

# TechNotes over het gebruik van hoge schijfruimte

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## Inleiding

Dit document beschrijft een procedure wanneer u een gebruik van een schijf van 100% ervaart en u moet controleren of het een toepassingsprobleem of een hardwareprobleem is, dan moet u meerdere opdrachten uitvoeren om de situatie te analyseren.

## Voorwaarden

### Vereisten

Er zijn geen specifieke vereisten van toepassing op dit document.

### Gebruikte componenten

De informatie in dit document is gebaseerd op de volgende software- en hardware-versies:

- Cisco Unified Computing System (UCS) Series
- Head-end-Packard (HP) servers

De informatie in dit document is gebaseerd op de apparaten in een specifieke laboratoriumomgeving. Alle apparaten die in dit document worden beschreven, hadden een opgeschoonde (standaard)configuratie. Als uw netwerk live is, moet u de potentiële impact van elke opdracht begrijpen.

## Probleem: Gebruik van hoge schijfruimte

Het systeem werkt langzaam en is niet stabiel. U ervaart een gebruik van 100% van de harde schijf.

# Problemen oplossen

De snelle en makkelijke manier is om toegang te krijgen tot de web interface van het beheer en de hardware-status van het opslagapparaat te onderzoeken.

Wanneer er geen toegang is tot Cisco Integrated Management Controller (CIMC) afstandsbeheer voor Unified Computing System (UCS) Series of Integrated Lights-Out (ILO) op HP-servers, u kunt de informatie over de DVD en disk(s) verkrijgen met behulp van deze methode:

Voor Cisco Unified Computing System (UCS)-servers:

Debianse distributies gebruiken een pakket met de naam "megacli".

Meer informatie over dit gereedschap - <http://hwraid.le-vert.net/wiki/LSIMegaRAIDSAS>

Voorbeelden van het gebruik van de opdracht -

<http://www.mostlychris.com/blog/2009/07/29/check-raid-status-with-megacli/>

Het pakket voor het debiër kan worden [gedownload](#) en geïnstalleerd.

Opmerking: Het wordt getest met megacli\_8.07.14-1\_amd64.deb

Om te controleren welke hardwarecontrollers gebruikt worden, voert u de opdracht uit: **sudo lspci -vv | grep-i BANK**

bijvoorbeeld

82:00.0 VIP-buscontroller: LSI Logic / Symbios Logic **MegaRAID SAS 2208 [Thunderbolt]** (rev 05)

Kernelstuurprogramma in gebruik: megaraid\_sas

meer informatie over deze opdracht is te vinden in :

<http://www.cisco.com/c/en/us/support/docs/servers-unified-computing/ucs-c-series-rack-servers/115020-intro-lsi-megacli-00.html>

Runnen als root, commando: **sudo/usr/bin/megacli**

## Cisco Unified Computing System (UCS) Series

Stap 1. Zoek uw gegevens van de RAID-controller, voer opdracht uit: **lspci-vv | grep-i RAID**.

