

Transition from Cisco UCS Mini (6324 FI) to Cisco UCS X-Series Direct (9108 FI)





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This document provides a comprehensive guide on transitioning from Cisco UCS® Mini with the Cisco UCS 6324 Fabric Interconnect (6324 FI) to the newer Cisco UCS X-Series Direct Fabric Interconnect 9108 100G (9108 FI). It covers the key differences, migration options, and step-by-step instructions to ensure a smooth upgrade while maximizing performance, scalability, and sustainability.

Introduction

Cisco UCS Mini with the 6324 Fabric Interconnect has been a reliable solution for smaller server domains, integrating fabric interconnects within the chassis to support up to 20 servers (up to 16 Cisco UCS B-Series blade servers and 4 Cisco UCS C-Series rack servers). However, with evolving technology and increasing demands for higher bandwidth and scalability, Cisco introduced Cisco UCS X-Series Direct, featuring the Cisco UCS X-Series Direct Fabric Interconnect 9108 100G. This new platform offers enhanced performance, integrated fabric interconnects, and support for modern workloads, making it an ideal upgrade path for Cisco UCS Mini users.

This document aims to guide users through the transition process, highlighting the benefits and providing practical steps to migrate workloads and infrastructure from Cisco UCS Mini to Cisco UCS X-Series Direct.



Overview of Cisco UCS X-Series Direct

Some people think Cisco UCS is only for larger commercial or enterprise business. Like its predecessor Cisco UCS Mini, Cisco UCS X-Series Direct brings all the benefits of an award-winning modular system to customers needing smaller server environments.

Cisco UCS X-Series Direct transforms the Cisco UCS X-Series Modular System into a self-contained system with a pair of integrated fabric interconnects and up to 20 compute nodes (two fully populated Cisco UCS X9508 Chassis and up to four rack servers). For customers with multiple locations, Cisco Intersight® is the preferred management platform, because it can seamlessly manage every chassis. Alternatively, Cisco UCS Manager may be used for systems management.

Because the platform is designed to incorporate future technologies, you can easily update all of its components while preserving your investment in the Cisco UCS X9508 Chassis and optional Cisco UCS X-Fabric technology. This is a more sustainable solution and reduces your TCO.

Cisco UCS X-Series Direct can be used if you don't want to use top-of-rack fabric interconnects, yet you want support for all of your edge, retail, and small or remote-office use cases. You can configure servers, GPU accelerators, networking, and storage to propel such use cases as the following:

- AI/ML inferencing, with up to six compact GPUs per server, or up to two full-length, full height GPUs
- Data protection in NVMe storage, to guard mission-critical data and enable rapid restoration in the event of a failure or ransomware event
- Hyperconverged infrastructure with Nutanix, which requires large amounts of local storage
- Virtual Desktop Infrastructure (VDI) that you can deploy close to users and ensure a smooth user experience with optional GPU rendering
- Cloud-native, containerized environments with support from the Red Hat OpenShift Container Platform
- Virtualized environments such as those supported by VMware vSphere 8.0 and higher
- Converged infrastructure solutions that integrate enterprise-shared storage from our leading storage partners

Reasons for transition

Here are the key benefits of transitioning to Cisco UCS X-Series Direct:

- **Higher performance:** 100G networking supports demanding applications and future growth
- **Scalability:** Expandable compute nodes and integrated fabric interconnects
- **Simplified management:** Unified management using Cisco Intersight
- **Sustainability:** Advanced power and cooling optimization
- **Modern workload support:** AI/ML, hyperconverged infrastructure, VDI, and cloud-native environments
- **Intersight Managed Mode:** Moving to Intersight-managed Cisco UCS X-Series Direct shifts the management plane from on-premises Cisco UCS Manager to Cisco's cloud operations platform, enabling enhanced automation, telemetry, and lifecycle management



Figure 1. Cisco UCS X-Series Chassis with integrated fabric interconnects 9108 100G at the top

