Configure RAID on M2 Drives under M2 HWRAID mini storage module (UCS-M2-HWRAID)

Contents

Introduction

This document describes how to configure M.2 SATA drives under a RAID when controlled by the M2 Hardware RAID storage module (UCS-M2-HWRAID).

Prerequisite

Requirements

Cisco recommends that you have knowledge of these topics:

- UCS Manager firmware: 4.0(4a) and above.

Components Used

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

- UCS-M2-HWRAID (Internal Name: Noe Valley)
- 240GB M.2 6G SATA SSDs.
- C240 M5SN server integrated with UCS Manager running firmware 4.0(4e).

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.

Setup and Configurations

The initial setup includes a scenario, where the UCS-M2-HWRAID installed physically on the C240 M5SN, may not get detected under the UCSM inventory.

The server cimc show the sensor value as 0x0180 which signifies the absence of the mini storage module/not detected by the presence sensor.

```
MINI_STORAGE_PRS | disc -> | discrete    | 0x0280 | na      | na      | na      | na      | na      | na      |
```
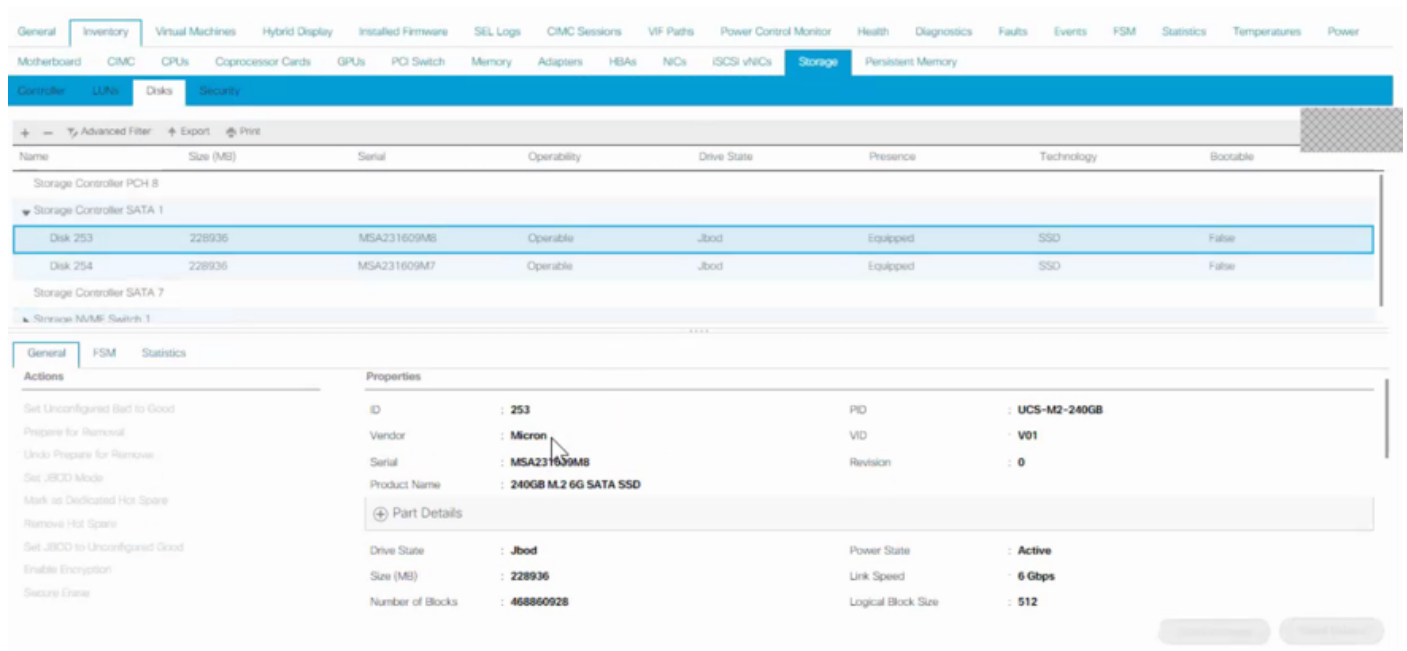A re-seat of the mini storage module can help in this case.

The module successfully identified in the server inventory with the sensor value 0x0280.

