PID UCSC-R2R3-C220M6, the system includes three half-height risers (riser 1, riser 2, and riser 3).
- If you order PID HCI-GPURKIT-C220, the system includes two full-height risers (riser 1 and riser 2)

Approved Configurations

- (1) Half-height riser 1 only (controlled from CPU1). This is the default and is automatically included.
- (2) Half-height risers 1, 2, and 3 only. Risers 1 and 2 are controlled from CPU1 and Riser 3 is controlled from CPU2
- (3) Full-height risers 1 and 2 only. Riser 1 is controlled from CPU1 and riser 2 is controlled from CPU2.

STEP 4 SELECT CPU(s)

The standard CPU features are:

- 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake)
- Intel® C621 series chipset
- Cache size of up to 60 MB
- Up to 40 cores

Select CPUs

The available CPUs are listed in [Table 6](#).

Table 6 Available CPUs

Product ID (PID)	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Cores	UPI ¹ Links (GT/s)	Highest DDR4 DIMM Clock Support (MHz) ²
8000 Series Processors						
HCI-CPU-I8380	2.3	270	60	40	3 at 11.2	3200
HCI-CPU-I8368	2.4	270	57	38	3 at 11.2	3200
HCI-CPU-I8362	2.8	265	48	32	3 at 11.2	3200
HCI-CPU-I8360Y	2.4	250	54	36	3 at 11.2	3200
HCI-CPU-I8358P	2.6	240	48	32	3 at 11.2	3200
HCI-CPU-I8358	2.6	250	48	32	3 at 11.2	3200
HCI-CPU-I8352Y	2.2	205	48	32	3 at 11.2	3200
HCI-CPU-I8352V	2.1	195	54	36	3 at 11.2	2933
HCI-CPU-I8352M	2.3	185	48	32	3 at 11.2	2933
HCI-CPU-I8352S	2.2	205	48	32	3 at 11.2	3200
HCI-CPU-I8351N ³	2.4	225	54	36	0	2933
6000 Series Processors						
HCI-CPU-I6354	3.0	205	39	18	3 at 11.2	3200
HCI-CPU-I6348	2.6	235	42	28	3 at 11.2	3200
HCI-CPU-I6346	3.1	205	36	16	3 at 11.2	3200
HCI-CPU-I6342	2.8	230	36	24	3 at 11.2	3200
HCI-CPU-I6338N	2.2	185	48	32	3 at 11.2	2666
HCI-CPU-I6338T	2.1	165	36	24	3 at 11.2	3200
HCI-CPU-I6338	2.0	205	48	32	3 at 11.2	3200
HCI-CPU-I6336Y	2.4	185	36	24	3 at 11.2	3200
HCI-CPU-I6334	3.6	165	18	8	3 at 11.2	3200
HCI-CPU-I6330N	2.2	165	42	28	3 at 11.2	2666
HCI-CPU-I6330	2.0	205	42	28	3 at 11.2	2933
HCI-CPU-I6326	2.9	185	24	16	3 at 11.2	3200

Table 6 Available CPUs

Product ID (PID)	Clock Freq (GHz)	Power (W)	Cache Size (MB)	Cores	UPI ¹ Links (GT/s)	Highest DDR4 DIMM Clock Support (MHz) ²
HCI-CPU-I6314U ⁴	2.3	205	48	32	0	3200
HCI-CPU-I6312U ⁵	2.4	185	36	24	0	3200
5000 Series Processors						
HCI-CPU-I5320T	2.3	150	30	20	3 at 11.2	2933
HCI-CPU-I5320	2.2	185	39	26	3 at 11.2	2933
HCI-CPU-I5318N	2.1	150	36	24	3 at 11.2	2666
HCI-CPU-I5318S	2.1	165	36	24	3 at 11.2	2933
HCI-CPU-I5318Y	2.1	165	36	24	3 at 11.2	2933
HCI-CPU-I5317	3.0	150	18	12	3 at 11.2	2933
HCI-CPU-I5315Y	3.2	140	12	8	3 at 11.2	2933
4000 Series Processors						
HCI-CPU-I4316	2.3	150	30	20	2 at 10.4	2666
HCI-CPU-I4314	2.4	135	24	16	2 at 10.4	2666
HCI-CPU-I4310T	2.3	105	15	10	2 at 10.4	2666
HCI-CPU-I4310	2.1	120	18	12	2 at 10.4	2666
HCI-CPU-I4309Y	2.8	105	12	8	2 at 10.4	2666

Notes:

1. UPI = Ultra Path Interconnect.
2. If higher or lower speed DIMMs are selected than what is shown in [Table 8 on page 23](#) for a given CPU speed, the DIMMs will be clocked at the lowest common denominator of CPU clock and DIMM clock.
3. The maximum number of HCI-CPU-I8351N CPUs is one
4. The maximum number of HCI-CPU-I6314U CPUs is one
5. The maximum number of HCI-CPU-I6312U CPUs is one



CAUTION: For systems configured with 3rd Gen Intel® Xeon® Scalable Processors (Ice Lake) processors operating above 28° C [82.4° F], a fan fault or executing workloads with extensive use of heavy instructions sets such as Intel® Advanced Vector Extensions 512 (Intel® AVX-512), may assert thermal and/or performance faults with an associated event recorded in the System Event Log (SEL).

Table 7 CPU Suffixes

CPU Suffix	Description	Features
N	Networking Optimized	Optimized for use in networking applications like L3 forwarding, 5G UPF, OVS DPDK, VPP FIB router, VPP IPsec, web server/NGINX, vEPC, vBNG, and vCMTS. SKUs have higher base frequency with lower TDPs to enable best performance/Watt
P	Cloud Optimized	SKU specifically designed for cloud IaaS environments to deliver higher frequencies at constrained TDPs
V	Cloud Optimized	SKUs specifically designed for cloud environments to deliver high rack density and maximize VM/cores per TCO\$
T	High T case	SKUs designed for Network Environment-Building System (NEBS) environments
U	1-socket Optimized	Optimized for targeted platforms adequately served by the cores, memory bandwidth and IO capacity available from a single processor
S	Max SGX enclave size	Supports Max SGX enclave size (512GB) to enhance and protect the most sensitive portions of a workload or service
M	Media and AI optimized	Media, AI and HPC Segment Optimized for lower TDP & higher frequencies delivering better perf/w
Y	Speed Select - Performance Profile	Intel® Speed Select Technology provides the ability to set a guaranteed base frequency for a specific number of cores, and assign this performance profile to a specific application/workload to guarantee performance requirements. It also provides the ability to configure settings during runtime and provide additional frequency profile configuration opportunities.

Approved Configurations

(1) For the HClAF220C-M6SN (All-NVMe) server node:

- Two-CPU Configuration
 - You must select two identical CPUs listed in [Table 6 Available CPUs, page 18](#).
 - For 2-CPU systems, the server is shipped:
 - With half-height risers 1, 2, and 3 by default, or
 - With full-height risers 1 and 2 if you order a non-T4 GPU with more than 75 W power dissipation.
 - Two CPUs are required with All-NVMe Servers.

(2) For the HClAF220C-M6S (All-Flash) server node:

- One-CPU Configuration
 - Choose one CPU from any one of the rows of [Table 6 Available CPUs, page 18](#).
 - For 1-CPU systems, the server is shipped by default with riser 1 only.
- Two-CPU Configuration
 - Choose two identical CPUs from any one of the rows of [Table 6 Available CPUs, page 18](#).
 - For 2-CPU systems, the server is shipped:
 - With half-height risers 1, 2, and 3 by default, or
 - With full-height risers 1 and 2 if you order a non-T4 GPU with more than 75 W power dissipation.

**NOTE:**

- You cannot have two I8351N or two I6314U or I6312U CPUs in a two-CPU configuration.
 - If you configure a server with one I8351N CPU or one I6314U CPU or one I6312U CPU you cannot later upgrade to a 2-CPU system with two of these CPUs.
-

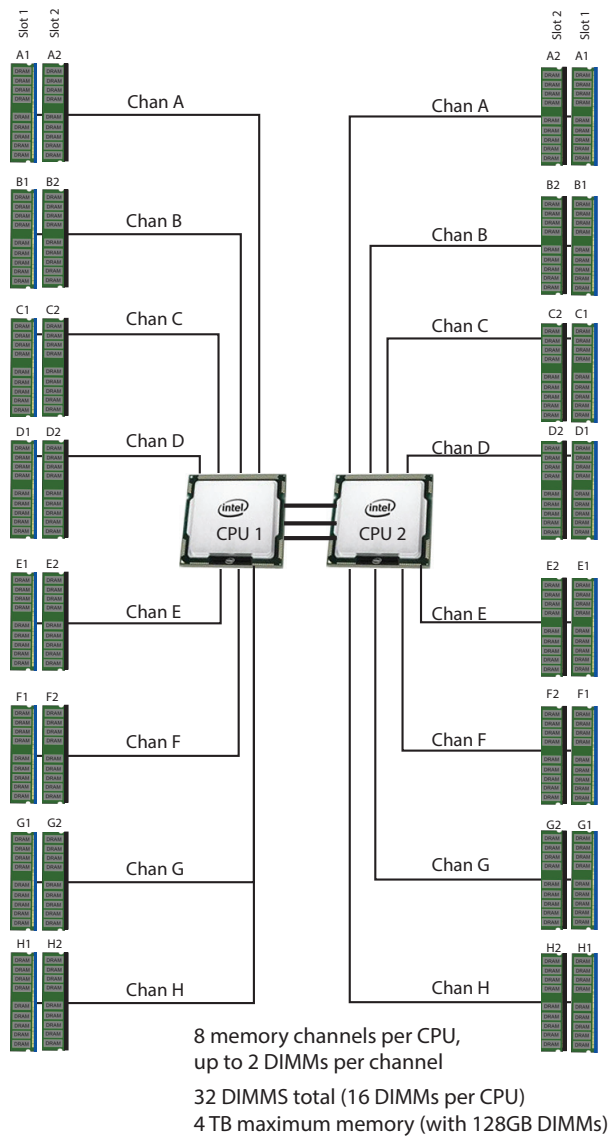
STEP 5 SELECT MEMORY

The available memory main characteristics for the HClAF220C M6 All-NVMe/All-Flash Server are as follows:

- Clock speed: 3200 MHz
- Ranks per DIMM: 1, 2, 4, or 8
- Operational voltage: 1.2 V
- Registered ECC DDR4 DIMMS (RDIMMs), Load-reduced DIMMS (LRDIMMs)

Memory is organized with eight memory channels per CPU, with up to two DIMMs per channel, as shown in [Figure 7](#).

Figure 7 HClAF220C M6 All-NVMe/All-Flash Server Memory Organization



DIMMs

The supported memory options are listed in [Table 8](#).

Table 8 Available DDR4 DIMMs

Product ID (PID)	PID Description	Voltage	Ranks /DIMM
3200-MHz DIMMs			
HCI-MR-X16G1RW	16GB RDIMM SRx4 3200 (8Gb)	1.2 V	1
HCI-MR-X32G1RW	32GB RDIMM SRx4 3200 (16Gb)	1.2 V	1
HCI-MR-X32G2RW	32GB RDIMM DRx4 3200 (8Gb)	1.2 V	2
HCI-MR-X64G2RW	64GB RDIMM DRx4 3200 (16Gb)	1.2 V	2
HCI-ML-128G4RW	128GB LRDIMM QRx4 3200 (16Gb) (non-3DS)	1.2 V	4
DIMM Blank¹			
UCS-DIMM-BLK	UCS DIMM Blank		

Notes:

1. Any empty DIMM slot must be populated with a DIMM blank to maintain proper cooling airflow.



NOTE:

- System performance is optimized when the DIMMs type and quantity are equal for both CPUs, and when all channels are filled equally across the CPUs in the server.
- The selected DIMMs must be all of same type and number of DIMMs must be equal for both CPUs.

Memory Configurations, Features, and Modes

System speed is dependent on the CPU DIMM speed support. Refer to [Available CPUs, page 18](#) for DIMM speeds.

- The server supports the following memory reliability, availability, and serviceability (RAS) BIOS options (only one option can be chosen):
 - Adaptive Double Device Data Correction (ADDDC) (default).
 - Maximum performance.
- For best performance, observe the following:
 - When one DIMM is used, it must be populated in DIMM slot 1 (farthest away from the CPU) of a given channel.
 - When single- or dual-rank DIMMs are populated in two DIMMs per channel (2DPC) configurations, always populate the higher number rank DIMM first (starting from the farthest slot). For a 2DPC example, first populate with dual-rank DIMMs in DIMM slot 1. Then populate single-rank DIMMs in DIMM 2 slot.
- DIMMs for CPU 1 and CPU 2 (when populated) must always be configured identically.
- Cisco memory from previous generation servers (DDR3 and DDR4) is not compatible with the server.
- Memory can be configured in any number of DIMMs as pairs, although for optimal performance, see the following document:
[UCS M6 Memory Guide](#)

Approved Configurations

(1) 1-CPU configuration:

- Select from 1 to 16 DIMMs
 - 1, 2, 4, 6, 8, 12, or 16 DIMMs allowed
 - 3, 5, 7, 9, 10, 11, 13, 14, 15 DIMMs not allowed
 - DIMMs for both CPUs must be configured identically.

The DIMMs will be placed by the factory as shown in the following tables.

#DIMMs	CPU 1 DIMM Placement in Channels (for identically ranked DIMMs)
1	(A1)
2	(A1, E1)
4	(A1, C1); (E1, G1)
6	(A1, C1); (D1, E1); (G1, H1)
8	(A1, C1); (D1, E1); (G1, H1); (B1, F1)
12	(A1, C1); (D1, E1); (G1, H1); (A2, C2); (D2, E2); (G2, H2)
16	(A1, B1); (C1, D1); (E1, F1); (G1, H1); (A2, B2); (C2, D2); (E2, F2); (G2, H2)

(2) 2-CPU configuration:

- Select from 1 to 16 DIMMs per CPU
 - 1, 2, 4, 6, 8, 12, or 16 DIMMs allowed
 - 3, 5, 7, 9, 10, 11, 13, 14, 15 DIMMs not allowed
 - DIMMs for both CPUs must be configured identically.

The DIMMs will be placed by the factory as shown in the following tables..

#DIMMs	CPU 1 DIMM Placement in Channels (for identically ranked DIMMs)	CPU 2 DIMM Placement in Channels (for identically ranked DIMMs)
1	(A1)	(A1)
2	(A1, E1)	(A1, E1)
4	(A1, C1); (E1, G1)	(A1, C1); (E1, G1)
6	(A1, C1); (D1, E1); (G1, H1)	(A1, C1); (D1, E1); (G1, H1)
8	(A1, C1); (D1, E1); (G1, H1); (B1, F1)	(A1, C1); (D1, E1); (G1, H1); (B1, F1)
12	(A1, C1); (D1, E1); (G1, H1); (A2, C2); (D2, E2); (G2, H2)	(A1, C1); (D1, E1); (G1, H1); (A2, C2); (D2, E2); (G2, H2)
16	(A1, B1); (C1, D1); (E1, F1); (G1, H1); (A2, B2); (C2, D2); (E2, F2); (G2, H2)	(A1, B1); (C1, D1); (E1, F1); (G1, H1); (A2, B2); (C2, D2); (E2, F2); (G2, H2)



NOTE: System performance is optimized when the DIMM type and quantity are equal for both CPUs, and when all channels are filled equally across the CPUs in the server.

Table 9 3200-MHz DIMM Memory Speeds with Different Intel® Xeon® Ice Lake® Processors

DIMM and CPU Frequencies (MHz)	DPC	LRDIMM (4Rx4)-128GB (MHz)	RDIMM (2Rx4) - 64GB (MHz)	RDIMM (2Rx4) - 32GB (MHz)	RDIMM (1Rx4) - 16GB (MHz)
		1.2 V	1.2 V	1.2 V	1.2 V
DIMM = 3200 CPU = 3200	1DPC	3200	3200	3200	3200
	2DPC	3200	3200	3200	3200
DIMM = 3200 CPU = 2933	1DPC	2933	2933	2933	2933
	2DPC	2933	2933	2933	2933
DIMM = 3200 CPU = 2666	1DPC	2666	2666	2666	2666
	2DPC	2666	2666	2666	2666

DIMM Rules

- Allowed DIMM count for 1 CPU:
 - Minimum DIMM count = 1; Maximum DIMM count = 16
 - 1, 2, 4, 6, 8, 12, or 16 DIMMs allowed.
 - 3, 5, 7, 9, 10, 11, 13, 14, or 15 DIMMs not allowed.
- Allowed DIMM count for 2 CPUs:
 - Minimum DIMM count = 2; Maximum DIMM count = 32
 - 2, 4, 8, 12, 16, 24, or 32 DIMMs allowed.
 - 6, 10, 14, 18, 20, 22, 26, 28, or 30 DIMMs not allowed.
- DIMM Mixing:
 - Mixing different types of DIMM (RDIMM with LRDIMM) is not supported within a server.
 - Mixing RDIMM with RDIMM types is allowed, if they are mixed in same quantities, in a balanced configuration.
 - Mixing 16GB, 32GB, and 64GB RDIMMs is supported.
 - 128GB LRDIMMs cannot be mixed with other RDIMMs.



NOTE: See the detailed mixing DIMM configurations at the following link [UCS M6 Memory Guide](#)

STEP 6 SELECT DRIVE CONTROLLERS

The following list summarizes how drives are controlled on the server:

- SAS/SATA drives are controlled through a Cisco 12G SAS pass-through HBA.
- PCIe drives are controlled directly from the CPUs.



NOTE: Drive Controllers are not supported in HClAF220C-M6SN (All-NVMe) server node.

Cisco 12G SAS HBA

This HBA supports up to 10 SAS or SATA drives operating at 3GBs, 6GBs, and 12GBs. It supports JBOD or pass-through mode (not RAID) and plugs directly into a dedicated slot.

Select Drive Controller Options

Select the following:

- Cisco 12G SAS HBA (see [Table 10](#)).

Table 10 Hardware Controller Options

Product ID (PID)	PID Description
Controllers for Internal Drives	
Note that if the following Cisco 12G SAS HBA is selected, it is factory-installed in a dedicated slot.	
HCI-SAS-220M6	Cisco 12G SAS HBA for (16 drives) w/1U Brkt <ul style="list-style-type: none"> ■ No RAID support ■ Supports up to 10 internal SAS/SATA SSDs ■ Supports JBOD or pass-through mode

Approved Configurations

- The Cisco 12G SAS HBA supports up to 10 internal drives with JBOD support.

STEP 7 SELECT DRIVES

The standard disk drive features are:

- 2.5-inch small form factor
- Hot-pluggable
- Drives come mounted in sleds

Select Drives - [HClAF220C-M6SN \(All-NVMe\)](#)

The available drives are listed in [Table 11](#).

Table 11 Available Hot-Pluggable Sled-Mounted Drives

Product ID (PID)	PID Description	Drive Type	Capacity
Front Capacity Drive			
HCI-NVMEI4I1920M6	1.9TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance	NVMe	1.9TB
HCI-NVME4-1920-M6	1.9TB 2.5in U.2 P5520 NVMe High Perf Medium Endurance	NVMe	1.9TB
HCI-NVMEI4I3840M6	3.8TB 2.5in U.2 Intel P5500 NVMe High Perf Medium Endurance	NVMe	3.8TB
HCI-NVME4-3840-M6	3.8TB 2.5in U.2 15mm P5520 Hg Perf Med End NVMe	NVMe	3.8TB
HCI-NVME-W7680M6	7.6TB 2.5in U.2 WD SN840 NVMe Extreme Perf. Value Endurance	NVMe	7.6TB
HCI-NVME4-7680-M6	7.6TB 2.5in U.2 P5520 NVMe High Perf Medium Endurance	NVMe	7.6TB
HCI-NVME-W15300M6	15.3TB 2.5in U.2 WD SN840 NVMe Extreme Perf. High Endurance	NVMe	15.3TB
HCI-NVME4-15360M6	15.3TB 2.5in U.2 P5520 NVMe High Perf Medium Endurance	NVMe	15.3TB
Boot Drives			
HCI-M2-240G-M6	240GB SATA M.2	SATA	240GB
HCI-M2-I240GB-M6	240GB M.2 SATA SSD	SATA	240GB
HCI-M2-HWRAID-M6	Cisco Boot optimized M.2 Raid controller		
<p>NOTE: Cisco uses solid state drives (SSDs) from a number of vendors. All solid state drives (SSDs) are subject to physical write limits and have varying maximum usage limitation specifications set by the manufacturer. Cisco will not replace any solid state drives (SSDs) that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco.</p>			

Approved Configurations

- Two to ten capacity drives
- Two boot drives with M.2 Raid controller.



