

IBM System Storage - DS8880 Disk Storage Microcode Bundle 88.52.21.0 Release Note Information v1.1

Release Date: April 15, 2019

VRMF Level Data Results:

VRMF level From:	88.51.53.0
VRMF Level To:	88.52.21.0
Report for:	All DS8880

Code Bundle Contents

DS8880 Code Bundle Level	SEA or LMC Version:	DSCLI Client	Heat Map Transfer Utility	Storage Manager	Copy Services Manager
88.52.21.0	7.8.52.70	7.8.52.70	7.8.52.70	5.8.52.1029	6.2.4

Overview of new features and functions supported by this release

At a glance:

- Capacity intermix in HPFE Gen2 Enclosures
- 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:

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 Possible data inconsistency on PPRC secondary

1. **Problem Description:** Possible data inconsistency on PPRC secondary (or GM FlashCopy target as current instance) while running FlashCopy on PPRC ESE primary (PPRC primary is also FLC target)
 2. **Potential Impact of Problem:** loss of data
 3. **Problem Severity:** HIPER
 4. **Pervasive Problem:** Yes
- ID# 341639

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

Repeated 0x4422 MLEs

5. **Problem Description:** An unusual (but legal) sequence of Format Write/Locate Record Erase commands can trigger repeated warmstarts that may escalate to cluster failover and loss of access.
 6. **Potential Impact of Problem:** loss of access
 7. **Problem Severity:** High Impact
 8. **Pervasive Problem:** No
- ID# 340203

HIPER Multiple 0x0109 MLEs and LPAR failover

1. **Problem Description:** Adding Flash storage capacity or replacing Flash Drives, may cause multiple Microcode Logic Errors and LPAR failover in systems running 88.51.49.0 code bundle.
 2. **Potential Impact of Problem:** Temporary loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
- ID# 340309, 341973

HIPER Loss of access during LPAR quiesce

1. **Problem Description:** In systems with "6 PCIe port" I/O bay hardware, if zHyperLink is not installed, a PCIe link to an internal switch may be down. During LPAR quiesce, multiple of these unused links could trigger PCIe fabric errors, that may lead to a loss of access.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
- ID# 340395

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0x014E MLE and LPAR reboot during CDA to R8.5

- 1. Problem Description:** A hardware problem during Code Distribution and Activation from R8.4 or earlier levels, to R8.5, may result in a loss of access.
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID# 340535

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

FlashCopy target write inhibit

- 1. Problem Description:** A small timing window exists when writing to a FlashCopy target volume, where a bitmap may become corrupted.
- 2. Potential Impact of Problem:** Failed FlashCopy job
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 333268

0x7D0E MLE

- 1. Problem Description:** A race condition between threads caused a process control lock to be released twice.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes

ID# 336221

Global Mirror degraded performance

- 1. Problem Description:** Write Intercepts delayed because of lock contention issues.
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 337607

IOS071I Start Pending when establishing Metro Mirror pair(s)

- 1. Problem Description:** During first pass volume copy, system may log IOS071I ... START PENDING STATUS: I/O OPERATION IS EXECUTING and IOS071I ... START PENDING STATUS: I/O WAITING FOR EXTENT CONFLICT when the following conditions are true:
 - zHPF write chain with multiple domains
 - DB2 Castout Accelerator active
 - Descending track order between domains (legal but unusual)
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 339203

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CMUN80519E when modifying an existing PPRC pair

- 1. Problem Description:** When modifying an existing PPRC pair to enable Multi-Target or to start/stop Metro Global Mirror-Incremental Resync, internal logic flags are set incorrectly.
- 2. Potential Impact of Problem:** Cannot establish a Multi Target pair or send a Release Space command to the secondary
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 339686

0x0B8A MLE and Host Adapter reboot

- 1. Problem Description:** z System aborted during a zHPF transfer with > 55 records, triggering a Host Adapter DSI and HA reboot
- 2. Potential Impact of Problem:** loss of path
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 339936

0x01B7 and 0x7D13 MLEs

- 1. Problem Description:** Global Mirror subsystem query operations are taking a higher-level lock than necessary, leading to lock contention.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 339978

Very slow response from DSCLI 'lsckdvol' or 'lsfbvol' command

- 1. Problem Description:**lsckdvol or lsfbvol command response very slow in systems running R8.5 levels of code with a large number of volumes.
- 2. Potential Impact of Problem:** DSCLI command timeouts
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes

ID# 339984

PPRC path not moving data

- 1. Problem Description:** PPRC path with high workload can experience a Task Control Block leak, depleting all available Host Adapter port TCBS
- 2. Potential Impact of Problem:** loss of path
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 340222

HMC2 WebUI fails to start after update to R8.5

- 1. Problem Description:** A file left over from manufacturing caused the HMC hostname to revert to 'localhost2'.
- 2. Potential Impact of Problem:** Loss of access to HMC2
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes

ID# 340441

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PPRC Suspend

- 1. Problem Description:** During PPRC establish, space release on secondary may exceed the timeout value
- 2. Potential Impact of Problem:** PPRC Suspend
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 340949

Service: A recoverable error, Service improvements.

Unable to perform VRAID adapter replacement

- 1. Problem Description:** Partner adapter would not allow the repair, even though neither adapter could see the problem drive slot
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339210

Remote syslog message flood

- 1. Problem Description:** Incorrect HMC rsyslog rule order
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339450

HMC callhome, heartbeat, and remote support failure

- 1. Problem Description:** HMC firewall rules specified only the port, without including the destination IP address. If the rule is removed, it affects all destinations.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339486

0x01B7 MLE

- 1. Problem Description:** With large number of dataset-level FlashCopy relationships, queries can take too long to complete
- 2. Potential Impact of Problem:** ODD Dump
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339691

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0x01B7 MLE

- 1. Problem Description:** In systems with "6 PCIe port" I/O bay hardware, if zHyperLink is not installed, a variable does not get initialized. This condition may cause bay heartbeat to time out on a locking exception.
- 2. Potential Impact of Problem:** ODD Dump
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339729

ODD Data Collection Timeout

- 1. Problem Description:** Changes made to support zHyperLink data collection may cause the data collection to exceed the timeout value.
- 2. Potential Impact of Problem:** ODD data collection failure
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339887

UPS fenced when changing time zone

- 1. Problem Description:** Failure when setting UPS to UTC -3 time zone
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 339890

DS GUI and Easy Tier hang

- 1. Problem Description:** Locking exception during Easy Tier extent relocation caused DS GUI communication failure, until cleared by warmstart
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** Yes

ID# 339980

0x01B7 MLE

- 1. Problem Description:** Unique Concurrent Copy workloads can cause lock contention
- 2. Potential Impact of Problem:** ODD Dump
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 340334

0x01B7 MLE

- 1. Problem Description:** Lock contention caused by many query functions taking a lock they do not need to take;
- 2. Potential Impact of Problem:** ODD dump
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 340430

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Improvements: Improvements for better usability

Limit drive rejections during installation testing

- 1. Problem Description:** Cabling issues during Storage Facility install can lead to many false drive failures that have to be recovered
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 339579

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