Troubleshooting Server Disk Drive Detection and Monitoring

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Support for Local Storage Monitoring

The type of monitoring supported depends upon the Cisco UCS server.

Supported Cisco UCS Servers for Local Storage Monitoring

Through Cisco UCS Manager, you can monitor local storage components for the following servers:

- Cisco UCS B200 M3 blade server
- Cisco UCS B420 M3 blade server
- Cisco UCS B22 M3 blade server
- Cisco UCS B200 M4 blade server
- Cisco UCS B260 M4 blade server
- Cisco UCS B460 M4 blade server
- Cisco UCS C460 M2 rack server
- Cisco UCS C420 M3 rack server

- Cisco UCS C260 M2 rack server
- Cisco UCS C240 M3 rack server
- Cisco UCS C220 M3 rack server
- Cisco UCS C24 M3 rack server
- Cisco UCS C22 M3 rack server
- Cisco UCS C220 M4 rack server
- Cisco UCS C240 M4 rack server
- Cisco UCS C460 M4 rack server

Note Not all servers support all local storage components. For Cisco UCS rack servers, the onboard SATA RAID 0/1 controller integrated on motherboard is not supported.

Supported Cisco UCS Servers for Legacy Disk Drive Monitoring

Only legacy disk drive monitoring is supported through Cisco UCS Manager for the following servers:

- Cisco UCS B200 M1/M2 blade server
- Cisco UCS B250 M1/M2 blade server

Note In order for Cisco UCS Manager to monitor the disk drives, the 1064E storage controller must have a firmware level contained in a UCS bundle with a package version of 2.0(1) or higher.

Prerequisites for Local Storage Monitoring

These prerequisites must be met for local storage monitoring or legacy disk drive monitoring to provide useful status information:

- The drive must be inserted in the server drive bay.
- The server must be powered on.
- The server must have completed discovery.
- The results of the BIOS POST complete must be TRUE.

Viewing the Status of a Disk Drive

Viewing the Status of Local Storage Components in the Cisco UCS Manager GUI

Procedure

Step 1 In the **Navigation** pane, click the **Equipment** tab.

Step 2 On the **Equipment** tab, expand **Equipment** > **Chassis** > ***Chassis Number*** > **Servers**.

Step 3 Click the server for which you want to view the status of your local storage components.

Step 4 In the **Work** pane, click the **Inventory** tab.

Step 5 Click the **Storage** subtab to view the status of your RAID controllers and any FlexFlash controllers.

Step 6 Click the down arrows to expand the **Local Disk Configuration Policy**, **Actual Disk Configurations**, **Disks**, and **Firmware** bars and view additional status information.

Viewing the Status of a Disk Drive in the Cisco UCS Manager CLI

Procedure

	Command or Action	Purpose
Step 1	UCS-A# **scope chassis** *chassis-num*	Enters chassis mode for the specified chassis.
Step 2	UCS-A /chassis # **scope server** *server-num*	Enters server chassis mode.
Step 3	UCS-A /chassis/server # **scope raid-controller** *raid-contr-id* {**sas** | **sata**}	Enters RAID controller server chassis mode.
Step 4	UCS-A /chassis/server/raid-controller # **show local-disk** [*local-disk-id* | **detail** | **expand**]	

The following example shows the status of a disk drive:

```
UCS-A# scope chassis 1
UCS-A /chassis # scope server 6
UCS-A /chassis/server # scope raid-controller 1 sas
UCS-A /chassis/server/raid-controller # show local-disk 1

Local Disk:
    ID: 1
    Block Size: 512
    Blocks: 60545024
    Size (MB): 29563
```

```
Operability: Operable
Presence: Equipped
```

Interpreting the Status of a Monitored Disk Drive

Cisco UCS Manager displays the following properties for each monitored disk drive:

- Operability—The operational state of the drive.
- Presence—The presence of the disk drive, and whether it can be detected in the server drive bay, regardless of its operational state.

You need to look at both properties to determine the status of the monitored disk drive. The following table shows the likely interpretations of the combined property values.

Operability Status	Presence Status	Interpretation
Operable	Equipped	No fault condition. The disk drive is in the server and can be used.
Inoperable	Equipped	Fault condition. The disk drive is in the server, but one of the following could be causing an operability problem: • The disk drive is unusable due to a hardware issue such as bad blocks. • There is a problem with the IPMI link to the storage controller.
N/A	Missing	Fault condition. The server drive bay does not contain a disk drive.
N/A	Equipped	Fault condition. The disk drive is in the server, but one of the following could be causing an operability problem: • The server is powered off. • The storage controller firmware is the wrong version and does not support disk drive monitoring. • The server does not support disk drive monitoring.

Note The **Operability** field might show the incorrect status for several reasons, such as if the disk is part of a broken RAID set or if the BIOS power-on self-test (POST) has not completed.

HDD Metrics Not Updated in Cisco UCS Manager GUI

Problem—After hot-swapping, removing, or adding a hard drive, the updated hard disk drive (HDD) metrics do not appear in the Cisco UCS Manager GUI.

Possible Cause—This problem can be caused because Cisco UCS Manager gathers HDD metrics only during a system boot. If a hard drive is added or removed after a system boot, the Cisco UCS Manager GUI does not update the HDD metrics.

Procedure

Reboot the server.

Disk Drive Fault Detection Tests Fail

Problem—The fault LED is illuminated or blinking on the server disk drive, but Cisco UCS Manager does not indicate a disk drive failure.

Possible Cause—The disk drive fault detection tests failed due to one or more of the following conditions:

- The disk drive did not fail, and a rebuild is in progress.
- Drive predictive failure
- Selected drive failure on Disk 2 of a B200, B230 or B250 blade
- Selected drive failure on Disk 1 of a B200, B230 or B250 blade

Procedure

Step 1 Monitor the fault LEDs of each disk drive in the affected server(s).

Step 2 If a fault LED on a server turns any color, such as amber, or blinks for no apparent reason, create technical support file for each affected server and contact Cisco TAC.

Cisco UCS Manager Reports More Disks in Server than Total Slots Available

Problem—Cisco UCS Manager reports that a server has more disks than the total disk slots available in the server. For example, Cisco UCS Manager reports three disks for a server with two disk slots as follows:

```
RAID Controller 1:
           Local Disk 1:
               Product Name: 73GB 6Gb SAS 15K RPM SFF HDD/hot plug/drive sled mounted
               PID: A03-D073GC2
               Serial: D3B0P99001R9
               Presence: Equipped
```

```
Local Disk 2:
    Product Name:
    Presence: Equipped
    Size (MB): Unknown
Local Disk 5:
    Product Name: 73GB 6Gb SAS 15K RPM SFF HDD/hot plug/drive sled mounted
    Serial: D3B0P99001R9
    HW Rev: 0
    Size (MB): 70136
```

Possible Cause—This problem is typically caused by a communication failure between Cisco UCS Manager and the server that reports the inaccurate information.

Procedure

Step 1 Upgrade the Cisco UCS domain to the latest release of Cisco UCS software and firmware.

Step 2 Decommission the server.

Step 3 Recommission the server.