NOTE:

- Dual M.2 SATA SSD with the HW RAID controller is the only supported boot configuration for this solution.
 - The Boot-Optimized RAID controller supports AHV and VMware Operating Systems.
 - UCSM is supported for configuring of volumes and monitoring of the controller and installed SATA M.2 drives.
 - The SATA M.2 drives can boot in UEFI mode only. Legacy boot mode is not supported.
 - Hot-plug replacement is not supported. The server must be powered off.
 - See [Figure 10 on page 105](#) for the location of the module connector on the motherboard. This connector accepts the boot-optimized RAID controller.
-

Caveats

SFF NVMe drives are connected directly to CPU2, and are not managed by any drive controller.

Select Drives - HClAF220C-M6S (All-Flash)

The available drives are listed in [Table 12](#)

Table 12 Available Hot-Pluggable Sled-Mounted Drives

Product ID (PID)	PID Description	Drive Type	Capacity
Front Capacity Drive			
HCI-SD19T6S1XEVM6	1.9TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	1.9TB
HCI-SD38T6S1XEVM6	3.8TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	3.8TB
HCI-SD38T6I1XEVM6	3.8TB 2.5in Enter Value 6G SATA Intel SSD	SATA	3.8TB
HCI-SD76T6S1XEVM6	7.6TB 2.5 inch Enterprise Value 6G SATA SSD	SATA	7.6TB
HCI-SD38TKA1XEVM6	3.8TB 2.5 inch Enterprise Value 12G SAS SSD	SAS	3.8TB
HCI-SD76TKA1XEVM6	7.6TB 2.5 inch Enterprise Value 12G SAS SSD	SAS	7.6TB
HCI-SD15TKA1XEVM6	15.3TB 2.5in Enter Value 12G SAS Kioxia G2 SSD	SAS	15.3TB
Front SED Capacity Drive			
HCI-SD38TBKNK9-M6	3.8TB Enterprise Value SAS SSD (1X FWPD, SED)	SAS	3.8TB
HCI-SD76TBKNK9-M6	7.6TB Enterprise value SAS SSD (1 DWPD, SED-FIPS)	SAS	7.6TB
HCI-SD38TBKANK9M6	3.8TB 2.5in Enterprise value 12G SAS SSD (1DWPD, SED-FIPS)	SAS	3.8TB
HCI-SD76TBKANK9M6	7.6TB Enterprise value SAS SSD (1 DWPD, SED-FIPS)	SAS	7.6TB
Boot Drives			
HCI-M2-240G-M6	240GB M.2 SATA SSD	SATA	240GB
HCI-M2-I240GB-M6	240GB M.2 SATA SSD	SATA	240GB
HCI-M2-HWRAID-M6	Cisco Boot optimized M.2 Raid controller		
<p>NOTE: Cisco uses solid state drives (SSDs) from a number of vendors. All solid state drives (SSDs) are subject to physical write limits and have varying maximum usage limitation specifications set by the manufacturer. Cisco will not replace any solid state drives (SSDs) that have exceeded any maximum usage specifications set by Cisco or the manufacturer, as determined solely by Cisco.</p>			

Approved Configurations

- Two to ten capacity drives
- Two boot drives with M.2 Raid controller



NOTE:

- Dual M.2 SATA SSD with the HW RAID controller is the only supported boot configuration for this solution.
 - The Boot-Optimized RAID controller supports AHV and VMware Operating Systems.
 - UCSM is supported for configuring of volumes and monitoring of the controller and installed SATA M.2 drives.
 - The SATA M.2 drives can boot in UEFI mode only. Legacy boot mode is not supported.
 - Hot-plug replacement is not supported. The server must be powered off.
 - See [Figure 10 on page 105](#) for the location of the module connector on the motherboard. This connector accepts the boot-optimized RAID controller.
-

Caveats

SED drives can not be mixed with the non-SED drives.

STEP 8 SELECT CISCO COMPUTE HYPERCONVERGED CONNECTIVITY (REQUIRED)

A. FI Managed Mode - HCI connectivity:

The following connectivity and cards options are available, if you select the FI Managed Mode from the [STEP 2 SELECT MANAGEMENT MODE \(REQUIRED\)](#).

Select Connectivity

The available connectivity are listed in [Table 13](#).



NOTE:

- HCI MLOM Connectivity (HCI-MLOM) is mandatory for this solution.
- Minimum and maximum one MLOM card is available from the [Table 13](#).
- Supported configuration maximum is Single MLOM + Single VIC (select VIC under the riser PCIe VIC card option from [Table 17](#)).
- Additional NIC cards can be selected for user VM network traffic and will be directly connected to ToR (top of the rack), select NIC under the riser PCIe NIC options [Table 17](#).

Table 13 Cisco Compute Hyperconverged Connectivity

Product ID (PID)	Description	Max cards available per node	Requirement
HCI-MLOM-M6	Cisco VIC Connectivity	1	1 mLOM (Mandatory) + 1 PCIe VIC (optional) (select from Table 14)

The available cards for the Cisco Compute Hyperconverged MLOM are listed in [Table 14](#)

Table 14 Available Cards for the Cisco Compute Hyperconverged MLOM Connectivity

Product ID (PID)	Description	Location	Card Size ¹
MLOM Cards			
HCI-M-V25-04	Cisco UCS VIC 1467 quad port 25G SFP28 mLOM	mLOM	HHHL, SS

Notes:

1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.

B. Intersight Standalone Mode (IS Managed) - HCI connectivity:



Golden Rule: Mixing VIC and NIC in same server/cluster is not supported.

The following connectivity options are available, if you select the Intersight Standalone Mode (IS Managed) from the **STEP 2 SELECT MANAGEMENT MODE (REQUIRED)**.

Select Connectivity

The available connectivity are listed in [Table 15](#).



NOTE:

- Either Cisco VIC Connectivity (HCI-MLOM) or Third Party NIC Connectivity (HCI-PCIE) is mandatory for this solution.
- Use HCI-MLOM for VIC based connectivity and HCI-PCIE for NIC based connectivity.
- Minimum and maximum one MLOM card is available from the [Table 16](#).
- When HCI-MLOM is selected up to two additional VIC can be selected from the [Table 17](#).
- When HCI-PCIE is selected up to two additional NIC can be selected from the [Table 17](#).

Table 15 Cisco Compute Hyperconverged Connectivity

Product ID (PID)	Description	Max cards available per node	Requirement
HCI-MLOM-M6	Cisco VIC Connectivity	1 MLOM VIC + 2 PCIe VIC	Select from MLOM VIC Table 16 and additional VIC in the riser slot from the Table 17
HCI-PCIE-M6	Third Party NIC Connectivity	3 dual port or 2 quad port in PCIe riser slot	Select NIC cards under riser from Table 17

The available cards for the MLOM connectivity are listed in [Table 16](#).

Table 16 Available Cards for the Cisco Compute Hyperconverged MLOM Connectivity

Product ID (PID)	Description	Location	Card Size ¹
MLOM Cards			
HCI-M-V25-04	Cisco UCS VIC 1467 quad port 25G SFP28 mLOM	mLOM	HHHL, SS

Notes:

1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.

STEP 9 SELECT PCIe CARDS (OPTIONAL FOR FI MANAGED MODE)

For up-to-date server compatibility, please check the Hardware and Software compatibility list (HCL) at <https://ucshcltool.cloudapps.cisco.com/public/>.

The standard PCIe card offerings are:

- Virtual Interface Cards (VICs)
- Network Interface Cards (NICs)

Select Option Cards

The available PCIe cards are listed in [Table 17](#)

Table 17 Available PCIe Option Cards

Product ID (PID)	PID Description	Location	Card Size ¹	Supported Management Mode
Virtual Interface Cards (VICs)				
HCI-PCIE-C25Q-04	Cisco UCS VIC 1455 Quad Port 10/25G SFP28 CNA PCIe	Riser 1A (slot 2) or Riser 3A (slot 3)	HHHL, SS	IS Managed Mode FI Managed Mode
Network Interface Cards (NICs)				
10GbE NICs				
HCI-P-ID10GC-M6	Cisco-Intel X710T2LG 2x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	IS Managed Mode
HCI-P-IQ10GC-M6	Cisco-Intel X710T4LG 4x10GBE RJ45 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	IS Managed Mode
25GbE NICs				
HCI-P-I8D25GF-M6 ²	Cisco-Intel E810XXVDA2 2x25/10GBE SFP28 PCIe NIC	Riser 1A (slot 1 or 2) and Riser 2A (slot 2), Riser 3A (slot 3)	HHHL, SS	IS Managed Mode FI Managed Mode (User VM traffic only)
HCI-P-I8Q25GF-M6 ³	Cisco-Intel E810XXVDA4L 4x25/10GBE SFP28 PCIe NIC	Riser 1C or 3C	FHHL, SS	IS Managed Mode FI Managed Mode (User VM traffic only)
100GbE NICs				
HCI-P-I8D100GF-M6 ^{3,4}	Cisco-Intel E810CQDA2 2x100 GbE QSFP28 PCIe NIC	Riser 1, 2, or 3	HHHL, SS	FI Managed Mode (User VM traffic only)

Notes:

1. HHHL = half-height, half-length; FHHL = full-height, half-length; SS = single-slot; DS = double-slot. SFF = small form factor.
2. When present, the recommended Fan Speed Control policy setting is balanced.

Approved Configurations

(1) 1-CPU Systems

- You can select up to one of the PCIe option cards listed in [Table 17](#) to be installed in Riser 1. Riser 1 is controlled by CPU 1. Risers 2 and 3 are not installed in a 1-CPU system.

(2) 2-CPU Systems

- You can select up to two of the PCIe option cards listed in [Table 17](#) for a two-riser system (Riser 1 and Riser 2 installed) and up to three of the PCIe option cards for a three-riser system (Riser 1, Riser 2, and Riser 3 installed). Risers 1 and 2 are controlled by CPU 1 and riser 3 is controlled by CPU 2.

Caveats

- For 1-CPU systems:
 - Only Riser 1 is supported.
 - Only a single plug-in PCIe VIC card is supported and must be installed in Riser 1 in addition to the one mandatory mLOM VIC card installed in the mLOM slot.
- For 2-CPU systems:
 - All risers (Risers 1, 2, and 3) are supported.
 - One or two plug-in PCIe VIC cards are supported and must be installed in risers 1 and 3 in addition to the one mandatory mLOM VIC card installed in the mLOM slot.
 - To help ensure that your operating system is compatible with the card you have selected, or to see additional cards that have been qualified to work with the HClAF220C M6 All-NVMe/All-Flash Server, but are not sold on the Cisco pricelist, check the Hardware Compatibility List at this URL:

<https://ucshcltool.cloudapps.cisco.com/public/>

ORDER OPTIONAL PCIe OPTION CARD ACCESSORIES

- For list of supported optics and cables for VIC 1455, VIC 1495, VIC 1467 and VIC 1477. refer to the VIC 1400 series data sheets at the following link:
 - <https://www.cisco.com/c/en/us/products/collateral/interfaces-modules/unified-computing-system-adapters/datasheet-c78-741130.html>
- The information in the preceding tables was compiled from testing conducted by Cisco Transceiver Module Group (TMG) and vendors. The latest compatibility with optical modules and DACs can be found at <https://tmgmatrix.cisco.com/>

STEP 10 ORDER GPU CARDS (OPTIONAL)

Select GPU Options

The available GPU PCIe options are listed in [Table 18](#)

Table 18 Available PCIe GPU Cards¹

Product ID (PID)	PID Description	Card Size	Maximum cards Per node
HCI-GPU-T4-16	NVIDIA T4 PCIE 75W 16GB	HHHL, single-wide	3

Notes:

1. Refer to [installation Guide](#) for more details.



NOTE:

- All GPU cards must be procured from Cisco as there is a unique SBIOS ID required by CIMC and UCSM.
- GPUs cannot be mixed.
- For the maximum of 3x T4 GPUs, the 3x half slot riser should be selected.
- A GPU can be installed in either full-height PCIe riser 1 or 2 (or both) or three half-height riser 1, 2, or 3.

STEP 11 ORDER POWER SUPPLY

Power supplies share a common electrical and physical design that allows for hot-plug and tool-less installation into M6 HCI-series servers. Each power supply is certified for high-efficiency operation and offers multiple power output options. This allows users to “right-size” based on server configuration, which improves power efficiency, lowers overall energy costs and avoids stranded capacity in the data center. Use the power calculator at the following link to determine the needed power based on the options chosen (CPUs, drives, memory, and so on):

<http://ucspowercalc.cisco.com>



WARNING:

- Starting 1st January 2024, only Titanium rated PSUs are allowed to be shipped to European Union (EU), European Economic Area (EEA), United Kingdom (UK), Switzerland and other countries that adopted Lot 9 Regulation.
- DC PSUs are not impacted by Lot 9 Regulation and are EU/UK Lot 9 compliant

Table 19 Power Supply

Product ID (PID)	PID Description
PSU (Input High Line 210VAC)	
HCI-PSU1-1050W-M6	UCS 1050W AC PSU Platinum (Not EU/UK Lot 9 Compliant)
HCI-PSUV21050DCM6 ¹	1050W DC power supply for Rack servers Platinum
HCI-PSU1-1200W-M6	1200W Titanium power supply for C-Series Servers
HCI-PSU1-1600W-M6	UCS 1600W AC PSU Platinum (Not EU/UK Lot 9 Compliant)
HCI-PSU1-2300W-M6 ²	2300W Power supply for Rack servers Titanium
PSU (Input Low Line 110VAC)	
HCI-PSU1-1050W-M6	UCS 1050W AC PSU Platinum (Not EU/UK Lot 9 Compliant)
HCI-PSUV21050DCM6 ¹	1050W DC power supply for Rack servers Platinum
HCI-PSU1-1200W-M6	1200W Titanium power supply for C-Series Servers
HCI-PSU1-2300W-M6	2300W Power supply for Rack servers Titanium

Notes:

1. DC PSUs are not impacted by Lot 9 Regulation and are EU/UK Lot 9 compliant
2. The 2300 W power supply uses a different power connector than the rest of the power supplies, so you must use different power cables to connect it. See [Table 20 on page 39](#) and [Table 21 on page 42](#).



NOTE: In a server with two power supplies, both power supplies must be identical.

STEP 12 SELECT INPUT POWER CORD(S)

Using [Table 20](#) and [Table 21](#), select the appropriate AC power cords. You can select a minimum of no power cords and a maximum of two. If you select the option R2XX-DMYMPWRCORD, no power cord is shipped with the server.



NOTE: [Table 20](#) lists the power cords for servers that use power supplies less than 2300 W. [Table 21](#) lists the power cords for servers that use 2300 W power supplies. Note that the power cords for 2300 W power supplies use a C19 connector so they only fit the 2300 W power supply connector.

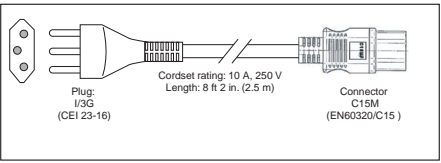
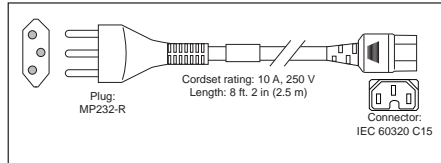
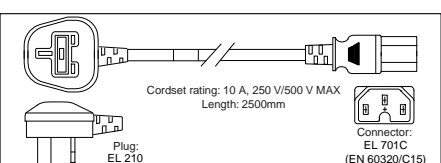
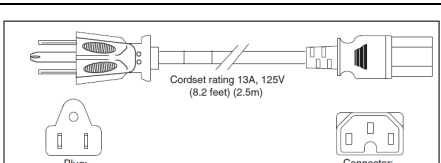
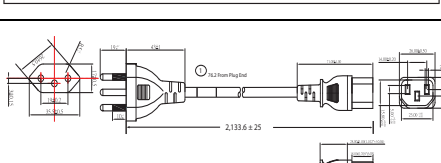
Table 20 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
NO-POWER-CORD	ECO friendly green option, no power cable will be shipped	
CAB-48DC-40A-8AWG	C-Series -48VDC PSU Power Cord, 3.5M, 3 Wire, 8AWG, 40A	<p>Figure 1-3 CAB-48DC-40A-8AWG, DC Power Cord (3.5 m)</p>
CAB-N5K6A-NA	Power Cord, 200/240V 6A, North America	<p>Plug: NEMA 6-15P Cordset rating: 10 A, 250 V Length: 8.2 ft Connector: IEC60320/C13</p>
CAB-AC-L620-C13	AC Power Cord, NEMA L6-20 - C13, 2M/6.5ft	<p>3" From Plug End 79±2</p>
CAB-C13-CBN	CABASY,WIRE,JUMPER CORD, 27" L, C13/C14, 10A/250V	<p>685 MM ± 25 MM 75MM ± 10MM PLUG TYPE: S333A PWR DETAILS: 10A/250V IEC 320-2-2 CONNECTION TYPE: H205</p>
CAB-C13-C14-2M	CABASY,WIRE,JUMPER CORD, PWR, 2 Meter, C13/C14,10A/250V	<p>3" From Plug End 2,000</p>

Table 20 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
CAB-C13-C14-AC	CORD,PWR,JMP,IEC60320/C14,IEC60320/C13, 3.0M	
CAB-250V-10A-AR	Power Cord, 250V, 10A, Argentina	
CAB-9K10A-AU	Power Cord, 250VAC 10A 3112 Plug, Australia	
CAB-250V-10A-CN	AC Power Cord - 250V, 10A - PRC	
CAB-9K10A-EU	Power Cord, 250VAC 10A CEE 7/7 Plug, EU	
CAB-250V-10A-ID	Power Cord, 250V, 10A, India	
CAB-C13-C14-3M-IN	Power Cord Jumper, C13-C14 Connectors, 3 Meter Length, India	Image not available
CAB-C13-C14-IN	Power Cord Jumper,C13-C14 Connectors,1.4 Meter Length, India	Image not available
CAB-250V-10A-IS	Power Cord, SFS, 250V, 10A, Israel	

Table 20 Available Power Cords (for server PSUs less than 2300 W)

Product ID (PID)	PID Description	Images
CAB-9K10A-IT	Power Cord, 250VAC 10A CEI 23-16/VII Plug, Italy	
CAB-9K10A-SW	Power Cord, 250VAC 10A MP232 Plug, Switzerland	
CAB-9K10A-UK	Power Cord, 250VAC 10A BS1363 Plug (13 A fuse), UK	
CAB-9K12A-NA ¹	Power Cord, 125VAC 13A NEMA 5-15 Plug, North America	
CAB-250V-10A-BR	Power Cord - 250V, 10A - Brazil	
CAB-C13-C14-2M-JP	Power Cord C13-C14, 2M/6.5ft Japan PSE mark	Image not available
CAB-9K10A-KOR ¹	Power Cord, 125VAC 13A KSC8305 Plug, Korea	Image not available
CAB-ACTW	AC Power Cord (Taiwan), C13, EL 302, 2.3M	Image not available
CAB-JPN-3PIN	Japan, 90-125VAC 12A NEMA 5-15 Plug, 2.4m	Image not available
CAB-48DC-40A-INT	C-Series -48VDC PSU PWR Cord, 3.5M, 3 Wire, 8AWG, 40A (INT)	Image not available
CAB-48DC-40A-AS	C-Series -48VDC PSU PWR Cord, 3.5M, 3Wire, 8AWG, 40A (AS/NZ)	Image not available

Notes:

1. This power cord is rated to 125V and only supported for PSU rated at 1050W or less

Table 21 Available Power Cords (for servers with 2300 W PSUs)

Product ID (PID)	PID Description	Images
CAB-C19-CBN	Cabinet Jumper Power Cord, 250 VAC 16A, C20-C19 Connectors	Not applicable
CAB-S132-C19-ISRL	S132 to IEC-C19 14ft Israeli	Image not available
CAB-IR2073-C19-AR	IRSM 2073 to IEC-C19 14ft Argen	Image not available
CAB-BS1363-C19-UK	BS-1363 to IEC-C19 14ft UK	Image not available
CAB-SABS-C19-IND	SABS 164-1 to IEC-C19 India	Image not available
CAB-C2316-C19-IT	CEI 23-16 to IEC-C19 14ft Italy	Image not available
CAB-L520P-C19-US	NEMA L5-20 to IEC-C19 6ft US	Image not available
CAB-US515P-C19-US	NEMA 5-15 to IEC-C19 13ft US	Image not available
CAB-US520-C19-US	NEMA 5-20 to IEC-C19 14ft US	Image not available
CAB-US620P-C19-US	NEMA 6-20 to IEC-C19 13ft US	Image not available

STEP 13 ORDER TOOL-LESS RAIL KIT AND OPTIONAL REVERSIBLE CABLE MANAGEMENT ARM

Select a Tool-less Rail Kit

Select a tool-less rail kit from [Table 22](#).

