

# Configure M2 Hardware Raid from UCS Central

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## Introduction

This document describes how to configure the Unified Computing System (UCS)-M2-HWRAID in UCS Central Management Software.

## Prerequisites

### Requirements

Cisco recommends you have knowledge of these topics:

- UCS Manager
- UCS Central
- M2 Raid UCS-M2-HWRAID

### Components Used

The information in this document is based on these software and hardware versions:

- Cisco UCS 64108 108-Port Fabric Interconnect in Ethernet and Fibre Channel End Host Mode
- Infrastructure bundle version: 4.2(3)
- Cisco UCS B200 M6 Server
- Server firmware version: 4.2.3(b)B
- More: [UCS Hardware and Software Compatibility](#)
  - **Adapters > RAID > Cisco Boot Optimized M.2 HW Raid Controller (Cisco)**

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, ensure

that you understand the potential impact of any command.

## Background Information

The UCS-M2-HWRAID holds two m.2 gumsticks; one on each side of the carrier. The UCS-M2-HWRAID and UCS-MSTOR-M2 look similar, but in this configuration example, hardware RAID.

## Configure

### Check Current Status

1. Check that the necessary parts are shown at server inventory.

In UCS Central, navigate to **Equipment > Servers > Server x**.

Select the **Inventory** tab at the top, **Motherboard**. Expand **Mini Storage**. Ensure that your Model shows as **UCS-M2-HWRAID** as shown in this image.

The screenshot displays the UCS Central interface for a server's hardware configuration. On the left, a navigation pane shows 'Controllers' selected. The main content area is divided into two sections: a summary table and a detailed configuration table.

Key Indicators	Status
Operability	Optimal
Presence	Equipped
Controller Status	Optimal
Pinned Cache Status	Disabled
Security	None

Configuration	Value
Firmware Version	2.3.17.1014
Boot-loader Version	1.1.17.1002

Hardware	Specs.
ID	1
PCI Address	04:00.0
Model	UCS-M2-HWRAID
RAID Support	RAID1
OOB Interface Supported	Yes
Rebuild Rate	0
No. Of Local Disks	2 (2 slots)
S/No	FCH241778B6

2. Check that two m.2 disks are presented, and are in operable state. This server model places m.2 disks in slots 253 and 254.

Basic

Motherboard

CIMC

CPUs

GPUs

Security

Memory

Adapters

Controllers

**Storage**

LUNs

## Storage

SAS Controller 1 Disk 1  
OK

SAS Controller 1 Disk 2  
OK

SATA Controller 1 Disk 253 ←  
OK

SATA Controller 1 Disk 254 ←  
OK

3. Check for any orphaned LUN:

Navigate to **LUNs** Tab. If you see an orphaned LUN, skip to the Troubleshooting section at the bottom before you begin the configuration.

Basic	LUNs	Virtual Drive RAID1_253254 1/0	Operability	Presence
Motherboard	Virtual Drive RAID1_253254 1/0	OK	OK	Equipped
CIMC			<b>Key Indicators</b>	
CPU's			Associated Service Profile	Status
GPU's			Config State	Orphaned
Security			Bootable	True
Memory			Access Policy	Read Write
Adapters			Security	
Controllers			<b>Hardware</b>	
Storage			ID	0
LUNs			Size (MB)	228872
			Drive State	Optimal
			Block Size	512
			No. Of Blocks	468731008

## Create Disk Group Policy on UCS Central

1. On UCS Central, navigate to box **What do you want to do?** and type **Create Disk Group Configuration Policy**.

The screenshot shows the UCS Central web interface. At the top, there is a search bar with the text "What are you looking for?". Below it, a dropdown menu titled "What do you want to do?" is open, showing two options: "Create Disk Group Configuration Policy" (highlighted in blue) and "Create Disk Zoning Policy". The main content area displays a "Welcome to UCS Central!" message and a "What's New" section with a notification about firmware updates. Below this, there are sections for "Explore" and "Support" with various links.

