Nota tecnica sull'utilizzo ad alte prestazioni del disco

Sommario

Introduzione

Questo documento descrive una procedura quando si riscontra un utilizzo delle prestazioni del disco pari al 100% e la necessità di controllare se si tratta di un problema dell'applicazione o di un problema hardware, è necessario eseguire diversi comandi per analizzare la situazione.

Prerequisiti

Requisiti

Nessun requisito specifico previsto per questo documento.

Componenti usati

Le informazioni fornite in questo documento si basano sulle seguenti versioni software e hardware:

- Serie Cisco Unified Computing System (UCS)
- Server Hewlett-Packard (HP)

Le informazioni discusse in questo documento fanno riferimento a dispositivi usati in uno specifico ambiente di emulazione. Su tutti i dispositivi menzionati nel documento la configurazione è stata ripristinata ai valori predefiniti. Se la rete è operativa, valutare attentamente eventuali conseguenze derivanti dall'uso dei comandi.

Problema: Elevate prestazioni del disco

Il sistema funziona lentamente e non è stabile. L'utilizzo delle prestazioni del disco raggiunge il 100%.

Risoluzione dei problemi

Il modo più semplice e rapido consiste nell'accedere all'interfaccia Web di gestione ed esaminare lo stato dell'hardware di storage.

Quando non è possibile accedere a Cisco Integrated Management Controller (CIMC) gestione remota per la serie UCS (Unified Computing System) o Integrated Lights-Out (ILO) sui server HP, è possibile ottenere informazioni su RAID e dischi utilizzando questo metodo:

Per i server Cisco Unified Computing System (UCS):

Le distribuzioni Debian usano un pacchetto chiamato "megacli".

Ulteriori informazioni su questo strumento - http://hwraid.le-vert.net/wiki/LSIMegaRAIDSAS

Esempi di utilizzo del comando - http://www.mostlychris.com/blog/2009/07/29/check-raid-status-with-megacli/

Il pacchetto per debian può essere scaricato e installato.

> **Nota:** Viene testato con megacli_8.07.14-1_amd64.deb

Per controllare i controller hardware utilizzati, eseguire il comando: **sudo lspci -v | grep -i RAID**

es.

Controller bus RAID 82:00.0: LSI Logic/Symbios Logic **MegaRAID** SAS 2208 [Thunderbolt] (rev. 05)

> Driver kernel in uso: area_di_supporto_globale

per ulteriori informazioni sul comando, consultare:

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

Esecuzione come root, eseguire il comando: **sudo /usr/bin/megacli**

Serie Cisco Unified Computing System (UCS)

Passaggio 1. Individuare i dettagli del controller RAID ed eseguire il comando: **lspci -v | grep -i RAID**.

Il controller RAID è un 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
```

Passaggio 2. Controllo dell'unità fisica e virtuale UCS (Unified Computing System Series) in corso, eseguire il 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
```

Ènecessario controllare il valore in - Criterio cache corrente

WriteBack - OK

WriteThrough - NON VALIDO

Questo è un esempio per la stessa operazione:

```
$ 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$
```

Passaggio 3. Controllo batteria, eseguire il comando: **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
```

Passaggio 4. Informazioni sui dischi fisici, eseguire il 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
```

Passaggio 5. Verifica della coerenza, eseguire il 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
```

Passaggio 6. Impostazioni dell'intervallo per il controllo di coerenza, eseguire il comando: **sudo megacli -AdpCcSched -Info -aALL**.

Il controller RAID esegue un controllo di coerenza del RAID ogni 7 giorni. Il valore di ritardo 168 mostrato nella è espresso in ore.