Table 22 Tool-less Rail Kit Options

Product ID (PID)	PID Description
HCI-RAIL-M6	Ball Bearing Rail Kit for C220 and C240 M6 rack servers



NOTE: Cisco recommends a minimum quantity of 1 Rail Kit.

Select an Optional Reversible Cable Management Arm

The reversible cable management arm mounts on either the right or left slide rails at the rear of the server and is used for cable management. Use [Table 23](#) to order a cable management arm.

Table 23 Cable Management Arm

Product ID (PID)	PID Description
HCI-CMA-C220M6	Reversible CMA for C220 M6 ball bearing rail kit

For more information about the tool-less rail kit and cable management arm, see the [Cisco M6 Server Installation and Service Guide](#).



NOTE: If you plan to rackmount your HCI AF220C M6 All-NVMe/All-Flash Server, you must order a tool-less rail kit. The same rail kits and CMAs are used for M5 and M6 servers.

STEP 14 ORDER SECURITY DEVICES (OPTIONAL)

A Trusted Platform Module (TPM) is a computer chip (microcontroller) that can securely store artifacts used to authenticate the platform (server). These artifacts can include passwords, certificates, or encryption keys. A TPM can also be used to store platform measurements that help ensure that the platform remains trustworthy. Authentication (ensuring that the platform can prove that it is what it claims to be) and attestation (a process helping to prove that a platform is trustworthy and has not been breached) are necessary steps to ensure safer computing in all environments.

A chassis intrusion switch gives a notification of any unauthorized mechanical access into the server.

The security device ordering information is listed in [Table 24](#).

Table 24 Security Devices

Product ID (PID)	PID Description
HCI-TPM-002C-M6	TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified, for M6 servers
HCI-INT-SW02-M6	C220 and C240 M6 Chassis Intrusion Switch
HCI-TPM-OPT-OUT-M6	OPT OUT, TPM 2.0, TCG, FIPS140-2, CC EAL4+ Certified ¹

Notes:

1. Please note that Microsoft certification requires a TPM 2.0 for bare-metal or guest VM deployments. Opt-out of the TPM 2.0 voids the Microsoft certification



NOTE:

- The TPM module used in this system conforms to TPM 2.0, as defined by the Trusted Computing Group (TCG). It is also SPI-based.
- TPM installation is supported after-factory. However, a TPM installs with a one-way screw and cannot be replaced, upgraded, or moved to another server. If a server with a TPM is returned, the replacement server must be ordered with a new TPM.

STEP 15 SELECT HYPERVISOR

Cisco Hypervisor options are available as follows.

Table 25 Hypervisor

Product ID (PID)	PID Description
HCI-AOSAHV-SWK9M6	HCI AOS AHV SW



NOTE:

- This solution supports AHV hypervisor option. The Nutanix Foundation VM will perform bare-metal imaging for either hypervisor at time of install for FI management mode (HCI-FI-MANAGED-M6).
- For IS Management mode (HCI-IS-MANAGED-M6) bare metal image can be performed thorough Prism Central.




STEP 16 SELECT NUTANIX SOFTWARE AND NUTANIX PROFESSIONAL SERVICES

- *Top Level Nutanix Software And Professional Services PIDs, page 48*
 - *Table 26, Top Level Nutanix Software And Professional Services PIDs*
- *Nutanix Software And Professional Services PID Decoder, page 50*
 - *Table 27.0, Nutanix Software PID Decoder (WW-XX-YY-ZZ)*
 - *Table 27.1, Nutanix Professional Services PID Decoder (WW-XX-YY-ZZ)*
- *Nutanix Software PIDs and Description, page 51*
 - *Table 30.0, Nutanix Cloud Infrastructure (NCI)*
 - *Table 30.1, Nutanix Cloud Infrastructure Data (NCI-D)*
 - *Table 30.2, Nutanix Cloud Infrastructure Edge (NCI-E)*
 - *Table 30.3, End User Computing (EUC)*
 - *Table 30.4, Nutanix Cloud Manager (NCM)*
 - *Table 30.5, Nutanix Cloud Manager Edge (NME)*
 - *Table 30.6, Nutanix Cloud Manager EUC (NCM-U)*
 - *Table 30.7, Nutanix Cloud Platform (NCP)*
 - *Table 30.8, Nutanix Unified Storage™ (NUS)*
 - *Table 30.9, Nutanix Data Lens (NDL)*
- *Professional Services PIDs and Description, page 77*
 - *Table 31.0, NCI Design Workshop*
 - *Table 31.1, NCI Cluster Deployment or Expansion*
 - *Table 31.2, Virtual Machine Migration Workshop*
 - *Table 31.3, Virtual Machine Migration*
 - *Table 31.4, NCM Self-Service Design Workshop*
 - *Table 31.5, NCM Intelligent Operations Design Workshop*
 - *Table 31.6, NCM Intelligent Operations Deployment*
 - *Table 31.7, FastTrack for NCM Self-Service*
 - *Table 31.8, FastTrack for NCM Cost Governance*
 - *Table 31.9, Nutanix Flexible Credits*
- *Nutanix Support:, page 88*
- *Software With Professional Services PID Mapping, page 89*
 - *Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping*
 - *Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping*
 - *Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping*
 - *Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping*

- *Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services*

Top Level Nutanix Software And Professional Services PIDs

Table 26 Top Level Nutanix Software And Professional Services PIDs

ATO Product ID (PID)	Description
NTX-SW	<p>Nutanix Software 3Y and above</p> <hr/>  NOTE: Please refer to the complete list of <i>Nutanix Software PIDs and Description, page 51</i> <hr/>
NTX-SW-1Y	<p>Nutanix Software 1Y</p> <hr/>  NOTE: Please refer to the complete list of <i>Nutanix Software PIDs and Description, page 51</i> <hr/>
NTX-SW-PS	<p>Nutanix Professional Service</p> <hr/>  NOTE: Please refer to the complete list of <i>Professional Services PIDs and Description, page 77</i> <hr/>

**NOTE:****(1) 1 Year Subscription term:**

- All Nutanix software package subscription requires **mandatory** attach of Nutanix Professional Services.

(2) 3 Year Subscription term:

- For Nutanix Cloud Infrastructure (NCI) software, it is **recommended** to attach Nutanix Professional Services during ordering.
- For Nutanix Cloud Manager (NCM) software, only Professional (PRO) subscription and Ultimate (ULT) subscription requires **mandatory** Nutanix Professional Services.

(3) Any future expansion opportunity does not require **mandatory Nutanix Professional Services attach.**

(4) Cisco and Nutanix products are each subject to their own terms and conditions, including support timelines and milestones. This includes the Nutanix Cloud Platform software and qualified Cisco UCS hardware platforms sold together as part of the Cisco Compute Hyperconverged with Nutanix solution. Carefully review [Nutanix's EoL portal](#) for support timelines by hardware platform. Cisco's UCS hardware support milestones may not align with Nutanix's support milestones. Therefore, it is important to plan your hardware and software refresh cycles based on the earlier of the two dates (hardware support from Cisco and software support from Nutanix). It is your responsibility to check the Nutanix software term length desired against the support time frames for the quoted UCS hardware platform.

Nutanix licenses are transferable to newer generation Cisco UCS platforms subject to Nutanix's end user license agreement. Refer to [Nutanix's Support FAQs](#) for details and definitions of Nutanix's End of Life and End of Support Life milestones. Refer to [Cisco's EoL policy](#) for details and definitions of Cisco's End of Life and Last Date of Support milestones.

Nutanix Software PIDs and Description

Table 28 Software Options and Metric

Software Option	Software Description	Metric
Nutanix Cloud Infrastructure (NCI)	NCI is a complete software stack to unify your hybrid cloud infrastructure including compute, storage and network, hypervisors, and containers, in public or enterprise clouds	Per Core
Nutanix Cloud Infrastructure Data (NCI-D)	Delivers rich data and storage services but does not include Nutanix compute and networking capabilities. No support for AHV	Per Core
Nutanix Cloud Infrastructure Edge (NCI-Edge)	Nutanix Cloud Infrastructure - Edge (NCI-Edge) provides a distributed infrastructure platform for small edge deployments. NCI-Edge provides the same capabilities as NCI, combining compute, storage, and networking resources from a cluster of servers into a single logical pool with integrated resiliency, security, performance, and simplified administration.	Per VM
Nutanix Cloud Manager (NCM)	NCM offers intelligent operations, self service and orchestration, visibility and governance of spend, security and teams	Per Core
Nutanix Cloud Manager Edge (NCM-E)	Provides NCM capabilities for Edge deployments	Per VM
Nutanix Cloud Manager EUC (NCM-U)	Provides NCM capabilities in VDI use cases	Per User
Nutanix Cloud Platform (NCP)	Bundle for NCI and NCM	Per Core
Nutanix Unified Storage™ (NUS)	Nutanix Unified Storage™ (NUS) is a software-defined data services platform that consolidates the management and protection of siloed block, file, and object storage into a single, unified platform.	Per TIB
Nutanix Data Lens (NDL)	Nutanix Data Lens is a SaaS-based cyberstorage solution offering ransomware resilience and global data visibility for unstructured data on Nutanix Unified Storage (NUS).	Per TIB
End User Computing (EUC)	on-prem VDI and Desktop as a Service (DaaS) use cases	Per User

Table 29 Nutanix Software License Tiers

NCI Starter	NCI Professional	NCI Ultimate
<p>Core set of software functionality</p> <p>Ideal for: Small-scale deployments with a limited set of workloads (on-prem only)</p>	<p>Rich data services, resilience and management features</p> <p>Ideal for: Running multiple applications or large-scale single workload deployments (on-prem or in public clouds)</p>	<p>Full suite of Nutanix software capabilities to tackle complex infrastructure challenges</p> <p>Ideal for: Multi-site deployments and advanced security requirements (on-prem or in public clouds)</p>



NOTE:

- Prism Central will be required for all licensing actions.
 - Licenses are portable across Cisco hardware platforms in HCL.
-

(1) Nutanix Cloud Infrastructure (NCI):

Nutanix Cloud Infrastructure (NCI) converges the entire datacenter stack, including compute, storage, storage networking, and virtualization and is at the core of creating a hyperconverged infrastructure environment. Complex and expensive legacy infrastructure is replaced by NCI, running on industry-standard servers loaded with the latest hardware technologies. This allows enterprises to deploy what you need for the short term, and scale on-demand as infrastructure needs increase over time. Each server, often referred to as a node in the context of HCI, is an x86 platform with direct-attached storage drives. NCI software runs on each node, distributing all operating functions across the cluster for superior performance and resilience, and enabling seamless scalability.

**NOTE:**

- For more information about Nutanix Cloud Infrastructure (NCI), please visit <https://www.nutanix.com/products/nutanix-cloud-infrastructure>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.0 Nutanix Cloud Infrastructure (NCI)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCI-STR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCI-STR-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-STR-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-STR-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO - PROFESSIONAL	
NT-NCI-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCI-PRO-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Mission Critical Software Support Service for 1 CPU Core

Table 30.0 Nutanix Cloud Infrastructure (NCI)

NT-NCI-PRO-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-PRO-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT - ULTIMATE	
NT-NCI-ULT-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCI-ULT-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-ULT-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-ULT-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ADVANCED REPLICATION	
NT-A-NCI-ADR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-ADR-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-ADR-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-ADR-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Advanced Replication add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core
KUBERNETES	
NT-A-NCI-NKS-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-NKS-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-NKS-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-NKS-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Kubernetes Engine add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core
SECURITY	
NT-A-NCI-SEC-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-SEC-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Mission Critical Software Support Service for 1 CPU Core

Table 30.0 Nutanix Cloud Infrastructure (NCI)

NT-A-NCI-SEC-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-SEC-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Security add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core



NOTE: The quantity of NCI-D license must match with total number for cores in hardware platforms.

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(2) Nutanix Cloud Infrastructure Data (NCI-D):

Nutanix supports freedom of choice of hypervisor and container platform, by offering a version called NCI Data that delivers rich data and storage services but does not include Nutanix compute and networking capabilities. Support for Hypervisor specific features, such as GPU support on ESXi, is not impacted by NCI Data licensing tiers.



NOTE:

- For more information about Nutanix Cloud Infrastructure (NCI), please visit <https://www.nutanix.com/products/nutanix-cloud-infrastructure>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options> Please note, the grey rows in the software options table under NCI are not included in NCI Data.
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix.Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.1 Nutanix Cloud Infrastructure Data (NCI-D)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCI-D-STR-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCI-D-STR-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-D-STR-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-D-STR-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO - PROFESSIONAL	
NT-NCI-D-PRO-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCI-D-PRO-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-D-PRO-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Federal Production Software Support Service for 1 CPU Core

Table 30.1 Nutanix Cloud Infrastructure Data (NCI-D)

NT-NCI-D-PRO-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT - ULTIMATE	
NT-NCI-D-ULT-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCI-D-ULT-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCI-D-ULT-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCI-D-ULT-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ADVANCED REPLICATION	
NT-A-NCI-D-ADR-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-D-ADR-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-D-ADR-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-D-ADR-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Advanced Replication add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core
SECURITY	
NT-A-NCI-D-SEC-PR	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Production Software Support Service for 1 CPU Core
NT-A-NCI-D-SEC-MC	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Mission Critical Software Support Service for 1 CPU Core
NT-A-NCI-D-SEC-FP	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Federal Production Software Support Service for 1 CPU Core
NT-A-NCI-D-SEC-FM	Subscription, Nutanix Cloud Infrastructure Data (NCI-D) Security add-on Software License & Federal Mission Critical Software Support Service for 1 CPU Core



NOTE: The quantity of NCI-D license must match with total number for cores in hardware platforms.

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(3) Nutanix Cloud Infrastructure Edge (NCI-E):

Nutanix Cloud Infrastructure - Edge (NCI-E) provides a distributed infrastructure platform for small edge deployments. NCI-Edge provides the same capabilities as NCI, combining compute, storage, and networking resources from a cluster of servers into a single logical pool with integrated resiliency, security, performance, and simplified administration. With NCI-Edge, organizations can efficiently extend the Nutanix platform to remote office/branch office (ROBO) and other edge use cases.

- 1 TiB of NUS Pro per NCI-Edge cluster is included at no cost with NCI-Edge.
- NCI-Edge licenses must run on a dedicated licensed cluster with no core-based licensing. Mixing of NCI-Edge licenses with other types of NCI licensing within a cluster is not supported.
- NCI-Edge can be used with any cluster deployment type as long as the conditions mentioned are followed.
- Maximum nodes for the Edge cluster is 5.



NOTE:

- NCI-Edge is limited to a maximum of 25 VMs in a cluster, with each VM being limited to a maximum of 96GB of memory.
- For more information about Nutanix Cloud Infrastructure (NCI), please visit <https://www.nutanix.com/products/nutanix-cloud-infrastructure>
- For more information about Nutanix NCI Edge software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.2 Nutanix Cloud Infrastructure Edge (NCI-E)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCI-E-STR-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Production Software Support Service for 1 VM
NT-NCI-E-STR-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Mission Critical Software Support Service for 1 VM
NT-NCI-E-STR-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Federal Production Software Support Service for 1 VM
NT-NCI-E-STR-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Starter Software License for Edge sites & Federal Mission Critical Software Support Service for 1 VM

Table 30.2 Nutanix Cloud Infrastructure Edge (NCI-E)

PRO - PROFESSIONAL	
NT-NCI-E-PRO-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Production Software Support Service for 1 VM
NT-NCI-E-PRO-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Mission Critical Software Support Service for 1 VM
NT-NCI-E-PRO-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Federal Production Software Support Service for 1 VM
NT-NCI-E-PRO-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Pro Software License for Edge sites & Federal Mission Critical Software Support Service for 1 VM
ULT - ULTIMATE	
NT-NCI-E-ULT-PR	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Production Software Support Service for 1 VM
NT-NCI-E-ULT-MC	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Mission Critical Software Support Service for 1 VM
NT-NCI-E-ULT-FP	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Federal Production Software Support Service for 1 VM
NT-NCI-E-ULT-FM	Subscription, Nutanix Cloud Infrastructure (NCI) Ultimate Software License for Edge sites & Federal Mission Critical Software Support Service for 1 VM

**NOTE:**

- NCI-Edge is limited to a maximum of 25 VMs in a cluster, with each VM being limited to a maximum of 96GB of memory.
- Maximum nodes for the Edge cluster is 5
- The quantity of NCI-Edge license must match with Total number for VMs running in the cluster.
- For the purpose of calculation, internal VMs (or Nutanix infrastructure VMs) such as Controller VM or Prism Central VM are not counted.

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(4) End User Computing (EUC):

Per user model offers hybrid cloud infrastructure capabilities appropriate for on-prem virtual desktop infrastructure (VDI) and Desktop as a Service (DaaS) use cases with pricing based on a Maximum Concurrent User basis (maximum number of provisioned end-user VMs). EUC per user is an alternative to the core-based NCI licensing option and is designed to provide simple, transparent licensing for all VDI users, regardless of the underlying hardware, hypervisor, or cloud.