De RAID-controller is een apparaat.

```
$ lspci -vv | grep -i RAID
82:00.0 RAID bus controller: LSI Logic / Symbios Logic MegaRAID SAS 2208 [Thunderbolt] (rev 05)
    Kernel driver in use: megaraid_sas
```

```

$ sudo lspci -vv | grep -A60 -i RAID
82:00.0 RAID bus controller: LSI Logic / Symbios Logic MegaRAID SAS 2208 [Thunderbolt] (rev 05)
Subsystem: LSI Logic / Symbios Logic Device 9271
Control: I/O+ Mem+ BusMaster+ SpecCycle- MemWINV- VGASnoop- ParErr+ Stepping- SERR+ FastB2B-
DisINTx+
Status: Cap+ 66MHz- UDF- FastB2B- ParErr- DEVSEL=fast >TAbort- <TAbort- <MAbort- >SERR- <PERR-
INTx-
Latency: 0, Cache Line Size: 64 bytes
Interrupt: pin A routed to IRQ 56
Region 0: I/O ports at f000 [size=256]
Region 1: Memory at fbe60000 (64-bit, non-prefetchable) [size=16K]
Region 3: Memory at fbe00000 (64-bit, non-prefetchable) [size=256K]
Expansion ROM at fbe40000 [disabled] [size=128K]
Capabilities: [50] Power Management version 3
Flags: PMEClk- DSI- D1+ D2+ AuxCurrent=0mA PME(D0-,D1-,D2-,D3hot-,D3cold-)
Status: D0 NoSoftRst+ PME-Enable- DSel=0 DScale=0 PME-
Capabilities: [68] Express (v2) Endpoint, MSI 00
DevCap: MaxPayload 4096 bytes, PhantFunc 0, Latency L0s <64ns, L1 <1us
ExtTag+ AttnBtn- AttnInd- PwrInd- RBE+ FLReset+
DevCtl: Report errors: Correctable- Non-Fatal+ Fatal+ Unsupported-
RlxdOrd- ExtTag- PhantFunc- AuxPwr- NoSnoop+ FLReset-
MaxPayload 256 bytes, MaxReadReq 512 bytes
DevSta: CorrErr+ UncorrErr- FatalErr- UnsuppReq+ AuxPwr- TransPnd-
LnkCap: Port #0, Speed 8GT/s, Width x8, ASPM L0s, Latency L0 <64ns, L1 <1us
ClockPM- Surprise- LLActRep- BwNot-
LnkCtl: ASPM Disabled; RCB 64 bytes Disabled- Retrain- CommClk+
ExtSynch- ClockPM- AutWidDis- BWInt- AutBWInt-
LnkSta: Speed 8GT/s, Width x8, TrErr- Train- SlotClk+ DLActive- BWMgmt- ABWMgmt-
DevCap2: Completion Timeout: Range BC, TimeoutDis+
DevCtl2: Completion Timeout: 65ms to 210ms, TimeoutDis-
LnkCtl2: Target Link Speed: 8GT/s, EnterCompliance- SpeedDis-, Selectable De-emphasis: -6dB
Transmit Margin: Normal Operating Range, EnterModifiedCompliance- ComplianceSOS-
Compliance De-emphasis: -6dB
LnkSta2: Current De-emphasis Level: -6dB, EqualizationComplete+, EqualizationPhase1+
EqualizationPhase2+, EqualizationPhase3+, LinkEqualizationRequest+
Capabilities: [d0] Vital Product Data
Unknown small resource type 00, will not decode more.
Capabilities: [a8] MSI: Enable- Count=1/1 Maskable- 64bit+
Address: 0000000000000000 Data&colon; 0000
Capabilities: [c0] MSI-X: Enable+ Count=16 Masked-
Vector table: BAR=1 offset=00002000
PBA: BAR=1 offset=00003000
Capabilities: [100 v2] Advanced Error Reporting
UESta: DLP- SDES- TLP- FCP- CmplttO- CmplttAbrt- UnxCmpltt- RxOF- MalfTLP- ECRC- UnsupReq-
ACSViol-
UEmsk: DLP- SDES- TLP- FCP- CmplttO- CmplttAbrt- UnxCmpltt- RxOF- MalfTLP- ECRC- UnsupReq+
ACSViol-
UESvrt: DLP+ SDES+ TLP- FCP+ CmplttO- CmplttAbrt- UnxCmpltt- RxOF+ MalfTLP+ ECRC- UnsupReq-
ACSViol-
CESta: RxErr- BadTLP- BadDLLP- Rollover- Timeout- NonFatalErr+
CEmsk: RxErr- BadTLP- BadDLLP- Rollover- Timeout- NonFatalErr+
AERCap: First Error Pointer: 00, GenCap- CGenEn- ChkCap- ChkEn-
Capabilities: [1e0 v1] #19
Capabilities: [1c0 v1] Power Budgeting <?>
Capabilities: [190 v1] #16
Capabilities: [148 v1] Alternative Routing-ID Interpretation (ARI)
ARICap: MFVC- ACS-, Next Function: 0
ARICtl: MFVC- ACS-, Function Group: 0
Kernel driver in use: megaraid_sas

```

**Stap 2. Controleer het fysieke en virtuele station van Unified Computing System Series (UCS) en voer de opdracht uit: `sudo megacli -ldinfo -ALL -aAL`.**

```
$ sudo megacli -ldinfo -lALL -aALL
```

```
Adapter 0 -- Virtual Drive Information:
```

```
Virtual Drive: 0 (Target Id: 0)
```

```
Name :RAID10_1234
```

```
RAID Level : Primary-1, Secondary-0, RAID Level Qualifier-0
```

```
Size : 1.088 TB
```

```
Sector Size : 512
```

```
Is VD emulated : No
```

```
Mirror Data &colon; 1.088 TB
```

```
State : Optimal
```

```
Strip Size : 64 KB
```

```
Number Of Drives per span:2
```

```
Span Depth : 2
```

```
Default Cache Policy: WriteBack, ReadAdaptive, Direct, No Write Cache if Bad BBU
```

```
Current Cache Policy: WriteThrough, ReadAdaptive, Direct, No Write Cache if Bad BBU
```

```
Default Access Policy: Read/Write
```

```
Current Access Policy: Read/Write
```

```
Disk Cache Policy : Disk's Default
```

```
Encryption Type : None
```

```
PI type: No PI
```

```
Is VD Cached: No
```

```
Exit Code: 0x00
```