How to transition from Cisco UCS Mini (6324 FI) to Cisco UCS X-Series Direct (9108 FI)

Understand the product differences

Cisco UCS Mini :

- Embedded fabric interconnects in I/O module form factor
- 4 x 10G server or uplink ports (4 unified ports configurable as Fibre Channel or Ethernet)
- 1x 40G scalability for a second chassis
- Supports up to 20 servers (16 blade servers + 4 direct-connect rack servers)
- Limited scalability and older generation hardware
- [End-of-sale and end-of-life announcements](#)

Cisco UCS X-Series Direct :

- Integrated fabric interconnects with 100G networking
- Supports up to 8 compute nodes initially, expandable to 20 nodes (16 Cisco UCS X-Series compute nodes + 4 direct-connect rack servers)
- Designed for edge, remote branch, and small data center use cases
- Supports modern workloads including AI/ML, hyperconverged infrastructure, VDI, and cloud-native environments
- Simplified licensing with perpetual licenses included

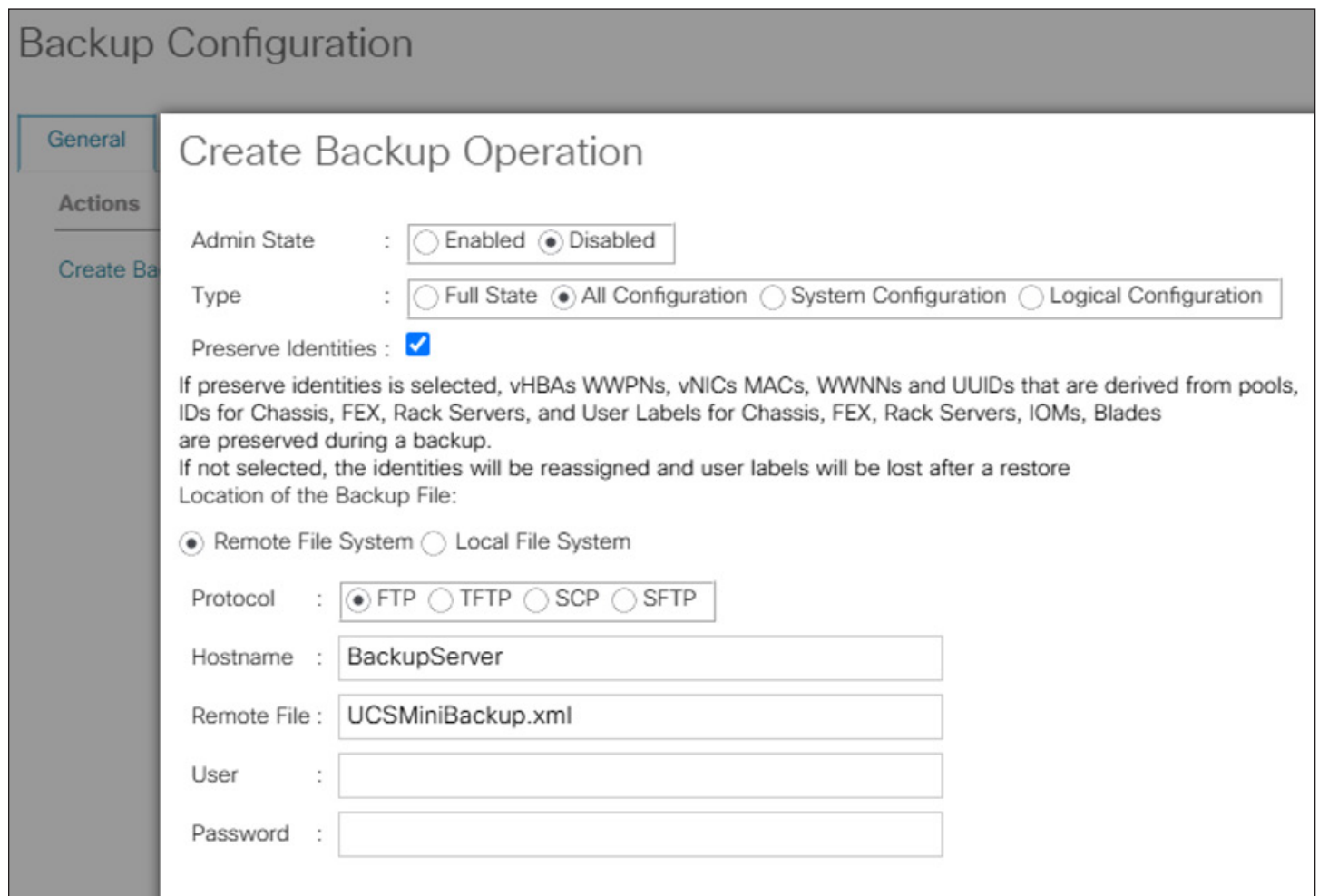
Plan the migration

Before migrating to the new Cisco UCS X-Series Direct, review the current Cisco UCS Mini environment, including server models, workloads, and network configurations.

- Have Cisco UCS X-Series Direct identify the components needed: Cisco UCS X9508 Chassis, Cisco UCS X-Series Direct Fabric Interconnect 9108 100G, compute nodes (Cisco UCS X210c M6/M7/M8, Cisco UCS X215c M8, and Cisco UCS X410c M7), and optional GPU nodes.
- Align migration goals with business needs, focusing on scalability, performance, and sustainability.
- If needed, coordinate with Cisco support and partner resources for migration assistance and demos.

Prepare the environment

Backing up Cisco UCS Mini configurations procedure can be found [here](#).



The screenshot shows the 'Backup Configuration' page in Cisco UCS Manager. The 'General' tab is selected, and the 'Create Backup Operation' section is active. The configuration includes:

- Admin State:** ☐ Enabled ☒ Disabled
- Type:** ☐ Full State ☒ All Configuration ☐ System Configuration ☐ Logical Configuration
- Preserve Identities:** ☒
If preserve identities is selected, vHBAs WWPNs, vNICs MACs, WWNNs and UUIDs that are derived from pools, IDs for Chassis, FEX, Rack Servers, and User Labels for Chassis, FEX, Rack Servers, IOMs, Blades are preserved during a backup.
