

IBM System Storage - DS8700 Disk Storage 1 **Microcode Bundle 76.31.150.0 Release Note Information v1**

Release Date: July 31, 2015

VRMF Level Data Results:

VRMF level From:	76.31.143.0
VRMF Level To:	76.31.150.0
Report for:	All DS8700

Code Bundle Contents

This table includes code component reference information.

DS8000 Code Bundle Level	SEA or LMC Version: Used with dscli ver command.	CLI Client Level	Storage Manager Code Level
76.31.150.0	6.6.31.1550	6.6.31.1550	5.6.31.1323

Overview of new features and functions supported by this release on DS8700, 242x model 941

At a glance:

- Problem fixes
- Serviceability enhancements
- Improvements

This new microcode release only supports the DS8700.

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:

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

HIPER: High Impact problem that is Pervasive: 3 or more occurrences

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Acute: An irrecoverable error with potential loss of data.

Error in GM collision handling

- 1. Problem Description:** A microcode logic error handling a GM collision may result in 0x7618 MLE, or incomplete data sent to secondary, depending on timing.
 - 2. Potential Impact of Problem:** Warmstart, or corrupted consistency group
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 303510

0x7178 MLE, SEFLC target volume in failed state

- 1. Problem Description:** Track-Space-Efficient secondary volumes in failed state because of a microcode logic error
 - 2. Potential Impact of Problem:** loss of data
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 303700

Provide new warning when replacing DDMs in an offline array

- 1. Problem Description:** SSR may replace a DDM that is needed to recover an offline array.
 - 2. Potential Impact of Problem:** Extended loss of access, or loss of data
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 305037

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

Loss of access during CDA when repository size > 50TiB

- 1. Problem Description:** Insufficient metadata table space for repositories > 50TiB, but this limit was not enforced.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 295123

HIPER I/O timeout during failed DDM deconfigure

- 1. Problem Description:** Operation in process hangs because the DDM is unresponsive, thus preventing quiesce of the DDM.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** HIPER
 - 4. Pervasive Problem:** Yes
- ID#: 298041

Repeated 0xE716 MLE after failover

- 1. Problem Description:** NVS data for the failed CEC was being processed, which should have been cleared.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 301554

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0x14E MLE and loss of access

- 1. Problem Description:** System deadlocked because no cache segments are free, and cache SMP segment scan is stalled.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 301701

HIPER Loop errors caused multiple DDM rejections

- 1. Problem Description:** Degraded loop led to array members being marked 'Security Degraded', which then caused them to be rejected from the array.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** HIPER
 - 4. Pervasive Problem:** Yes
- ID#: 303527

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

Unbalanced Global Copy path utilization

- 1. Problem Description:** Path selection algorithm behaves incorrectly if the SMP bandwidth counters are higher than the host adapter bandwidth counters. This leads to unbalanced path usage, and degraded copy rates.
 - 2. Potential Impact of Problem:** degraded performance
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
- ID#: 271451

I/O timeout during DDM deconfig

- 1. Problem Description:** Microcode logic error caused a Device Adapter showstop during deconfig of a failed array member.
 - 2. Potential Impact of Problem:** degraded performance
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** No
- ID#: 286016

MLE during background copy

- 1. Problem Description:** The same in-memory relation entry was queued on two different background copy rank queues, causing a microcode logic error.
 - 2. Potential Impact of Problem:** Warmstart
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
- ID#: 291579

0x904A MLE during PCIe fabric recovery

- 1. Problem Description:** Corrects a microcode logic error during PCIe fabric recovery.
 - 2. Potential Impact of Problem:** Warmstart
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
- ID#: 303359

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Easy Tier warm demote after DB2 reorg

1. **Problem Description:** Reorg can trigger demote of active DB2 data to nearline tier
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 305524

Service: A recoverable error, Service improvements.

0x05E0 MLE during SF IML

1. **Problem Description:** A microcode logic error during Storage Facility IML caused the SF to DSI and perform another dual IML. The exposure only exists during full SF IML.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 302748

Prevent accidental LIC downgrade

1. **Problem Description:** SSR was able to accidentally start a CDA process to a lower level of LIC.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 303230

Increase maximum number of TPC-R server connections allowed

1. **Problem Description:** Environments with multiple TPC-R servers may exceed the maximum client logins to the DS8K. This change increases the default maximum client logins from 10 to 64.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 303459

Remove weak ciphers

1. **Problem Description:** HMC security scan found weak hashing algorithms.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 303586

DS Storage Manager GUI hangs

1. **Problem Description:** The GUI server hit an Out-of-Memory Java error
2. **Potential Impact of Problem:** Unresponsive GUI
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 304096

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CEC DDM failure during CDA

- 1. Problem Description:** SSR is unable to perform CEC DDM replacement of drive that fails during CDA mirroring process.
- 2. Potential Impact of Problem:** Extended service window
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 306317

DDM replacement failure

- 1. Problem Description:** Map 4970 enhancement for SRC BE340027 where DDM is bypassed by FCIC firmware.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 307067

Improvements: Improvement for better usability

Optional proactive 'Slow Disk' notification

- 1. Problem Description:** Creates SRC BE346018 for Customer notification of DDMs that are posting 'slow disk' messages. Notification is enabled by control switch. HMC will not call home for this message.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID#: 304271

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