U moet de waarde onder - **Huidige cachebeleid** controleren

**Schrijf terug - OK**

**SchrijfThrough - BAD**

Dit is een voorbeeld van hetzelfde:

```
$ sudo megacli -ldinfo -lALL -aALL
```

```
Adapter 0 -- Virtual Drive Information:
```

```
Virtual Drive: 0 (Target Id: 0)
```

```
Name :RAID10_1234
```

```
RAID Level : Primary-1, Secondary-0, RAID Level Qualifier-0
```

```
Size : 1.088 TB
```

```
Sector Size : 512
```

```
Is VD emulated : No
```

```
Mirror Data : 1.088 TB
```

```
State : Optimal
```

```
Strip Size : 64 KB
```

```
Number Of Drives per span:2
```

```
Span Depth : 2
```

```
Default Cache Policy: WriteBack, ReadAdaptive, Direct, No Write Cache if Bad BBU
```

```
Current Cache Policy: WriteBack, ReadAdaptive, Direct, No Write Cache if Bad BBU
```

```
Default Access Policy: Read/Write
```

```
Disk Cache Policy : Disk's Default
```

```
Disk Cache Policy : Disk's Default
```

```
Encryption Type : None
```

```
PI type: No PI
```

```
Is VD Cached: No
```

```
Exit Code: 0x00
```

intucell@deb017:/intucell/maintenance\_portal\_6\$

**Stap 3. Controleer de batterij, voer opdracht: `sudo megacli -AdpBuCmd -GetBuStatus -aALL-NoLog`.**

```
$ sudo megacli -AdpBbuCmd -GetBbuStatus -aALL -NoLog
```

BBU status for Adapter: 0

BatteryType: CVPM02  
Voltage: 9849 mV  
Current: 0 mA  
Temperature: 25 C  
Battery State: Optimal  
BBU Firmware Status:

```
Charging Status           : None
Voltage                   : OK
Temperature                : OK
Learn Cycle Requested     : No
Learn Cycle Active        : No
Learn Cycle Status        : OK
Learn Cycle Timeout       : No
I2c Errors Detected      : No
Battery Pack Missing      : No
Battery Replacement required : No
Remaining Capacity Low    : No
Periodic Learn Required   : No
Transparent Learn         : No
No space to cache offload : No
Pack is about to fail & should be replaced : No
Cache Offload premium feature required : No
Module microcode update required : No
```

BBU GasGauge Status: 0x654e

```
Pack energy           : 334 J
Capacitance           : 101
Remaining reserve space : 93
```

Exit Code: 0x00

**Stap 4. Fysieke schijf(s) info, voer opdracht: `sudo megacli -AdpAllInfo -aALL`.**

```
$ sudo megacli -AdpAllInfo -aALL
```

Adapter #0

=====

Versions

=====

```
Product Name      : LSI MegaRAID SAS 9271-8i
Serial No        : SV50206143
FW Package Build : 23.29.0-0014
```

Mfg. Data

=====

```
Mfg. Date        : 01/04/15
```

Rework Date : 00/00/00  
Revision No : 33B  
Battery FRU : N/A

Image Versions in Flash:

=====

BIOS Version : 5.47.05.0\_4.16.08.00\_0x06080500  
WebBIOS Version : 6.1-71-e\_71-Rel  
Preboot CLI Version: 05.07-00:##00011  
FW Version : 3.410.05-3484  
NVDATA Version : 2.1406.03-0134  
Boot Block Version : 2.05.00.00-0010  
BOOT Version : 07.26.26.219

Pending Images in Flash

=====

None

PCI Info

=====

Controller Id : 0000  
Vendor Id : 1000  
Device Id : 005b  
SubVendorId : 1000  
SubDeviceId : 9271

Host Interface : PCIE

ChipRevision : D1

Link Speed : 0  
Number of Frontend Port: 0  
Device Interface : PCIE

Number of Backend Port: 8

Port	Address
0	74a2e6a2b23600bf
1	0000000000000000
2	0000000000000000
3	0000000000000000
4	0000000000000000
5	0000000000000000
6	0000000000000000
7	0000000000000000