If not selected, the identities will be reassigned and user labels will be lost after a restore
- Location of the Backup File:**
☒ Remote File System ☐ Local File System
- Protocol:** ☒ FTP ☐ TFTP ☐ SCP ☐ SFTP
- Hostname:** BackupServer
- Remote File:** UCSMiniBackup.xml
- User:** (empty field)
- Password:** (empty field)

Figure 2. Example backup configuration under Cisco UCS Manager for Cisco UCS Mini

Validate compatibility of workloads and applications with Cisco UCS X-Series Direct.

Ensure that either Cisco UCS Manager or Cisco Intersight is ready for managing the new system.

Migration from Cisco UCS Mini with UCS Manager to Cisco UCS X-Series Direct with UCS Manager

There is no supported direct migration path to move configurations live from the Cisco UCS Mini to Cisco UCS X-Series Direct within UCS Manager. These are different hardware platforms with distinct capabilities and firmware requirements.

The recommended approach is to **create a new configuration on the 9108 FI** rather than attempting an in-place migration. This involves planning and executing migration during a maintenance window to minimize disruption.

Here are the steps to migrate to the Cisco UCS X-Series Direct Fabric Interconnect 9108 100G:

- Review and document the current 6324 FI configuration, including server profiles, VLANs, uplinks, and policies.
- Prepare the 9108 FI with the appropriate firmware version compatible with Cisco UCS Manager.
- Manually re-create or import the necessary configuration elements on the 9108 FI, ensuring alignment with the existing Cisco UCS domain design.
- Importing can be done by navigating to the Admin tab, then to the All node, then to the General tab. Under Actions, click on Import Configuration and then on Create Import Operations.
- Establish redundant network paths and failover mechanisms to reduce traffic loss during cutover.
- Schedule a maintenance window to power down the 6324 FI, physically replace it with the 9108 FI, and bring the new FI online with the new configuration.
- Validate the FI cluster health, server connectivity, and traffic flow post-migration.

