TechNote sobre a utilização de alto desempenho de disco

Contents

Introduction

Este documento descreve um procedimento quando a utilização do desempenho do disco chega a 100% e a necessidade de verificar se é um problema de aplicativo ou de hardware, você deve executar vários comandos para analisar a situação.

Prerequisites

Requirements

Não existem requisitos específicos para este documento.

Componentes Utilizados

As informações neste documento são baseadas nestas versões de software e hardware:

- Cisco Unified Computing System (UCS) Series
- Servidores Hewlett-Packard (HP)

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.

Problema: Alta utilização de desempenho de disco

O sistema funciona lentamente e não está estável. Você experimenta uma utilização de desempenho de disco que chega a 100%.

Troubleshoot

A maneira rápida e fácil é acessar a interface da Web de gerenciamento e examinar o status do hardware de armazenamento.

Quando não há acesso ao Cisco Integrated Management Controller (CIMC) gerenciamento remoto do Unified Computing System (UCS) Series ou Integrated Lights-Out (OIT) em servidores HP, você pode obter informações sobre o RAID e os discos usando este método:

Para servidores Cisco Unified Computing System (UCS):

As distribuições debianas usam um pacote chamado "megacli".

Mais informações sobre esta ferramenta - http://hwraid.le-vert.net/wiki/LSIMegaRAIDSAS

Exemplos de como usar o comando - http://www.mostlychris.com/blog/2009/07/29/check-raid-status-with-megacli/

O pacote para debian pode ser baixado e instalado.

> **Note**: Ele é testado com megacli_8.07.14-1_amd64.deb

Para verificar quais controladores de hardware são usados, execute o comando: **sudo lspci -vv | grep -i RAID**

p. ex.

Controladora de barramento RAID 82:00.0: LSI Logic / Symbios Logic **MegaRAID** SAS 2208 [Thunderbolt] (rev 05)

> Driver de kernel em uso: megaraid_sas

mais informações sobre este comando podem ser encontradas em:

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

Executando-o como raiz, execute o comando: **sudo /usr/bin/megacli**

Cisco Unified Computing System (UCS) Series

Etapa 1. Localize os detalhes da controladora RAID, execute o comando: **lspci -vv | grep -i RAID**.

O controlador RAID é um dispositivo.

```
$ 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- TransPend-
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- CmpltAbrt- UnxCmplt- RxOF- MalfTLP- ECRC- UnsupReq-
ACSViol-
UEMsk: DLP- SDES- TLP- FCP- CmpltTO- CmpltAbrt- UnxCmplt- RxOF- MalfTLP- ECRC- UnsupReq+
ACSViol-
UESvrt: DLP+ SDES+ TLP- FCP+ CmpltTO- CmpltAbrt- UnxCmplt- 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
```

Etapa 2. Verificando a unidade física e virtual do Unified Computing System Series (UCS), execute o comando: **sudo megacli -ldinfo -lALL -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
```

Você precisa verificar o valor em - **Diretiva de cache atual**

WriteBack - OK

WriteThrough - BAD

Este é um exemplo para o mesmo:

```
$ 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$
```

Etapa 3. Verificação da bateria, executar comando: **sudo megacli -AdpBbuCmd -GetBbuStatus -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
```

Etapa 4. Informações do(s) disco(s) físico(s), execute o comando: **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
```

Etapa 5. Verificação de consistência, executar comando: **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
```

Etapa 6. Configurações do intervalo de verificação de consistência, execute o comando: **sudo megacli -AdpCcSched -Info -aALL**.

O controlador RAID executa uma verificação de consistência do RAID a cada 7 dias. O valor de atraso 168 mostrado aqui é em horas.

```
$ 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
```

