



Cisco UCS Servers

- [Server Management, on page 1](#)
- [Cisco UCS X-Series Direct and Components ", on page 2](#)
- [Cisco UCS Fabric Interconnects, on page 9](#)
- [Equipment Policies, on page 11](#)
- [Power Management in Cisco UCS Central, on page 17](#)
- [Viewing X-Fabric Module \(XFM\) Fan Status, on page 23](#)
- [Inventory Management, on page 24](#)

Server Management

With global policies, global server pools and firmware management in Cisco UCS Central, you can manage general and complex server deployments for the following servers in your registered UCS domains:

- Cisco UCS B-Series Blade Servers
- Cisco UCS C-Series Rack-Mount Servers
- Cisco UCS Mini

Cisco UCS X-Series Direct and Components:

- Cisco UCS X-Series Direct Supported Chassis—Cisco UCS X9508 Chassis
- Cisco UCS X-Series Direct Supported Blade Servers—X215c M8, X210c M7, X410c M7, X210c M6
- Cisco UCS X-Series Direct Supported Fabric Interconnects—Cisco UCSX-I-9108-100G, UCSX-I-9108-25G
- Cisco UCS X9508 Server Chassis equipped with X-Fabric Module

Cisco UCS X-Series Direct and Components "

Cisco UCS X-Series Direct

Cisco UCS X-Series Direct[®]

The Cisco UCS X-Series Direct[®] simplifies your data center, adapting to the unpredictable needs of modern applications while also providing an edge scaled for remote branch office workloads. It minimizes the IT infrastructure deployed at edge locations to achieve desired business outcomes. As you are looking to increase the number of applications at the edge while deploying as little IT infrastructure as possible, the Cisco UCS X-Series Direct[®], powered by Cisco Intersight[®] and Cisco UCS Central, enables the benefits of scale together with a secure and unified connectivity.

The Cisco UCS X-Series Direct begins with the Cisco UCS X9508 Chassis engineered to be adaptable and future ready. It is a standard, open system designed to deploy and automate faster in concert with a hybrid-cloud environment.

With a midplane-free design, I/O connectivity for the X9508 chassis is accomplished with frontloading, vertically oriented compute nodes intersecting with horizontally oriented I/O connectivity modules in the rear of the chassis. The I/O connectivity modules of the solution are the Cisco UCS X-Series Direct Fabric Interconnect Modules, a unified fabric for Ethernet and Fibre Channel. Additionally, the UCS X9508 chassis can have expanded GPU capabilities using the Cisco UCS X-Fabric technology which interconnects X-series compute and PCIe nodes using high-speed PCIe technology.

For more information see [Cisco UCS X-Series Direct Data Sheet](#).

Cisco UCSX-9508 Chassis

The Cisco UCS X9508 Server Chassis and its components are part of the Cisco Unified Computing System (UCS). This system can use multiple server chassis configurations along with the Cisco UCS Fabric Interconnects to provide advanced options and capabilities in server and data management. The following configuration options are supported:

- All Cisco UCS compute nodes. In a compute node-only configuration, two Intelligent Fabric Modules (IFMs) are required.
- A mix of Cisco UCS compute nodes and Cisco UCS PCI Nodes. In this configuration, the compute nodes are paired 1:1 with Cisco UCS PCIe nodes, such as the Cisco UCS X440p PCIe Node. Two Intelligent Fabric Modules (IFMs) and two Cisco X9416 X-Fabric Modules (XFM) are required.

The Cisco UCS X9508 Series server chassis is a scalable and flexible chassis for today's and tomorrow's data center that helps reduce total cost of ownership.

The chassis is seven rack units (7 RU) high and can mount in an industry-standard 19-inch rack with square holes for use with cage nuts or round-holes for use with spring nuts. The chassis can house up to eight Cisco UCS nodes.

Up to six hot-swappable AC power supplies are accessible from the front of the chassis. These power supplies can be configured to support nonredundant, N+1 redundant, N+2 redundant, and grid-redundant configurations. The rear of the chassis contains four hot-swappable fans, six power connectors (one per power supply), two horizontal top slots for Intelligent Fabric Modules (IFM1, IFM2), and two additional horizontal bottom slots for X-Fabric modules (XFM1, XFM2).

Cisco UCS X215c M8 Compute Node

The Cisco UCS X-Series Modular System simplifies your data center, adapting to the unpredictable needs of modern applications while also providing for traditional scale-out and enterprise workloads. It reduces the number of server types to maintain, helping to improve operational efficiency and agility as it helps reduce complexity. Powered by the Cisco Intersight™ cloud operations platform, it shifts your thinking from administrative details to business outcomes with hybrid cloud infrastructure that is assembled from the cloud, shaped to your workloads, and continuously optimized.

The Cisco UCS X215c M8 Compute Node integrates into the Cisco UCS X-Series Modular System. Up to eight compute nodes can reside in the 7-Rack-Unit (7RU) Cisco UCS X9508 Chassis, offering one of the highest densities of compute, IO, and storage per rack unit in the industry.

The Cisco UCS X215c M8 Compute Node offers the following:

- CPU: Up to 2x 4th Generation AMD EPYC Processors with up to 128 cores per processors
- Memory:
 - 24 DIMM slots (12 DIMMs per CPU socket), up to 4800 MT/s DDR5.
 - Up to 6 TB of capacity.
- Storage: Up to 6 hot-pluggable, Solid-State Drives (SSDs), or Non-Volatile Memory Express (NVMe) 2.5-inch drives with a choice of enterprise-class Redundant Array of Independent Disks (RAID) or pass-through controllers with four lanes each of PCIe Gen 4 connectivity and up to 2 M.2 SATA or NVMe drives for flexible boot and local storage capabilities.
- Optional Front Mezzanine GPU module: The Cisco UCS Front Mezzanine GPU module is a passive PCIe Gen 4 front mezzanine option with support for up to two U.2 or U.3 NVMe drives and two HHHL GPUs.
- mLOM virtual interface cards:
 - Cisco UCS Virtual Interface Card (VIC) 15420 occupies the server's Modular LAN on Motherboard (mLOM) slot, enabling up to 50Gbps (2 x25Gbps) of unified fabric connectivity to each of the chassis Intelligent Fabric Modules (IFMs) for 100Gbps connectivity per server.
 - Cisco UCS Virtual Interface Card (VIC) 15230 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis Intelligent Fabric Modules (IFMs) for 100 Gbps connectivity per server with secure boot capability.
- Optional Mezzanine card:
 - Cisco UCS Virtual Interface Card (VIC) 15422 can occupy the server's mezzanine slot at the bottom rear of the chassis. An included bridge card extends this VIC's 100Gbps (4 x 25Gbps) of network connections through IFM connectors, bringing the total bandwidth to 100Gbps per VIC 15420 and 15422 (for a total of 200Gbps per server). In addition to IFM connectivity, the VIC 15422 I/O connectors link to Cisco UCS X-Fabric technology.
 - Cisco UCS PCI Mezz card for X-Fabric can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric modules and enable connectivity to the X440p PCIe Node.
- Security: Includes secure boot silicon root of trust FPGA, ACT2 anti-counterfeit provisions, and optional Trusted Platform Model (TPM).