This process requires careful coordination and testing to ensure business continuity and minimize downtime. Cisco support and partners can assist with migration planning and execution.

Attempting a direct live migration or cluster replacement without reconfiguration is not supported and may cause service disruption.

Migration plan from 6324 FI with UCS Manager to 9108 FI managed by Intersight

Migrating from Cisco UCS Mini with 6324 Fabric Interconnect managed by UCS Manager to a Cisco UCS Fabric Interconnect 9108 100G managed by Cisco Intersight introduces additional considerations related to cloud-based management and automation.

Preparation steps:

- Ensure the new 9108 FI is registered and connected to Cisco Intersight.
- Validate network connectivity and firewall rules to allow secure communication between the FI and Intersight.
- Backup existing UCS Manager configurations for rollback or reference.

Migration process:

- Deploy the 9108 FI and connect it to Intersight.
- Use Intersight's migration tools and workflows to import or recreate configurations from the 6324 FI environment.
- More about the Cisco Intersight Managed Mode Transition Tool can be found in the section "Cisco Intersight Managed Mode Transition Tool," below.
- Reconfigure server profiles, network policies, and firmware management through Intersight if needed.
- Validate that all compute nodes and chassis components are properly discovered and managed by Intersight.

Operational benefits:

- Gain centralized cloud-based management with real-time analytics and proactive support.
- Leverage Intersight's automation capabilities for ongoing lifecycle management and scaling.
- Improve operational efficiency and reduce manual intervention.

Post-migration validation:

- Confirm that all Cisco UCS components are visible and healthy in Intersight.
- Test workload connectivity and performance to ensure migration success.
- Train operations teams on Intersight management interfaces and workflows.

