

IBM System Storage - DS8700 Disk Storage 1 **Microcode Bundle 76.31.169.0 Release Note Information v1.2**

Release Date: March 31, 2016

VRMF Level Data Results:

VRMF level From:	76.31.159.0
VRMF Level To:	76.31.169.0
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
76.31.169.0	6.6.31.1790	6.6.31.1790	5.6.31.1358

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 supports only 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.

HIPER XRC suspend, abend 9C4-10, No Record Found

- 1. Problem Description:** Write command with Bypass Extent Checking set, needs to still check for extent conflicts if prior I/Os did not also specify BEC.
 - 2. Potential Impact of Problem:** Loss of Data on secondary
 - 3. Problem Severity:** HIPER
 - 4. Pervasive Problem:** No
- ID#: 313493

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

Host timeout during DDM deconfigure

- 5. Problem Description:** A specific set of conditions led to an 8-second delay while deconfiguring a failed DDM
 - 6. Potential Impact of Problem:** loss of access
 - 7. Problem Severity:** High Impact
 - 8. Pervasive Problem:** No
- ID#: 283642

PCIe fabric error recovery caused loss of access

- 1. Problem Description:** During PCIe fabric error recovery, if there is no communication path to Device Adapters or V-RAID adapters, the time to recover can be extended, causing a temporary loss of access.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 290283

Device adapter hang during PCIe error recovery

- 1. Problem Description:** Device adapter performing a DMA operation couldn't release its lock during PCIe fabric recovery. Partner adapter had to wait for timeout and warmstarts to release the locks.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 309129

HIPER Device Adapter showstop

- 1. Problem Description:** After smart rebuild abort, the disk deconfigure process hangs, causing DDM replacement failures. If a second DDM fails in the same adapter pair, the prior deconfigure hang can lead to showstop of both DAs, and temporary loss of access.
 - 2. Potential Impact of Problem:** Loss of Access
 - 3. Problem Severity:** HIPER
 - 4. Pervasive Problem:** Yes
- ID#: 309226

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DA Takeover failed

- 1. Problem Description:** Rank state changes were not processed because periodic DATO path test processes were queued in the partner LPAR
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 311068

Port LOGIn failures

- 1. Problem Description:** Delays processing PLOGIs can lead to multiple collisions when the remote port retries, while the host adapter is still processing the last PLOGI. In extreme cases, this could lead to depletion of Task Control Blocks
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 312998

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

0x9F1B MLE

- 1. Problem Description:** An RPC communication error was not handled gracefully.
 - 2. Potential Impact of Problem:** Warmstart
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** Yes
- ID#: 262354

LPAR 'out of memory' crashdump

- 1. Problem Description:** On large systems, processes that monitor I/O Priority Manager can fill up user memory, causing crashdump and reboot of a single LPAR.
 - 2. Potential Impact of Problem:** degraded performance
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** No
- ID#: 267958

CS Task Timeout caused Global Mirror Suspend

- 1. Problem Description:** A microcode logic error caused a deadlock condition between cache and copy services functions.
 - 2. Potential Impact of Problem:** Global Mirror Suspend
 - 3. Problem Severity:** Moderate
 - 4. Pervasive Problem:** No
- ID#: 303225

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0x01B7 MLE

- 1. Problem Description:** Host bay fabric healthcheck tasks exceeded their runtime limit
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 306997

PPRC full copy when Brocade fast write is enabled

- 1. Problem Description:** A PPRC incremental operation performed a full copy, because Brocade fast write was not handled properly.
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 307648

PPRC bad path caused suspend

- 1. Problem Description:** Link errors on one PPRC path caused suspend, when other good paths were available
- 2. Potential Impact of Problem:** PPRC Suspend
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 307668

Global Mirror long response time

- 1. Problem Description:** Path errors while processing global copy collisions can result in long response times
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 308049

Virtual Command Ring full

- 1. Problem Description:** Size of VCR is not large enough for very large FICON read I/O chains
- 2. Potential Impact of Problem:** Interface Control Checks
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 311893

Battery End-of-Life detection

- 1. Problem Description:** Weekly proactive check for battery EoL date fails to properly detect battery age
- 2. Potential Impact of Problem:** No early warning of battery EoL
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 312447

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Slow failover/failback

- 1. Problem Description:** In large configurations, rank and volume state changes can take several seconds to process. Fix moves volume state change processing to separate parallel threads.
- 2. Potential Impact of Problem:** PPRC suspend
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 313143

Service: A recoverable error, Service improvements.

Improve FRU list for SRC BE3526D8

- 1. Problem Description:** Add PCIe switch card, and I/O enclosure backplane to the list of possible FRUs.
- 2. Potential Impact of Problem:** None
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 310446

LPAR network adapters reverted to dynamic IP

- 1. Problem Description:** After changing the private IP address range, the static IP mode may not be enforced.
- 2. Potential Impact of Problem:** Repair actions or code updates fail
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 310613

Secure Data Overwrite failure

- 1. Problem Description:** SDO fails on device adapter pairs that have no storage enclosures installed.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 310885

Secure Data Overwrite failure

- 1. Problem Description:** SDO fails if too many DDMs on a DA pair are failing, leading to multiple reruns to complete the process.
- 2. Potential Impact of Problem:** Extended SDO duration
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 310914

Unable to configure LCUs

- 1. Problem Description:** If HMC or LPARs change internal IP addresses, and an address is reused, commands may go to the wrong target.
- 2. Potential Impact of Problem:** Unable to perform config changes
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 311065

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Heartbeat callhome failure on 2x2 systems

- 1. Problem Description:** Internal callhome array size may not be large enough to contain data from both storage facilities.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 312120

SRC BEB30001 HMC filesystem size check failed

- 1. Problem Description:** During PE package collection, the process that collects HMC traces produced corrupted output.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 312273

No Customer email notification for SRC=BE310B01

- 1. Problem Description:** Email notification did not occur because the SRC flag was not set for email notification. This fix will also clarify the options on the Customer notify configuration setup pane. The first option will change from "Call home problem events only" to "Serviceable Event Notification only"
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 312939

Improvements: Improvement for better usability

None.

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