- **Agnostic:** Works with any EUC management platform including Citrix Virtual Apps & Desktops and VMware Horizon
- **Term license:** Term license must run on a dedicated software licensed VDI cluster with no core-based licensing. Mixing of non-VDI workloads is not supported
- **Unified Storage:** Built-in and also available as a per TiB base add-on
- No additional license cost for DR site
- Portable across on-premises and public cloud, public cloud use requires Ultimate edition
- Available in Starter, Pro, and Ultimate editions
- Cloud Native and Database Service Add-ons not available with NCI EUC. Advanced Replication and Security Add-on features require NCI Ultimate edition

	EUC STARTER	EUC PROFESSIONAL	VDI ULTIMATE
NCI Feature Set	Everything in NCI Starter	Everything in NCI Professional	Everything in NCI Ultimate
Nutanix Unified Storage	1 TiB Free Capacity	50 GB Per User	100GB Per User



NOTE:

- For more information on End User Computing (EUC), please visit <https://www.nutanix.com/solutions/end-user-computing>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- For ‘PURE” EUC/VDI environment, there is no NCI license required.
- If the end user wants to run a mixed workload on same server (virtual machines that are not part of the VDI environment), NCI license is required.
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix’s Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.3 End User Computing (EUC)

Product ID (PID)	PID Description
STR - STARTER	
NT-EUC-STR-PR	Subscription, End User Computing (EUC) Starter Software License & Production Software Support Service for 1 User
NT-EUC-STR-MC	Subscription, End User Computing (EUC) Starter Software License & Mission Critical Software Support Service for 1 User
NT-EUC-STR-FP	Subscription, End User Computing (EUC) Starter Software License & Federal Production Software Support Service for 1 User
NT-EUC-STR-FM	Subscription, End User Computing (EUC) Starter Software License & Federal Mission Critical Software Support Service for 1 User
PRO- PROFESSIONAL	
NT-EUC-PRO-PR	Subscription, End User Computing (EUC) Pro Software License & Production Software Support Service for 1 User
NT-EUC-PRO-MC	Subscription, End User Computing (EUC) Pro Software License & Mission Critical Software Support Service for 1 User
NT-EUC-PRO-FP	Subscription, End User Computing (EUC) Pro Software License & Federal Production Software Support Service for 1 User
NT-EUC-PRO-FM	Subscription, End User Computing (EUC) Pro Software License & Federal Mission Critical Software Support Service for 1 User
ULT - ULTIMATE	
NT-EUC-ULT-PR	Subscription, End User Computing (EUC) Ultimate Software License & Production Software Support Service for 1 User
NT-EUC-ULT-MC	Subscription, End User Computing (EUC) Ultimate Software License & Mission Critical Software Support Service for 1 User
NT-EUC-ULT-FP	Subscription, End User Computing (EUC) Ultimate Software License & Federal Production Software Support Service for 1 User
NT-EUC-ULT-FM	Subscription, End User Computing (EUC) Ultimate Software License & Federal Mission Critical Software Support Service for 1 User

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(5) Nutanix Cloud Manager (NCM):

Nutanix Cloud Manager (NCM) is a hybrid multi-cloud management platform for building a cloud operating model. NCM provides Intelligent Operations, Self-Service, Cost Governance, and Security natively with the Nutanix Platform or through a SaaS subscription.

- Self-service VMs and Apps are defined via simple blueprints, easily created, and managed via GUI/CLI.
- Management of IT lifecycle includes visibility, optimization, and financial control over multi-cloud deployments.
- Detect, monitor, and remediate security vulnerabilities and compliance near real-time across multiple cloud environment



NOTE:

- For more information Nutanix Cloud Manager (NCM), please visit <https://www.nutanix.com/products/cloud-manager>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.4 Nutanix Cloud Manager (NCM)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCM-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCM-STR-MC	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCM-STR-FP	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCM-STR-FM	Subscription, Nutanix Cloud Manager (NCM) Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO - PROFESSIONAL	
NT-NCM-PRO-PR	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Production Software Support Service for 1 CPU Core

Table 30.4 Nutanix Cloud Manager (NCM)

NT-NCM-PRO-MC	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCM-PRO-FP	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCM-PRO-FM	Subscription, Nutanix Cloud Manager (NCM) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT - ULTIMATE	
NT-NCM-ULT-PR	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCM-ULT-MC	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCM-ULT-FP	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCM-ULT-FM	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
COST GOVERNANCE	
NT-NCM-CM-FP	Subscription, NCM Cost Governance as a Service for US Federal including Production Support for 1 VM
NT-NCM-CM-OV-FP	Overage, NCM Cost Governance as a Service for US Federal including Production Support for 1 VM
NT-NCM-CM-OV-PR	Overage, NCM Cost Governance as a Service including Production Support for 1 VM
NT-NCM-CM-PR	Subscription, NCM Cost Governance as a Service including Production Support for 1 VM
SECURITY CENTRAL	
NT-NCM-SC-FP	Subscription, NCM Security Central as a Service for US Federal including Production Support for 1 VM
NT-NCM-SC-OV-FP	Overage, NCM Security Central as a Service for US Federal including Production Support for 1 VM
NT-NCM-SC-OV-PR	Overage, NCM Security Central as a Service including Production Support for 1 VM
NT-NCM-SC-PR	Subscription, NCM Security Central as a Service including Production Support for 1 VM
SELF SERVICE	
NT-NCM-SS-OV-PR	Overage, NCM Self-Service & Orchestration as a Service including Production Support for 1 VM
NT-NCM-SS-PR	Subscription, NCM Self-Service & Orchestration as a Service including Production Support for 1 VM



NOTE: The quantity of NCM license must match with Total number for cores in hardware platforms.

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(6) Nutanix Cloud Manager Edge (NME):

Nutanix Cloud Manager (NCM) is a hybrid multi-cloud management platform for building a cloud operating model. NCM provides Intelligent Operations, Self-Service, Cost Governance, and Security natively with the Nutanix Platform or through a SaaS subscription.

- Self-service VMs and Apps are defined via simple blueprints, easily created, and managed via GUI/CLI.
- Management of IT lifecycle includes visibility, optimization, and financial control over multi-cloud deployments.
- Detect, monitor, and remediate security vulnerabilities and compliance near real-time across multiple cloud environment.

**NOTE:**

- For more information Nutanix Cloud Manager (NCM), please visit <https://www.nutanix.com/products/cloud-manager>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>
- PC 2024.2 is the minimum requirement for these licenses to be applied. Check and confirm the release schedule of PC before ordering these licenses.

Table 30.5 Nutanix Cloud Manager Edge (NME)

Product ID (PID)	PID Description
STR - STARTER	
NT-NME-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & Production Software Support Service per VM
NT-NME-STR-MC	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & Mission Critical Software Support Service per VM
NT-NME-STR-FP	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & FED Production Software Support Service per VM
NT-NME-STR-FM	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for Edge Sites & FED Mission Critical Software Support Service per VM
PRO- PROFESSIONAL	
NT-NME-PRO-PR	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & Production Software Support Service per VM

Table 30.5 Nutanix Cloud Manager Edge (NME)

NT-NME-PRO-MC	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & Mission Critical Software Support Service per VM
NT-NME-PRO-FP	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & FED Production Software Support Service per VM
NT-NME-PRO-FM	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for Edge Sites & FED Mission Critical Software Support Service per VM
ULT - ULTIMATE	
NT-NME-ULT-PR	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & Production Software Support Service per VM
NT-NME-ULT-MC	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & Mission Critical Software Support Service per VM
NT-NME-ULT-FP	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & FED Production Software Support Service per VM
NT-NME-ULT-FM	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for Edge Sites & FED Mission Critical Software Support Service per VM

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(7) Nutanix Cloud Manager EUC (NCM-U):

Nutanix Cloud Manager (NCM) is a hybrid multi-cloud management platform for building a cloud operating model. NCM provides Intelligent Operations, Self-Service, Cost Governance, and Security natively with the Nutanix Platform or through a SaaS subscription.

- Self-service VMs and Apps are defined via simple blueprints, easily created, and managed via GUI/CLI.
- Management of IT lifecycle includes visibility, optimization, and financial control over multi-cloud deployments.
- Detect, monitor, and remediate security vulnerabilities and compliance near real-time across multiple cloud environment.

**NOTE:**

- For more information Nutanix Cloud Manager (NCM), please visit <https://www.nutanix.com/products/cloud-manager>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://computekb.cisco.com/article/nutanix-support-for-federal-customers.html>
- PC 2024.2 is the minimum requirement for these licenses to be applied. Check and confirm the release schedule of PC before ordering these licenses.

Table 30.6 Nutanix Cloud Manager EUC (NCM-U)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCM-U-STR-PR	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & Production Software Support Service per User
NT-NCM-U-STR-MC	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & Mission Critical Software Support Service per User
NT-NCM-U-STR-FP	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & FED Production Software Support Service per User
NT-NCM-U-STR-FM	Subscription, Nutanix Cloud Manager (NCM) Starter Software License for EUC & FED Mission Critical Software Support Service per User
PRO - PROFESSIONAL	
NT-NCM-U-PRO-PR	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & Production Software Support Service per User

Table 30.6 Nutanix Cloud Manager EUC (NCM-U)

NT-NCM-U-PRO-MC	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & Mission Critical Software Support Service per User
NT-NCM-U-PRO-FP	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & FED Production Software Support Service per User
NT-NCM-U-PRO-FM	Subscription, Nutanix Cloud Manager (NCM) Professional Software License for EUC & FED Mission Critical Software Support Service per User
ULT - ULTIMATE	
NT-NCM-U-ULT-PR	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & Production Software Support Service per User
NT-NCM-U-ULT-MC	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & Mission Critical Software Support Service per User
NT-NCM-U-ULT-FP	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & FED Production Software Support Service per User
NT-NCM-U-ULT-FM	Subscription, Nutanix Cloud Manager (NCM) Ultimate Software License for EUC & FED Mission Critical Software Support Service per User

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(8) Nutanix Cloud Platform (NCP):

Nutanix Cloud Infrastructure (NCI) and Nutanix Cloud Manager (NCM) can be purchased together in ‘better together’ Nutanix Cloud Platform (NCP) bundles:

Nutanix Cloud Platform (NCP)	Nutanix Cloud Infrastructure (NCI) included	Nutanix Cloud Manager (NCM) Edition included
NCP Starter	NCI Professional	NCM Professional
NCP Professional	NCI Ultimate	NCM Professional
NCP Ultimate	NCI Ultimate	NCM Ultimate

**NOTE:**

- For more information on Nutanix Cloud Platform (NCP) bundles, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix’s Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.7 Nutanix Cloud Platform (NCP)

Product ID (PID)	PID Description
STR - STARTER	
NT-NCP-STR-PR	Subscription, Nutanix Cloud Platform Starter Software License & Production Software Support Service for 1 CPU Core
NT-NCP-STR-MC	Subscription, Nutanix Cloud Platform Starter Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-STR-FP	Subscription, Nutanix Cloud Platform Starter Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-STR-FM	Subscription, Nutanix Cloud Platform Starter Software License & Federal Mission Critical Software Support Service for 1 CPU Core
PRO- PROFESSIONAL	
NT-NCP-PRO-PR	Subscription, Nutanix Cloud Platform Pro Software License & Production Software Support Service for 1 CPU Core

Table 30.7 Nutanix Cloud Platform (NCP)

NT-NCP-PRO-MC	Subscription, Nutanix Cloud Platform Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-PRO-FP	Subscription, Nutanix Cloud Platform Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-PRO-FM	Subscription, Nutanix Cloud Platform Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
ULT-ULTIMATE	
NT-NCP-ULT-PR	Subscription, Nutanix Cloud Platform Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCP-ULT-MC	Subscription, Nutanix Cloud Platform Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-ULT-FP	Subscription, Nutanix Cloud Platform Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-ULT-FM	Subscription, Nutanix Cloud Platform Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCI PROFESSIONAL	
NT-NCP-NCI-PRO-PR	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCI-PRO-MC	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-NCI-PRO-FP	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCI-PRO-FM	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCI ULTIMATE	
NT-NCP-NCI-ULT-PR	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCI-ULT-MC	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-NCI-ULT-FP	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCI-ULT-FM	Subscription, (included in NCP) Nutanix Cloud Infrastructure (NCI) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCM PROFESSIONAL	
NT-NCP-NCM-PRO-PR	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCM-PRO-MC	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Mission Critical Software Support Service for 1 CPU Core

Table 30.7 Nutanix Cloud Platform (NCP)

NT-NCP-NCM-PRO-FP	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCM-PRO-FM	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Pro Software License & Federal Mission Critical Software Support Service for 1 CPU Core
NCM ULTIMATE	
NT-NCP-NCM-ULT-PR	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Production Software Support Service for 1 CPU Core
NT-NCP-NCM-ULT-MC	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Mission Critical Software Support Service for 1 CPU Core
NT-NCP-NCM-ULT-FP	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Production Software Support Service for 1 CPU Core
NT-NCP-NCM-ULT-FM	Subscription, (included in NCP) Nutanix Cloud Manager (NCM) Ultimate Software License & Federal Mission Critical Software Support Service for 1 CPU Core

**NOTE:**

- The total number of cores for NCI and NCM should be same
- The support tiers for NCI and NCM should be same.

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(9) Nutanix Unified Storage™ (NUS):

Nutanix Unified Storage™ (NUS) is a software-defined data services platform that consolidates the management and protection of siloed block, file, and object storage into a single, unified platform. NUS harnesses the power of rich data services such as analytics, ransomware protection, lifecycle management, and data protection. These features enable organizations to seamlessly adapt to the ever-changing requirements of modern applications, allowing them to shift their management focus from data storage to data management. Leveraging the Nutanix Cloud Platform™ (NCP) software, NUS is specifically built to meet the needs of modern applications deployed across core, cloud, and edge infrastructure. With its capacity for seamless scaling, high performance, and integrated data security, NUS provides a comprehensive solution for organizations.

Includes:

- **Nutanix Files Storage:** simple and secure software-defined scale-out file storage solution to store, manage, and scale files data (NFS and SMB)
- **Nutanix Objects Storage:** distributed scale-out S3-compatible object storage for both archive and high-performance analytics
- **Nutanix Volumes Storage:** high-performance low-latency block storage
- **Nutanix Data Lens:** available as an add-on for data analytics, anomaly behavior detection and ransomware protection
- **Nutanix AOS:** scale-out storage technology that makes hyperconverged infrastructure (HCI) possible.
- **Nutanix AHV:** lightweight cloud hypervisor built into Nutanix platform and offers enterprise-grade storage capabilities and built-in Kubernetes support.
- **App VMs running on storage:** NUS dedicated clusters are entitled to 1 app/user VM per node in the cluster. NCI clusters don't have any limit on the number of app/user VMs on the cluster.

**NOTE:**

- For more information **Nutanix Unified Storage™ (NUS)**, please visit <https://www.nutanix.com/products/cloud-platform/software-options#nus>
 - For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
 - Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
 - Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>
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Table 30.8 Nutanix Unified Storage™ (NUS)

Product ID (PID)	PID Description
PRO - PROFESSIONAL	
NT-NUS-PRO-PR	Nutanix Unified Storage Professional Software License & Production Software Support for 1 TiB
NT-NUS-PRO-MC	Nutanix Unified Storage Professional Software License & Mission Critical Software Support for 1 TiB
NT-NUS-PRO-FP	Nutanix Unified Storage Professional Software License & Federal Production Software Support for 1 TiB
NT-NUS-PRO-FM	Nutanix Unified Storage Professional Software License & Federal Mission Critical Software Support for 1 TiB
ADVANCED REPLICATION	
NT-A-NUS-ADR-PR	Nutanix Unified Storage Advanced Replication add-on Software License & Production Software Support 1 TiB
NT-A-NUS-ADR-MC	Nutanix Unified Storage Advanced Replication add-on Software License & Mission Critical Software Support 1 TiB
NT-A-NUS-ADR-FP	Nutanix Unified Storage Advanced Replication add-on Software License & Federal Production Software Support 1 TiB
NT-A-NUS-ADR-FM	Nutanix Unified Storage Advanced Replication add-on Software License & Federal Mission Critical Support 1 TiB
SECURITY	
NT-A-NUS-SEC-PR	Nutanix Unified Storage Security add-on Software License & Production Software Support 1 TiB
NT-A-NUS-SEC-MC	Nutanix Unified Storage Security add-on Software License & Mission Critical Software Support 1 TiB
NT-A-NUS-SEC-FP	Nutanix Unified Storage Security add-on Software License & Federal Production Software Support 1 TiB
NT-A-NUS-SEC-FM	Nutanix Unified Storage Security add-on Software License & Federal Mission Critical Software Support 1 TiB

Table 30.8.a Nutanix Unified Storage Allowed Capacity

Nutanix Unified Storage	Nutanix Unified Storage Support Tier	Storage Capacity Allowed (TiB)
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Table 30.8.a Nutanix Unified Storage Allowed Capacity

		1-50
		75
		100
		150
		200
		250
		300
		350
		400
		450
		500
		550
		600
		700
		800
		900
		1000
		1200
		1400
		1600
		1800
		2000
		2200
		2400
		2600
		2800
		3000
		4000
		5000
		6000
		7000
		8000
		9000
		10000
Pro (Professional) License Tier (NT-NUS-PRO-*) Advanced Replication (NT-A-NUS-ADR-*) Security (NT-A-NUS-SEC-*)	Production Mission Critical Federal Production Federal Mission Critical	

(10) Nutanix Data Lens (NDL):

Nutanix Data Lens is a SaaS-based cyberstorage solution offering ransomware resilience and global data visibility for unstructured data on Nutanix Unified Storage (NUS). This cloud-based data analytics service proactively assesses and mitigates data security risks by identifying anomalous activity, auditing user behavior, and adhering to compliance requirements. while enabling efficient data lifecycle management.

Nutanix Data Lens is currently offered through a “Freemium” licensing model, consisting of two tiers:

1. “Free Tier” comprises limited capabilities that are available perpetually free for NUS Pro customers
2. “Premium Tier” comprises extended capabilities, including Ransomware security, and is licensed on a per TiB basis for all NUS customers.

Self-service onboarding for current Nutanix Unified Storage Customers through [My Nutanix Portal](#).

**NOTE:**

- For more information **Nutanix Data Lens (NDL)**, please visit <https://www.nutanix.com/products/cloud-platform/software-options#nus>
- For more information about Nutanix Cloud Platform software options, please visit <https://www.nutanix.com/products/cloud-platform/software-options>
- Please note that the Federal Support program is reserved for US Federal accounts. US Federal accounts must select Federal Support Tier for the order to be fulfilled. If a non-Federal account selects a Federal Support program, Nutanix may not fulfill the order. Additionally, Nutanix's Mixed Support Level Guidelines(<https://www.nutanix.com/support-services/product-support/support-policies-and-faqs?show=accordion-4>) requires all software assets within a cluster to have the same support level, else software support will default to the lower option.
- Sellers in the Federal space need to ensure they have the Federal Support SKU's on the quote and order. All orders without the Federal Support SKU's will be rejected by Nutanix. Refer this Knowledge base article for more info: <https://compute.kb.cisco.com/article/nutanix-support-for-federal-customers.html>

Table 30.9 Nutanix Data Lens (NDL)

Product ID (PID)	PID Description
NDL	
NT-NDL-PR	Nutanix Data Lens as a hosted service including Production Support for 1 TiB
NT-NDL-FP	Nutanix Data Lens as a hosted service incl Fed Production Support for 1 TiB

Table 30.9.a Nutanix Data Lens Allowed Capacity

Nutanix Data Lens	Nutanix Data Lens Support Tier	Storage Capacity Allowed (TiB)
NDL	Production Federal Production	1-50
		75
		100
		150
		200
		250
		300
		350
		400
		450
		500
		550
		600
		700
		800
		900
		1000
		1200
		1400
		1600
1800		
2000		
2200		
2400		
2600		
2800		
3000		

Professional Services PIDs and Description

(1) NCI Design Workshop:

The Nutanix Cloud Infrastructure (NCI) Design Workshop offers IT teams in-depth and practical guidance to create a comprehensive design for on-premises NCI clusters. It covers various aspects such as scalability, functionality, integration, and operational needs. This workshop is beneficial during the Design stage of a Hybrid Multicloud journey, especially for complex solutions that involve third-party applications and automation.



NOTE:

- For more information on NCI Design workshop, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-nci-design-workshop.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.0 NCI Design Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-W-DS-STR	NCI Design Workshop - Starter - Workshop Only	Starter	Workshop Only
NCI Starter	NT-W-DS-STR-ED	NCI Design Workshop - Starter - Enhanced Doc	Starter	Enhanced Documentation
NCI Starter	NT-W-DS-STR-SD	NCI Design Workshop - Starter - Standard Doc	Starter	Standard Documentation
NCI Pro	NT-W-DS-PRO	NCI Design Workshop - Pro - Workshop Only	Pro	Workshop Only
NCI Pro	NT-W-DS-PRO-ED	NCI Design Workshop - Pro - Standard Doc	Pro	Standard Documentation
NCI Pro	NT-W-DS-PRO-SD	NCI Design Workshop - Pro - Enhanced Doc	Pro	Enhanced Documentation
NCI Ultimate	NT-W-DS-ULT-ED	NCI Design Workshop - Ultimate - Enhanced Doc	Ultimate	Enhanced Documentation
NCI Ultimate	NT-W-DS-ULT-SD	NCI Design Workshop - Ultimate - Standard Doc	Ultimate	Standard Documentation

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(2) NCI Cluster Deployment or Expansion:

The Nutanix Cloud Infrastructure (NCI) Cluster Deployment or Expansion accelerates the deployment of hybrid cloud infrastructure to support any application and workload. Highly skilled consultants can deploy on-premises NCI clusters or dedicated Nutanix Unified Storage (NUS) clusters. The clusters can be deployed to various supported hardware platforms, regardless of whether it's Nutanix, our OEM partners, or other platform providers. This offer is ideal for the Deploy stage of the Hybrid Multicloud journey.