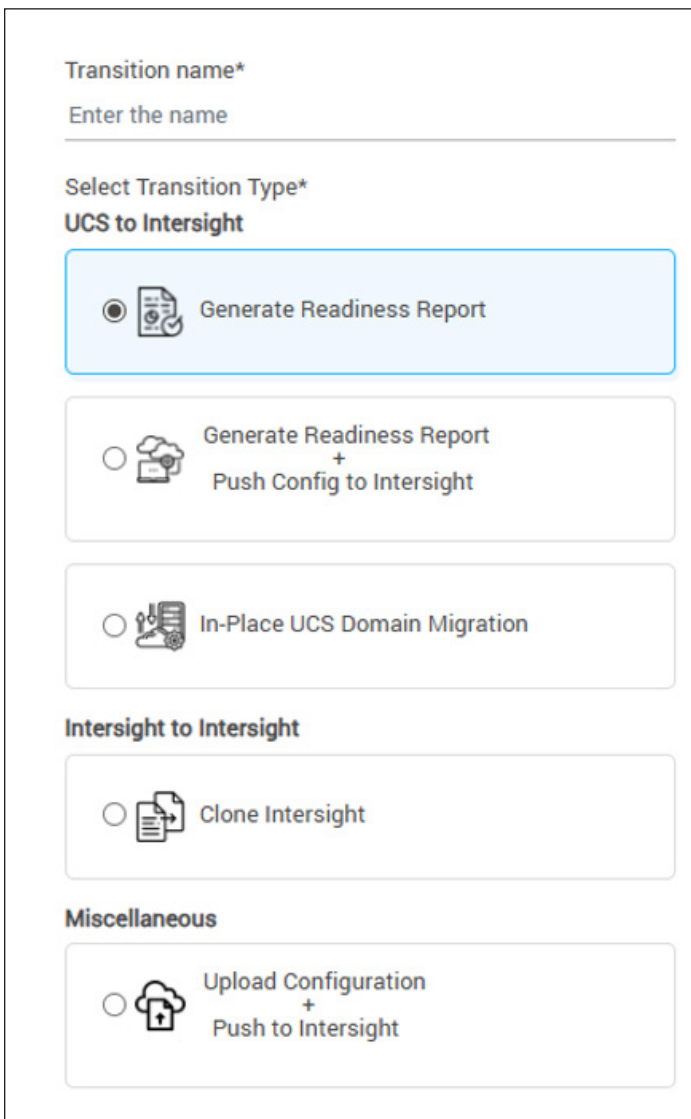
Decommission Cisco UCS Mini

After successful migration, decommission Cisco UCS Mini hardware and use the option of [Cisco's Takeback and Reuse Program](#) for proper disposal of end-of-life equipment.

Cisco Intersight Managed Mode Transition Tool

The Cisco Intersight Managed Mode (IMM) Transition Tool helps bootstrap new IMM deployments by replicating the configuration attributes of the existing Cisco UCS Manager (UCSM) and Cisco UCS Central infrastructure, and by converting the existing service profiles and templates to IMM server profiles and templates to accelerate deployment of new servers and to migrate existing servers to Intersight Managed Mode.

In Figure 3, you can see first options given when you first open the Cisco Intersight Managed Mode Transition Tool.



The screenshot displays the initial configuration screen of the Cisco Intersight Managed Mode Transition Tool. It features a form with the following sections:






- Transition name***: A text input field with the placeholder "Enter the name".
- Select Transition Type***: A section header for the main configuration options.
- UCS to Intersight**: A category header for migration options from UCS to Intersight.
 - ☒  **Generate Readiness Report**
 - ☐  **Generate Readiness Report + Push Config to Intersight**
 - ☐  **In-Place UCS Domain Migration**
- Intersight to Intersight**: A category header for migration options between Intersight instances.
 - ☐  **Clone Intersight**
- Miscellaneous**: A category header for other actions.
 - ☐  **Upload Configuration + Push to Intersight**

Figure 3. First options when open Cisco Intersight Managed Mode Transition Tool



The IMM Transition Tool, Release 5.0.1 and following, can be used to perform automated in-place migration to Intersight Managed Mode of UCS Manager devices.

The IMM Transition Tool, Release 5 and following, supports Cisco UCS X-Series Direct import policies and conversions from Cisco UCS Mini.