2. Select the **organization**, **name the policy**, add **description**, and select **RAID Level 1 Mirrored**.

UCS Central | What are you looking for? | What do you want to do?

### Disk Group Configuration Policy Create

Basic | Disk Group | Virtual Drive

Organization: root

Name \*: Policy-M2

Description: Disk M2 policy

RAID Level: RAID 1 Mirrored

Cancel Create Evaluate

3. Select **Disk Group**. Under **Disk Slots IDs**, type 253 and 254 for the Disk IDs for this case, and then select normal **Disk Roles**.

UCS Central | What are you looking for? | What do you want to do?

### Disk Group Configuration Policy Create

Basic | Disk Group | Virtual Drive

Configuration Type: Auto Manual

Span ID: 0

Disk Slot ID: 253, 254

Disk Role: Dedicated Hot Spare Global Hot Spare Normal

Cancel Create Evaluate

4. Select **Virtual Drive**, and confirm that all options are on Platform Default, and that Security is Disabled. Then, click the **Create** button.

The screenshot shows the 'Disk Group Configuration Policy Create' page in UCS Central. The interface includes a top navigation bar with the Cisco logo, 'UCS Central', a search bar, and a dropdown menu. A left sidebar contains navigation icons, with 'Virtual Drive' highlighted in a red box. The main content area is divided into sections: 'Basic', 'Disk Group', and 'Security'. Under 'Disk Group', several dropdown menus are set to 'Platform Default': Strip Size (KB), Access Policy, Read Policy, Write Cache Policy, IO Policy, and Drive Cache Policy. The 'Security' section has a radio button for 'Disabled' selected, also highlighted in a red box. At the bottom right, there are three buttons: 'Cancel', 'Create' (highlighted in a red box), and 'Evaluate'.

## Create a Storage Profile

1. On UCS Central, navigate next to search box **What are you looking for?** and type **Create Storage Profile**.

UCS Central | What are you looking for?

Policy-M2 Disk Group Configuration Policy

Policy Usage

0 Associated  
0 Not Associated  
0 Config Errors

Settings	Value
RAID Level	RAID 1 Mirrored

Disk Group	Value
Configuration Type	Manual

Disk	Span ID	User Role
253	0	Normal

create stora

- Create Storage Connection Policy
- Create Storage Profile

2. Name the storage profile and add a description.

UCS Central | What are you looking for? | What do you want to do?