For complete list of supported peripherals for Cisco UCS X215c M8 Compute Node, see [Cisco UCS X215c M8 Compute Node Spec Sheet](#).



Note Cisco UCS X215c M8 Compute Node supports only 15000 Series secure boot VIC adapters.

The Cisco UCS X410c M7 Compute Node is the first 4-socket 4th Gen Intel® Xeon® Scalable Processors computing device to integrate into the Cisco UCS X-Series Modular System. Up to four compute nodes or two compute nodes and two GPU nodes can reside in the 7-rack-unit (7RU) Cisco UCS X9508 Server Chassis, offering high performance and efficiency gains for a wide range of mission-critical enterprise applications, memory-intensive applications and bare-metal and virtualized workloads.

The Cisco UCS X410c M7 Compute Node provides these main features:

- CPU: Four 4th Gen Intel Xeon Scalable Processors with up to 60 cores per processor
- Memory: Up to 16TB of main memory with 64x 256 GB DDR5-4800 Memory DIMMs
- Storage: Up to six hot-pluggable solid-state drives (SSDs), or non-volatile memory express (NVMe) 2.5-inch drives with a choice of enterprise-class RAID or passthrough controllers, up to two M.2 SATA drives with optional hardware RAID
- mLOM virtual interface cards:
 - Cisco UCS VIC 15420 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 50 Gbps of unified fabric connectivity to each of the chassis's intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
 - Cisco UCS VIC 15231 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis's intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
 - Cisco UCS VIC 15230 (with secure boot feature) occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis's intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
- Optional mezzanine card:
 - Cisco UCS 5th Gen VIC 15422 can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric technology. An included bridge card extends this VIC's 2x 50 Gbps of network connections through IFM connectors, bringing the total bandwidth to 100 Gbps per fabric (for a total of 200 Gbps per server).
 - Cisco UCS PCI Mezz card for Cisco UCS X-Fabric can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric modules and enable connectivity to the Cisco UCS X440p PCIe Node.
 - All VIC mezzanine cards also provide I/O connections from the X410c M7 compute node to the X440p PCIe node.
- Security: The server supports an optional trusted platform module (TPM). Additional features include a secure boot FPGA and ACT2 anti-counterfeit provisions.

Cisco UCS X210c M7 Compute Node

The Cisco UCS X210c M7 Compute Node is the second generation of compute node to integrate into the Cisco UCS X-Series Modular System. It delivers performance, flexibility, and optimization for deployments in data centers, in the cloud, and at remote sites. This enterprise-class server offers market-leading performance, versatility, and density without compromise for workloads. Up to eight compute nodes can reside in the 7-rack-unit (7RU) Cisco UCS X210c M7 Compute Node, offering one of the highest densities of compute, I/O, and storage per rack unit in the industry.

The Cisco UCS X210c M7 Compute Node provides these main features:

- CPU: Up to 2x 4th Gen Intel® Xeon® Scalable Processors with up to 60 cores per processor and up to 2.625 MB Level 3 cache per core and up to 112.5 MB per CPU.
- Memory: Up to 8TB of main memory with 32x 256 GB DDR5-4800 DIMMs.
- Storage: Up to six hot-pluggable, solid-state drives (SSDs), or non-volatile memory express (NVMe) 2.5-inch drives with a choice of enterprise-class redundant array of independent disks (RAIDs) or passthrough controllers, up to two M.2 SATA and M.2 NVMe drives with optional hardware RAID.
- Optional front mezzanine GPU module: The Cisco UCS front mezzanine GPU module is a passive PCIe Gen 4.0 front mezzanine option with support for up to two U.2 NVMe drives and two HHL GPUs.
- mLOM virtual interface cards:
 - Cisco UCS Virtual Interface Card (VIC) 15420 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 50 Gbps of unified fabric connectivity to each of the chassis intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
 - Cisco UCS Virtual Interface Card (VIC) 15231 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
- Optional mezzanine card:
 - Cisco UCS 5th Gen Virtual Interface Card (VIC) 15422 can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric technology. An included bridge card extends this VIC's 2x 50 Gbps of network connections through IFM connectors, bringing the total bandwidth to 100 Gbps per fabric (for a total of 200 Gbps per server).
 - Cisco UCS PCI Mezz card for X-Fabric can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric modules and enable connectivity to the Cisco UCS X440p PCIe Node.
 - All VIC mezzanine cards also provide I/O connections from the X210c M7 compute node to the X440p PCIe Node.
- Security: The server supports an optional trusted platform module (TPM). Additional features include a secure boot FPGA and ACT2 anti-counterfeit provisions.

Cisco UCS X210c M6 Compute Node

The Cisco UCS X210c M6 Compute Node is the first computing device to integrate into the Cisco UCS X-Series Modular System. Up to eight compute nodes can reside in the 7-Rack-Unit (7RU) Cisco UCS X9508 Chassis, offering one of the highest densities of compute, I/O, and storage per rack unit in the industry.

The Cisco UCS X210c M6 Compute Node provides these main features:

- CPU: Up to 2x 3rd Gen Intel® Xeon® Scalable Processors with up to 40 cores per processor and 1.5 MB Level 3 cache per core
- Memory: Up to 32x 256 GB DDR4-3200 DIMMs for up to 8 TB of main memory. Configuring up to 16x 512-GB Intel Optane™ persistent memory DIMMs can yield up to 12 TB of memory.
- Storage: Up to 6 hot-pluggable, solid-state drives (SSDs), or non-volatile memory express (NVMe) 2.5-inch drives with a choice of enterprise-class redundant array of independent disks (RAIDs) or pass-through controllers with four lanes each of PCIe Gen 4 connectivity and up to 2 M.2 SATA drives for flexible boot and local storage capabilities
- Optional front mezzanine GPU module: The Cisco UCS Front Mezzanine GPU module is a passive PCIe Gen 4 front mezzanine option with support for up to two U.2 NVMe drives and two GPUs.
- mLOM virtual interface cards:
 - Cisco UCS Virtual Interface Card (VIC) 14425 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 50 Gbps of unified fabric connectivity to each of the chassis intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
 - Cisco UCS VIC 15231 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
 - Cisco UCS VIC 15420 occupies the server's modular LAN on motherboard (mLOM) slot, enabling up to 100 Gbps of unified fabric connectivity to each of the chassis intelligent fabric modules (IFMs) for 100 Gbps connectivity per server.
- Optional mezzanine card:
 - Cisco UCS VIC 14825 can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric technology. An included bridge card extends this VIC's 2x 50 Gbps of network connections through IFM connectors, bringing the total bandwidth to 100 Gbps per fabric (for a total of 200 Gbps per server).
 - Cisco UCS VIC 15422 X-Series mezz (UCSX-ME-V5Q50G) 4x25G can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric technology. An included bridge card extends this VIC's 2x 50 Gbps of network connections through IFM connectors, bringing the total bandwidth to 100 Gbps per fabric (for a total of 200 Gbps per server).
 - Cisco UCS PCI Mezz card for X-Fabric can occupy the server's mezzanine slot at the bottom rear of the chassis. This card's I/O connectors link to Cisco UCS X-Fabric modules and enable connectivity to the X440p PCIe Node.
- Security: The server supports an optional trusted platform module (TPM). Additional features include a secure boot FPGA and ACT2 anti-counterfeit provisions

Intelligent Fabric Module (IFM)

The Intelligent Fabric Modules (IFMs) bring the unified fabric into the blade server enclosure, providing connectivity between the blade servers and the fabric interconnect, simplifying diagnostics, cabling, and management. Cisco UCS X-Series Servers support following IFMs:

- Cisco UCS 9108 25G IFMs (UCSX-I-9108-25G)—supports aggregate data throughput of 2TB/s through two groups of four optical ports.
- Cisco UCS 9108 100G IFMs (UCSX-I-9108-100G)—supports data throughput of 100G through two groups of 4 ports.

X-Fabric Module (XFM)

XFMs—Displays a summary of the X-Fabric Modules (XFM) in the chassis. Click a specific XFM to view the details of the fan modules. When you click a fan module, you can view the ID, model, and operational state of the fans.



Note The XFM (UCSX-F-9416) slots are to be present in the respective two slots of UCSX 9508 Chassis.

The module is a configuration option:

- The X-Fabric modules are required when the server chassis contains the Cisco UCS X440p PCIe node
- The X-Fabric module is not required if your server chassis contains only Cisco UCS X-Series compute nodes, such as the Cisco UCS X210c.

For more information on X-Fabric Module (XFM) Fan Status, see [Viewing X-Fabric Module \(XFM\) Fan Status, on page 23](#).

Overview of Cisco UCS Fabric Interconnects 9108 100G (Cisco UCS X-Series Direct)

The Cisco UCS X-Series Direct is identified by the product ID UCSX-S9108-100G, and the product description Cisco UCS Fabric Interconnects 9108 100G.

Components of Cisco UCS Fabric Interconnects 9108 100G:

- Two Cisco UCS X9508 Chassis
- A pair of Cisco UCS Fabric Interconnects 9108 100G
- One or more of the following servers:
 - Up to eight two-socket Cisco UCS X215c M8 Compute Nodes
 - Up to eight two-socket Cisco UCS X210c M6/M7/M8 Compute Nodes
 - Up to four four-socket Cisco UCS X410c M7 Compute Nodes
 - Up to four Cisco UCS C220 M7/M8 Servers
 - Up to four Cisco UCS C240 M7/M8 Servers
 - Up to four Cisco UCS C225 M7/M8 Servers
 - Up to four Cisco UCS C245 M7/M8 Servers
- One or more of Cisco UCS X-Series M6, M7, and M8 Compute Nodes

- Optional components:
 - Cisco UCS 9416 X-Fabric Modules
 - Cisco UCS X440p PCIe Node with up to four GPUs used in conjunction with the 9416 X-Fabric Modules

The Cisco UCS Fabric Interconnects 9108 100G platform streamlines data center architecture by eliminating the need for separate Fabric Interconnects (FIs), integrating essential networking and management functionality directly within the chassis. The Cisco UCS Fabric Interconnects 9108 100G platform is designed for deployments in smaller settings, where the compute server requirements are less extensive than those of a traditional data center. This solution is centered around a single-chassis system, the Cisco UCS X9508 Chassis, which incorporates Cisco UCS Fabric Interconnects 9108 100G directly into the chassis for a consolidated and efficient infrastructure. To ensure high availability, each chassis houses two Cisco UCS Fabric Interconnects 9108 100G that establish direct downlink connections to servers and provide uplink connections to facilitate seamless integration with both Local Area Network (LAN) and Storage Area Network (SAN) systems. The Fabric Interconnects (FIs) are adeptly designed to fit into the Cisco UCS X-Series chassis, presenting as a single module within the NX-OS environment that merges QSFP ports with server backplane ports.

The hardware configuration of the Cisco UCS Fabric Interconnects 9108 100G platform retains the same form factor as the standard Cisco UCS X-Series chassis, and features 17 MACs, each configurable for 10 Gbps, 25 Gbps, 40 Gbps, or 100 Gbps connectivity. It is equipped with a CPU, for operating NX-OS, Cisco UCS Manager for management and Chassis Management Controller (CMC) software. The Cisco UCS Fabric Interconnects 9108 100G includes an onboard Ethernet switch with multiple 10G links dedicated to out-of-band communication between blade components such as the Baseboard Management Controller (BMC), CMC. A dedicated 1G link facilitates IFM-to-IFM clustering and high availability synchronization. Within the Cisco UCS Fabric Interconnects 9108 100G, Ethernet ports 1-8, backplane ports 9-16, and the Baseboard Interface (BIF) port 17 coexist on a singular switch card. Ports 1-2 are unified to manage all SAN features and configurations. The 100G Ethernet ports [1-8] can also be configured as 25Gx4 SFP28 compatible breakout ports or 4x10G ports, offering flexible networking solutions to accommodate a range of data center needs.

Cisco UCS Fabric Interconnects 9108 100G (Cisco UCS X-Series Direct) Architecture

The Cisco UCS X-Series Direct architecture is engineered to support a diverse range of workloads, from traditional applications to cloud-native services, by offering a composable and disaggregated approach to computing resources. Key components of the Cisco UCS X-Series Direct architecture include:

- **Cisco UCSX-9508 Chassis**—A modular and future-proof chassis that can accommodate various types of compute nodes, providing the flexibility to adapt to different workload requirements without the need for a complete hardware overhaul.

