

UCS C-Series Rack Servers CLI Commands for Troubleshooting HDD Issues



Document ID: 115025

Contributed by Andreas Nikas, Cisco TAC Engineer.
Dec 07, 2012

Contents

Introduction

Prerequisites

- Requirements
- Components Used
- Conventions

CLI Commands

- Show the Product Name
- Show the HDD Status
- Show the Virtual and Physical Drive Status
- Show the Number of Correctable and Uncorrectable Errors
- Show the RAID Controller Configuration
- Show the Number of HDDs

Technical Support File

Battery Backup Unit

Related Information

Introduction

This document describes several command-line interface (CLI) commands, as well as other troubleshooting techniques, that can help troubleshoot hard disk drive (HDD) issues. The best method for troubleshooting HDD issues is to use the LEDs, GUI, BIOS, LSI Option ROM / MegaRaid GUI, and logs. However, these options are not always available. In this case, you can use the CLI.

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

This document is not restricted to specific software and hardware versions.

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, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

CLI Commands

Show the Product Name

Note: Some of the commands listed in this document depend on if you have an LSI MegaRaid controller as not all of them are supported by the 1064/1068e LSI controllers.

Enter the **show pci-adapter** command in order to view the product name. This example shows an LSI 1064e adapter.

```
ucs-c2xx-m1 /chassis #show pci-adapter
Slot Vendor ID Device ID SubVendor ID SubDevice ID Product Name
-----
M 0x1000 0x0056 0x152d 0x896d Cisco LSI 1064E Mezzan...
```

Show the HDD Status

Enter the **show hdd** command in order to view the status of the HDDs.

```
ucs-c2xx-m1 /chassis #show hdd
Name Status
-----
HDD_01_STATUS present
HDD_02_STATUS absent
HDD_03_STATUS absent
HDD_04_STATUS absent
```

Show the Virtual and Physical Drive Status

Enter the **show virtual-drive** command in order to view the status of the virtual drives. This command is useful since it does not require you to shut down the server and enter the BIOS to view the information.

```
ucs-c210-m2/chassis #scope storageadapter SLOT-5
ucs-c210-m2/chassis/storageadapter #show virtual-drive
Virtual Drive Status Name Size RAID Level
-----
0 Optimal 139236 MB RAID 1
1 Degraded 974652 MB RAID 5
```

Enter the **show physical-drive** command in order to view the status of the physical drives.

```
ucs-c210-m2 /chassis/storageadapter #show physical-drive
Slot Predictive
Number Controller Status Manufacturer Model Failure Count Drive Firmware Coerced Size Type
-----
0 SLOT-5
1 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
2 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
3 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
4 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
5 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
6 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
7 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
9 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
10 SLOT-5 online SEAGATE ST9146852SS 0 0005 139236 MB HDD
```

Show the Number of Correctable and Uncorrectable Errors

Enter the **show error-counters** command in order to view the number of correctable and uncorrectable errors.

```
ucs-c210-m2 /chassis/storageadapter #show error-counters

PCI Slot SLOT-5:

    Memory Correctable Errors: 0

    Memory Uncorrectable Errors: 0
```

Show the RAID Controller Configuration

Enter the **show hw-config** command in order to view the RAID controller configuration.

```
ucs-c210-m2 /chassis/storageadapter #show hw-config

PCI Slot SLOT-5:

    SAS Address 0: 500e004aaaaaaaa3f

    SAS Address 1: 0000000000000000

    SAS Address 2: 0000000000000000

    SAS Address 3: 0000000000000000

    SAS Address 4: 0000000000000000

    SAS Address 5: 0000000000000000

    SAS Address 6: 0000000000000000

    SAS Address 7: 0000000000000000

    BBU Present: true

    NVRAM Present: true

    Serial Debugger Present: true

    Memory Present: true

    Flash Present: true

    Memory Size: 512 MB

    Cache Memory Size: 394 MB

    Number of Backend Ports: 8
```

Show the Number of HDDs

Enter the **show physical-drive-count** command in order to view the number of HDDs.

```
ucs-c210-m2 /chassis/storageadapter #show physical-drive-count

PCI Slot SLOT-5:

    Physical Drive Count: 9
```