NOTE:

- For more information on NCI Cluster deployment and expansion workshop, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-nci-cluster-deployment-or-expansion.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.1 NCI Cluster Deployment or Expansion

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-S-DP-STR-AVB	NCI Cluster Deployment or Expansion - Starter - AHV - Base	Starter	AHV Nodes
NCI Starter	NT-S-DP-STR-AVV	NCI Cluster Deployment or Expansion - Starter - AHV - Var	Starter	AHV Nodes
NCI Starter	NT-S-DP-STR-EXB	NCI Cluster Deployment or Expansion - Starter - ESX - Base	Starter	ESX Nodes
NCI Starter	NT-S-DP-STR-EXV	NCI Cluster Deployment or Expansion - Starter - ESX - Var	Starter	ESX Nodes
NCI Pro	NT-S-DP-PRO-AV-SB	NCI Cluster Deployment or Expansion - Starter - AHV - Base	Starter	AHV Nodes
NCI Pro	NT-S-DP-PRO-AV-SV	NCI Cluster Deployment or Expansion - Starter - AHV - Var	Starter	AHV Nodes
NCI Pro	NT-S-DP-PRO-EX-SV	NCI Cluster Deployment or Expansion - Starter - ESX - Var	Starter	ESX Nodes
NCI Pro	NT-S-DP-PRO-EX-SB	NCI Cluster Deployment or Expansion - Starter - ESX - Base	Starter	ESX Nodes
NCI Pro	NT-S-DP-PRO-AV-PB	NCI Cluster Deployment or Expansion - Pro - AHV - Base	Pro	AHV Nodes
NCI Pro	NT-S-DP-PRO-AV-PV	NCI Cluster Deployment or Expansion - Pro - AHV - Var	Pro	AHV Nodes
NCI Pro	NT-S-DP-PRO-EX-PB	NCI Cluster Deployment or Expansion - Pro - ESX - Base	Pro	ESX Nodes
NCI Pro	NT-S-DP-PRO-EX-PV	NCI Cluster Deployment or Expansion - Pro - ESX - Var	Pro	ESX Nodes

Table 31.1 NCI Cluster Deployment or Expansion

NCI Ultimate	NT-S-DP-ULT-AV-SB	NCI Cluster Deployment or Expansion - Starter - AHV - Base	Starter	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-AV-SV	NCI Cluster Deployment or Expansion - Starter - AHV - Var	Starter	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-EX-SB	NCI Cluster Deployment or Expansion - Starter - ESX - Base	Starter	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-EX-SV	NCI Cluster Deployment or Expansion - Starter - ESX - Var	Starter	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-AV-PB	NCI Cluster Deployment or Expansion - Pro - AHV - Base	Pro	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-AV-PV	NCI Cluster Deployment or Expansion - Pro - AHV - Var	Pro	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-EX-PB	NCI Cluster Deployment or Expansion - Pro - ESX - Base	Pro	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-EX-PV	NCI Cluster Deployment or Expansion - Pro - ESX - Var	Pro	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-AV-UB	NCI Cluster Deployment or Expansion- Ultimate - AHV - Base	Ultimate	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-AV-UV	NCI Cluster Deployment or Expansion- Ultimate - AHV - Var	Ultimate	AHV Nodes
NCI Ultimate	NT-S-DP-ULT-EX-UB	NCI Cluster Deployment or Expansion- Ultimate - ESX - Base	Ultimate	ESX Nodes
NCI Ultimate	NT-S-DP-ULT-EX-UV	NCI Cluster Deployment or Expansion- Ultimate - ESX - Var	Ultimate	ESX Nodes

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(3) Virtual Machine Migration Workshop:

The Virtual Machine Migration Workshop offers IT teams in-depth and practical guidance to create a comprehensive virtual machine migration plan for migrating virtual machines to Nutanix Cloud Infrastructure (NCI). This offer is ideal for the Migrate state of a Hybrid Multicloud journey.



NOTE:

- For more information on Virtual Machine Migration Workshop, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-virtual-machine-migration-workshop.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.2 Virtual Machine Migration Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-W-MG-STR-SD	Virtual Machine Migration Workshop - Standard Doc	None	Standard Documentation
NCI Starter	NT-W-MG-STR-ED	Virtual Machine Migration Workshop - Enhanced Doc	None	Enhanced Documentation
NCI Pro	NT-W-MG-PRO-SD	Virtual Machine Migration Workshop - Standard Doc	None	Standard Documentation
NCI Pro	NT-W-MG-PRO-ED	Virtual Machine Migration Workshop - Enhanced Doc	None	Enhanced Documentation
NCI Ultimate	NT-W-MG-ULT-SD	Virtual Machine Migration Workshop - Standard Doc	None	Standard Documentation
NCI Ultimate	NT-W-MG-ULT-ED	Virtual Machine Migration Workshop - Enhanced Doc	None	Enhanced Documentation

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(4) Virtual Machine Migration:

Virtual machine (VM) Migration offers IT teams strong domain expertise to migrate virtual machines to Nutanix Cloud Infrastructure (NCI) per the customer-provided migration plan. This offer is ideal for the Migrate stage of a Hybrid Multicloud journey

**NOTE:**

- For more information on Virtual Machine Migration, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-virtual-machine-migration.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.3 Virtual Machine Migration

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCI Starter	NT-S-MG-VM-STR-AVB	Virtual Machine Migration - From AHV - Base	None	From AHV
NCI Starter	NT-S-MG-VM-STR-AVV	Virtual Machine Migration - From AHV - Var	None	From AHV
NCI Starter	NT-S-MG-VM-STR-EXB	Virtual Machine Migration - From ESX - Base	None	From ESX
NCI Starter	NT-S-MG-VM-STR-EXV	Virtual Machine Migration - From ESX - Var	None	From ESX
NCI Pro	NT-S-MG-VM-PRO-AVB	Virtual Machine Migration - From AHV - Base	None	From AHV
NCI Pro	NT-S-MG-VM-PRO-AVV	Virtual Machine Migration - From AHV - Var	None	From AHV
NCI Pro	NT-S-MG-VM-PRO-EXB	Virtual Machine Migration - From ESX - Base	None	From ESX
NCI Pro	NT-S-MG-VM-PRO-EXV	Virtual Machine Migration - From ESX - Var	None	From ESX
NCI Ultimate	NT-S-MG-VM-ULT-AVB	Virtual Machine Migration - From AHV - Base	None	From AHV
NCI Ultimate	NT-S-MG-VM-ULT-AVV	Virtual Machine Migration - From AHV - Var	None	From AHV
NCI Ultimate	NT-S-MG-VM-ULT-EXB	Virtual Machine Migration - From ESX - Base	None	From ESX
NCI Ultimate	NT-S-MG-VM-ULT-EXV	Virtual Machine Migration - From ESX - Var	None	From ESX

Table 33.0, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 33.1, Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

(5) NCM Self-Service Design Workshop:

The Nutanix Cloud Management (NCM) Self-Service Design Workshop offers automation teams in-depth and practical guidance to create a comprehensive design for application-centric infrastructure automation and lifecycle management (LCM) platforms to streamline and accelerate application development. This workshop is beneficial during the Design stage of a Hybrid Multicloud journey.



NOTE:

- For more information on Nutanix Cloud Management (NCM) Self-Service Design Workshop, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/datasheets/professional-services-service-descriptions.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.4 NCM Self-Service Design Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Pro	NT-W-SSD-PRO-SD-S	NCM Self-Service Design Workshop - Starter - Standard Doc	Starter	Standard Documentation
NCM Pro	NT-W-SSD-PRO-ED-S	NCM Self-Service Design Workshop - Starter - Enhanced Doc	Starter	Enhanced Documentation
NCM Pro	NT-W-SSD-PRO-SD-P	NCM Self-Service Design Workshop - Pro - Standard Doc	Pro	Standard Documentation
NCM Pro	NT-W-SSD-PRO-ED-P	NCM Self-Service Design Workshop - Pro - Enhanced Doc	Pro	Enhanced Documentation
NCM Ultimate	NT-W-SSD-ULT-SD-S	NCM Self-Service Design Workshop - Starter - Standard Doc	Starter	Standard Documentation
NCM Ultimate	NT-W-SSD-ULT-ED-S	NCM Self-Service Design Workshop - Starter - Enhanced Doc	Starter	Enhanced Documentation
NCM Ultimate	NT-W-SSD-ULT-SD-P	NCM Self-Service Design Workshop - Pro - Standard Doc	Pro	Standard Documentation
NCM Ultimate	NT-W-SSD-ULT-ED-P	NCM Self-Service Design Workshop - Pro - Enhanced Doc	Pro	Enhanced Documentation

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(6) NCM Intelligent Operations Design:

The Nutanix Cloud Management (NCM) Intelligent Operations Design Workshop offers IT teams in-depth and practical guidance to create a comprehensive design for Nutanix X-Play automation and playbooks to automate common tasks.

**NOTE:**

- For more information on NCM Intelligent Operations Design Workshop, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-design.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.5 NCM Intelligent Operations Design Workshop

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Starter	NT-W-OD-STR-SD	NCM Intelligent Operations Design Workshop - Standard Doc	None	Standard Documentation
NCM Starter	NT-W-OD-STR-ED	NCM Intelligent Operations Design Workshop - Enhanced Doc	None	Enhanced Documentation
NCM Pro	NT-W-OD-PRO-SD	NCM Intelligent Operations Design Workshop - Standard Doc	None	Standard Documentation
NCM Pro	NT-W-OD-PRO-ED	NCM Intelligent Operations Design Workshop - Enhanced Doc	None	Enhanced Documentation
NCM Ultimate	NT-W-OD-ULT-SD	NCM Intelligent Operations Design Workshop - Standard Doc	None	Standard Documentation
NCM Ultimate	NT-W-OD-ULT-ED	NCM Intelligent Operations Design Workshop - Enhanced Doc	None	Enhanced Documentation

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(7) NCM Intelligent Operations Deployment:

The Nutanix Cloud Management (NCM) Intelligent Operations Deployment accelerates the deployment of Nutanix X-Play automation and playbooks to automate common tasks with in-depth expertise from highly skilled consultants.



NOTE:

- For more information on NCM Intelligent Operations Deployment Workshop, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.6 NCM Intelligent Operations Deployment

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Starter	NT-S-OP-STR	NCM Intelligent Operations Deployment	None	None
NCM Pro	NT-S-OP-PRO	NCM Intelligent Operations Deployment	None	None
NCM Ultimate	NT-S-OP-ULT	NCM Intelligent Operations Deployment	None	None

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(8) FastTrack for NCM Self-Service:

FastTrack for Nutanix Cloud Manager (NCM) Self-Service accelerates the deployment and configuration of NCM Self-Service, which streamlines how teams manage, deploy, and scale applications across hybrid clouds with self-service, automation, and centralized role-based governance, with expertise from highly skilled automation consultants.

**NOTE:**

- For more information on Fast Track for NCM Self-Service, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.7 FastTrack for NCM Self-Service

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Pro	NT-F-PRO-SS	FastTrack for NCM Self-Service	None	None
NCM Ultimate	NT-F-ULT-SS	FastTrack for NCM Self-Service	None	None

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(9) FastTrack for NCM Cost Governance:

The FastTrack for Nutanix Cloud Management (NCM) Cost Governance accelerates the onboarding of deep visibility and rich analytics detailing cloud consumption patterns along with one-click cost optimization across cloud environments with expertise from highly skilled consultants. IT teams can choose to onboard on-premises Nutanix Cloud Infrastructure (NCI) clusters or a public cloud platform.



NOTE:

- For more information on Fast Track for NCM Cost Governance, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.8 FastTrack for NCM Cost Governance

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
NCM Pro	NT-F-PRO-CG	FastTrack for NCM Cost Governance	None	None
NCM Ultimate	NT-F-ULT-CG	FastTrack for NCM Cost Governance	None	None

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

(10) Nutanix Services Flexible Credits:

Nutanix Flex Credits provide a credits program for purchasing Nutanix Professional Services. This program provides the flexibility to utilize your budget cycles to pre-buy credits for future use of Nutanix Professional Services and training via redemption of credits. Within the terms of validity of your Flex Credits, use the credits for the portfolio of Nutanix Professional Services including Consulting, Resident, Technical Account Manager, and Education.

**NOTE:**

- For more information on Nutanix Services Flexible Credits, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/sd-ncm-intelligent-operations-deployment.pdf>
- For more information on Cisco version of Nutanix Professional services, please visit - <https://www.nutanix.com/content/dam/nutanix/resources/service-descriptions/professional-services-service-descriptions-cisco.pdf>

Table 31.9 Nutanix Flexible Credits

Nutanix Software Product/Edition	Cisco Product PID	Cisco PID Description PS Offer Name - PS Offer Edition - PS Offer Option - Base/Variable	Nutanix PS Edition	Nutanix PS Option
All	NT-FLEX-CST-CR	Nutanix Services Flexible Credits	None	None

Table 34.0, Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Table 34.1, Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Table 35, Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

Nutanix Support:

Table 32 Nutanix Support

Product ID (PID)	PID Description
Nutanix Support	
SVS-NT-SUP	Entitlement ONLY for Nutanix Cloud Infrastructure SW

Software With Professional Services PID Mapping



NOTE: Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 33.0 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

Software PIDs	Mandatory Professional Services PIDs	
	NCI Design Workshop (select one service)	NCI Cluster Deployment or Expansion (select a Pair of service)
<p>STR:</p> <p>A) NCI NT-NCI-STR-PR NT-NCI-STR-MC NT-NCI-STR-FP NT-NCI-STR-FM</p> <p>B) NCI-D NT-NCI-D-STR-PR NT-NCI-D-STR-MC NT-NCI-D-STR-FP NT-NCI-D-STR-FM</p> <p>C) EUC NT-EUC-STR-PR NT-EUC-STR-MC NT-EUC-STR-FP NT-EUC-STR-FM</p> <p>PRO:</p> <p>A) NCI NT-NCI-PRO-PR NT-NCI-PRO-MC NT-NCI-PRO-FP NT-NCI-PRO-FM</p>	<p>STR: NT-W-DS-STR NT-W-DS-STR-SD NT-W-DS-STR-ED</p> <p>PRO: NT-W-DS-PRO NT-W-DS-PRO-SD NT-W-DS-PRO-ED</p> <p>ULT: NT-W-DS-ULT-SD NT-W-DS-ULT-ED</p>	<p>STR: NT-S-DP-STR-AVB and NT-S-DP-STR-AVV or NT-S-DP-STR-EXB and NT-S-DP-STR-EXV</p> <p>PRO: NT-S-DP-PRO-AV-SB and NT-S-DP-PRO-AV-SV or NT-S-DP-PRO-EX-SB and NT-S-DP-PRO-EX-SV or NT-S-DP-PRO-AV-PB and NT-S-DP-PRO-AV-PV or NT-S-DP-PRO-EX-PB and NT-S-DP-PRO-EX-PV</p> <p>ULT: NT-S-DP-ULT-AV-SB and NT-S-DP-ULT-AV-SV or NT-S-DP-ULT-EX-SB and NT-S-DP-ULT-EX-SV or NT-S-DP-ULT-AV-PB and NT-S-DP-ULT-AV-PV or NT-S-DP-ULT-EX-PB and NT-S-DP-ULT-EX-PV or NT-S-DP-ULT-AV-UB and NT-S-DP-ULT-AV-UV or NT-S-DP-ULT-EX-UB and NT-S-DP-ULT-EX-UV</p>

Table 33.0 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 1 YEAR SUBSCRIPTION with professional services PID Mapping

<p>B) NCI-D NT-NCI-D-PRO-PR NT-NCI-D-PRO-MC NT-NCI-D-PRO-FP NT-NCI-D-PRO-FM</p> <p>C) EUC NT-EUC-PRO-PR NT-EUC-PRO-MC NT-EUC-PRO-FP NT-EUC-PRO-FM</p> <p>E) NCP (NCI-PRO) NT-NCP-NCI-PRO-PR NT-NCP-NCI-PRO-MC NT-NCP-NCI-PRO-FP NT-NCP-NCI-PRO-FM</p> <p>ULT: A) NCI NT-NCI-ULT-PR NT-NCI-ULT-MC NT-NCI-ULT-FP NT-NCI-ULT-FM</p> <p>B) NCI-D NT-NCI-D-ULT-PR NT-NCI-D-ULT-MC NT-NCI-D-ULT-FP NT-NCI-D-ULT-FM</p> <p>C) EUC NT-EUC-ULT-PR NT-EUC-ULT-MC NT-EUC-ULT-FP NT-EUC-ULT-FM</p> <p>D) NCP (NCI-ULT) NT-NCP-NCI-ULT-PR NT-NCP-NCI-ULT-MC NT-NCP-NCI-ULT-FP NT-NCP-NCI-ULT-FM</p>		
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NOTE: Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 33.1 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

Software PIDs	Recommended Professional Services PIDs	
	NCI Design Workshop (select one service)	NCI Cluster Deployment or Expansion (select a Pair of service)
<p>STR:</p> <p>A) NCI NT-NCI-STR-PR NT-NCI-STR-MC NT-NCI-STR-FP NT-NCI-STR-FM</p> <p>B) NCI-D NT-NCI-D-STR-PR NT-NCI-D-STR-MC NT-NCI-D-STR-FP NT-NCI-D-STR-FM</p> <p>C) EUC NT-EUC-STR-PR NT-EUC-STR-MC NT-EUC-STR-FP NT-EUC-STR-FM</p> <p>PRO:</p> <p>A) NCI NT-NCI-PRO-PR NT-NCI-PRO-MC NT-NCI-PRO-FP NT-NCI-PRO-FM</p> <p>B) NCI-D NT-NCI-D-PRO-PR NT-NCI-D-PRO-MC NT-NCI-D-PRO-FP NT-NCI-D-PRO-FM</p>	<p>STR: NT-W-DS-STR NT-W-DS-STR-SD NT-W-DS-STR-ED</p> <p>PRO: NT-W-DS-PRO NT-W-DS-PRO-SD NT-W-DS-PRO-ED</p> <p>ULT: NT-W-DS-ULT-SD NT-W-DS-ULT-ED</p>	<p>STR: NT-S-DP-STR-AVB and NT-S-DP-STR-AVV or NT-S-DP-STR-EXB and N T-S-DP-STR-EXV</p> <p>PRO: NT-S-DP-PRO-AV-SB and NT-S-DP-PRO-AV-SV or NT-S-DP-PRO-EX-SB and NT-S-DP-PRO-EX-SV or NT-S-DP-PRO-AV-PB and NT-S-DP-PRO-AV-PV or NT-S-DP-PRO-EX-PB and NT-S-DP-PRO-EX-PV</p> <p>ULT: NT-S-DP-ULT-AV-SB and NT-S-DP-ULT-AV-SV or NT-S-DP-ULT-EX-SB and NT-S-DP-ULT-EX-SV or NT-S-DP-ULT-AV-PB and NT-S-DP-ULT-AV-PV or NT-S-DP-ULT-EX-PB and NT-S-DP-ULT-EX-PV or NT-S-DP-ULT-AV-UB and NT-S-DP-ULT-AV-UV or NT-S-DP-ULT-EX-UB and NT-S-DP-ULT-EX-UV</p>

Table 33.1 Nutanix Software NCI, NCI-D, EUC, NCP (NCI-PRO), NCP (NCI-ULT) 3 YEAR SUBSCRIPTION with professional services PID Mapping