### Storage Profile Create

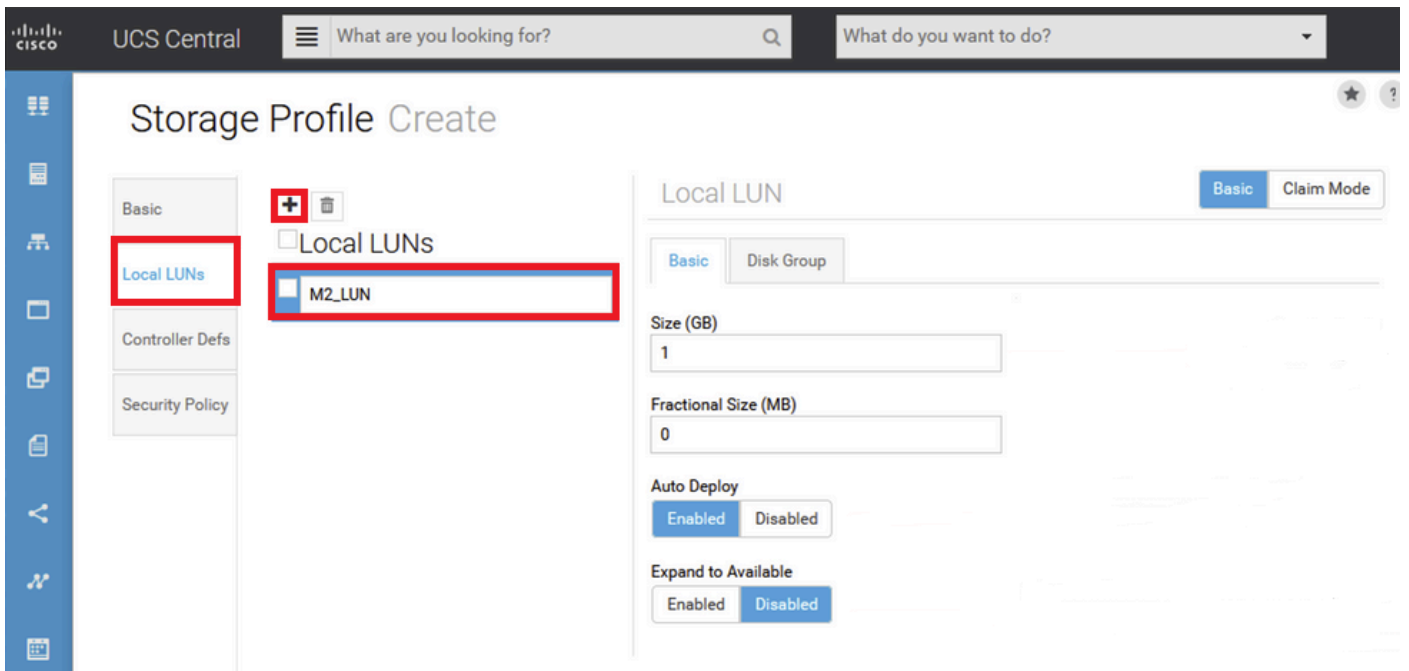
Organization: root

Name \*: LUN-M2

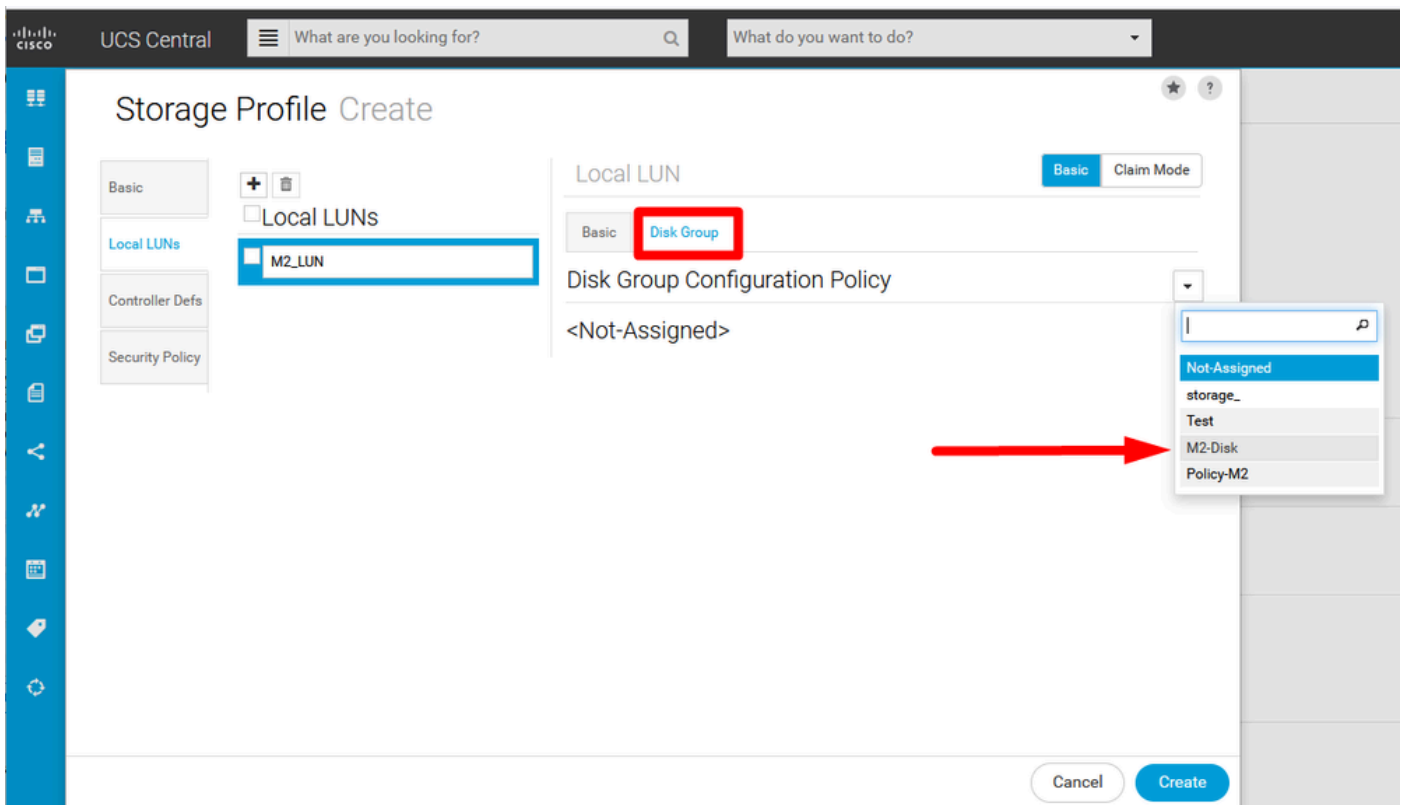
Description: LUN for M2 raid

Cancel Create