Critical Physical Drive Count: 0

Failed Physical Drive Count: 0

Technical Support File

In the event that you do not have access to the CLI, you can view the technical support file (/tmp/tech_support) in order to obtain information about the status of the HDDs. Here is an excerpt from the technical support file that shows the HDDs from the Intelligent Platform Management Interface (IPMI) sensors:

```
Querying All IPMI Sensors:
Sensor Name | Reading | Unit      | Status | LNR | LC | LNC | UNC | UC | UNR

HDD0_INFO  | 0x0    | discrete | 0x2181 | na  | na | na  | na  | na | na
HDD1_INFO  | 0x0    | discrete | 0x2181 | na  | na | na  | na  | na | na
HDD2_INFO  | 0x0    | discrete | 0x2181 | na  | na | na  | na  | na | na
HDD3_INFO  | 0x0    | discrete | 0x2181 | na  | na | na  | na  | na | na
HDD4_INFO  | 0x0    | discrete | 0x2181 | na  | na | na  | na  | na | na
HDD5_INFO  | 0x0    | discrete | 0x2181 | na  | na | na  | na  | na | na
HDD6_INFO  | na     | discrete | na     | na  | na | na  | na  | na | na
HDD7_INFO  | na     | discrete | na     | na  | na | na  | na  | na | na
```

Here is an excerpt from the technical support file that shows a breakdown of the HDD status:

```
Bit[15:10] - Unused
Bit[9:8]   - Fault
Bit[7:4]   LED Color
Bit[3:0]   LED State
Fault:
0x100 On Line
0x200 - Degraded
LED Color:
0x10 GREEN
0x20 AMBER
0x40 BLUE
0x80 RED
LED State:
0x01 OFF
0x02 ON
0x04 FAST BLINK
0x08 SLOW BLINK
```

Here is an excerpt from the technical support file that shows the HDD status (with a status code of 0x2181):

```
0x2181

Fault:
0x100 --- HDD is On Line

LED Color:
0x80 --- RED

LED State:
0x01 --- OFF
```

Battery Backup Unit

You have the option to use a battery backup unit (BBU) with some server deployments. The BBU is an intelligent battery backup unit that protects disk write cache data on the RAID controller for up to 72 hours

during a power loss.

This example shows how to use the MegaCli in order to check the status of the BBU:

```
bash$ sudo /opt/MegaRAID/MegaCli/MegaCli64 -AdpBbuCmd -a0 -NoLog
Password:

. . .

Battery Replacement required          : Yes

. . .

Relative State of Charge: 99 %
Absolute State of charge: 76 %

. . .

Date of Manufacture: 11/08, 2008
Design Capacity: 700 mAh
Design Voltage: 3700 mV
Specification Info: 33
Serial Number: 243
Pack Stat Configuration: 0x6cb0
Manufacture Name: LSI113000G
Device Name: 2970700
Device Chemistry: LION
Battery FRU: N/A
```

This example shows how to use the CLI in order to check the status of the BBU:

```
ucs-c200-m2 /chassis/storageadapter #show bbu detail
Controller SLOT-7:
  Battery Type: iBBU
  Battery Present: true
  Voltage: 4.023 V
  Current: 0.000 A
  Charge: 100%
  Charging State: fully charged
  Temperature: 34 degrees C
  Voltage Low: false
  Temperature High: false
  Learn Cycle Requested: false
  Learn Cycle Active: false
  Learn Cycle Failed: false
  Learn Cycle Timeout: false
  I2C Errors Detected: false
  Battery Replacement Required: true
  Remaining Capacity Low: true
```

Related Information

• Technical Support & Documentation – Cisco Systems

[Contacts & Feedback](#) | [Help](#) | [Site Map](#)

© 2014 – 2015 Cisco Systems, Inc. All rights reserved. [Terms & Conditions](#) | [Privacy Statement](#) | [Cookie Policy](#) | [Trademarks of Cisco Systems, Inc.](#)

Updated: Dec 07, 2012

Document ID: 115025