<p>C) EUC NT-EUC-PRO-PR NT-EUC-PRO-MC NT-EUC-PRO-FP NT-EUC-PRO-FM</p> <p>D) NCP (NCI-PRO) NT-NCP-NCI-PRO-PR NT-NCP-NCI-PRO-MC NT-NCP-NCI-PRO-FP NT-NCP-NCI-PRO-FM</p> <p>ULT:</p> <p>A) NCI NT-NCI-ULT-PR NT-NCI-ULT-MC NT-NCI-ULT-FP NT-NCI-ULT-FM</p> <p>B) NCI-D NT-NCI-D-ULT-PR NT-NCI-D-ULT-MC NT-NCI-D-ULT-FP NT-NCI-D-ULT-FM</p> <p>C) EUC NT-EUC-ULT-PR NT-EUC-ULT-MC NT-EUC-ULT-FP NT-EUC-ULT-FM</p> <p>D) NCP (NCI-ULT) NT-NCP-NCI-ULT-PR NT-NCP-NCI-ULT-MC NT-NCP-NCI-ULT-FP NT-NCP-NCI-ULT-FM</p>		
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NOTE: Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 34.0 Nutanix Software NCM and NCM-U STR 1 YEAR SUBSCRIPTION with professional services PID Mapping

Software PIDs	Mandatory Professional Services PIDs	
	NCM Intelligent Operations Design (select one service)	NCM Intelligent Operations Deployment (select one service)
STR:	STR:	STR:
A) NCM	NT-W-OD-STR-SD	NT-S-OP-STR
NT-NCM-STR-PR	NT-W-OD-STR-ED	
NT-NCM-STR-MC		PRO:
NT-NCM-STR-FP	PRO:	NT-S-OP-PRO
NT-NCM-STR-FM	NT-W-OD-PRO-SD	
	NT-W-OD-PRO-ED	ULT:
B) NCM-U		NT-S-OP-ULT
NT-NCM-U-STR-PR	ULT:	
NT-NCM-U-STR-MC	NT-W-OD-ULT-SD	
NT-NCM-U-STR-FP	NT-W-OD-ULT-ED	
NT-NCM-U-STR-FM		



NOTE: Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 34.1 Nutanix Software NCM and NCM-U STR 3 YEAR AND ABOVE SUBSCRIPTION with Professional Services PID Mapping

Software PIDs	Recommended Professional Services PIDs	
	NCM Intelligent Operations Design (select one service)	NCM Intelligent Operations Deployment (select one service)
STR: A) NCM NT-NCM-STR-PR NT-NCM-STR-MC NT-NCM-STR-FP NT-NCM-STR-FM B) NCM-U NT-NCM-U-STR-PR NT-NCM-U-STR-MC NT-NCM-U-STR-FP NT-NCM-U-STR-FM	STR: NT-W-OD-STR-SD NT-W-OD-STR-ED PRO: NT-W-OD-PRO-SD NT-W-OD-PRO-ED ULT: NT-W-OD-ULT-SD NT-W-OD-ULT-ED	STR: NT-S-OP-STR PRO: NT-S-OP-PRO ULT: NT-S-OP-ULT



NOTE: Recommended to select the matching/higher level of service options for the subscribed software. For example: If ULT (Ultimate) software is selected, recommended to choose the ULT services from the below columns. However, it is allowed to select the lower version of the services.

Table 35 Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

Software PIDs	Mandatory Professional Services PIDs				
	NCM Self-Service DesignWorkshop (select one service)	NCM Intelligent Operations Design (select one service)	NCM Intelligent Operations Deployment (select one service)	FastTrack for NCM Self-Service (select one service)	FastTrack for NCM Cost Governance (select one service)
PRO: A) NCM NT-NCM-PRO-PR NT-NCM-PRO-MC NT-NCM-PRO-FP NT-NCM-PRO-FM B) NCM-U NT-NCM-U-PRO-PR NT-NCM-U-PRO-MC NT-NCM-U-PRO-FP NT-NCM-U-PRO-FM C) NCP (NCM-PRO) NT-NCP-NCM-PRO-PR NT-NCP-NCM-PRO-MC NT-NCP-NCM-PRO-FP NT-NCP-NCM-PRO-FM ULT: A) NCM NT-NCM-ULT-PR NT-NCM-ULT-MC NT-NCM-ULT-FP NT-NCM-ULT-FM	PRO: NT-W-SSD-PRO-SD-S NT-W-SSD-PRO-ED-S NT-W-SSD-PRO-SD-P NT-W-SSD-PRO-ED-P ULT: NT-W-SSD-ULT-SD-S NT-W-SSD-ULT-ED-S NT-W-SSD-ULT-SD-P NT-W-SSD-ULT-ED-P	STR: NT-W-OD-STR-SD NT-W-OD-STR-ED PRO: NT-W-OD-PRO-SD NT-W-OD-PRO-ED ULT: NT-W-OD-ULT-SD NT-W-OD-ULT-ED	STR: NT-S-OP-STR PRO: NT-S-OP-PRO ULT: NT-S-OP-ULT	PRO: NT-F-PRO-SS ULT: NT-F-ULT-SS	PRO: NT-F-PRO-CG ULT: NT-F-ULT-CG

Table 35 Nutanix Software NCM PRO, NCM ULT, NCM-U PRO, NCM-U ULT, NCP (NCM-PRO), NCP (NCM-ULT) 1 YEAR AND 3 YEAR & ABOVE SUBSCRIPTION with Professional services

<p>B) NCM-U NT-NCM-U-ULT-PR NT-NCM-U-ULT-MC NT-NCM-U-ULT-FP NT-NCM-U-ULT-FM</p> <p>C) NCP (NCM-ULT) NT-NCP-NCM-ULT-PR NT-NCP-NCM-ULT-MC NT-NCP-NCM-ULT-FP NT-NCP-NCM-ULT-FM</p>					
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STEP 17 CISCO INTERSIGHT

Cisco Intersight™ is a Software-as-a-Service (SaaS) hybrid cloud operations platform which delivers intelligent automation, observability, and optimization to customers for traditional and cloud-native applications and infrastructure.

Product ID (PID)	
DC-MGT-SAAS	Cisco Intersight SaaS

Select Cisco Intersight subscription option as desired from [Table 36](#)

Table 36 Cisco Intersight

Product ID (PID)	PID Description
Cisco Intersight 2.0 Infrastructure Services	
DC-MGT-IS-SAAS-ES SA	Infrastructure Services SaaS/CVA - Essentials
DC-MGT-IS-SAAS-AD SA	Infrastructure Services SaaS/CVA - Advantage
DC-MGT-IS-PVAPP-ES SA	Infrastructure Services PVA - Essentials
DC-MGT-IS-PVAPP-AD SA	Infrastructure Services PVA - Advantage
DC-MGT-IS-UCSD	UCS Director - 1 Server License (includes Network, Storage)
Cisco Intersight Workload Optimizer (IWO) - SaaS	
VM Instance	
DC-MGT-WO-SAAS-ES SA	Cisco Intersight Workload Optimizer SaaS - Essentials
DC-MGT-WO-SAAS-AD SA	Cisco Intersight Workload Optimizer SaaS - Advantage
DC-MGT-WO-SAAS-PR SA	Cisco Intersight Workload Optimizer SaaS - Premier
VDI Instance	
DC-MGT-WOD-SAAS-ES SA	Cisco Intersight Workload Optimizer SaaS VDI - Essentials
DC-MGT-WOD-SAAS-AD SA	Cisco Intersight Workload Optimizer SaaS VDI - Advantage
DC-MGT-WOD-SAAS-PR SA	Cisco Intersight Workload Optimizer SaaS VDI - Premier

Select Cisco Intersight support option as desired from [Table 37](#)

Table 37 Cisco Intersight Support

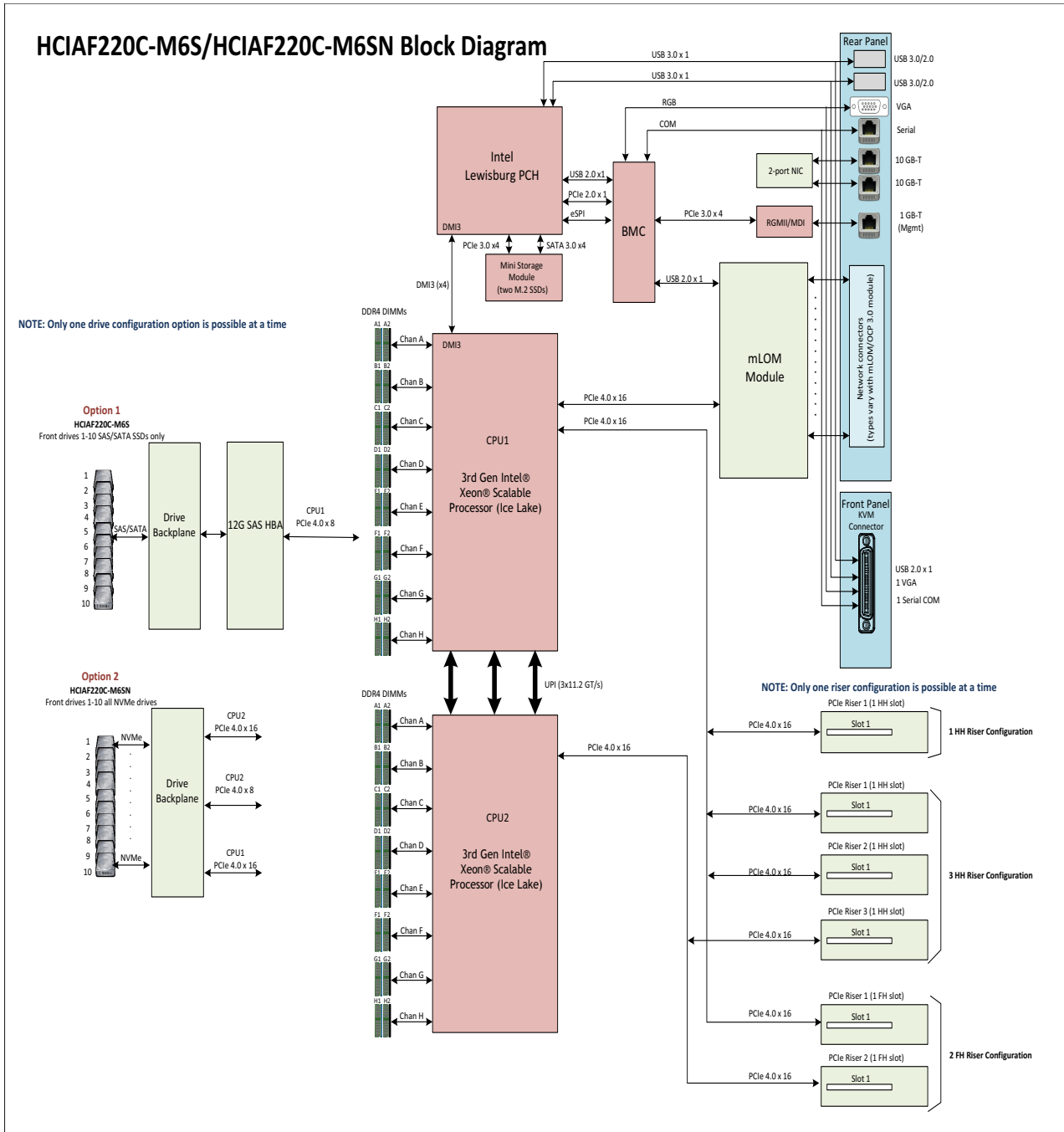
Product ID (PID)	PID Description
Cisco Intersight Support	
SVS-SSTCS-DCMGMT SA	Solution Support for DC Mgmt
SVS-L1DCS-INTER SA	CXL1 for INTERSIGHT
SVS-L2DCS-INTER SA	CXL2 for INTERSIGHT
SVS-DCM-SUPT-BAS	Basic Support for DCM



NOTE: An Intersight license is required for every server.

SUPPLEMENTAL MATERIAL

Block Diagram

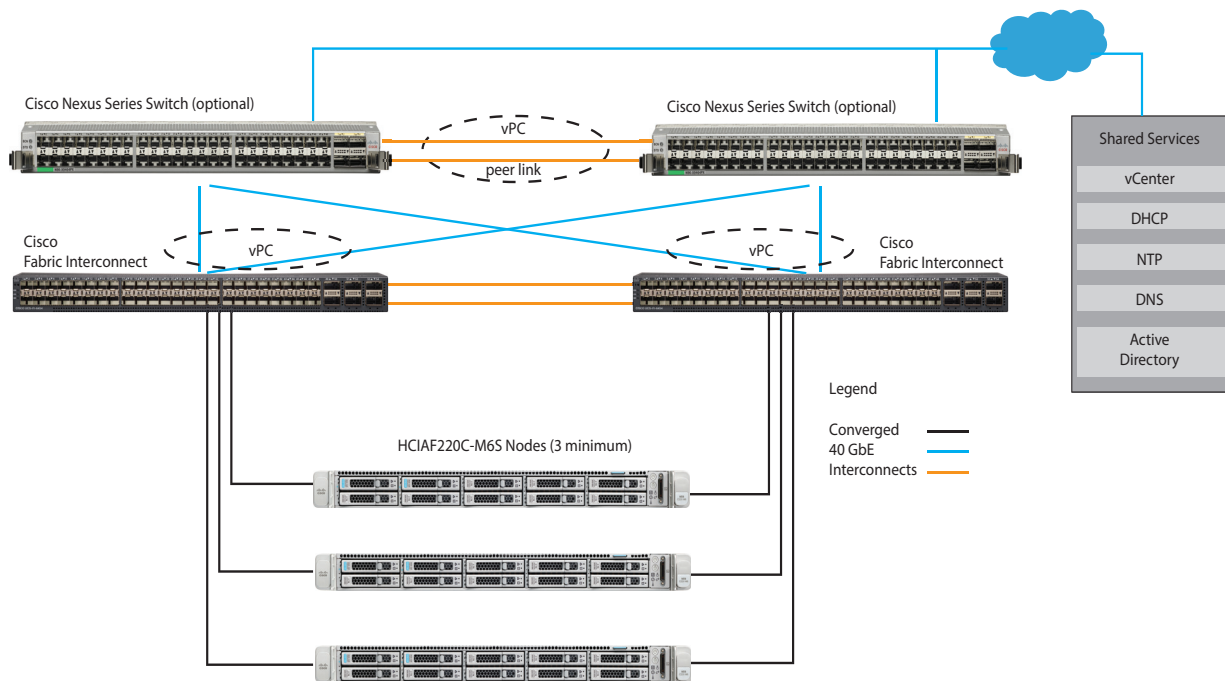


Hyperconverged Systems

Cisco Compute Hyperconverged Systems let you unlock the full potential of hyperconvergence and adapt IT to the needs of your workloads. The systems use an end-to-end software-defined infrastructure approach, combining software-defined computing in the form of Cisco Compute Hyperconverged HCI-Series nodes; software-defined storage with the powerful Nutanix AOS Platform; and software-defined networking with the Cisco UCS fabric that will integrate smoothly with Cisco Application Centric Infrastructure (Cisco ACI). Together with a single point of connectivity and management, these technologies deliver a preintegrated and adaptable cluster with a unified pool of resources that you can quickly deploy, adapt, scale, and manage to efficiently power your applications and your business.

Figure 8 & Figure 8 show a small footprint cluster.

Figure 8 Small Footprint Cluster Using HCIAF220C M6 All-NVMe/All-Flash Server With Data Center Fabric Interconnect Deployment Mode.



Retrofit of Existing UCS Servers

Existing UCS servers that match the base HCI platform (C220 M6 All-Flash/C220 M6 All-NVMe/C240 M6 All-Flash) can be retrofitted to support Nutanix software. UCS servers contain a software feature known as a software defined personality, enabling easy and automatic conversion between a base UCS platform and an HCI appliance supported under the Nutanix OEM program.

To prepare a server for retrofitting, confirm all installed components match all required sections of this document (e.g CPU, Memory, Drive Controller, Drives, Network Adapters, etc.). Special care should be taken to ensure compatible boot media, storage controllers, drives, and networking adapters are selected in line with this document.

For the C240 M6 All-Flash specifically, riser 1B and 3B can be physically installed as long as the drive bays remain unpopulated. Only the 24 front facing drive slots can be populated with SSDs.



NOTE: The C240 M6 All-NVMe chassis (UCSC-C240-M6SN) is not supported with Nutanix software.

Once the server hardware is confirmed to be compatible with this spec sheet, be sure to purchase the appropriate Nutanix software licenses, Intersight licenses, and professional services, as required.

The [Table 38](#) below can be used to verify drive compatibility for a new Nutanix deployment. Use the source PID (whether UCS or HX) to find the equivalent HCI PID. The table below is a generic lookup table and is not specific to this spec sheet. Therefore, once the HCI PID is determined, verify the compatibility of the drive to the specific model in the spec sheet (step 7). If a drive doesn't have an HCI PID listed, it is an end of life (EoL) drive that is supported with this solution and qualified for conversion use cases.

Table 38 Drive compatibility for a new Nutanix deployment

HCI Drive PID	HX Drive PID	UCS Drive PID	Other Equivalent PIDs	Drive Model
NVMe				
HCI-NVME4-1920 HCI-NVME4-1920-M6	HX-NVME4-1920	UCS-NVME4-1920 UCS-NVME4-1920-D	UCSX-NVME4-1920 UCSX-NVME4-1920-D	SSDPF2KX019T10
HCI-NVMEI4I1920M6	HX-NVMEI4-I1920	UCS-NVMEI4-I1920	UCSX-NVMEI4-I1920 UCSXNVMEI4I1920-D	SSDPF2KX019T9K
HCI-NVMEI4I3840M6	HX-NVMEI4-I3840 HXE-NVMEI4-I3840	UCS-NVMEI4-I3840	UCSX-NVMEI4-I3840 UCSXNVMEI4I3840-D	SSDPF2KX038T9K
HCI-NVMEI4I7680M6	HX-NVMEI4-I7680 HXE-NVMEI4-I7680	UCS-NVMEI4-I7680	UCSX-NVMEI4-I7680 UCSXNVMEI4I7680-D	SSDPF2KX076T9K
HCI-NVME-W7680M6	HX-NVMEM6-W7680	UCS-NVMEM6-W7680	UCSX-NVME-W7680-D UCSX-NVMEM6-W7680	WUS4BA176DSP3X3
HCI-NVME-W15300M6	HX-NVMEM6-W15300 HXE-NVMEM6-W15300	UCS-NVMEM6-W15300	UCSX-NVMEM6W1530 UCSX-NVMEW15300-D	WUS4BA1A1DSP3X3
HCI-NVME4-3840-M6	HX-NVME4-3840 HXE-NVME4-3840	UCS-NVME4-3840 UCS-NVME4-3840-D	UCSX-NVME4-3840 UCSX-NVME4-3840-D	SSDPF2KX038T10

Table 38 Drive compatibility for a new Nutanix deployment

HCI-NVME4-15360M6	HX-NVME4-15360 HXE-NVME4-15360	UCS-NVME4-15360 UCS-NVME4-15360-D	UCSX-NVME4-15360 UCSX-NVME4-15360D	SSDPF2KX153T10
SSD				
HCI-SD19T6S1XEVM6	HX-SD19T6S1X-EV	UCS-SD19T6S1X-EV UCS-SD19T6S1XEVD	UCSX-SD19T6S1X-EV UCSXSD19T6S1XEVD	MZ7L31T9HBLT
HCI-SD38T6S1XEVM6	HX-SD38T6S1X-EV HXE-SD38T6S1X-EV	UCS-SD38T6S1X-EV UCS-SD38T6S1XEVD	UCSX-SD38T6S1X-EV UCSXSD38T6S1XEVD	MZ7L33T8HBLT
HCI-SD76T6S1XEVM6	HX-SD76T6S1X-EV HXE-SD76T6S1X-EV	UCS-SD76T6S1X-EV UCS-SD76T6S1XEVD	UCSX-SD76T6S1X-EV UCSXSD76T6S1XEVD	MZ7L37T6HBLA
HCI-SD38TK1X-EVM6	HX-SD38TK1X-EV	UCS-SD38TK1X-EV UCS-SD38TK1X-EVD	UCSX-SD38TK1X-EV UCSX-SD38TK1XEVD	KPM6XRUG3T84
HCI-SD76TK1X-EVM6	HX-SD76TK1X-EV	UCS-SD76TK1X-EV UCS-SD76TK1X-EVD	UCSX-SD76TK1X-EV UCSX-SD76TK1XEVD	KPM6XRUG7T68
HCI-SD38TBKNK9-M6	HX-SD38TBKNK9	UCS-SD38TBKNK9 UCS-SD38TBKNK9-D	UCSX-SD38TBKNK9 UCSX-SD38TBKNK9-D	KPM6WRUG3T84
HCI-SD76TBKNK9-M6	HX-SD76TBKNK9	UCS-SD76TBKNK9 UCS-SD76TBKNK9-D	UCSX-SD76TBKNK9 UCSX-SD76TBKNK9-D	KPM6WRUG7T68
No HCI PID	HX-SD19T61X-EV	UCS-SD19T61X-EV	UCSX-SD19T61X-EV	PM883 (MZ7LH1T9HMLT) model only ¹ PM863a (MZ7LM1T9HMJP) is not supported.
No HCI PID	HX-SD38T61X-EV HXE-SD38T61X-EV	UCS-SD38T61X-EV UCS-SP-38T61X-EV UCS-SP-SD-3P8T	UCSX-SD38T61X-EV	PM883 (MZ7LH3T8HMLT) and PM863a (MZ7LM3T8HMLP) models only. ¹ PM863 (MZ7LM3T8HCJM) is not supported.
No HCI PID	HX-SD76T61X-EV HXE-SD76T61X-EV	UCS-SD76T61X-EV	UCSX-SD76T61X-EV	PM883 (MZ7LH7T6HMLA
Boot				
HCI-M2-240GB-M6	HX-M2-240GB	UCS-M2-240GB UCS-M2-240GB-D	UCSX-M2-240GB UCSX-M2-240GB-D	Micron 5100/5300
HCI-M2-240G-M6	HX-M2-240G	UCS-M2-240G UCS-M2-240G-D	UCSX-M2-240G UCSX-M2-240G-D	Micron 5400
HCI-M2-I240GB-M6	HX-M2-I240GB	UCS-M2-I240GB UCS-M2-I240GB-D	UCSX-M2-I240GB UCSX-M2-I240GB-D	Solidigm/Intel SSDSCKKB240GZK

Notes:

1. Carefully check the actual drive installed to ensure it matches this exact model. PID identification is not sufficient to verify compatibility.