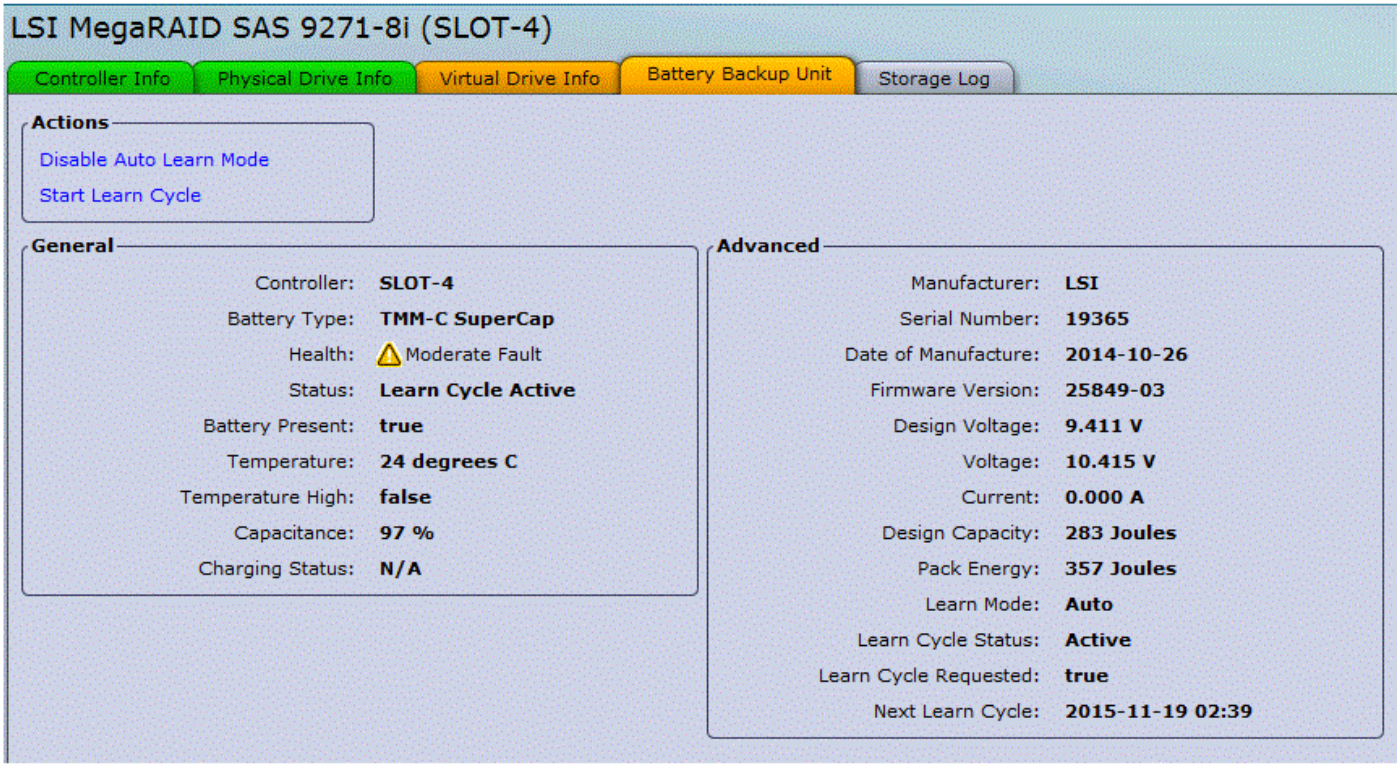
Passo 7. Obtenha o registro de eventos de RAID, execute o comando: **sudo megacli -AdpEventLog -GetEvents -f events.log -aALL && cat events.log | mais**.

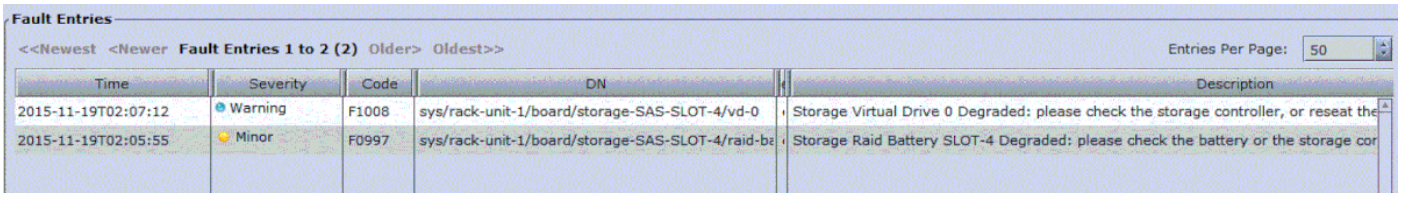
```
$ sudo megacli -AdpEventLog -GetEvents -f events.log -aALL && cat events.log | more

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>
```