HW Configuration

=====

SAS Address : 500605b009f61dd0  
BBU : Present  
Alarm : Present  
NVRAM : Present  
Serial Debugger : Present  
Memory : Present  
Flash : Present  
Memory Size : 1024MB  
TPM : Absent  
On board Expander: Absent  
Upgrade Key : Absent  
Temperature sensor for ROC : Present  
Temperature sensor for controller : Absent

ROC temperature : 74 degree Celsius

Settings

=====  
Current Time : 7:3:27 2/19, 2016  
Predictive Fail Poll Interval : 300sec  
Interrupt Throttle Active Count : 16  
Interrupt Throttle Completion : 50us  
Rebuild Rate : 30%  
PR Rate : 30%  
BGI Rate : 30%  
Check Consistency Rate : 30%  
Reconstruction Rate : 30%  
Cache Flush Interval : 4s  
Max Drives to Spinup at One Time : 2  
Delay Among Spinup Groups : 12s  
Physical Drive Coercion Mode : 1GB  
Cluster Mode : Disabled  
Alarm : Enabled  
Auto Rebuild : Enabled  
Battery Warning : Enabled  
Ecc Bucket Size : 15  
Ecc Bucket Leak Rate : 1440 Minutes  
Restore HotSpare on Insertion : Disabled  
Expose Enclosure Devices : Enabled  
Maintain PD Fail History : Disabled  
Host Request Reordering : Enabled  
Auto Detect BackPlane Enabled : SGPIO/i2c SEP  
Load Balance Mode : Auto  
Use FDE Only : Yes  
Security Key Assigned : No  
Security Key Failed : No  
Security Key Not Backedup : No  
Default LD PowerSave Policy : Automatic  
Maximum number of direct attached drives to spin up in 1 min : 10  
Auto Enhanced Import : Yes  
Any Offline VD Cache Preserved : No  
Allow Boot with Preserved Cache : No  
Disable Online Controller Reset : No  
PFK in NVRAM : Yes  
Use disk activity for locate : No  
POST delay : 90 seconds  
BIOS Error Handling : Pause on Errors  
Current Boot Mode : Normal

Capabilities

=====  
RAID Level Supported : RAID0, RAID1, RAID5, RAID6, RAID00, RAID10, RAID50, RAID60,  
PRL 11, PRL 11 with spanning, SRL 3 supported, PRL11-RLQ0 DDF layout with no span, PRL11-RLQ0  
DDF layout with span  
Supported Drives : SAS, SATA

Allowed Mixing:

Mix in Enclosure Allowed  
Mix of SAS/SATA of HDD type in VD Allowed  
Mix of SAS/SATA of SSD type in VD Allowed

Status

=====  
ECC Bucket Count : 0

Limitations

=====  
Max Arms Per VD : 32  
Max Spans Per VD : 8  
Max Arrays : 128  
Max Number of VDs : 64

Max Parallel Commands : 1008  
Max SGE Count : 60  
Max Data Transfer Size : 8192 sectors  
Max Strips PerIO : 42  
Max LD per array : 64  
Min Strip Size : 8 KB  
Max Strip Size : 1.0 MB  
Max Configurable CacheCade Size: 0 GB  
Current Size of CacheCade : 0 GB  
Current Size of FW Cache : 866 MB

**Device Present**

=====

**Virtual Drives : 1**  
**Degraded : 0**  
**Offline : 0**  
**Physical Devices : 6**  
**Disks : 4**  
**Critical Disks : 0**  
**Failed Disks : 0**

Supported Adapter Operations

=====

Rebuild Rate : Yes  
CC Rate : Yes  
BGI Rate : Yes  
Reconstruct Rate : Yes  
Patrol Read Rate : Yes  
Alarm Control : Yes  
Cluster Support : No  
BBU : Yes  
Spanning : Yes  
Dedicated Hot Spare : Yes  
Revertible Hot Spares : Yes  
Foreign Config Import : Yes  
Self Diagnostic : Yes  
Allow Mixed Redundancy on Array : No  
Global Hot Spares : Yes  
Deny SCSI Passthrough : No  
Deny SMP Passthrough : No  
Deny STP Passthrough : No  
Support Security : No  
Snapshot Enabled : No  
Support the OCE without adding drives : Yes  
Support PFK : Yes  
Support PI : Yes  
Support Boot Time PFK Change : No  
Disable Online PFK Change : No  
Support LDPI Type1 : No  
Support LDPI Type2 : No  
Support LDPI Type3 : No  
PFK TrailTime Remaining : 0 days 0 hours  
Support Shield State : Yes  
Block SSD Write Disk Cache Change: No  
Support Online FW Update : Yes