Cisco UCS X-Series Direct supports the addition of a secondary Cisco UCS X9508 Chassis, enabling scalability of up to 20 servers. This includes both Cisco UCS C-Series servers and Cisco UCS X-Series Compute Nodes, providing flexible expansion options for diverse workloads.

- **Cisco UCS Fabric Interconnects 9108 100G**—This solution is centered around a single-chassis system, the Cisco UCS X9508 Chassis, which incorporates Cisco UCS Fabric Interconnects 9108 100G directly into the chassis for a consolidated and efficient infrastructure. To ensure high availability, each chassis houses two Cisco UCS Fabric Interconnects 9108 100G that establish direct downlink connections to servers and provide uplink connections to facilitate seamless integration with both Local Area Network (LAN) and Storage Area Network (SAN) systems.

- **Software Architecture**—In terms of the startup and operational model, the management, Cisco UCS Manager aligns with the approach taken in the Cisco UCS 6500 and 6400 Series Fabric Interconnects. In this model, Cisco UCS Manager is encapsulated within a container and is initiated by the underlying NX-OS, depending on the selected management mode.

Cisco UCS Fabric Interconnects

Cisco UCS 6600 Series Fabric Interconnects

Overview of Cisco UCS 6664 Fabric Interconnect

The Cisco UCS 6664 Fabric Interconnect is a 2-rack unit (RU), fixed-port system designed for Top-of-Rack deployment in data centers. The fabric interconnect has both Ethernet and unified ports. Unified ports provide Fibre Channel over Ethernet (FCoE), Fibre Channel, NVMe over Fabric, and Ethernet. By supporting these different protocols, you can use a single multi-protocol Virtual Interface Card (VIC) in your servers.

The UCS 6664 Fabric Interconnect supports an array of Gigabit Ethernet (GbE), Fibre Channel (FC), and Fibre Channel over Ethernet (FCoE) ports to offer connectivity to peer data center devices. This device is also ideal for high-performance, scalable, and secure networking in modern data centers.

The Cisco UCS 6664 Fabric Interconnect includes:

- 64 total ports
 - 48 ports of 40/100 Gbps
 - 16 unified ports
 - Supports 10/25 Gbps for Ethernet and Fibre Channel over Ethernet (FCoE)
 - Supports 10/25 Gbps or 16/32/64 Gbps Fibre Channel for maximum flexibility
- 2RU fixed form factor for dense 100 Gbps connectivity
- Fibre Channel end-host and switch-mode support

Cisco UCS 6664 Fabric Interconnect Architecture

The Cisco UCS 6664 Fabric Interconnect is a high-density, line-rate, low-latency 100 Gbps solution specifically designed for the Cisco UCS X-Series Modular System and Cisco UCS C-Series Rack servers. It serves as a foundational component within Cisco UCS, unifying computing, networking, management, storage access, and virtualization resources into a single, cohesive system. This integrated approach is engineered to significantly reduce the Total Cost of Ownership (TCO) for data center deployments.

Architecture:

- **Front Panel:** Houses all the network ports and system status lights (LEDs). These ports are highly flexible, supporting various connection types like Ethernet, Fibre Channel, and Fibre Channel over Ethernet (FCoE) through "Unified Ports."
- **Rear Panel:** Contains the management connections (for setup and control), and the power supplies and fan modules.

- **Redundancy and Reliability:** The design includes redundant power supplies and multiple fan modules to ensure continuous operation and efficient cooling.

This design allows the fabric interconnect to serve as a central hub, connecting servers to both the local network and external storage systems.

Key Features and Capabilities

- **Unified Fabric:** The Cisco UCS 6664 Fabric Interconnect features 64 ports, including 48 QSFP ports (10/25 Gbps with Ethernet/FCoE support) and 16 Unified SFP ports (10/25 Gbps or 16/32/64 Gbps Fibre Channel). Ports 49-64 are optimized for secure uplinks with Media Access Control Security (MACsec).
- **Server Connectivity:**
 - For **Cisco UCS C-Series Rack Servers**, direct connection to the 6664 Fabric Interconnect is supported. Alternatively, the Cisco Nexus 93180YC-FX3 switch can be deployed as a Fabric Extender (FEX) to provide the benefits of networking cabling consolidation for rack servers, similar to a modular server system.
 - For **Cisco UCS X-Series Modular Systems**, network cable consolidation is achieved through Intelligent Fabric Modules (IFMs). These IFMs are available in both 25 Gbps and 100 Gbps form factors, facilitating up to 200 Gbps of aggregate bandwidth per compute node.



Note Port breakout functionality is not available on Cisco UCS 6664 Fabric Interconnects.

Port Functionality on Cisco UCS 6664 Fabric Interconnect

The Cisco UCS 6664 Fabric Interconnect is a 2-rack unit (RU) fixed-port system designed for flexible and high-performance networking. It features 64 front panel ports that support a variety of connectivity options.

Front Panel Port Configuration and Types

The UCS 6664 Fabric Interconnect supports the following possible configurations or port types for each front panel port:

Port Number	Port Hardware	Admin Port Speed	Port Type	Port Role
1-24	QSFP 28	40 Gbps/100 Gbps	Gigabit Ethernet	<ul style="list-style-type: none"> • Server Port • Ethernet/FCoE Uplink Port • FCoE Storage Port • Appliance Port (EHM only) • Monitor Port

25-40 (Unified Ports)	SFP28	16 Gbps/32 Gbps/64 Gbps	Fibre Channel (FC)	<ul style="list-style-type: none"> • FC Uplink Port • FC Storage Port
		10 Gbps/25 Gbps	Gigabit Ethernet	<ul style="list-style-type: none"> • Server Port • Ethernet/FcoE Uplink Port • Appliance Port (EHM only) • Monitor Port
41-64 Note: Ports 49–64 are MAC Security (MACsec)-capable	QSFP 28	40 Gbps/100 Gbps	Gigabit Ethernet	<ul style="list-style-type: none"> • Server Port • Ethernet/FCoE Uplink Port • FCoE Storage Port • Appliance Port (EHM only) • Monitor Port



Note Breakout port functionality is not supported on Cisco UCS 6600 Series Fabric Interconnects.

Equipment Policies

Equipment policies allow you to tune your servers and other equipment to suit your requirements. Equipment policies can only be set at the domain group level, and apply to all servers in that domain group.



Note Equipment policies are not included in service profiles.

