

## Motorola Solutions Technical Notification (MTN)

**TITLE:** HPE ProLiant DL380 Gen9 Smart Storage Battery (SSB) Limited Life Expectancy

**TECHNOLOGY:** ASTRO®25

### **SYMPTOMS:**

Active Server

1. Fault manager reports degraded or failure condition for battery sensor or a critical alarm for the Smart Array P440ar RAID Controller
2. System health LED may blink amber, HPE Integrated Lights-Out (iLO) may show the HPE Smart Storage Battery status as OK and the cache module status as degraded, or the HPE Smart Storage Administrator may show the status of the smart array cache as permanently disabled.
3. The Integrated Management Log contains Smart Storage Battery Failure events
4. During initial battery failure, a reduction in local disk performance may occur while the contents of the disk cache are written out to disk. I/O intensive workloads may experience noticeable service degradation. After the contents of the cache are written out to disk, the performance will stabilize at a reduced performance level.

Inactive Server

1. Server has been stored unpowered for 6 to 12 months

### **MODELS / SYSTEM RELEASES / KITS / DATECODES AFFECTED:**

HPE ProLiant DL380 Gen9 Servers

### **SEVERITY RECOMMENDATION:**

Medium –

- **Active Server:** Replace battery module when symptoms are exhibited. As a preventative measure, replace battery module during upgrade to the A7.18 or later release where Gen9 servers are still in service.
- **Inactive Server:** Perform charging procedure every 6 to 12 months depending on storage conditions. Replace battery module after 3 years.

### **ROOT CAUSE / DEFINITIVE TEST:**

For active servers exhibiting one of the listed symptoms, battery failure can be confirmed by logging into the iLO on the impacted host. Check the Smart Storage Battery status on the Power tab of the System Information section.

HPE statement on life expectancy for batteries in active use:

The SSB is designed to last 3 years during normal use. The main factor that can reduce the expected battery life is exposure to high temperatures. The server is designed to operate in a 10° to 40°C (50° to 104°F) environment. It is advisable to replace the SSB after 3 years of use to proactively ensure that the battery is in an optimal condition.

HPE statement on storage of battery units:

- The SSB is delivered to HPE with a state of charge (SOC) of less than 30% to meet established transportation rules. Once installed into the server and powered up, the SSB will be at 100% SOC within 2 hours. When the server ships from the HPE factory, the SSB will be at 100% SOC.
- Once the SSB is at 100% SOC, the expected shelf life in an unpowered state is 12 months, assuming the temperature is between -20°C (-4°F) to 25°C (77°F). The ideal temperature for SSB storage is 15°C (59°F). If the storage temperature is above 35°C (95°F), the shelf life expectation will be 6 months. HPE recommends recharging the battery every 12 months if the server is stored at -20°C (-4°F) to 25°C (77°F) or every 6 months if the server is stored above 35°C (95°F).

### **WORKAROUNDS AND CORRECTIVE ACTIONS:**

None, failed batteries must be replaced.

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## **RESOLUTIONS AND REPAIR PROCEDURES:**

### **Inactive servers:**

Servers that are not in active use need to be powered on every 6 to 12 months to avoid failure of the Smart Storage Battery.

- Plug in and power on the server
- Wait 3 hours
- Connect to the iLO
- Check that the System Information to verify that the Smart Storage Battery Status is OK.
  - If the status is not OK, replace the battery module as described below for active servers.
- Power down and return the server to storage.

After three years, replace the battery module and perform power on for three hours before returning the server to storage.