Supported VD Operations

=====

Read Policy : Yes  
Write Policy : Yes  
IO Policy : Yes  
Access Policy : Yes  
Disk Cache Policy : Yes  
Reconstruction : Yes



Deny Locate : No  
Deny CC : No  
Allow Ctrl Encryption: No  
Enable LDBBM : No  
Support Breakmirror : No  
Power Savings : No

#### Supported PD Operations

=====

Force Online : Yes  
Force Offline : Yes  
Force Rebuild : Yes  
Deny Force Failed : No  
Deny Force Good/Bad : No  
Deny Missing Replace : No  
Deny Clear : No  
Deny Locate : No  
Support Temperature : Yes  
NCQ : Yes  
Disable Copyback : No  
Enable JBOD : No  
Enable Copyback on SMART : No  
Enable Copyback to SSD on SMART Error : Yes  
Enable SSD Patrol Read : No  
PR Correct Unconfigured Areas : Yes  
Enable Spin Down of UnConfigured Drives : Yes  
Disable Spin Down of hot spares : No  
Spin Down time : 30  
T10 Power State : No

#### Error Counters

=====

Memory Correctable Errors : 0  
Memory Uncorrectable Errors : 0

#### Cluster Information

=====

Cluster Permitted : No  
Cluster Active : No

#### Default Settings

=====

Phy Polarity : 0  
Phy PolaritySplit : 0  
Background Rate : 30  
Strip Size : 64kB  
Flush Time : 4 seconds  
Write Policy : WB  
Read Policy : Adaptive  
Cache When BBU Bad : Disabled  
Cached IO : No  
SMART Mode : Mode 6  
Alarm Disable : Yes  
Coercion Mode : 1GB  
ZCR Config : Unknown  
Dirty LED Shows Drive Activity : No  
BIOS Continue on Error : 1  
Spin Down Mode : Internal Only  
Allowed Device Type : SAS/SATA Mix  
Allow Mix in Enclosure : Yes  
Allow HDD SAS/SATA Mix in VD : Yes  
Allow SSD SAS/SATA Mix in VD : Yes  
Allow HDD/SSD Mix in VD : No  
Allow SATA in Cluster : No  
Max Chained Enclosures : 16

```

Disable Ctrl-R                : Yes
Enable Web BIOS               : Yes
Direct PD Mapping             : No
BIOS Enumerate VDs           : Yes
Restore Hot Spare on Insertion : No
Expose Enclosure Devices      : Yes
Maintain PD Fail History      : No
Disable Puncturing           : No
Zero Based Enclosure Enumeration : No
PreBoot CLI Enabled          : Yes
LED Show Drive Activity       : No
Cluster Disable               : Yes
SAS Disable                   : No
Auto Detect BackPlane Enable  : SGPIO/i2c SEP
Use FDE Only                  : Yes
Enable Led Header             : No
Delay during POST             : 0
EnableCrashDump               : No
Disable Online Controller Reset : No
EnableLDBBM                   : No
Un-Certified Hard Disk Drives : Allow
Treat Single span R1E as R10  : No
Max LD per array              : 64
Power Saving option           : All power saving options are enabled
Default spin down time in minutes: 30
Enable JBOD                   : No
TTY Log In Flash              : Yes
Auto Enhanced Import          : Yes
BreakMirror RAID Support      : No
Disable Join Mirror           : No
Enable Shield State           : No
Time taken to detect CME      : 60s

```

Exit Code: 0x00

**Step 5. Consistentie check, run opdracht: `sudo megacli -ldinfo -lALL -aALL`.**

```
$ sudo megacli -ldinfo -lALL -aALL
```

Adapter 0 -- Virtual Drive Information:

```

Virtual Drive: 0 (Target Id: 0)
Name                :RAID10_1234
RAID Level          : Primary-1, Secondary-0, RAID Level Qualifier-0
Size                : 1.088 TB
Sector Size         : 512
Is VD emulated      : No
Mirror Data         &colon; 1.088 TB
State               : Optimal
Strip Size          : 64 KB
Number Of Drives per span:2
Span Depth          : 2
Default Cache Policy: WriteBack, ReadAdaptive, Direct, No Write Cache if Bad BBU
Current Cache Policy: WriteBack, ReadAdaptive, Direct, No Write Cache if Bad BBU
Default Access Policy: Read/Write
Current Access Policy: Read/Write
Disk Cache Policy   : Disk's Default

```

**Ongoing Progresses:**

```

Check Consistency          : Completed 43%, Taken 11 min.
Encryption Type      : None
PI type: No PI

```

Is VD Cached: No

Exit Code: 0x00

Stap 6. Instellingen van het interval van de consistentiecontrole, opdracht: **sudo megacli -AdpCcSched -Info -aALL**.