Under the UCSM, the server inventory shows the storage module as shown in this image:
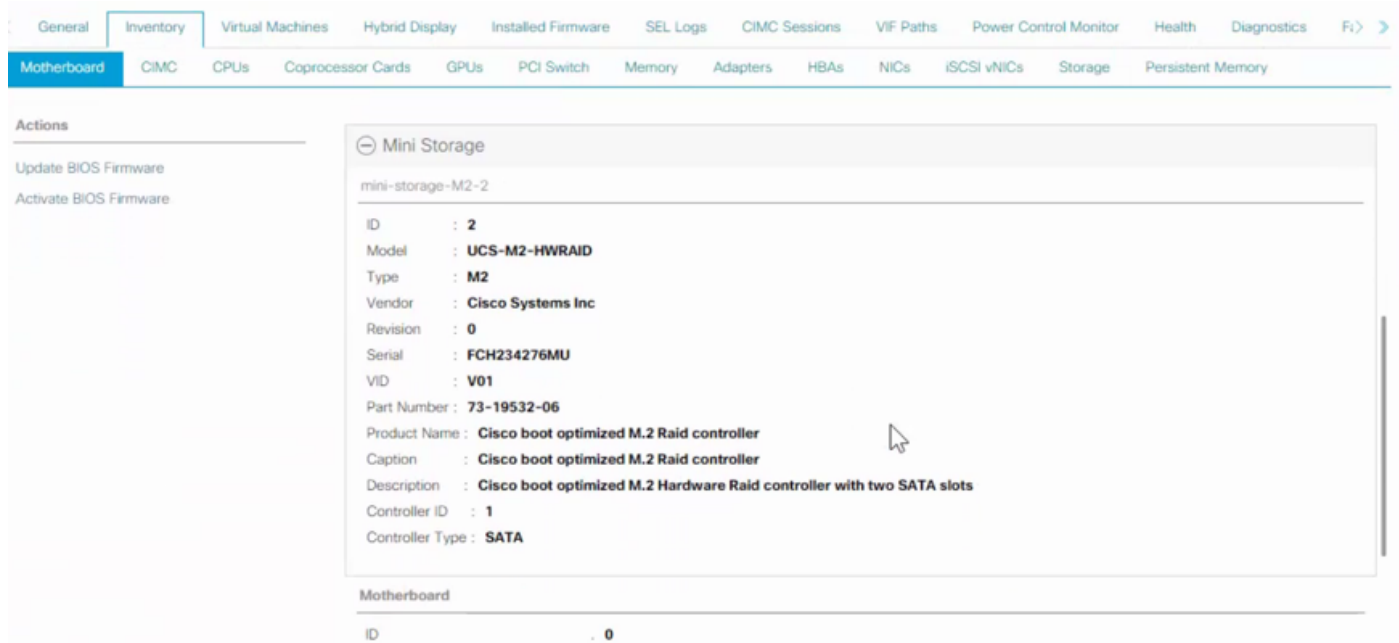

M2-HWRAID detected as controller SATA 1

The drives initially are seen as JBOD

Create the storage profile for the service profile to be associated to the server, the disk group config is done manually with the disks configured in a certain RAID level, 1 being the supported one in the given construct.