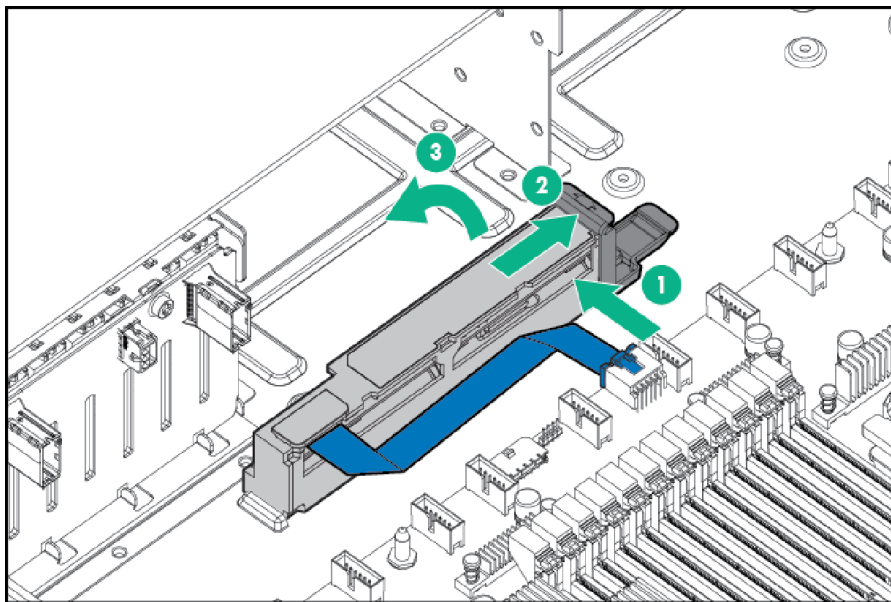
### **Active servers:**

Replacing the battery involves scheduling down time for the server. During an upgrade, this procedure should be performed during the time period when the server will be temporarily offline. Ensure critical server data has been backed up before beginning procedure.

### **Details**

1. Power down all virtual machines resident on the server.
2. Power down the server.
3. Remove all power from the server by disconnecting power cords from the server.
4. Extend the server from the rack
5. Remove the access panel
6. Remove the air baffle
7. Remove the fan cage
8. Disconnect the cable, and then remove the Smart Storage Battery

To replace the component, perform the steps in reverse order.



### **PARTS REQUIRED (HARDWARE/SOFTWARE):**

Replacement battery module: DLN7006A, FRU:HP DL380/DL360 G9 SERVER'S SMART STORAGE BATTERY

### **ADDITIONAL INFORMATION:**

Motorola procedures for powering up or down a server can be found in the release specific version of the Virtual Management Server Hardware manual.

Detailed descriptions with pictures are available for each step of the Smart Storage Battery replacement procedure can be found in the HPE ProLiant DL380 Gen9 Server Maintenance and Service Guide under the HPE Smart Storage Battery heading:

[https://support.hpe.com/hpsc/doc/public/display?sp4ts.oid=1009087943&docLocale=en\\_US&docId=emr\\_na-c04436999](https://support.hpe.com/hpsc/doc/public/display?sp4ts.oid=1009087943&docLocale=en_US&docId=emr_na-c04436999)

HPE Smart Storage Batteries – How to Determine if 12W and 96W HPE Smart Storage Battery Needs To Be Replaced:

[https://support.hpe.com/hpsc/doc/public/display?docId=emr\\_na-a00006597en\\_us](https://support.hpe.com/hpsc/doc/public/display?docId=emr_na-a00006597en_us)

**REFERENCE THE FOLLOWING DOCUMENTS/PROCESSES FOR INSTALLATION PROCEDURES:**

A7.14	6871025P39-C	Virtual Management Server Hardware	Powering up the ESXi Server Shutting Down the ESXi Server
A7.15	MN000718A01-E		
A7.16	MN001955A01-E		
A7.17, A7.17.1	MN003374A01-E		
A7.17.2	MN004447A01-C		
A7.17.3	MN004910A01-B		
A7.18	MN005427A01-A		

**WHEN TO APPLY RESOLUTION:**

- After reboot \_\_\_
- After (re)installation \_\_\_
- After upgrade \_\_\_
- After power cycle \_\_\_
- After database restoration \_\_\_
- After failure \_\_\_
- On FRU replacement \_\_\_
- During maintenance \_\_\_
- Immediately \_\_\_
- As instructed X\_
- Information only \_\_\_

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