# Product Support Notice

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| **PSN #** PSN003616u | |

| Original publication date: 20-Feb-12. This is Issue #09, published date: 16-Feb-17. | Severity/ risk level | Medium | Urgency | Immediately |
|---|---|---|---|---|

## Name of problem

S8800 RAID Battery Lifecycle Management

## Products affected

The following products are only affected for the releases installed on the S8800 servers. This is not applicable to products operating on any other servers supplied by Avaya.

- Avaya Aura® Communication Manager (including when used with Midsize Business Template or Session Border Controller)
- Avaya Aura® Conferencing Standard Edition
- Avaya Aura® Messaging
- Avaya Aura® Presence Services
- Avaya Aura® SIP Enablement Services
- Avaya Aura® Session Manager
- Avaya Aura® System Manager
- Avaya IQ
- Communication Manager Messaging – Federal Market
- Meeting Exchange
- Modular Messaging
- Message Networking
- One-X Mobile
- One-X Speech
- Voice Portal
- Proactive Contact

## Problem description

The S8800 servers, forming part of Avaya turnkey solutions, were launched in September 2009 and became End of Sale June 6, 2011. The majority of S8800 servers included the OEM MR10i RAID controller card with 256 MB Battery Backed Write Cache for the application solutions listed above. The RAID battery used in these RAID controller cards is a Lithium Ion battery. Over time, in normal operation, the RAID battery will have a reduced charge. The charging system in the MR10i controller card extends the life of the battery but is not able to do so indefinitely.

Once the RAID battery falls below a minimum level of voltage output, it will no longer power the cache. When that happens, the RAID controller switches from the default Write-Back to a Write-Through mode of operation. For applications like Communication Manager, there will be no general performance degradation, although backup time may be increased by slower read-write activity. For applications that write to the hard disk drives more frequently, like Modular Messaging, general service will deteriorate and the customer may experience some level of service disruption. If the RAID battery is completely exhausted and the server is exposed to a commercial power source failure and no Universal Power Supply (UPS) is being used, there is a chance that disk file corruption will occur if a write operation is taking place at the time of the power interruption.

To ensure continued RAID Write-Back operation, when the RAID battery is below minimum or has exhausted its output voltage, it is recommended that the RAID battery be replaced.

**Note**: This problem <u>does not apply</u> to the S8800 servers that came with the OEM BR10i RAID Controller. This controller did not include battery backed cache and <u>servers with this card are not affected</u> by this problem. Avaya products running on S8800 servers with the BR10i RAID Controller card include Avaya Aura® Application Enablement Services, Avaya Integrated Management and Secure Access Link.

## Resolution

**Ordering Information**

The RAID battery is a consumable product on the S8800 server and is not covered under the maintenance agreement. The Avaya order code (700478753) is no longer orderable. Customers requiring a replacement battery will need to order the equivalent by calling 1-800-388-7080 (US ONLY) option 2, then option 1 and provide FRU # 46C9040 (That is for the battery only. For the 'kit' that includes the small board it is FRU#46C9039). IBM does not recognize part number 44E8826 any longer.

For customers in the UK call the IBM parts order line +44 800 169 1458 and choose option 1,
Or you can order through their FRU website: www.ibm.com/shop/**uk**/**parts**/  using the FRU's listed above.

For other International customers they will have to obtain battery through a IBM/Lenovo supplier using the FRU's listed above.

**Products Providing RAID Battery Alarm and Status**
Some, but not all, applications have released service updates that provide alarming for the S8800 RAID Controller battery.

**System Platform 6.0.3** and later and 6.2.1 and later have similar alarming. System Platform includes support for the Dell R610, which is not supported by Communication Manager 5.2.1.
The System Platform 6.0.3.6.3 patch:
System Platform provides improved system monitoring of RAID battery power levels. Write cache issues, the most common issue, is monitored. Status on cache in Write-Through mode, battery backup weak and stuck in learn cycle which happens on rare occasions, are monitored.
All applications running on System Platform benefit from this capability.

Please review the presentation **"How To Check Status of S8800 RAID Battery on System Platform**" available on the following YouTube site, prepared by an Avaya associate.
http://www.youtube.com/watch?v=7qXbwRPzZ5E

**Communication Manager 5.2.1 SP12** and later provides alarming for low voltage RAID batteries and if the RAID Controller cache is off. As explained in the Release Notes, which are available on Avaya Global Sales:
> The S8800 and HP DL360 G7 servers used with Communication Manager 5.2.1 have RAID controllers with a cache back-up battery. The battery is rechargeable but over time loses the ability to hold an adequate charge, causing the server to disable caching and put the controller in write through mode. This can significantly slow down procedures such as software installs, upgrades, or backup and restore that involve a lot of disk I/O. Slow I/O can also happen if caching is erroneously disabled on the RAID controller. Communication Manager 5.2.1 Service Pack 12 introduces alarming for the RAID cache backup battery condition and cache mode. A major alarm will be raised if the battery fails or the RAID controller is in write through mode.

**Modular Messaging 5.2 SP 10** and above includes similar alarming for the RAID battery and Controller cache.
Session Manager 6.2 and above includes the ability to check the battery status using the hardware_info command.

## S8800 MR10i RAID Battery Replacement Procedure
Replace the MR10i RAID Controller battery using the following procedure and paying attention to the cautions provided.