Configuring the Chassis/FEX Discovery Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group domain-group	Enters domain group root mode and (optionally) enters a sub-domain group under the domain

	Command or Action	Purpose
		group root. To enter the domain group root mode, type / as the <i>domain-group</i> .
Step 3	UCSC(policy-mgr) /domain-group # scope chassis-disc-policy	Enters organization chassis/FEX discovery policy mode.
Step 4	UCSC(policy-mgr) /domain-group/chassis-disc-policy # set action {1-link 2-link 4-link 8-link platform-max}	Specifies the minimum threshold for the number of links between the chassis or FEX and the fabric interconnect.
Step 5	UCSC(policy-mgr) /domain-group/chassis-disc-policy # set link-aggregation-pref {none port-channel}	Specifies whether the links from the IOMs or FEXes to the fabric interconnects are grouped in a port channel. Note The link grouping preference only takes effect if both sides of the links between an IOM or FEX and the fabric interconnect support fabric port channels. If one side of the links does not support fabric port channels, this preference is ignored and the links are not grouped in a port channel.
Step 6	UCSC(policy-mgr) /domain-group/chassis-disc-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to:

- Configure the chassis discovery policy to discovery chassis with four links to a fabric interconnect
- Set the link grouping preference to port channel

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group /
UCSC(policy-mgr) /domain-group # scope chassis-disc-policy
UCSC(policy-mgr) /domain-group/chassis-disc-policy # set action 4-link
UCSC(policy-mgr) /domain-group/chassis-disc-policy* # set link-aggregation-pref port-channel
UCSC(policy-mgr) /domain-group/chassis-disc-policy* # commit-buffer
UCSC(policy-mgr) /domain-group/chassis-disc-policy #
```

Configuring the Rack Server Discovery Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group <i>domain-group</i>	Enters domain group root mode and (optionally) enters a sub-domain group under the domain group root. To enter the domain group root mode, type / as the <i>domain-group</i> .
Step 3	UCSC(policy-mgr) /domain-group # scope rackserver-disc-policy	Enters rack server discovery policy mode.
Step 4	UCSC(policy-mgr) /domain-group/rackserver-disc-policy # set action {immediate user-acknowledged}	Specifies the way the system reacts when you add a new rack server.
Step 5	UCSC(policy-mgr) /domain-group/rackserver-disc-policy # set scrub-policy policy-name	Specifies the scrub policy that should run on a newly discovered rack server.
Step 6	UCSC(policy-mgr) /domain-group/rackserver-disc-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to:

- Set the rack server discovery policy to immediately discover new rack servers
- Specify the scrub policy ScrubPoll

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group
UCSC(policy-mgr) /domain-group # scope rackserver-disc-policy
UCSC(policy-mgr) /domain-group/rackserver-disc-policy # set action immediate
UCSC(policy-mgr) /domain-group/rackserver-disc-policy # set scrub-policy ScrubPoll
UCSC(policy-mgr) /domain-group/rackserver-disc-policy* # commit-buffer
UCSC(policy-mgr) /domain-group/rackserver-disc-policy #
```

Configuring the Rack Management Connection Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.

	Command or Action	Purpose
Step 2	UCSC(policy-mgr) # scope domain-group <i>domain-group</i>	Enters domain group root mode and (optionally) enters a sub-domain group under the domain group root. To enter the domain group root mode, type / as the <i>domain-group</i> .
Step 3	UCSC(policy-mgr) /domain-group # scope server-management-connectivity-policy	Enters server management connectivity policy mode.
Step 4	UCSC(policy-mgr) /domain-group/server-management-connectivity-policy # set action {auto-acknowledged user-acknowledged}	Select whether servers are automatically configured based on the available server connections.
Step 5	UCSC(policy-mgr) /domain-group/server-management-connectivity-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to configure the rack management connection policy to wait for user acknowledgment.

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group /
UCSC(policy-mgr) /domain-group # scope server-management-connectivity-policy
UCSC(policy-mgr) /domain-group/server-management-connectivity-policy # set action
user-acknowledged
UCSC(policy-mgr) /domain-group/server-management-connectivity-policy* # commit-buffer
UCSC(policy-mgr) /domain-group/server-management-connectivity-policy #
```

Configure MAC Address Table Aging Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group <i>domain-group</i>	Enters domain group root mode and (optionally) enters a sub-domain group under the domain group root. To enter the domain group root mode, type / as the <i>domain-group</i> .
Step 3	UCSC(policy-mgr) /domain-group # scope lan-cloud	Enters LAN cloud mode.

	Command or Action	Purpose
Step 4	UCSC(policy-mgr)/domain-group/lan-cloud # set mac-aging { <i>time</i> mode-default never }	Specify the length of time an idle MAC address remains in the MAC address table before it is removed. This can be one of the following: <ul style="list-style-type: none"> • <i>time</i>—Enter the number of days, hours, minutes, and seconds in the following format: dd hh mm ss. • mode-default—The system uses the default value. For end-host mode, the default is 14,500 seconds. For switching mode, the default is 300 seconds. • never—MAC addresses are never removed from the table.
Step 5	UCSC(policy-mgr)/domain-group/lan-cloud # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to set the MAC table aging to never.

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group /
UCSC(policy-mgr) /domain-group # scope lan-cloud
UCSC(policy-mgr) /domain-group/lan-cloud # set mac-aging never
UCSC(policy-mgr) /domain-group/lan-cloud* # commit-buffer
UCSC(policy-mgr) /domain-group/lan-cloud #
```

Setting VLAN Port Count Optimization

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group <i>domain-group</i>	Enters domain group root mode and (optionally) enters a sub-domain group under the domain group root. To enter the domain group root mode, type / as the <i>domain-group</i> .
Step 3	UCSC(policy-mgr) /domain-group # scope lan-cloud	Enters LAN cloud mode.
Step 4	UCSC(policy-mgr) /domain-group/lan-cloud # set vlan-compression { enabled disabled }	Select whether VLAN port count optimization is enabled or disabled.

	Command or Action	Purpose
Step 5	UCSC(policy-mgr) /domain-group/lan-cloud # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to enable VLAN port count optimization.