3. Select **Local LUNs**, then click **Add** button and give name to this LUN.

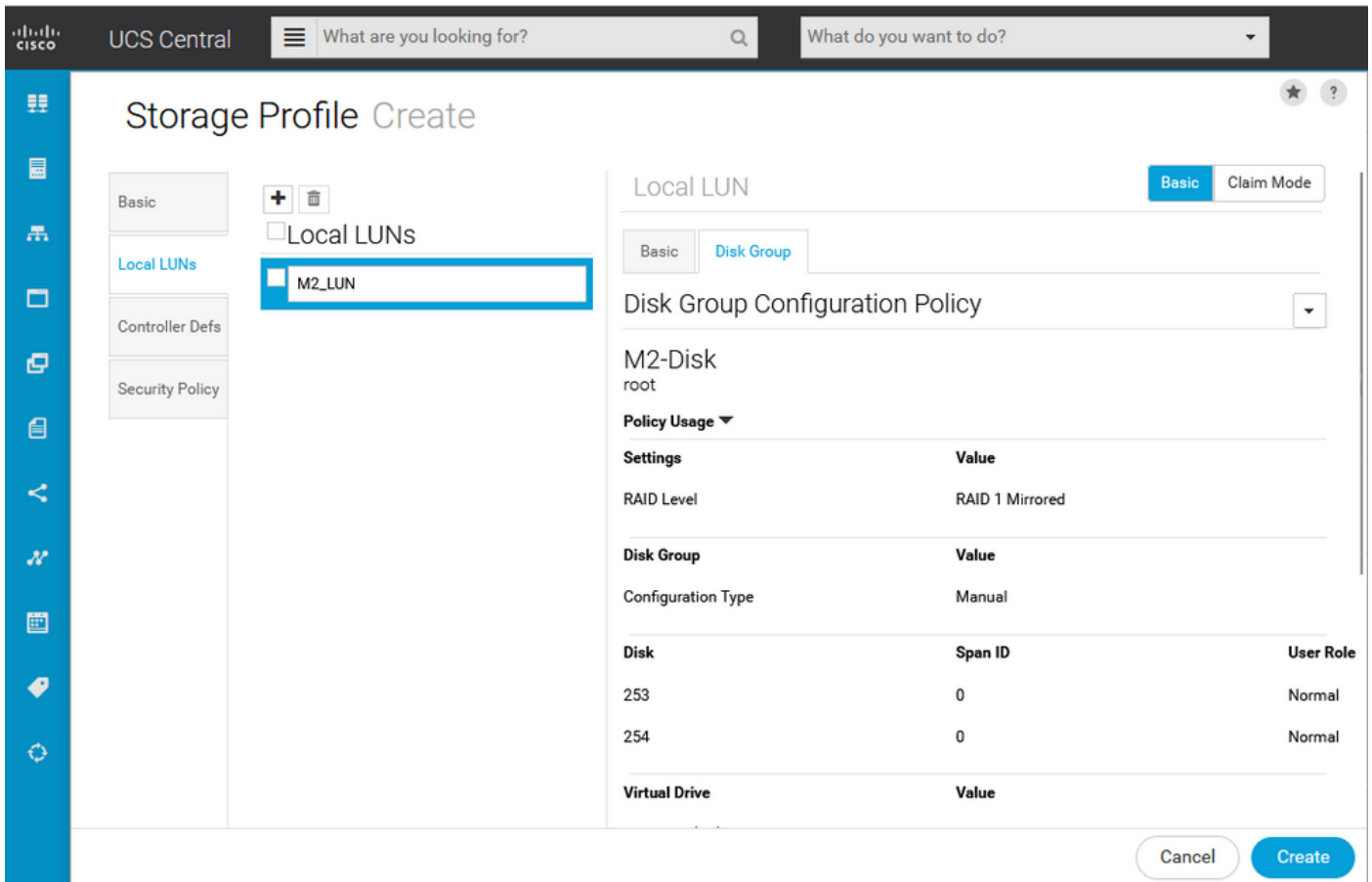


4. Click **Disk Group**. Click drop-down arrow and select previously created Disk Group Policy.