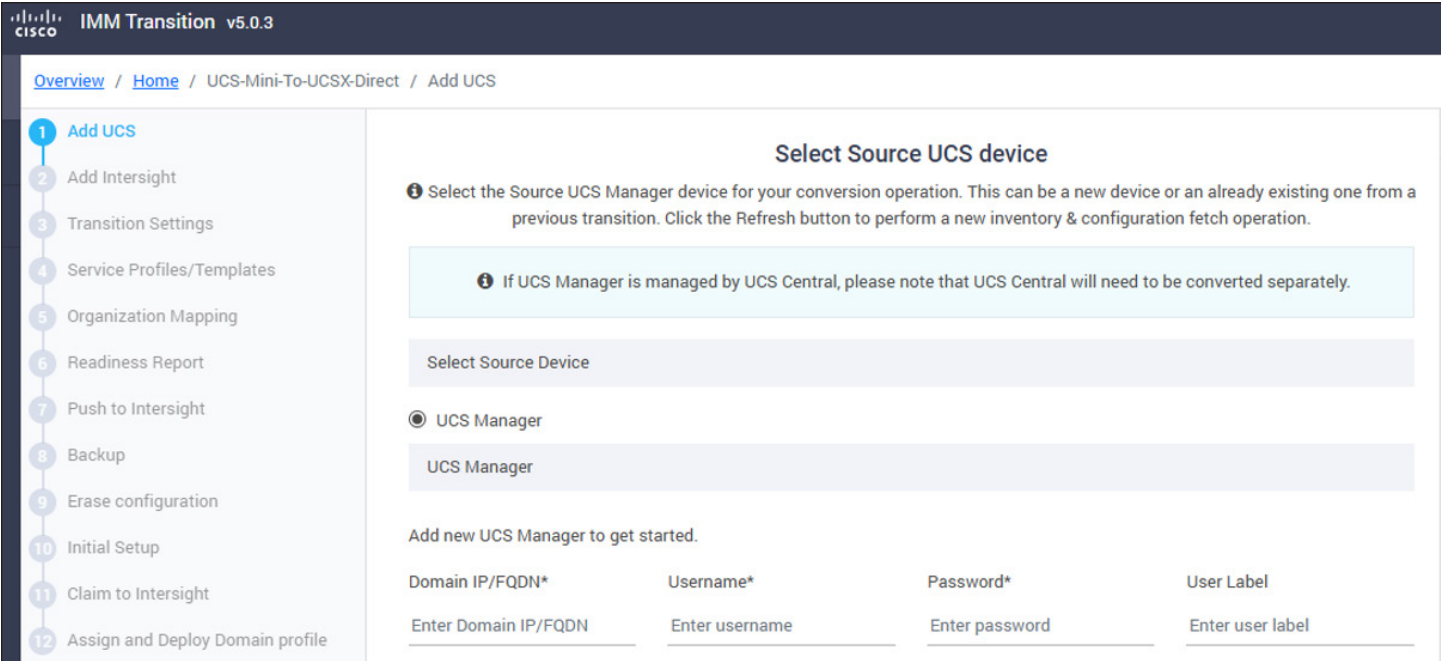


Figure 4. IMM Transition Tool with support for Cisco UCS X-Series Direct import policies and conversions from Cisco UCS Mini

Converting from Cisco UCS 6200/6300 series fabric interconnects (including Cisco UCS Mini) will not alter or remove VLANs that belong to the default reserved VLAN range on Cisco UCS 6400/6500/9108-100G series fabric interconnects. You can either modify or remove VLAN IDs from the reserved range or move the reserved VLAN range before deploying the domain profile.

Conclusion

With the end-of-sale announcement of the 6324 FI for Cisco UCS Mini that has already been made, and the upcoming end of software maintenance announcement on January 30, 2026, migration to a new technology such as the Cisco UCS X-Series Direct has become important. Either migration within UCS Manager or from UCS Manager to Cisco Intersight are ways to easily integrate the new Cisco UCS X-Series Direct technology. The successor of Cisco UCS Mini offers new options for customers by integrating new features and scaling to much higher limits.

Learn more

If you are thinking about upgrading your Cisco UCS Mini, start looking at Cisco UCS X-Series Direct as a logical next step and contact your local account team and/or partner to get an offer. For more information on Cisco UCS X-Series Direct, please visit:

- [End-of-sale announcement for the Cisco UCS 6324 Fabric Interconnect](#)
- [Cisco UCS X-Series Direct At-A-Glance](#)
- [Cisco UCS X-Series Direct Data Sheet](#)
- [Cisco UCS Fabric Interconnect 9108 100G Spec Sheet](#)
- [Cisco UCS 6324 Fabric Interconnect Data Sheet](#)
- [Cisco UCS Manager GUI Configuration Guide for Cisco UCS Mini, Release 3.0. Including backing up and restoring the configuration](#)
- [Video: Intersight IMM Expert Series – Migrating a UCSM Domain to Intersight using the IMM Transition Tool](#)
- [Cisco UCS Tools – IMM Transition Tool](#) (Requires Cisco account for access)
- [Release Notes for Cisco Intersight Managed Mode Transition Tool](#)
- [Cisco Intersight Managed Mode Transition Tool User Guide, 5.x](#)