```
$ 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
```

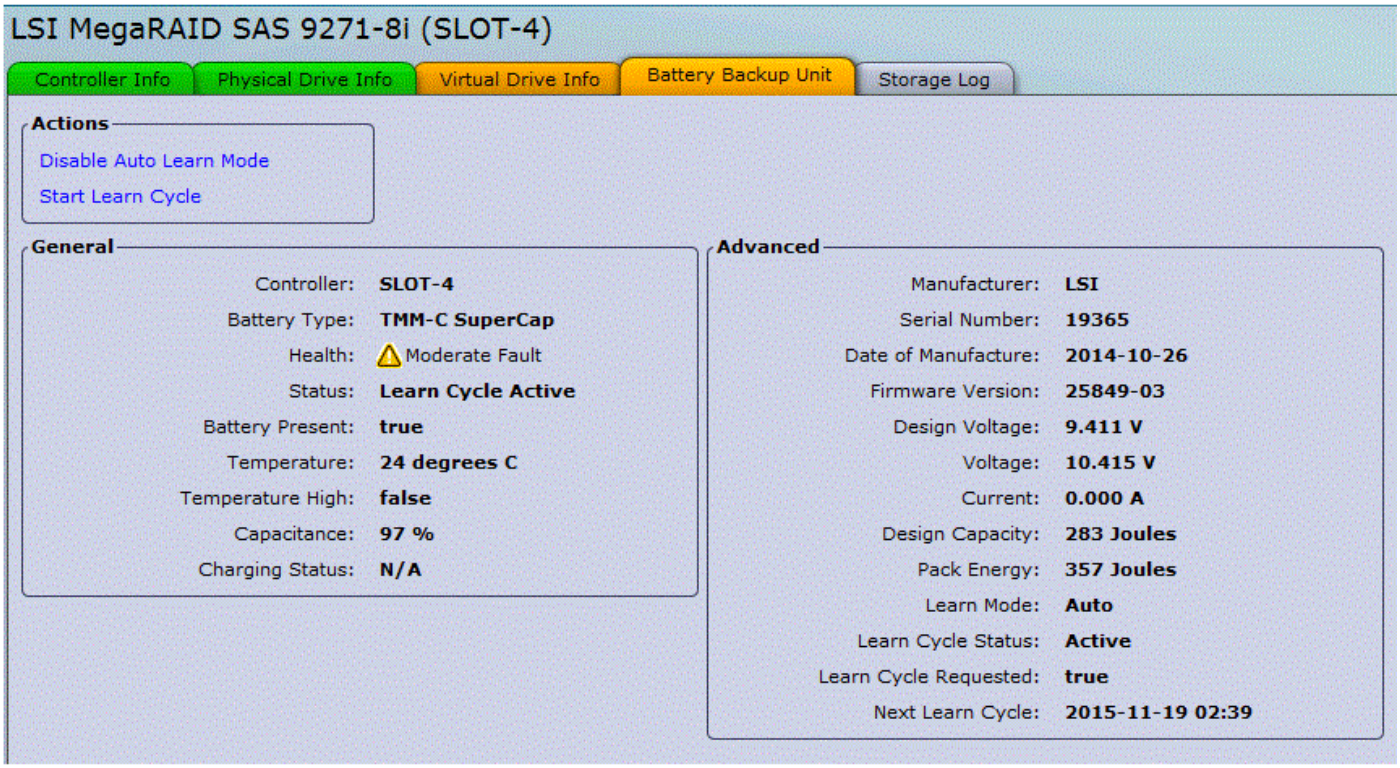
Passaggio 7. Ottenere il registro eventi RAID, eseguire il comando: **sudo megacli -AdpEventLog -GetEvents -f events.log -aALL && cat events.log | altro**.

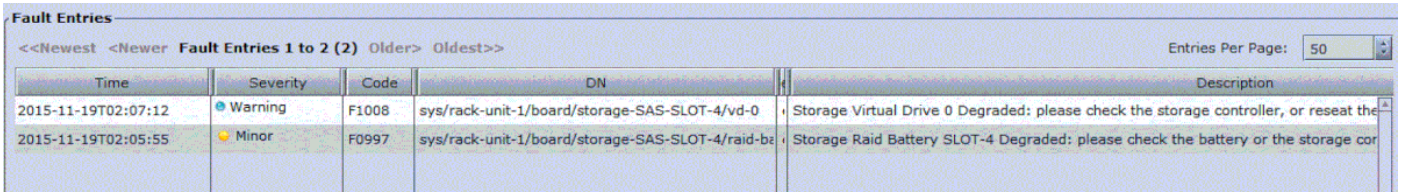
```
$ sudo megacli -AdpEventLog -GetEvents -f events.log -aALL && cat events.log | more