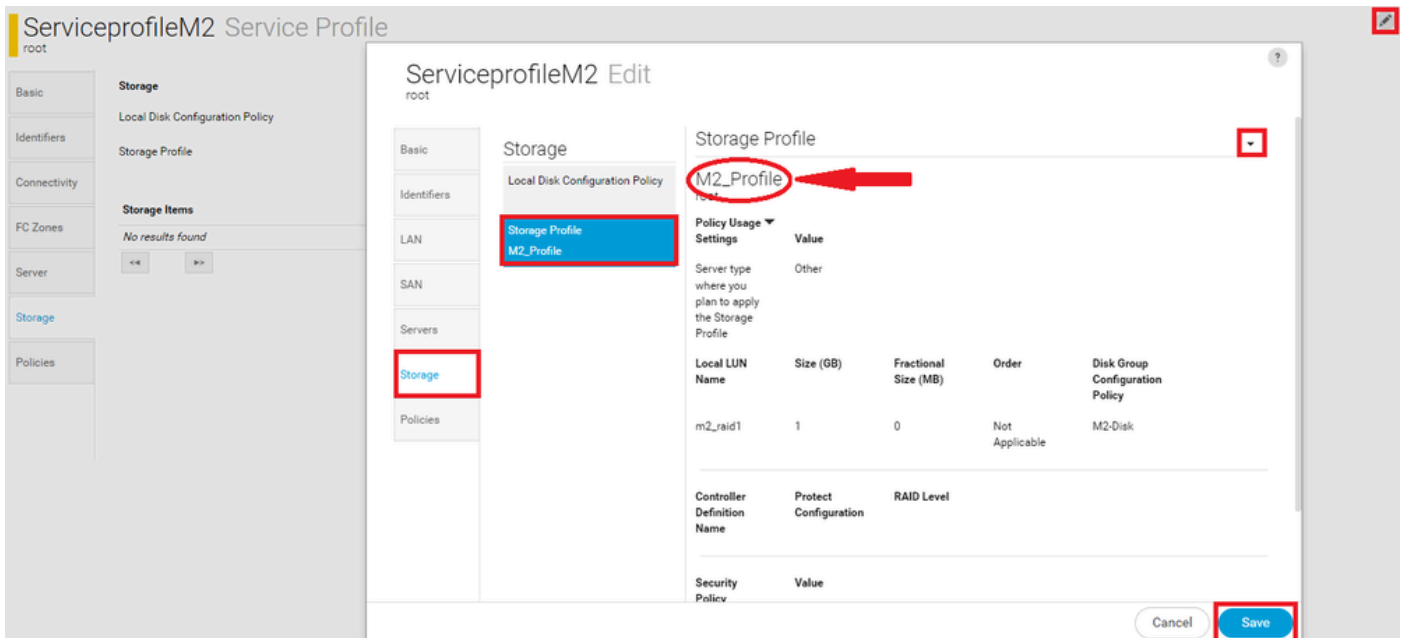
5. Controller Defs and Security policy are not required for M.2 Raid controllers. Complete configuration by selecting **Create**.



