IBM System Storage - DS8880 Disk Storage
Microcode Bundle 88.33.46.0 Release Note Information v1.1

Release Date: August 29, 2018

VRMF Level Data Results:

<table>
<thead>
<tr>
<th>VRMF level From:</th>
<th>88.33.41.0</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRMF Level To:</td>
<td>88.33.46.0</td>
</tr>
<tr>
<td>Report for:</td>
<td>All DS8880</td>
</tr>
</tbody>
</table>

Code Bundle Contents

<table>
<thead>
<tr>
<th>DS8880 Code Bundle Level</th>
<th>SEA or LMC Version:</th>
<th>DSCLI Client</th>
<th>Heat Map Transfer Utility</th>
<th>Storage Manager</th>
<th>Copy Services Manager</th>
</tr>
</thead>
<tbody>
<tr>
<td>88.33.46.0</td>
<td>7.8.33.144</td>
<td>7.8.40.180</td>
<td>7.8.33.144</td>
<td>5.8.33.1059</td>
<td>6.2.2</td>
</tr>
</tbody>
</table>

Overview of new features and functions supported by this release

At a glance:
- Code fixes

This new microcode release supports DS8880 systems only.

Select Modifications Included in this Release Note:
This is a list of some modifications contained across one or more LIC (License Internal Code) or microcode release(s). The potential impact is variable. Specific environments may aggravate or degrade the potential impact. Problem(s) fixed and reported in this release note may not be in higher levels of code bundles.

Definition of Problem Severity:

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>High Impact</td>
</tr>
<tr>
<td></td>
<td>- Acute: An irrecoverable error with potential loss of data.</td>
</tr>
<tr>
<td></td>
<td>- Serious: An irrecoverable error with potential loss of access to data.</td>
</tr>
<tr>
<td>2</td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>- A function not operational and/or performance might be degraded.</td>
</tr>
<tr>
<td>3</td>
<td>Service</td>
</tr>
<tr>
<td></td>
<td>- A recoverable error (no impact) and service improvements.</td>
</tr>
<tr>
<td>4</td>
<td>Improvements</td>
</tr>
<tr>
<td></td>
<td>- Improvement changes for better Usability and Serviceability.</td>
</tr>
</tbody>
</table>

**HIPER:** High Impact problem that is Pervasive: 3 or more occurrences
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**Acute:** An irrecoverable error with potential loss of data.
None.

**Serious:** An irrecoverable error with potential loss of access to data.

**HIPER Dual disk enclosure controller failure**
1. **Problem Description:** A disk enclosure controller failed, and the surviving partner controller was unable to complete enclosure recovery actions.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes
ID#: 332765

**Incorrect reporting of bad data block**
1. **Problem Description:** Sense data sent to IBM i host incorrectly identified the first block in the track as failed, rather than the actual failing block.
2. **Potential Impact of Problem:** Incorrect error recovery
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
ID#: 335122

**HIPER Host Adapter 0xB40B MLE with IBM i host connections**
1. **Problem Description:** A check condition while processing IBM i linked commands can trigger a Microcode Logic Error. This pattern may then repeat on multiple host adapters, leading to temporary loss of access.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes
ID#: 335351

**Repeating 0x264A MLE during failover**
1. **Problem Description:** After a data loss event, a Microcode Logic Error can cause repeated warmstarts during failover.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
ID#: 335935
Repeated 0x7F31 MLEs
1. **Problem Description:** When creating a forward cascading FlashCopy relationship, system encountered repeated MLEs accessing some tracks in the B copy until the B -> C copy was complete
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
ID#: 336893

Permanent I/O errors after Hyperswap
1. **Problem Description:** z/OS Metro/Global Mirror-Incremental Resync establish commands were issued to secondary devices in a suspended Global Mirror session. The commands were allowed to process because of incorrect status in a control block.
2. **Potential Impact of Problem:** Permanent I/O errors
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
ID#: 337250

Moderate: A system path is not operational and/or performance may be degraded.

Higher response times after CDA to 88.24.6.0 or later
1. **Problem Description:** Excessive cache is being allocated to sequential workloads causing increased cache demote of random tracks.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
ID#: 335470

Easy Tier stats collection stalled
1. **Problem Description:** After a warmstart, Easy Tier may fail to allocate stat buffers for new volumes
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID#: 335547
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Service: A recoverable error, Service improvements.

Remote login authentication fails intermittently
1. Problem Description: High volume of authentications, or DSCLI 'testauthpol' commands, can lead to a Java out-of-bounds condition.
2. Potential Impact of Problem: none
3. Problem Severity: Service
4. Pervasive Problem: No
ID#: 334449

CSM configuration data missing after HMC update or reload
1. Problem Description: If embedded Copy Services Manager has been updated using DSCLI 'installsoftware' method, and later the HMC is reloaded, or upgraded to a level that involves reload, the CSM configuration can be lost.
2. Potential Impact of Problem: CSM not operational
3. Problem Severity: Service
4. Pervasive Problem: Yes
ID#: 335729

HMC backups could fill up /var filesystem in LPARs
1. Problem Description: Function to prune old backup files fails to remove the files.
2. Potential Impact of Problem: none
3. Problem Severity: Service
4. Pervasive Problem: No
ID#: 336080

HPFE Gen2 firmware fails to update during MES
1. Problem Description: During install of new HPFE Gen2 enclosures or drive sets, the firmware update may begin before format is finished.
2. Potential Impact of Problem: none
3. Problem Severity: Service
4. Pervasive Problem: No
ID#: 336177

CMUN80293E creating IPSEC connection
1. Problem Description: Code could not determine that IPSEC service was running because an OS change renamed the .pid file
2. Potential Impact of Problem: none
3. Problem Severity: Service
4. Pervasive Problem: No
ID#: 336684
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Improvements: Improvements for better usability

CSM backup / restore enhancements

1. **Problem Description:** During HMC reload, prevent CSM from performing a backup if it has not yet been restored. Also, if a newer CSM package exists on the LPARs, install the package, and then restore the backup.

2. **Potential Impact of Problem:** none

3. **Problem Severity:** Improvement

4. **Pervasive Problem:** No

ID#: 336382
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