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>
```

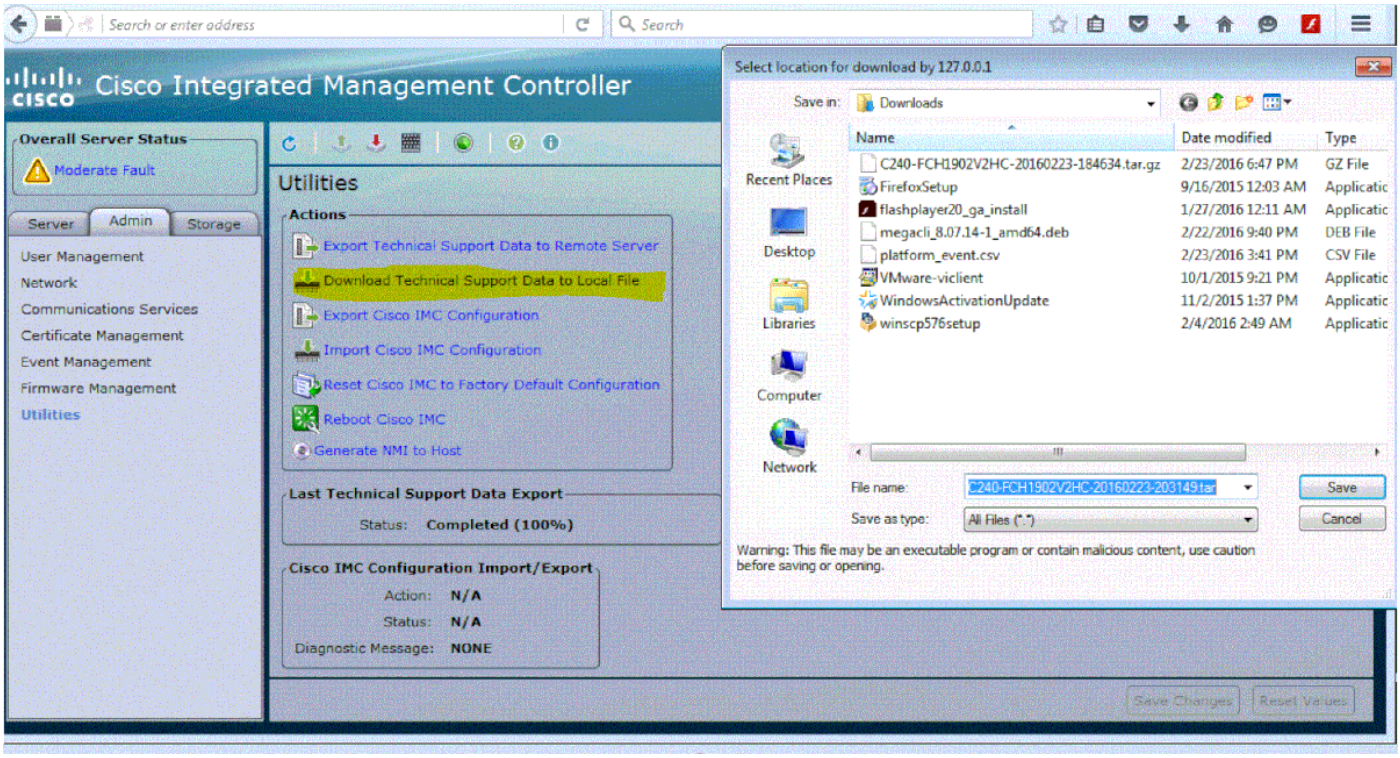
Problemi riscontrati nell'interfaccia Web Cisco Integrated Management per quanto riguarda il controller di storage:

Controllo batteria





Èpossibile salvare il registro per un'analisi successiva.



Hardware Hewlett-Packard (HP)

Per HP è disponibile un pacchetto speciale per Debian che deve essere installato per poter accedere al controller RAID e ai dischi fisici. Il nome del pacchetto è hpacucli_9.40.1-1._amd64.deb

Passaggio 1. Installazione:

- Accedere al sistema Linux con l'account privato.
- Scaricare il pacchetto sul sistema Linux: http://downloads.linux.hpe.com/SDR/repo/mcp/debian/pool/non-free/hpacucli_9.40.1-1._amd64.deb
- esegui comando: sudo dpkg -i hpacucli_9.40.1-1._amd64.deb

Al termine dell'installazione, è possibile utilizzare la manipolazione RAID utilizzando il seguente strumento CLI: hpacucli

Lo strumento consente di recuperare le informazioni appropriate dal controller RAID e di modificare la configurazione con i componenti RAID.

Passaggio 2. Visualizzare i dettagli di configurazione del controller, eseguire il comando: **hpacucli ctrl mostra tutti i dettagli della configurazione**.

```
# 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
```

Passaggio 3. Visualizzare lo stato del controller, eseguire il comando: **hpacucli ctrl mostra tutti lo stato**.

```
# hpacucli ctrl all show status

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

Passaggio 4. Visualizzare lo stato fisico, eseguire il 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
```

Passaggio 5. Mostra stato logico, esegui comando: **hpacucli ctrl slot=0 ld visualizza lo stato**.

```
# 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
```

Soluzione

A volte la causa può essere una batteria scarica in uno dei server. Dovresti sostituirlo.

Questo consente di risolvere il problema e di ridurre l'utilizzo delle prestazioni del disco.