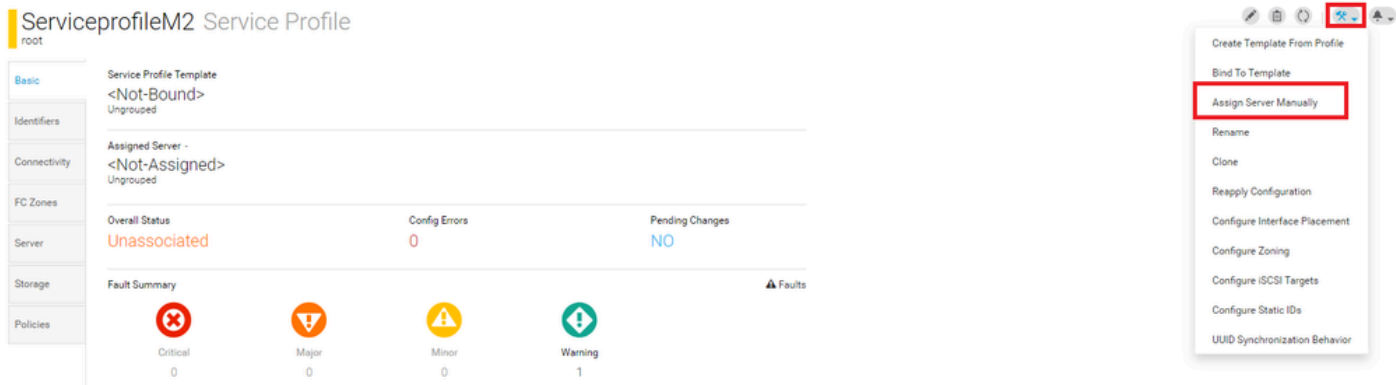


## Associate to a Global Service Profile

1. Apply the recently created Storage Profile to a new or existing service profile, and **Save** configuration.

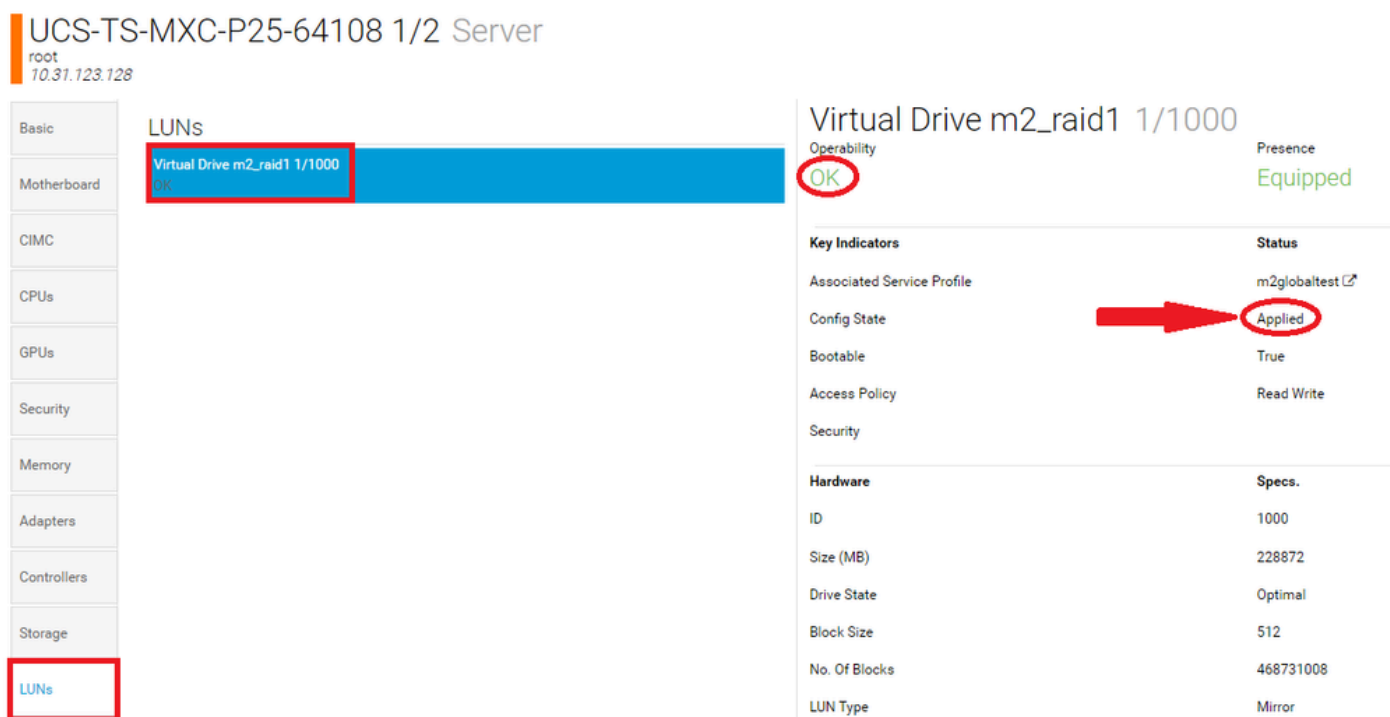


2. In case service profile is not associated yet, proceed to assign Service Profile to an existing Server.



## Verify

Check **ServerTab**, then select **LUNs** and make sure Virtual Drive exists and configure state is applied.



## Troubleshoot

This section provides information you can use in order to troubleshoot your configuration.

When an orphaned LUN is found, select the **LUN** and **Delete** it. This removes any and all data that exists on the array as shown in this image.

The screenshot displays the UCS Manager interface for a Virtual Drive RAID1\_253254 1/0. The left sidebar shows navigation options: Basic, Motherboard, CIMC, CPUs, GPUs, Security, Memory, Adapters, Controllers, Storage, and LUNs (highlighted). The main content area is divided into sections: Operability (OK), Presence (Equipped), Key Indicators, Associated Service Profile, Config State (Orphaned), Bootable (True), Access Policy (Read Write), Security, Hardware, and Specs. The 'Orphaned' status is circled in red. A context menu is open on the right, listing actions: Delete Orphaned LUN (highlighted), Rename LUN, Set Transport Ready, Hide Virtual Drive, and Secure Virtual Drive.

Key Indicators	Status
Operability	OK
Presence	Equipped
Config State	Orphaned
Bootable	True
Access Policy	Read Write
Security	
Hardware	Specs.
ID	0
Size (MB)	228872
Drive State	Optimal
Block Size	512
No. Of Blocks	468731008

## Related Information

- [Cisco UCS Central Server Management Guide, Release 2.0](#)
- [Cisco UCS Central Storage Management Guide, Release 2.0](#)
- [Configure UCS-M2-HWRAID on UCS Blades](#)
- [Cisco UCS B200 M6 Blade Server](#)
- [Cisco Technical Support & Downloads](#)