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group /
UCSC(policy-mgr) /domain-group # scope lan-cloud
UCSC(policy-mgr) /domain-group/lan-cloud # set vlan-compression enabled
UCSC(policy-mgr) /domain-group/lan-cloud* # commit-buffer
UCSC(policy-mgr) /domain-group/lan-cloud #
```

Configuring an Information Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope domain-group <i>domain-group</i>	Enters domain group root mode and (optionally) enters a sub-domain group under the domain group root. To enter the domain group root mode, type / as the <i>domain-group</i> .
Step 3	UCSC(policy-mgr) /domain-group # scope info-policy	Enters information policy mode.
Step 4	UCSC(policy-mgr) /domain-group/info-policy # set state {enabled disabled}	Select whether the information policy will display the uplink switches that are connected to the Cisco UCS domain.
Step 5	UCSC(policy-mgr) /domain-group/info-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to configure the information policy to display the uplink switches.

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope domain-group /
UCSC(policy-mgr) /domain-group # scope info-policy
UCSC(policy-mgr) /domain-group/info-policy # set state enabled
UCSC(policy-mgr) /domain-group/info-policy* # commit-buffer
UCSC(policy-mgr) /domain-group/info-policy #
```

Power Management in Cisco UCS Central

Power Capping in Cisco UCS Central

You can control the maximum power consumption on a server through power capping, as well as manage the power allocation in the Cisco UCS Manager for blade servers, rack servers, UCS Mini, and mixed UCS domains.

Cisco UCS Central supports power capping on the following:

- Cisco UCS Fabric Interconnects 9108 100G (Cisco UCS X-Series Direct)



Note Cisco UCSX-9508 Chassis supports Policy Driven Chassis Group Cap.

When you choose to select Policy Driven Chassis Group Cap, Cisco UCS Manager calculates the power allotment for Cisco UCSX-9508 Chassis and when you choose to select Manual Blade Level Power Cap, Chassis Management Controller (CMC) calculates the power allotment for Cisco UCSX-9508 Chassis.

Cisco UCS Manager provides the following power management policies to help you allocate power to your servers:

Power Management Policies	Description
Power Profiling Policy	Enables or disables the power profiling of the system Note This property is supported only on Cisco UCS X-Series servers.
Power Sync Policy	Addresses power synchronization issues between the associated service profiles and the servers.
Power Control Policy	Specifies the priority to calculate the initial power allocation for each blade in a chassis.
Power Save Policy	Globally manages the chassis to maximize energy efficiency or availability.
Cisco UCSX-9508 Chassis Power Extended Policy	Manages the chassis to maximize energy efficiency or availability. Power Extended Policy is effective only when we have PSU Redundant Policy Mode. For example, the total power available can be extended when we have N+1, N+2 and Grid to PSU Redundancy modes.
Cisco UCSX-9508 Chassis Fan Control Policy	Manages you to control the fan speed to bring down server power consumption and noise levels.

Power Management Policies	Description
Global Power Allocation	Specifies the Policy Driven Chassis Group Power Cap or the Manual Blade Level Power Cap to apply to all servers in a chassis.
Global Power Profiling	Specifies how the power cap values of the servers are calculated. If it is enabled, the servers will be profiled during discovery through benchmarking. This policy applies when the Global Power Allocation Policy is set to Policy Driven Chassis Group Cap.

Power Control Policy

Cisco UCS uses the priority set in the power control policy along with the blade type and configuration to calculate the initial power allocation for each blade within a chassis. During normal operation, the active blades within a chassis can borrow power from idle blades within the same chassis. If all blades are active and reach the power cap, service profiles with higher priority power control policies take precedence over service profiles with lower priority power control policies.

Priority is ranked on a scale of 1-10, where 1 indicates the highest priority and 10 indicates lowest priority. The default priority is 5.

Global Power Control Policy options are inherited by all the chassis managed by the Cisco UCS Manager.



Note You must include the power control policy in a service profile and that service profile must be associated with a server for it to take effect.

Creating a Power Control Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope org org-name	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # create power-control-policy policy-name	Creates a power control policy and enters power control policy mode.
Step 4	Required: UCSC(policy-mgr) /org/power-control-policy # set priority {priority-num no-cap}	Specifies the priority for the power control policy.
Step 5	Required: UCSC(policy-mgr) /org/power-control-policy # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to create a power control policy and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # create power-control-policy PCP-1
UCSC(policy-mgr) /org/power-control-policy* # set priority 1
UCSC(policy-mgr) /org/power-control-policy* # commit-buffer
UCSC(policy-mgr) /org/power-control-policy #
```

Deleting a Power-Control-Policy

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect policy-mgr	Enters policy manager mode.
Step 2	UCSC(policy-mgr) # scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 3	UCSC(policy-mgr) /org # delete power-control-policy <i>policy-name</i>	Deletes the specified power control policy.
Step 4	Required: UCSC(policy-mgr) /org # commit-buffer	Commits the transaction to the system configuration.

Example

The following example shows how to delete a power control policy and commits the transaction:

```
UCSC# connect policy-mgr
UCSC(policy-mgr) # scope org /
UCSC(policy-mgr) /org # delete power-control-policy PCP-1
UCSC(policy-mgr) /org* # commit-buffer
UCSC(policy-mgr) /org #
```

Power Save Policy

Creating a Power Save Policy

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the <i>org-name</i> .
Step 2	UCS-A /org # scope power-save-policy	Enters power save policy mode.

Deleting a Power Save Policy

	Command or Action	Purpose
Step 3	UCS-A /org/power-save-policy # set powersave Disable Enable	Sets the power save policy.
Step 4	UCS-A /org/power-save-policy # show detail	Shows the details of the configuration.

Example

The following example creates a power save policy and commits the transaction:

```
UCS-A# scope org
UCS-A /org # scope power-save-policy
UCS-A /org/power-extended-policy # set powersave {Disable|Enable}
UCS-A /org/power-extended-policy # commit-buffer
```

Deleting a Power Save Policy

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the org-name.
Step 2	UCS-A /org # scope power-save-policy	Enters power save policy mode.
Step 3	UCS-A /org/power-save-policy # delete powersave Disable Enable	Sets the power save policy.
Step 4	UCS-A /org/power-save-policy # show detail	Shows the details of the configuration.

Example

The following example creates a power save policy and commits the transaction:

```
UCS-A# scope org
UCS-A /org # scope power-save-policy
UCS-A /org/power-extended-policy # delete powersave {Disable|Enable}
UCS-A /org/power-extended-policy # commit-buffer
```

Power Extended Policy for Cisco UCS X9508 Chassis

Creating a Power Extended Policy for Cisco UCS X9508 Chassis

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the org-name.
Step 2	UCS-A /org # scope power-extended-policy <i>power-extended-policy-name</i>	Creates a power extended policy and enters power extended policy mode.
Step 3	UCS-A /org/power-extended-policy # set extendedmode Disable Enable	Sets the power extended mode to enable or disable.
Step 4	UCS-A /org/power-extended-policy # show detail	Shows the details of the configuration.

Example

The following example creates a power extended policy and commits the transaction:

```
UCS-A# scope org
UCS-A /org # scope power-extended-policy
UCS-A /org/power-extended-policy # set extendedmode {Disable|Enable}
UCS-A /org/power-extended-policy # commit-buffer
```

Deleting a Power Extended Policy for Cisco UCS X9508 Chassis

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the org-name.
Step 2	UCS-A /org # scope power-extended-policy <i>power-extended-policy-name</i>	Creates a power extended policy and enters power extended policy mode.
Step 3	UCS-A /org/power-extended-policy # delete extendedmode Disable Enable	Sets the power extended mode to enable or disable.
Step 4	UCS-A /org/power-extended-policy # show detail	Shows the details of the configuration.

Example

The following example creates a power extended policy and commits the transaction:

```
UCS-A# scope org
UCS-A /org # scope power-extended-policy
UCS-A /org/power-extended-policy # delete extendedmode {Disable|Enable}
UCS-A /org/power-extended-policy # commit-buffer
```

Fan Control Policy for Cisco UCS X9508 Chassis

Creating a Fan Control Policy for Cisco UCS X9508 Chassis

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the org-name.
Step 2	UCS-A /org # scope modular-chassis-fan-policy	Creates a modular chassis fan policy and enters modular chassis fan policy mode.
Step 3	UCS-A /org/modular-chassis-fan-policy # set speed acoustic balanced high-power low-power max-power	Sets the speed to high, low, max, balanced, and acoustic speeds.
Step 4	UCS-A /org/modular-chassis-fan-policy # show detail	Shows the details of the configuration.

Example

The following example creates a modular chassis fan policy:

```
UCS-A# scope org
UCS-A /org # scope modular-chassis-fan-policy
UCS-A /org/modular-chassis-fan-policy # set set speed
acoustic balanced high-power low-power max-power

UCS-A /org/modular-chassis-fan-policy # show detail
```

Deleting a Fan Control Policy for Cisco UCS X9508 Chassis

Procedure

	Command or Action	Purpose
Step 1	UCS-A# scope org <i>org-name</i>	Enters organization mode for the specified organization. To enter the root organization mode, type / as the org-name.
Step 2	UCS-A /org # scope modular-chassis-fan-policy	Creates a modular chassis fan policy and enters modular chassis fan policy mode.

	Command or Action	Purpose
Step 3	UCS-A /org/modular-chassis-fan-policy # delete speed acoustic balanced high-power low-power max-power	Sets the speed to high, low, max, balanced, and acoustic speeds.
Step 4	UCS-A /org/modular-chassis-fan-policy # show detail	Shows the details of the configuration.

Example

The following example creates a modular chassis fan policy:

```
UCS-A# scope org
UCS-A /org # scope modular-chassis-fan-policy
UCS-A /org/modular-chassis-fan-policy # delete set speed
acoustic    balanced    high-power low-power max-power
UCS-A /org/modular-chassis-fan-policy # show detail
```

Viewing X-Fabric Module (XFM) Fan Status

This procedure is applicable only for Cisco UCS X9508 Server Chassis equipped with XFM.

Procedure

-
- Step 1** In the Navigation pane, click **Equipment**.
 - Step 2** Expand Equipment > Chassis > Chassis Number > XFM Modules > XFM Module Number > Fans > Fan Module NumberEquipment > Chassis > Chassis Number > IO Modules.
 - Step 3** Choose the Fan number for which you want to view.
 - Step 4** In the Work pane, click the General tab.

The overall status for this fan appear. The fields in this tab are:

Column	Description
Name	A navigation tree that allows you to view a particular component and its subcomponents. You can right-click a component to view any actions available for that component.
Operability	A brief description of the operating state of the component. If a fan is inoperable, it can be replaced with a new fan module. Contact Cisco technical support for more information.
Performance	A brief description of the performance state of the component.

Column	Description
Power	A brief description of the power state of the component.
Temperature	A description of the temperature state of the component.

Inventory Management

Cisco UCS Central collects the inventory details from all registered Cisco UCS domains. You can view and monitor the components in the registered Cisco UCS domains from the domain management panel.

When a Cisco UCS domain is successfully registered, Cisco UCS Central starts collecting the following details:

- Physical Inventory
- Service profiles and service profile templates
- Fault information

Physical Inventory

The physical inventory details of the components in Cisco UCS domains are organized under domains. The Cisco UCS domains that do not belong to any domain groups are placed under ungrouped domains. You can view detailed equipment status, and the following physical details of components in the domain management panel:

- Fabric interconnects - switch card modules
- Servers - blades/rack mount servers
- Chassis - io modules
- Fabric extenders

Service Profiles and Templates

You can view a complete list of service profiles and service profile templates available in the registered Cisco UCS domains from the **Servers** tab. The **Service Profile** panel displays an aggregated list of the service profiles. Service profiles with the same name are grouped under the organizations they are assigned to. Instance count next to the service profile name will provide the number of times that particular service profile is used in Cisco UCS domains.

From the **Service Profile Template** panel, you can view the available service profile templates, organization and the number of times each service profile template is used in the Cisco UCS Domain.

Viewing Inventory Details for a UCS Domain

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain name	Enters the specified UCS domain.
Step 4	UCSC(resource-mgr)/domain-mgmt/UCS domain # show detail .	Displays a list of all equipments in the specified UCS domain.

Example

The following example shows how to view the details of a registered Cisco UCS Domain from Cisco UCS Central:

```
UCSC# connect resource-mgr
UCSC(resource-mgr) # scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # show detail
UCS System:
  ID: 1006
  Name: doc-mammoth96
  Total Servers: 6
  Free Servers: 0
  Owner:
  Site:
  Description:
  Fault Status: 1407460783489057
  Current Task:
UCSC(resource-mgr) /domain-mgmt/ucs-domain #
```

Viewing Inventory Details of a Server

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain name	Enters the specified UCS domain.
Step 4	UCS(resource-mgr)/domain-mgmt/ucs-domain # chassis 1	Enters the chassis mode

	Command or Action	Purpose
Step 5	UCS(resource-mgr)/domain-mgmt/ucs-domain/chassis # server 1	Enters the server mode
Step 6	UCS(resource-mgr)/domain-mgmt/ucs-domain/chassis /server # show inventory	Displays inventory details of a server.

Example

The following example shows how to view inventory details of a server within a chassis:

```
UCSC# connect resource-mgr
UCSC(resource-mgr)# scope doamin-mgmt
UCSC(resource-mgr)/doamin-mgmt# scope ucs-domain 1007
UCSC(resource-mgr)/doamin-mgmt/ucs-domain# scope chassis 1
UCSC(resource-mgr)/doamin-mgmt/ucs-domain/chassis# scope server 1
UCSC(resource-mgr)/doamin-mgmt/ucs-domain/chassis/server# show inventory
Server 1/1:
  Name:
  User Defined Description:
  Acknowledged Product Name: Cisco UCS B200 M1
  Acknowledged PID: N20-B6620-1
  Acknowledged VID: V01
  Acknowledged Serial (SN): QCI1415A3Q7
  Acknowledged Memory (MB): 8192
  Acknowledged Effective Memory (MB): 8192
  Acknowledged Cores: 8
  Acknowledged Adapters: 1
UCSC(resource-mgr)/doamin-mgmt/ucs-domain/chassis/server#
```

Viewing Local Service Profile

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope org org-name	Enters the organizations mode for the specified organization. To enter the root mode type/ as the <i>org-name</i> .
Step 3	UCSC(resource-mgr) /org # scope local-service-profile local-service-profile_name	Enters the specified local service profile.
Step 4	UCSC(resource-mgr) /org /local-service-profile # show instance	Displays information of the instance in the specified local service profile.

Example

The following example shows how to view local service profile named localSP2:

```

UCSC# connect resource-mgr
UCSC(resource-mgr)# scope org /
UCSC(resource-mgr)/org# scope local-service-profile localSP2
UCSC(resource-mgr)/org/local-service-profile# show instance
Compute Instance:
  ID      Name      Status      Assoc State  Config State  Physical Ref
  -----
  1007   samc02   Config Failure  Unassociated  Failed        localSP2/1007
UCSC(resource-mgr) /org/local-service-profile #

```

Viewing Organization Details

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope org <i>org-name</i>	Enters the organization mode for the specified organization. To enter the root organization mode type/ as the <i>org-name</i> .
Step 3	UCSC(resource-mgr) /org # show org	Displays details of an organization.

Example

The following example shows how to view root organization details:

```

UCSC# connect resource-mgr
UCSC(resource-mgr)# scope org /
UCSC(resource-mgr)/org # show org
Organizations:
  Name
  ----
  /org1
UCSC(resource-mgr)/org #

```

Viewing Chassis Information

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain <i>name</i>	Enters the specified UCS domain.
Step 4	UCSC(resource-mgr)/domain-mgmt/UCS domain # show chassis .	Displays a list of chassis in the specified UCS domain.

Example

The following example shows how to view the chassis information in a registered Cisco UCS Domain from Cisco UCS Central:

```
UCSC# connect resource-mgr
UCSC(resource-mgr) # scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # show chassis
UCS System chassis:
  Chassis Id Model          Status          Operability
  -----
          1 N20-C6508 Inoperable      Operable
UCSC(resource-mgr) /domain-mgmt/ucs-domain #
```

Viewing Fabric Interconnects

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain name	Enters the specified UCS domain.
Step 4	UCSC(resource-mgr)/domain-mgmt/UCS domain # show fabric-interconnect .	Displays a list of fabric-interconnect in the specified UCS domain.

Example

The following example shows how to view the fabric interconnects in a registered Cisco UCS Domain from Cisco UCS Central:

```
UCSC# connect resource-mgr
UCSC(resource-mgr) # scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # show fabric-interconnect
ID Operability IP Address      Model          Serial
-----
A Operable    10.193.66.180 UCS-FI-6296UP FOX1512G07K
UCSC(resource-mgr) /domain-mgmt/ucs-domain #
```

Viewing Fabric Extenders

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain name	Enters the specified UCS domain.
Step 4	UCSC(resource-mgr)/domain-mgmt/UCS domain # show fex .	Displays a list of fabric extenders in the specified UCS domain.

Example

The following example shows how to view the fabric extenders in a registered Cisco UCS domain from Cisco UCS Central:

```
UCSC# connect resource-mgr
UCSC(resource-mgr) # scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # show fex
UCS System Fabric-extender:
      Fex Id      Model          Status              Operability
-----
          2  N2K-C2232PP-10GE
                        Accessibility Problem      N/A

UCSC(resource-mgr) /domain-mgmt/ucs-domain #
```

Viewing Servers

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain name	Enters the specified UCS domain.
Step 4	UCSC(resource-mgr)/domain-mgmt/UCS domain # show server .	Displays a list of servers in the specified UCS domain.

Example

The following example shows how to view the rack servers in a registered Cisco UCS Domain from Cisco UCS Central:

```
UCSC# connect resource-mgr
UCSC(resource-mgr) # scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # show server
UCSC(resource-mgr) /domain-mgmt/ucs-domain #
```

To view the blade servers, you have to scope into the chassis:

```
UCSC# connect resource-mgr
UCSC(resource-mgr) # scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # scope chassis 1
UCSC(resource-mgr) /domain-mgmt/ucs-domain/chassis # show server
```

Blade Server in a UCS Chassis:

Chassis Id	Slot Id	Status	Cores	Memory (MB)	LS Ref
1	1	Inoperable	12	131072	
1	2	Ok	8	6144	
org-root/req-BIOS-2/inst-1006					
1	3	Discovery	0	0	
1	5	Ok	8	24576	
org-root/req-BIOS-5/inst-1006					
1	6	Ok	8	12288	
org-root/req-BIOS-6/inst-1006					
1	7	Ok	32	32768	
org-root/org-LisasOrg/req-Li					
sasOrg_SPClone/inst-1006					

```
UCSC(resource-mgr) /domain-mgmt/ucs-domain/chassis #
```

Viewing FSM Operation Status

Procedure

	Command or Action	Purpose
Step 1	UCSC# connect resource-mgr	Enters resource manager mode.
Step 2	UCSC(resource-mgr) # scope domain-mgmt	Enters the UCS domains.
Step 3	UCSC(resource-mgr) /domain-mgmt # scope ucs-domain name	Enters the specified UCS domain.

	Command or Action	Purpose
Step 4	UCSC(resource-mgr)/domain-mgmt/UCS domain # show fsm status .	Displays the fsm operation status for the specified UCS domain.

Example

The following example shows how to view the FSM operation status in a registered Cisco UCS Domain from Cisco UCS Central:

```
UCSC# connect resource-mgr
UCSC(resource-mgr)# scope domain-mgmt
UCSC(resource-mgr) /domain-mgmt # scope ucs-domain 1006
UCSC(resource-mgr) /domain-mgmt/ucs-domain # show fsm status
```

```
ID: 1006
  FSM 1:
    Status: 0
    Previous Status: 0
    Timestamp: Never
    Try: 0
    Progress (%): 100
    Current Task:
UCSC(resource-mgr) /domain-mgmt/ucs-domain #
```