Only base PIDs are included in the table above. Spares can be ordered with (=) added to the end of a base PID.



NOTE: This table will be continually updated. Compatibility between drive PIDs may shift, and hence this table must be referenced regularly.

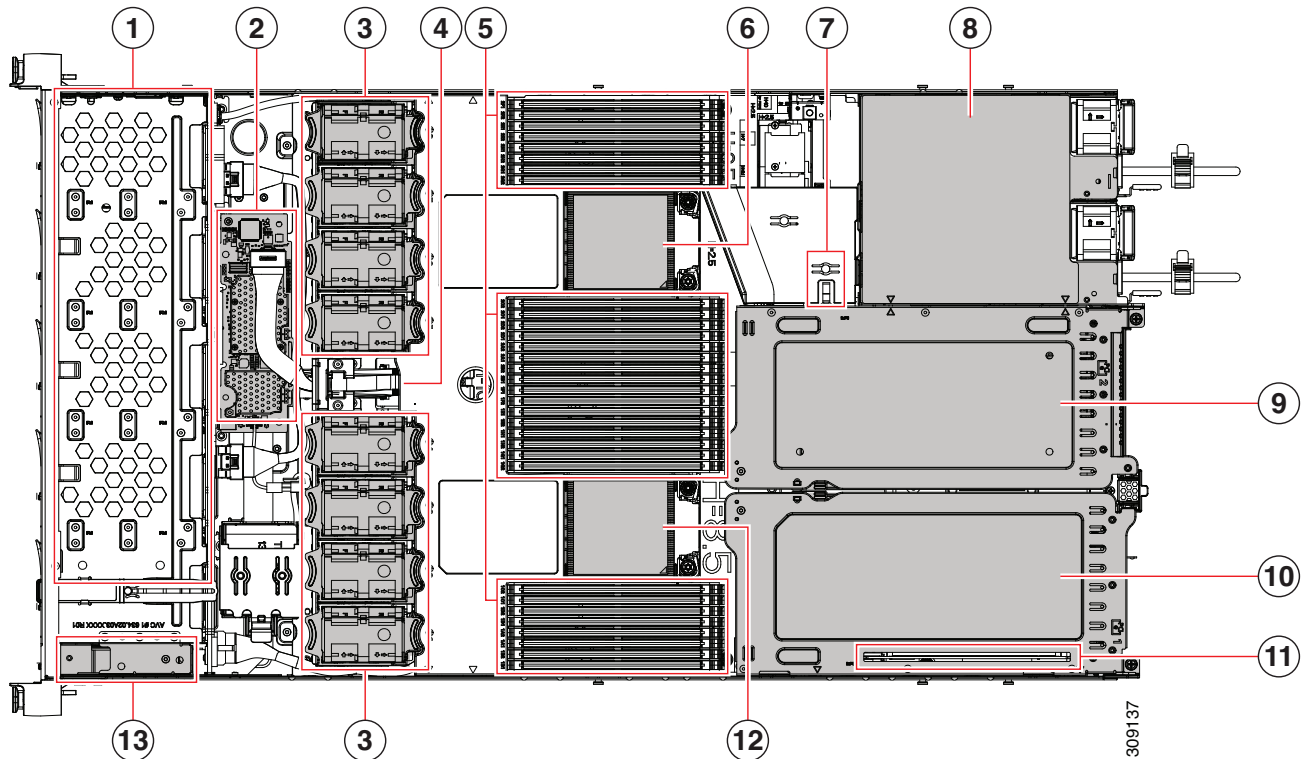
Some drives will require a detailed vendor & model check to confirm compatibility with Nutanix AOS software. To verify drive vendor & model, pick one of the following 3 options:

- Physically inspect the drives by removing the drive from the slot
- From UCSM CLI, run the following commands:
 - # scope server <x>
 - # scope raid-controller 1 sas
 - # show local-disk detail | egrep 'Vendor|Model|PID'
- From Intersight, navigate to the server of interest -> Inventory -> Storage Controllers -> SAS -> Physical Drives

Chassis

Internal views of the HClAF220C M6 All-NVMe/All-Flash Server chassis with the top cover removed are shown in [Figure 9](#) and [Figure 10 on page 105](#).

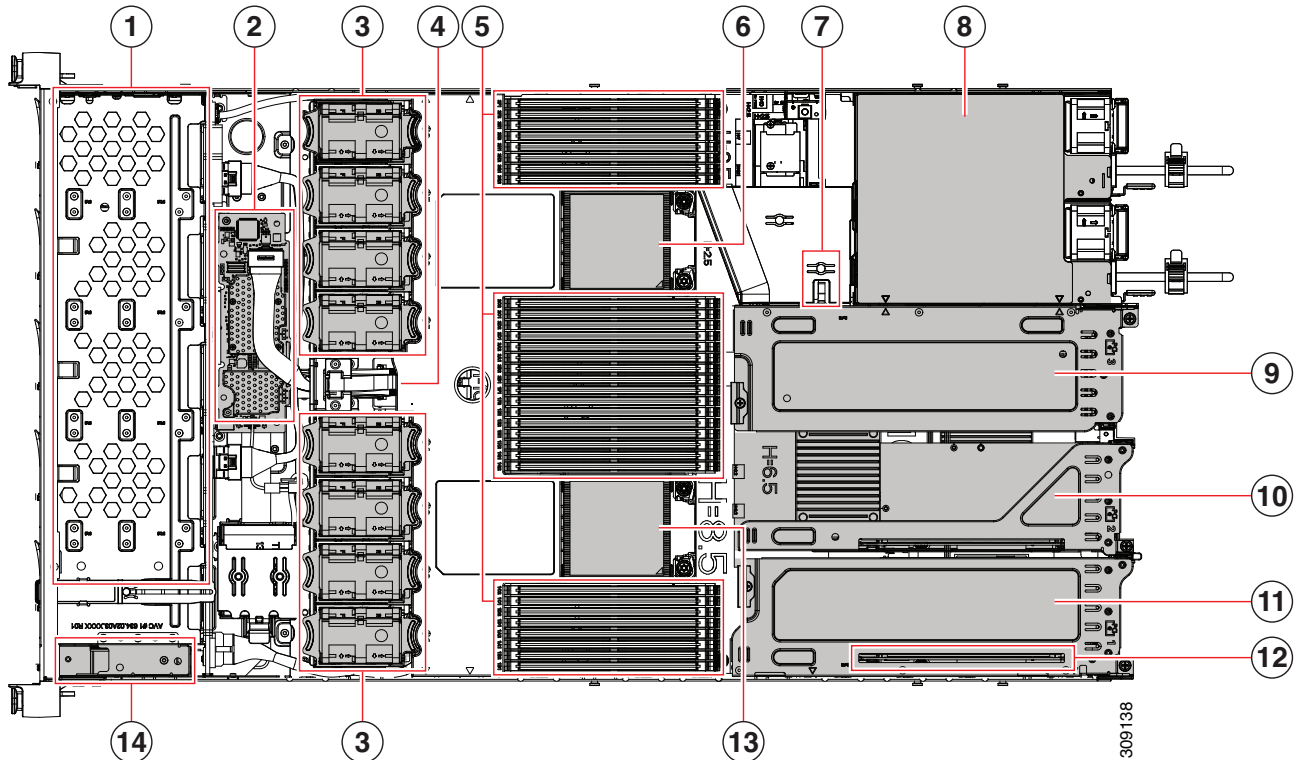
Figure 9 HClAF220C M6 All-NVMe/All-Flash Server With Top Cover Off (full-height, full-width PCIe cards)



1	Front-loading drive bays	2	M6 modular RAID card
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	6	Motherboard CPU2 socket
7	M.2 module connector, supporting a boot-optimized RAID controller with connectors for two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 3 Accepts 1 full height, full width PCIe riser card	10	PCIe riser 1 Accepts 1 full height, full width PCIe riser card
11	Modular LOM (mLOM) card bay on chassis floor(x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser 1.	12	Motherboard CPU1 socket
13	Front Panel Controller board	-	

An internal view of the HCIAF220C M6 All-NVMe/All-Flash Server chassis with the top cover removed is shown in [Figure 10](#).

Figure 10 HCIAF220C M6 All-NVMe/All-Flash Server With Top Cover Off (full-height, half-width PCIe cards)



1	Front-loading drive bays	2	M6 modular RAID card
3	Cooling fan modules (eight) Each fan is hot-swappable	4	Supercap module mounting bracket
5	DIMM sockets on motherboard, 32 total, 16 per CPU CPUs are arranged in groups of eight sockets above the top CPU and below the bottom CPU, and 16 sockets between the CPUs.	6	Motherboard CPU2 socket
7	M.2 module connector, supporting a boot-optimized RAID controller with connectors for two SATA M.2 SSDs.	8	Two power supplies
9	PCIe riser 3 Accepts 1 half height, half width PCIe riser card	10	PCIe riser 2 Accepts 1 half height, half width PCIe riser card
11	PCIe riser 1 Accepts 1 half height, half width PCIe riser card	12	Modular LOM (mLOM) card bay on chassis floor(x16 PCIe lane) Connector shown, but the card bay sits below PCIe riser slot 1.
13	Motherboard CPU1 socket	14	Front Panel Controller board

Risers

Figure 11 shows the locations of the PCIe riser connectors on the HClAF220C M6 All-NVMe/All-Flash Server motherboard. The allowed configurations are:

- Half-height risers in riser 1 connector, riser 2 connector, and riser 3 connector, or
- Full-height risers in riser 1 connector and riser 3 connector.

See *Figure 12* and *Figure 13* for more details.

Figure 11 HClAF220C M6 All-NVMe/All-Flash Server Riser Connector Locations
HClAF220C-M6S/SN M6 Motherboard

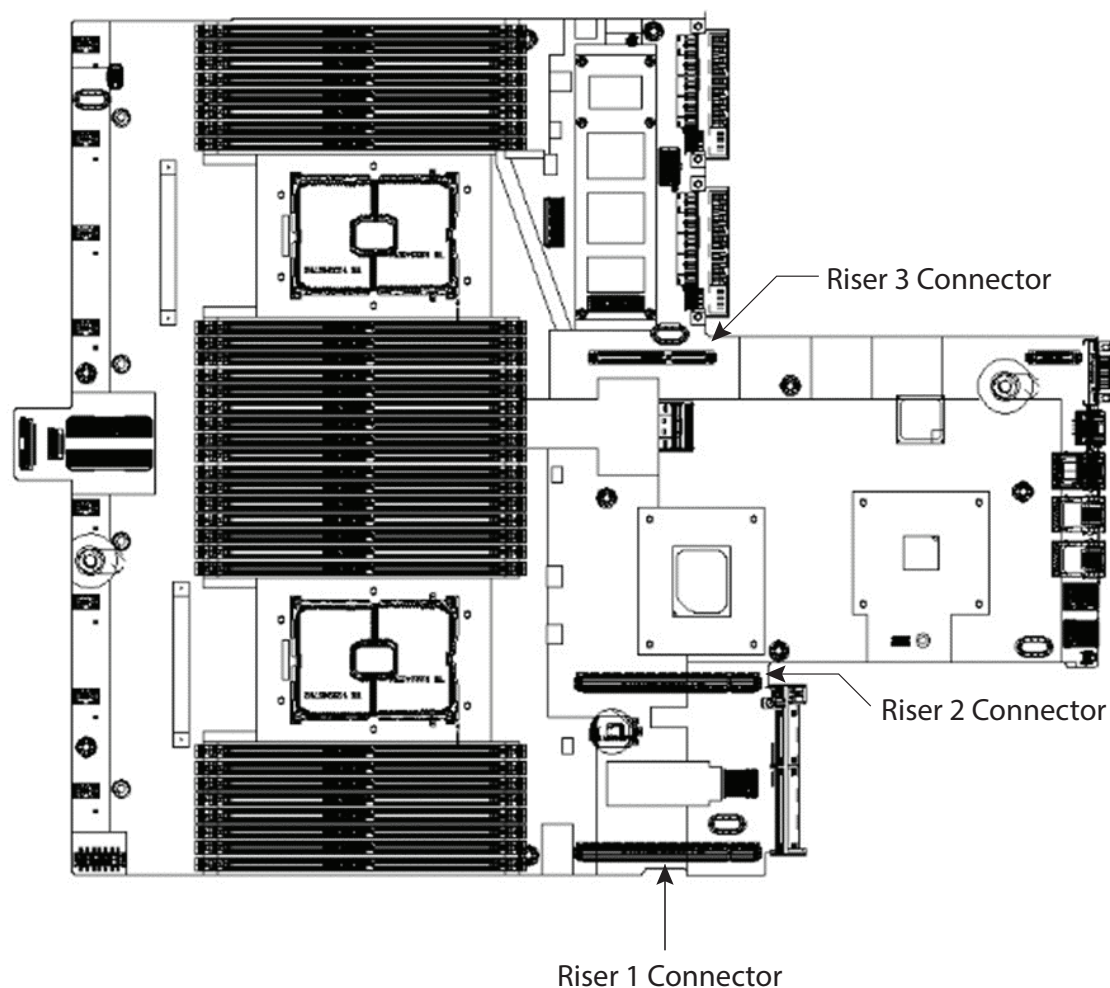


Figure 12 shows three half-height risers plugged into their respective connectors.

Figure 12 HClAF220C M6 All-NVMe/All-Flash Server with three half-height risers plugged In HClAF220C-M6S/SN Motherboard

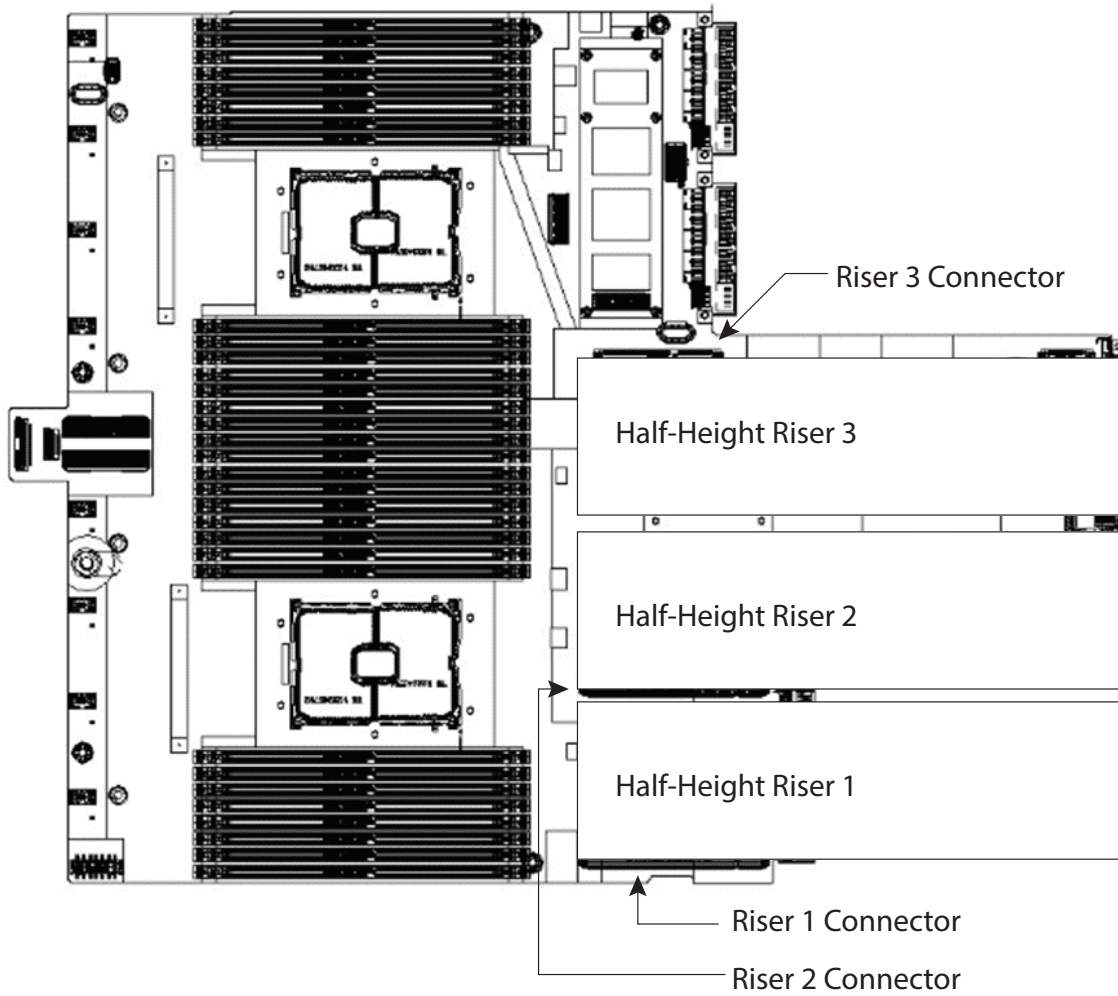
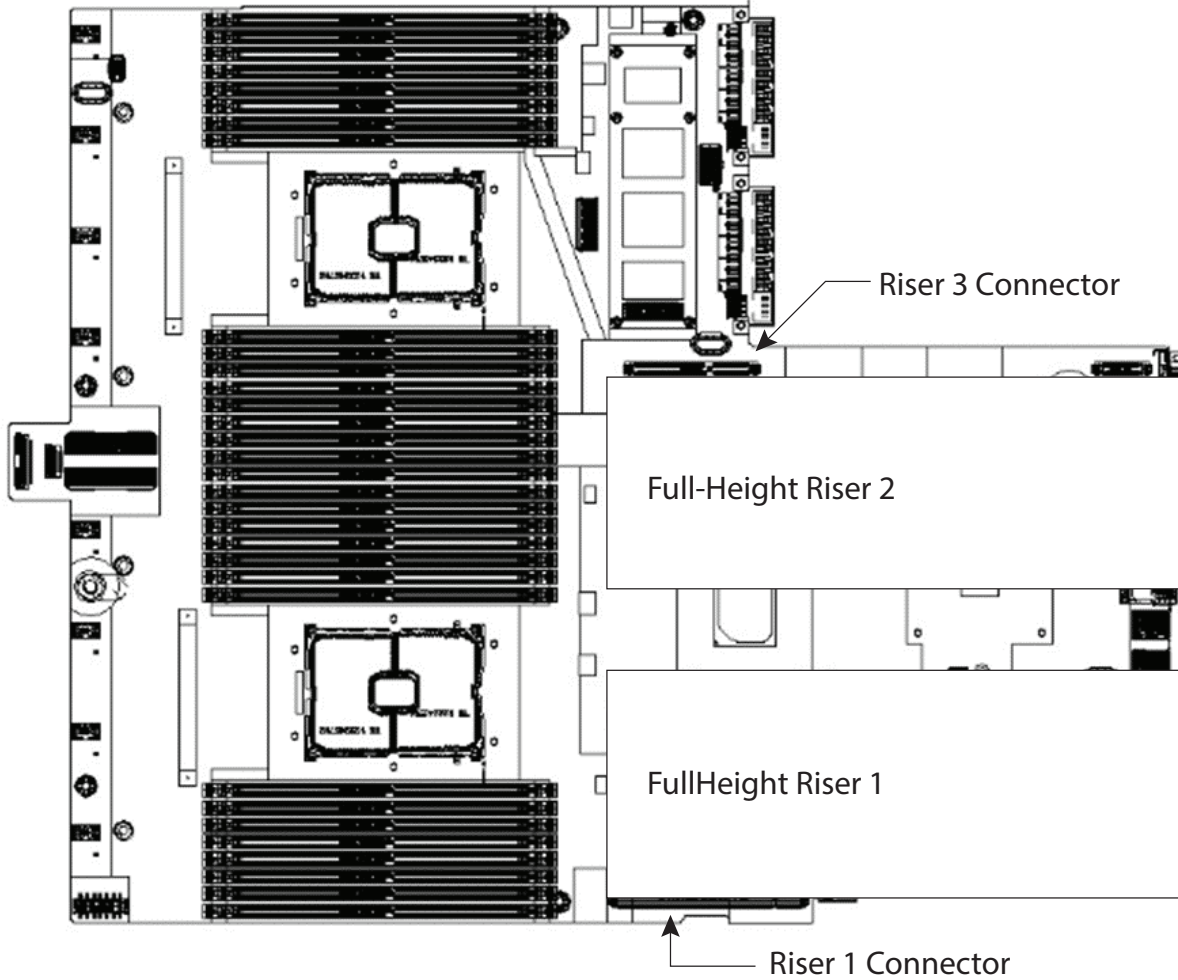


