IBM System Storage - DS8880 Disk Storage
Microcode Bundle 88.31.51.0 Release Note Information v1

Release Date: April 23, 2018

VRMF Level Data Results:

| VRMF level From: | 88.31.49.0 |
| VRMF Level To:   | 88.31.51.0 |
| Report for:      | All DS8880 |

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>88.31.51.0</td>
<td>7.8.31.139</td>
<td>7.8.33.113</td>
<td>7.8.31.139</td>
<td>5.8.31.1057</td>
<td>6.2.1</td>
</tr>
</tbody>
</table>

Overview of new features and functions supported by this release

At a glance:
- Code fixes and enhancements

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.

**MT-PPRC failure during Hyperswap**
1. **Problem Description:** During Hyperswap, a Multi-Target PPRC volume failed to reset Long Busy state.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
ID#: 332004

**HIPER CKD volumes 'reserve pending'**
1. **Problem Description:** When sending split ending status, the device end can end up stacked. In Hyperswap environments, a scenario exists that can lead to the stacked status never being cleared.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes
ID#: 332581

**HIPER Host Adapter LRC errors**
1. **Problem Description:** Open Systems volumes having more than 15 initiators that set persistent reserve may encounter a pointer exception that results in HA LRC errors, and repeated warmstarts.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes
ID#: 333868

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

**0x0103 / 0x0109 MLE**
1. **Problem Description:** During cache discard, related copy services sidefile entries were not properly managed.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
ID#: 330904
XRC suspend with msg ANTX8117I
1. **Problem Description:** Ref: APAR OA54082 - XRC suspend caused by an error in consistency time handling, when a datamover is idle.
2. **Potential Impact of Problem:** XRC suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
   ID#: 332112

**Service: A recoverable error, Service improvements.**

None.

**Improvements: Improvements for better usability**

None.
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