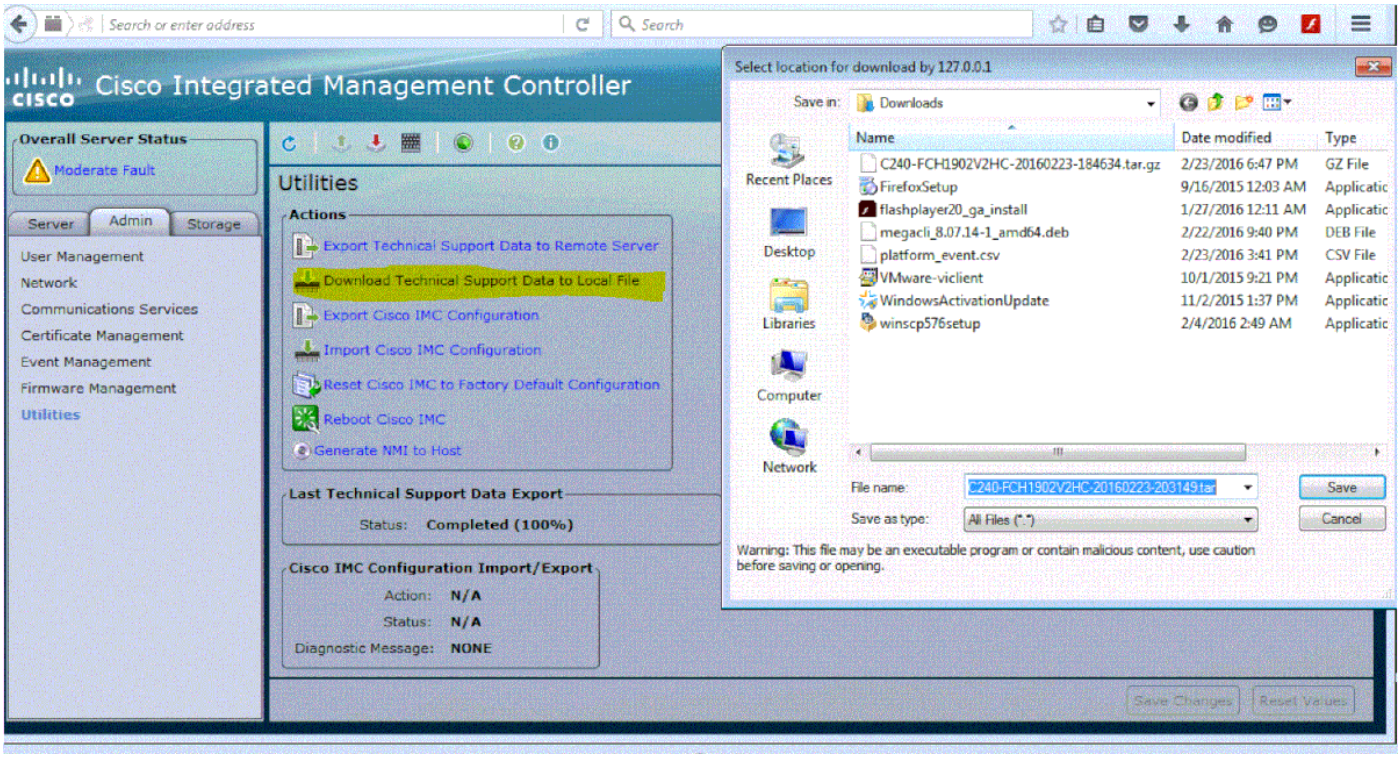
Problemas vistos na interface da Web do Cisco Integrated Management que examina o controlador de armazenamento:

Verificação da bateria





Você pode salvar o log para análise posterior.



Hardware Hewlett-Packard (HP)

Para a HP, há um pacote especial para a Debian que precisa ser instalado para ter acesso ao controlador RAID e aos discos físicos. O pacote é chamado hpacucli_9.40.1-1._amd64.deb

Etapa 1. Instalação:

- Faça login em seu sistema Linux com sua conta privada.
- Faça o download do pacote para o sistema Linux: wget http://downloads.linux.hpe.com/SDR./repo/mcp/debian/pool/non-free/hpacucli_9.40.1-1._amd64.deb
- execute o comando: sudo dpkg -i hpacucli_9.40.1-1._amd64.deb

Quando a instalação for concluída, você poderá trabalhar com a manipulação de RAID usando a seguinte ferramenta CLI: hpacucli

A ferramenta permite buscar informações apropriadas da controladora RAID, bem como alterar a configuração com os componentes RAID.

Etapa 2. Exibir detalhes da configuração do controlador, executar comando: **hpacucli ctrl all show config detail**.

```
# 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
```

Etapa 3. Mostrar status do controlador, executar comando: **hpacucli ctrl mostra o status**.

```
# hpacucli ctrl all show status

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

Etapa 4. Mostrar status físico, executar comando: **hpacucli ctrl slot=0 pd all show 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
```

Etapa 5. Mostrar status lógico, executar comando: **hpacucli ctrl slot=0 ld all show 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
```

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

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

Solução

Às vezes, uma bateria defeituosa em um dos servidores pode ser a razão para isso. Você deveria substituí-lo.

Isso resolve o problema e reduz a utilização do alto desempenho do disco.