The drives specified explicitly by the disk slots, as shown in the image:
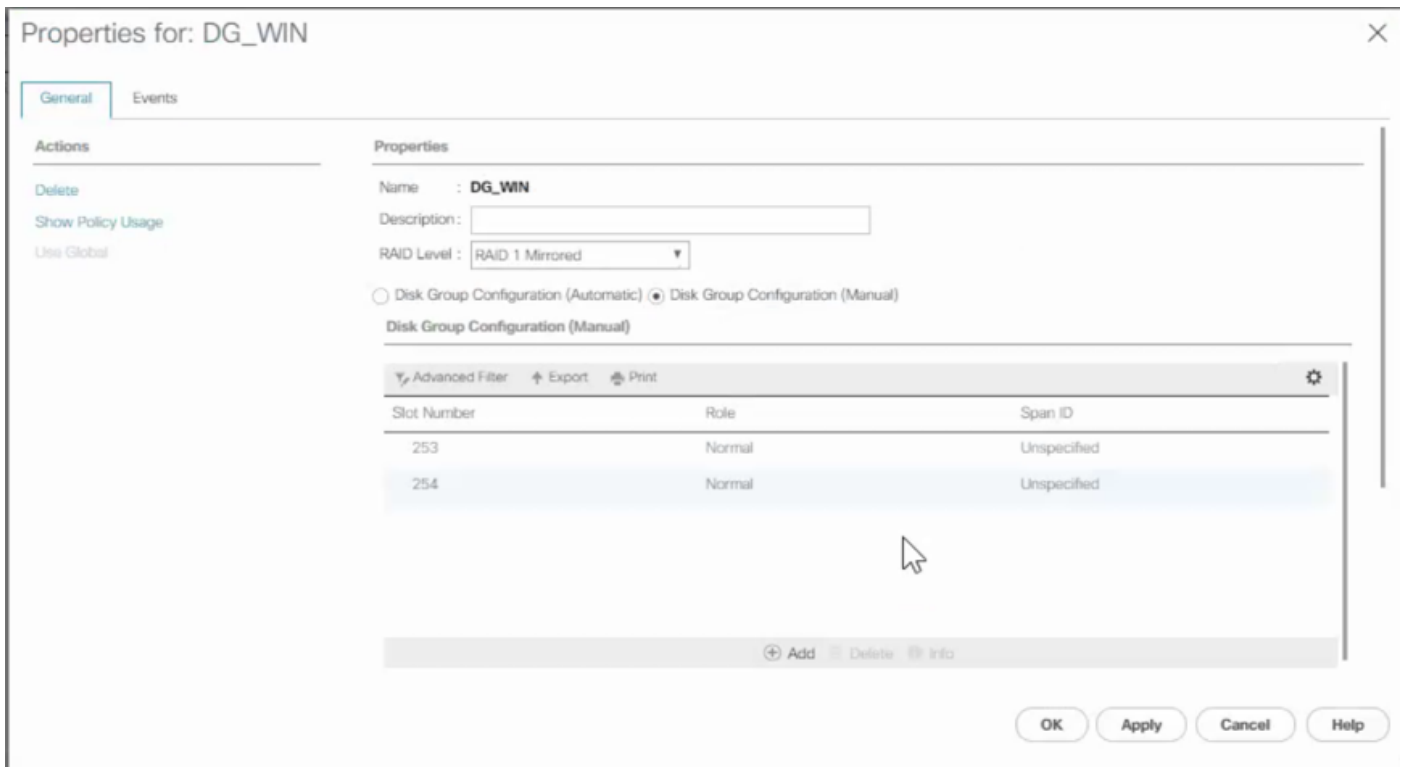
The drives are then made as online from JBOD mode.
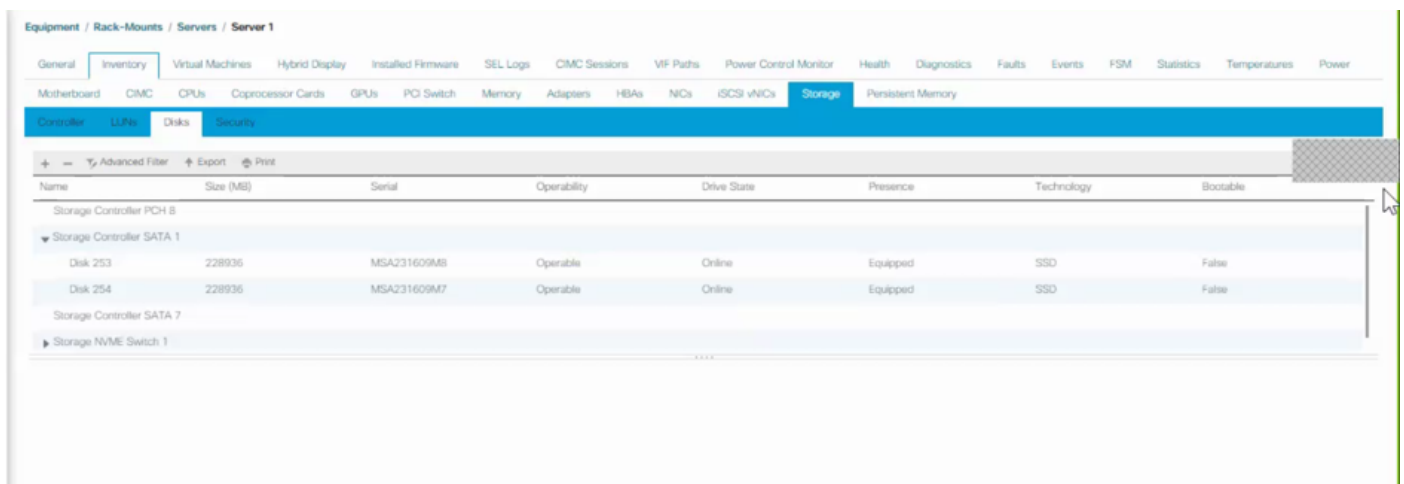
Note: M2-HWRAID supports only 2 modes, JBOD and RAID 1.

Description	Fort Point	Noe Valley
RAID	Broadcom Software RAID Driver	Marvell HW RAID
RAID Modes	RAID 1, 0 or JBOD	RAID 1 or JBOD
Number of Volumes	Up to 16?	1
Boot Modes	UEFI	UEFI

Unless the front panel drives are controlled by a SW based RAID controller, the pSATA does not need to be enabled.

Associate the service profile successfully and the server is ready for OS installation on the M.2 drives.

After the service profile applied with the configured disk group policy with RAID level 1, an error message for configuration fails with the reason:

"Server does not fulfill Local Disk config requirements of the service profile. There are not enough resources overall."

 Required to disable the pSATA, and use the manual Disk Group configuration to specify the disks to be configured under RAID.