Figure 13 shows two full-height risers plugged in. Note that riser 1 is plugged into the riser 1 connector and riser 2 is plugged into the riser 3 connector. Riser 2 connector is not used.

Figure 13 HClAF220C M6 All-NVMe/All-Flash With Two Full-Height Risers Plugged In
HClAF220C-M6S/SN M6 Motherboard

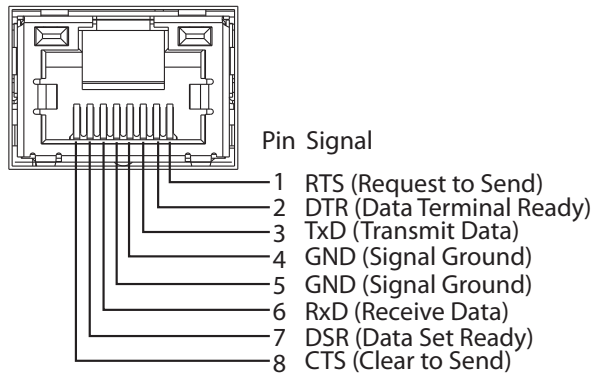


Serial Port Details

The pinout details of the rear RJ-45 serial port connector are shown in [Figure 14](#).

Figure 14 Serial Port (Female RJ-45 Connector) Pinout

Serial Port (RJ-45 Female Connector)



KVM Cable

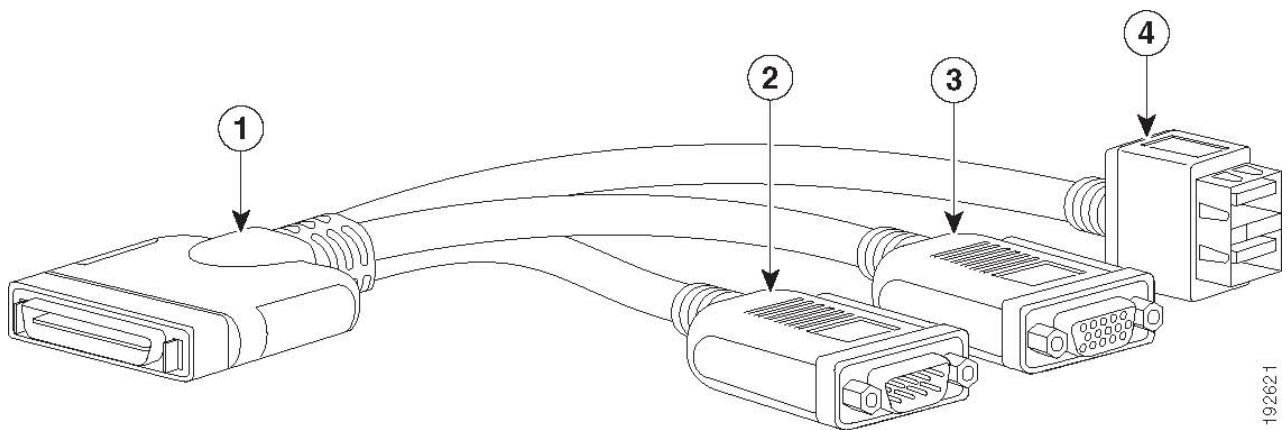
The KVM cable provides a connection into the server, providing a DB9 serial connector, a VGA connector for a monitor, and dual USB ports for a keyboard and mouse. With this cable, you can create a direct connection to the operating system and the BIOS running on the server.

The KVM cable ordering information is listed in [Table 39](#).

Table 39 KVM Cable

Product ID (PID)	PID Description
N20-BKVM	KVM local IO cable for UCS servers console port

Figure 15 KVM Cable



192621

1	Connector (to server front panel)	3	VGA connector (for a monitor)
2	DB-9 serial connector	4	Two-port USB connector (for a mouse and keyboard)

UPGRADING or REPLACING CPUs



NOTE: Before servicing any CPU, do the following:

- Decommission and power off the server.
- Slide the HClAF220C M6 All-NVMe/All-Flash Server out from the rack.
- Remove the top cover.

To replace an existing CPU, follow these steps:

(1) Have the following tools and materials available for the procedure:

- T-30 Torx driver—Supplied with replacement CPU.
- #1 flat-head screwdriver—Supplied with replacement CPU.
- CPU assembly tool—Supplied with replacement CPU. Can be ordered separately as Cisco PID UCS-CPUAT=.
- Heatsink cleaning kit—Supplied with replacement CPU. Can be ordered separately as Cisco PID UCSX-HSCK=.
- Thermal interface material (TIM)—Syringe supplied with replacement CPU. Can be ordered separately as Cisco PID UCS-CPU-TIM=.

(2) Order the appropriate replacement CPU from [Table 6 on page 18](#)

Carefully remove and replace the CPU and heatsink in accordance with the instructions found in “[Cisco M6 Server Installation and Service Guide](#)”.

To add a new CPU, follow these steps:

(1) Have the following tools and materials available for the procedure:

- T-30 Torx driver—Supplied with new CPU.
- #1 flat-head screwdriver—Supplied with new CPU
- CPU assembly tool—Supplied with new CPU. Can be ordered separately as Cisco PID UCS-CPUAT=
- Thermal interface material (TIM)—Syringe supplied with replacement CPU. Can be ordered separately as Cisco PID UCS-CPU-TIM=

(2) Order the appropriate new CPU from [Table 6 on page 18](#)

(3) Order one heat sink for each new CPU. Order PID UCSC-HSLP-M6=.

Carefully install the CPU and heatsink in accordance with the instructions found in “[Cisco M6 Server Installation and Service Guide](#)”

UPGRADING or REPLACING MEMORY



NOTE: Before servicing any DIMM do the following:

- Decommission and power off the server.
- Remove the top cover from the server
- Slide the server out the front of the chassis.

To add or replace DIMMs follow these steps:

Step 1 Open both DIMM connector latches.

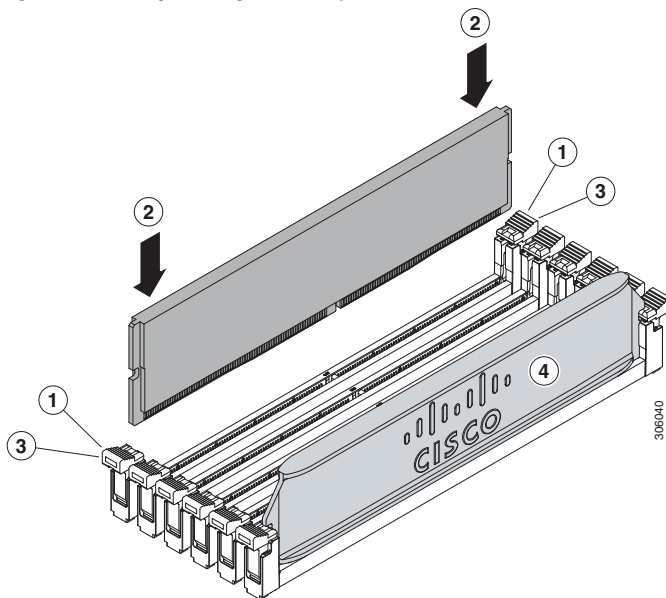
Step 2 Press evenly on both ends of the DIMM until it clicks into place in its slot

Note: Ensure that the notch in the DIMM aligns with the slot. If the notch is misaligned, it is possible to damage the DIMM, the slot, or both.

Step 3 Press the DIMM connector latches inward slightly to seat them fully.

Step 4 Populate all slots with a DIMM or DIMM blank. A slot cannot be empty.

Figure 16 Replacing Memory



For additional details on replacing or upgrading DIMMs, [“Cisco M6 Server Installation and Service Guide”](#)

TECHNICAL SPECIFICATIONS

Dimensions and Weight

Table 40 HClAF220C M6 All-NVMe/All-Flash Server Dimensions and Weight

Parameter	Value
Height	1.70 in. (4.3 cm)
Width (Not including slam latches)	16.9 in. (42.9 cm)
Width (including slam latches)	18.9 in. (48.0 cm)
Depth	30 in. (76.2 cm)
Front Clearance	3 in. (76 mm)
Side Clearance	1 in. (25 mm)
Rear Clearance	6 in. (152 mm)
Weight	
Weight with following options and no rail kit: 1 HDD, 1 CPU, 1 DIMM, and 1 1600 W power supply	22.32 lbs (10.1 kg)
Weight with following options and including rail kit: 1 HDD, 1 CPU, 1 DIMM, and 1 1600 W power supply	32.38 lbs (14.7 kg)
Weight with following options and no rail kit: 10 HDDs, 2 CPUs, 32 DIMMs, and 2 1600 W power supplies	32.38 lbs (14.7 kg)
Weight with following options and including rail kit: 10 HDDs, 2 CPUs, 32 DIMMs, and 2 1600 W power supplies	42.43 lbs (19.3 kg)

Power Specifications

The HCIAF220C M6 All-NVMe/All-Flash Server is available with the following types of power supplies:

- 1050 W (AC) power supply (see [Table 41](#)).
- 1050 W V2 (DC) power supply (see [Table 42](#)).
- 1600 W (AC) power supply (see [Table 43](#)).
- 2300 W (AC) power supply (see [Table 44](#)).

Table 41 HCIAF220C M6 All-NVMe/All-Flash Server Power Specifications (1050 W AC power supply)

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	100 to 240			
Maximum Allowable Input Voltage Range (V rms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) ¹	800		1050	
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	9.2	7.6	5.8	5.2
Maximum Input at Nominal Input Voltage (W)	889	889	1167	1154
Maximum Input at Nominal Input Voltage (VA)	916	916	1203	1190
Minimum Rated Efficiency (%) ²	90	90	90	91
Minimum Rated Power Factor ²	0.97	0.97	0.97	0.97
Maximum Inrush Current (A peak)	15			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) ³	12			

Notes:

1. Maximum rated output is limited to 800W when operating at low-line input voltage (100-127V).
2. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at <http://www.80plus.org/> for certified values.
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout.

Table 42 HClAF220C M6 All-NVMe/All-Flash Server Power Specifications (1050 W V2 DC power supply)

Parameter	Specification
Input Connector	Molex 42820
Input Voltage Range (V rms)	-48
Maximum Allowable Input Voltage Range (V rms)	-40 to -72
Frequency Range (Hz)	NA
Maximum Allowable Frequency Range (Hz)	NA
Maximum Rated Output (W)	1050
Maximum Rated Standby Output (W)	36
Nominal Input Voltage (V rms)	-48
Nominal Input Current (A rms)	24
Maximum Input at Nominal Input Voltage (W)	1154
Maximum Input at Nominal Input Voltage (VA)	1154
Minimum Rated Efficiency (%) ¹	91
Minimum Rated Power Factor ¹	NA
Maximum Inrush Current (A peak)	15
Maximum Inrush Current (ms)	0.2
Minimum Ride-Through Time (ms) ²	5

Notes:

1. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at <http://www.80plus.org/> for certified values.
2. Time output voltage remains within regulation limits at 100% load, during input voltage dropout.

Table 43 HClAF220C M6 All-NVMe/All-Flash Server 1600 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C14			
Input Voltage Range (V rms)	200 to 240			
Maximum Allowable Input Voltage Range (V rms)	180 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W)	1600			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (V rms)	100	120	208	230
Nominal Input Current (A rms)	NA	NA	8.8	7.9
Maximum Input at Nominal Input Voltage (W)	NA	NA	1778	1758
Maximum Input at Nominal Input Voltage (VA)	NA	NA	1833	1813
Minimum Rated Efficiency (%) ¹	NA	NA	90	91
Minimum Rated Power Factor ²	NA	NA	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) ²	12			

Notes:

1. This is the minimum rating required to achieve 80 PLUS Platinum certification, see test reports published at <http://www.80plus.org/> for certified values.
2. Time output voltage remains within regulation limits at 100% load, during input voltage dropout.

Table 44 HClAF220C M6 All-NVMe/All-Flash Server 2300 W (AC) Power Supply Specifications

Parameter	Specification			
Input Connector	IEC320 C20			
Input Voltage Range (Vrms)	100 to 240			
Maximum Allowable Input Voltage Range (Vrms)	90 to 264			
Frequency Range (Hz)	50 to 60			
Maximum Allowable Frequency Range (Hz)	47 to 63			
Maximum Rated Output (W) ¹	2300			
Maximum Rated Standby Output (W)	36			
Nominal Input Voltage (Vrms)	100	120	208	230
Nominal Input Current (Arms)	13	11	12	10.8
Maximum Input at Nominal Input Voltage (W)	1338	1330	2490	2480
Maximum Input at Nominal Input Voltage (VA)	1351	1343	2515	2505
Minimum Rated Efficiency (%) ²	92	92	93	93
Minimum Rated Power Factor ²	0.99	0.99	0.97	0.97
Maximum Inrush Current (A peak)	30			
Maximum Inrush Current (ms)	0.2			
Minimum Ride-Through Time (ms) ³	12			

Notes:

1. Maximum rated output is limited to 1200W when operating at low-line input voltage (100-127V)
2. This is the minimum rating required to achieve 80 PLUS Titanium certification, see test reports published at <http://www.80plus.org/> for certified values
3. Time output voltage remains within regulation limits at 100% load, during input voltage dropout

For configuration-specific power specifications, use the Cisco UCS Power Calculator at this URL:

<http://ucspowercalc.cisco.com>

Environmental Specifications

The environmental specifications for the M6 All-NVMe/All-Flash Server are listed in [Table 45](#).

Table 45 M6 Environmental Specifications

Parameter	Minimum
Operating Temperature	<p>Dry bulb temperature of 10°C to 35°C (50°F to 95°F)</p> <p>Maximum temperature change of 20°C (36°F) per hour (a temperature change within a specified period of time and not a rate of change)</p> <p>Humidity condition: Uncontrolled, not to exceed 50% RH starting condition</p> <p>Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m</p>
Extended Operating Temperature	<p>5°C to 40°C (41°F to 104°F) with no direct sunlight</p> <p>Humidity condition: Uncontrolled, not to exceed 50% RH starting condition</p> <p>Derate the maximum temperature by 1°C (33.8°F) per every 305 meters of altitude above 900m</p>
Non-Operating Temperature	Dry bulb temperature of -40°C to 65°C (-40°F to 149°F)
Operating Relative Humidity	<p>10% to 90% and 28°C (82.4°F) maximum dew-point temperature, non-condensing environment</p> <p>Minimum to be higher (more moisture) of -12°C (10.4°F) dew point or 8% relative humidity</p> <p>Maximum to be 24°C (75.2°F) dew point or 90% relative humidity</p>
Non-Operating Relative Humidity	5% to 93% relative humidity, non-condensing, with a maximum wet bulb temperature of 28°C across the 20°C to 40°C dry bulb range.
Maximum Operating Duration	Unlimited
Operating Altitude	A maximum elevation of 3050 meters (10,006 ft)
Non-Operating Altitude	An elevation of 0 to 12,000 meters (39,370 ft)
Sound Power level, Measure A-weighted per ISO7779 LWAd (Bels) Operation at 23°C (73°F)	5.5
Sound Pressure level, Measure A-weighted per ISO7779 LpAm (dBA) Operation at 23°C (73°F)	40

Extended Operating Temperature Hardware Configuration Limits

Table 46 HClAF220C M6 All-NVMe/All-Flash Server Extended Operating Temperature Hardware Configuration Limits

Platform ¹	ASHRAE A3 (5°C to 40°C) ²	ASHRAE A4 (5°C to 45°C) ³
Processors:	155W+	155W+ and 105W+ (4 or 6 Cores)
Memory:	LRDIMMs	LRDIMMs
Storage:	M.2 SATA SSDs NVMe SSDs	M.2 SATA SSDs NVMe SSDs
Peripherals:	PCIe NVMe SSDs GPUs	MRAID PCIe NVMe SSDs GPUs mLOMs VICs NICs HBAs

Notes:

1. Two PSUs are required and PSU failure is not supported
2. Non-Cisco UCS qualified peripherals and/or peripherals that consume more than 25W are not supported
3. High power or maximum power fan control policy must be applied

Compliance Requirements

The regulatory compliance requirements for HCI-Series servers are listed in [Table 47](#).

Table 47 HCI-Series Regulatory Compliance Requirements

Parameter	Description
Regulatory Compliance	Products should comply with CE Markings per directives 2014/30/EU and 2014/35/EU
Safety	UL 60950-1 Second Edition CAN/CSA-C22.2 No. 60950-1 Second Edition EN 60950-1 Second Edition IEC 60950-1 Second Edition AS/NZS 60950-1 GB4943 2001
EMC - Emissions	47CFR Part 15 (CFR 47) Class A AS/NZS CISPR32 Class A CISPR32 Class A EN55032 Class A ICES003 Class A VCCI Class A EN61000-3-2 EN61000-3-3 KN32 Class A CNS13438 Class A
EMC - Immunity	EN55024 CISPR24 EN300386 KN35



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