De BANK-controller voert om de zeven dagen een consistentiecontrole uit van de BANK. De waarde vertraging 168 wordt hier in uren weergegeven.

```
$ sudo megacli -AdpCcSched -Info -aALL
```

Adapter #0

Operation Mode: Concurrent

**Execution Delay: 168**

**Next start time: 02/20/2016, 03:00:00**

Current State: Active

Number of iterations: 43

Number of VD completed: 0

Excluded VDs : None

Exit Code: 0x00

Stap 7. Pak het logboek van de gebeurtenis van de INVALID, voer opdracht: **sudo megacli -AdpEventLog -GetEvents -f events.log -ALL & catevents.log | meer**.

```
$ sudo megacli -AdpEventLog -GetEvents -f events.log -aALL && cat events.log | more
```

Success in AdpEventLog

Exit Code: 0x00

Adapter: 0 - Number of Events : 1404

seqNum: 0x00000002

Seconds since last reboot: 78

Code: 0x0000001e

Class: 0

Locale: 0x20

Event Description: Event log cleared

Event Data&colon;

=====

None

seqNum: 0x00000003

Seconds since last reboot: 78

Code: 0x0000002b

Class: 0

Locale: 0x20

Event Description: Test event: 'Event log adjusted, possibly due Firmware version incompatibility'

Event Data&colon;

=====

String: Event log adjusted, possibly due Firmware version incompatibility

seqNum: 0x00000004

Seconds since last reboot: 4

Code: 0x00000000  
Class: 0  
Locale: 0x20  
Event Description: Firmware initialization started (PCI ID 005b/1000/9271/1000)  
Event Data&colon;  
<Snip>

Problemen zoals gezien op Cisco Integrated Management Web Interface die kijken naar Storage Controller:

### Batterijcontrole

**LSI MegaRAID SAS 9271-8i (SLOT-4)**

Controller Info | Physical Drive Info | Virtual Drive Info | **Battery Backup Unit** | Storage Log

**Actions**

- Disable Auto Learn Mode
- Start Learn Cycle

**General**

Controller: **SLOT-4**  
Battery Type: **TMM-C SuperCap**  
Health: **⚠ Moderate Fault**  
Status: **Learn Cycle Active**  
Battery Present: **true**  
Temperature: **24 degrees C**  
Temperature High: **false**  
Capacitance: **97 %**  
Charging Status: **N/A**