⚠ **WARNING:**
> **It is critical that you perform a graceful shutdown of the Application and server per the Application documentation. Failure to comply with these procedures can have catastrophic effects on system hardware and service. Read the explanations following the list to ensure a complete understanding of these necessary procedures.**

For updated documentation, product support notices, and service pack information, go to the Avaya Support Center Web site at http://support.avaya.com.
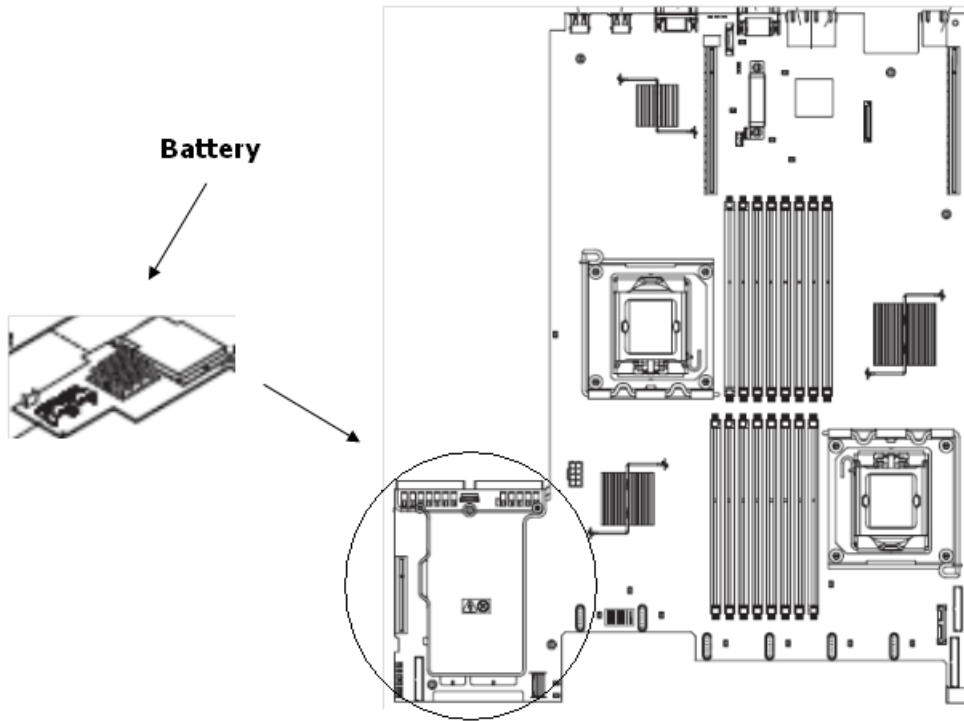
**Battery**

**Removing Existing Battery**

1. Shut down server according to AVAYA application procedures.

2. Remove server from rack and place on even surface.

3. Ensure Safe ESD practices.

4. With server power off and AC line cord unplugged, open top latch of server and remove cover. Locate MR10I RAID Controller and battery in front left of server.

5. Disconnect the cable from the connector on the battery. Leave the other end of the cable connected to the battery carrier. Battery carrier is mounted on top of MR10i RAID controller card.

6. Remove battery from the battery carrier by depressing on top half of battery retaining clip, lift up and slide back. See figure below.

7. Dispose of removed battery properly.

**Note:** If your battery and battery carrier are attached with a clip, squeeze the clip on the side of the battery carrier to remove the battery from the battery carrier.



Battery
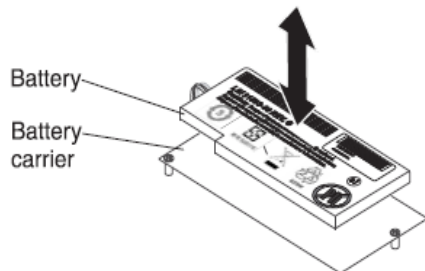
Battery carrier

**Installing New Battery**

1. If replacement battery comes assembled to a battery carrier remove battery carrier by unplugging cable from battery. Set battery carrier PWB aside.

2. Connect server MR10i/battery carrier cable to connector of new replacement battery.

3. Press the new battery onto the battery carrier of MR10i until the clip on the side of the battery snaps into place. See figure above.

4. Ensure battery is retained by clips.

5. Place lid on server, reinstall in rack and power up.

8. A battery learn cycle will start once the server powers up. The server will power up and function, but installation time of new software could be slowed until a battery learn cycle completes (up to 6 hours).

| Workaround or alternative remediation |
| --- |
| n/a |
| Remarks |
| n/a |

## Patch Notes

The information in this section concerns the patch, if any, recommended in the Resolution above.

| Backup before applying the patch | |
| --- | --- |
| n/a | |
| Download | |
| n/a | |
| Patch install instructions | Service-interrupting? |
| n/a | Yes |
| Verification | |
| n/a | |
| Failure | |
| n/a | |
| Patch uninstall instructions | |
| n/a | |

## Security Notes

The information in this section concerns the security risk, if any, represented by the topic of this PSN.

| Security risks |
| --- |
| n/a |
| Avaya Security Vulnerability Classification |
| Not Susceptible |
| Mitigation |
| n/a |

**If you require further information or assistance please contact your Authorized Service Provider, or visit support.avaya.com. There you can access more product information, chat with an Agent, or open an online Service Request. Support is provided per your warranty or service contract terms unless otherwise specified in the Avaya support Terms of Use.**