**Advanced**

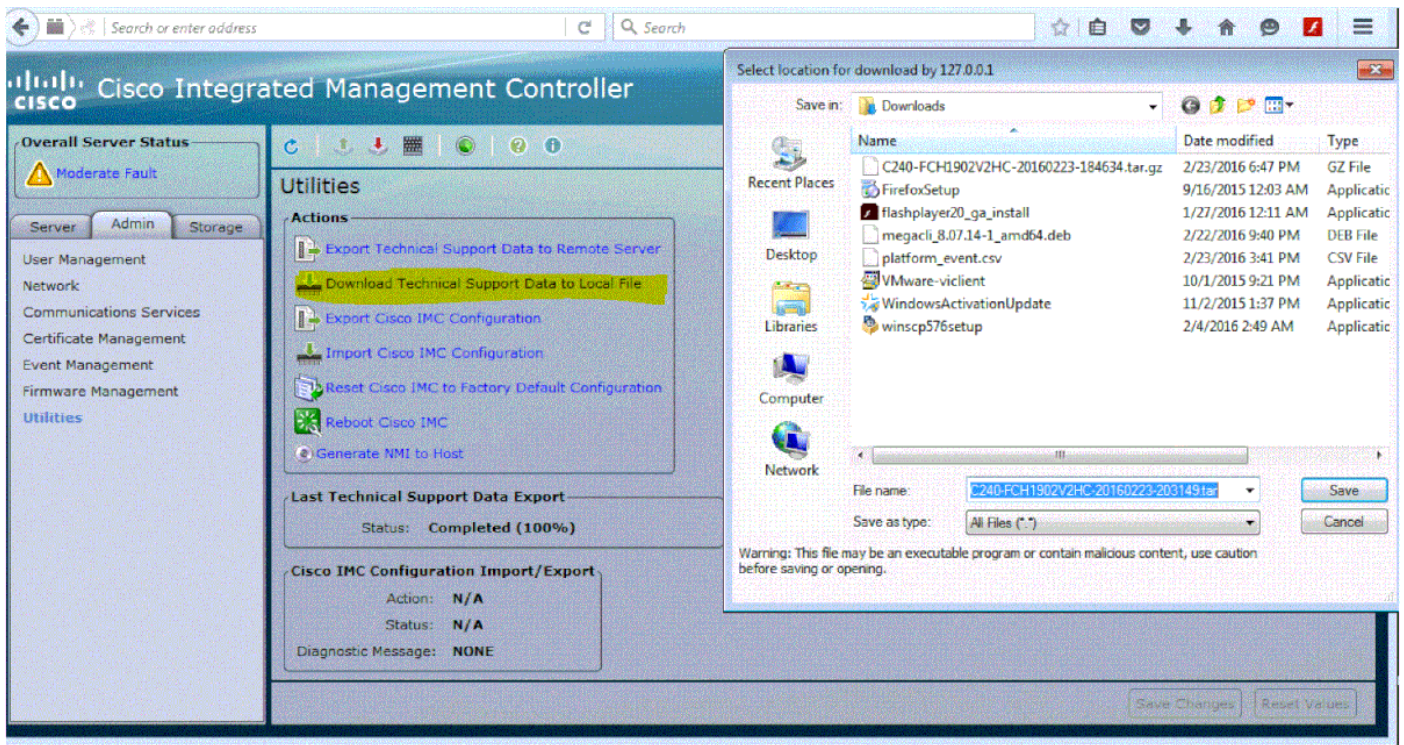
Manufacturer: **LSI**  
Serial Number: **19365**  
Date of Manufacture: **2014-10-26**  
Firmware Version: **25849-03**  
Design Voltage: **9.411 V**  
Voltage: **10.415 V**  
Current: **0.000 A**  
Design Capacity: **283 Joules**  
Pack Energy: **357 Joules**  
Learn Mode: **Auto**  
Learn Cycle Status: **Active**  
Learn Cycle Requested: **true**  
Next Learn Cycle: **2015-11-19 02:39**

**Fault Entries**

<<Newest <Newer **Fault Entries 1 to 2 (2)** Older> Oldest>> Entries Per Page: 50

Time	Severity	Code	DN	Description
2015-11-19T02:07:12	Warning	F1008	sys/rack-unit-1/board/storage-SAS-SLOT-4/vd-0	Storage Virtual Drive 0 Degraded: please check the storage controller, or rese
2015-11-19T02:05:55	Minor	F0997	sys/rack-unit-1/board/storage-SAS-SLOT-4/raid-ba	Storage Raid Battery SLOT-4 Degraded: please check the battery or the storage cor

U kunt het logbestand opslaan voor een latere analyse.



## Head-end Packard (HP) hardware

Voor HP is er een speciaal pakket voor Debian dat moet worden geïnstalleerd om toegang te krijgen tot de RAID-controller en fysieke disks. Het pakket heet [hpacucli\\_9.40.1-1. amd64.deb](http://downloads.linux.hpe.com/SDR./repo/mcp/debian/pool/non-free/hpacucli_9.40.1-1_amd64.deb)

### Stap 1. Installatie:

- Meld u aan bij uw Linux-systeem met uw privéaccount.
- Download het pakket voor uw Linux-systeem: wget [http://downloads.linux.hpe.com/SDR./repo/mcp/debian/pool/non-free/hpacucli\\_9.40.1-1. amd64.deb](http://downloads.linux.hpe.com/SDR./repo/mcp/debian/pool/non-free/hpacucli_9.40.1-1_amd64.deb)
- opdracht uitvoeren: `sudo dpkg -i hpacucli_9.40.1-1. amd64.deb`

Als de installatie is voltooid, kunt u met de BAL-manipulatie werken met behulp van het volgende CLI-gereedschap: `pacucli`

Met het gereedschap kan de juiste informatie worden opgehaald van de RAID-controller en kan de configuratie worden gewijzigd met de inval-onderdelen.

Stap 2. Geef de configuratiegegevens van de controller weer, voer opdracht uit: `hpacucli ctrl tonen alle configuratiedetails` .

```
# hpacucli ctrl all show config detail
```

```
Smart Array P410i in Slot 0 (Embedded)
  Bus Interface: PCI
  Slot: 0
  Serial Number: 50123456789ABCDE
  Cache Serial Number: PACCQ9SY9NUH
  RAID 6 (ADG) Status: Disabled
  Controller Status: OK
  Hardware Revision: C
```



Firmware Version: 2.50  
Rebuild Priority: Medium  
Expand Priority: Medium  
Surface Scan Delay: 15 secs  
Surface Scan Mode: Idle  
Queue Depth: Automatic  
Monitor and Performance Delay: 60 min  
Elevator Sort: Enabled  
Degraded Performance Optimization: Disabled  
Inconsistency Repair Policy: Disabled  
Wait for Cache Room: Disabled  
Surface Analysis Inconsistency Notification: Disabled  
Post Prompt Timeout: 0 secs  
Cache Board Present: True  
Cache Status: OK  
Cache Ratio: 25% Read / 75% Write  
Drive Write Cache: Disabled  
Total Cache Size: 256 MB  
Total Cache Memory Available: 144 MB  
No-Battery Write Cache: Disabled  
Cache Backup Power Source: Batteries  
Battery/Capacitor Count: 1  
Battery/Capacitor Status: OK  
SATA NCQ Supported: True

Array: A

Interface Type: SAS  
Unused Space: 0 MB  
Status: OK  
Array Type: Data

Logical Drive: 1

Size: 136.7 GB  
Fault Tolerance: 1  
Heads: 255  
Sectors Per Track: 32  
Cylinders: 35132  
Strip Size: 128 KB  
Full Stripe Size: 128 KB  
Status: OK  
Caching: Enabled  
Unique Identifier: 600508B1001037383941424344450E00  
Disk Name: /dev/cciss/c0d0  
Mount Points: /boot 243 MB  
OS Status: LOCKED  
Logical Drive Label: A00F9DBE50123456789ABCDEA8A8  
Mirror Group 0:  
    physicaldrive 1I:1:1 (port 1I:box 1:bay 1, SAS, 146 GB, OK)  
Mirror Group 1:  
    physicaldrive 1I:1:2 (port 1I:box 1:bay 2, SAS, 146 GB, OK)  
Drive Type: Data

physicaldrive 1I:1:1

Port: 1I  
Box: 1  
Bay: 1  
Status: OK  
Drive Type: Data Drive  
Interface Type: SAS  
Size: 146 GB  
Rotational Speed: 10000  
Firmware Revision: HPD5

Serial Number: D0A1P9B09YJW0949  
Model: HP EG0146FARTR  
Current Temperature (C): 18  
Maximum Temperature (C): 39  
PHY Count: 2  
PHY Transfer Rate: 6.0Gbps, Unknown

physicaldrive 1I:1:2  
Port: 1I  
Box: 1  
Bay: 2  
Status: OK  
Drive Type: Data Drive  
Interface Type: SAS  
Size: 146 GB  
Rotational Speed: 10000  
Firmware Revision: HPD5  
Serial Number: D0A1P9B09YKM0949  
Model: HP EG0146FARTR  
Current Temperature (C): 17  
Maximum Temperature (C): 47  
PHY Count: 2  
PHY Transfer Rate: 6.0Gbps, Unknown

SEP (Vendor ID PMCSIERA, Model SRC 8x6G) 250  
Device Number: 250  
Firmware Version: RevC  
WWID: 50123456789ABCED  
Vendor ID: PMCSIERA  
Model: SRC 8x6G

**Stap 3. Toon controllerstatus, voer opdracht: `hpacucli ctrl geeft allen een status` .**

```
# hpacucli ctrl all show status

Smart Array P410i in Slot 0 (Embedded)
  Controller Status: OK
  Cache Status: OK
  Battery/Capacitor Status: OK
```

**Stap 4. Weergave van fysieke status, opdracht uitvoeren: `sleuf=0 pd van pacucli ctrl tonen de status`.**

```
# hpacucli ctrl slot=0 pd all show status

physicaldrive 1I:1:1 (port 1I:box 1:bay 1, 146 GB): OK
physicaldrive 1I:1:2 (port 1I:box 1:bay 2, 146 GB): OK
```

**Stap 5. Logische status weergeven, opdracht uitvoeren: `de " pacucli " - ctrl sleuf=0 heeft de status van allen getoond` .**

```
# hpacucli ctrl slot=0 pd all show status

physicaldrive 1I:1:1 (port 1I:box 1:bay 1, 146 GB): OK
```

```
physicaldrive 1I:1:2 (port 1I:box 1:bay 2, 146 GB): OK
```

```
root@deb011:/intucell# hpacucli ctrl slot=0 ld all show status
```

```
logicaldrive 1 (136.7 GB, 1): OK
```

## Oplossing

Soms kan een slechte batterij in een van de servers de reden zijn. Je moet het vervangen.

Dit lost het probleem op en vermindert het hoge gebruik van diskprestaties.