

IBM System Storage - DS8870 Disk Storage

Microcode Bundle 87.51.121.0 Release Note Information v1.1

Release Date: May 1, 2018

VRMF Level Data Results:

VRMF level From:	87.51.103.0
VRMF Level To:	87.51.121.0
Report for:	All DS8870

Code Bundle Contents

DS8000 Code Bundle	SEA or LMC	DSCLI Client	STAT Tool	Easy Tier Client	Heat Map Transfer Utility	Storage Manager Code Level
87.51.121.0	7.7.51.3230	7.7.51.3230	7.7.51.3230	7.7.51.3230	7.7.51.3230	5.7.51.1150

Overview of new features and functions supported by this release on DS8870 242x model 961

At a glance:

- DC-UPS firmware version 03-53 (Enable battery test)
- Code fixes

This new microcode release supports DS8870 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.

Out-of-Sync bitmap from PPRC secondary was not merged with the primary

1. **Problem Description:** During PPRC failback, a timing window exists where the OOS bitmap may not be merged with the primary after a warmstart on the secondary.
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 304787

Potential data loss in systems running zHPF and APAR OA52080

1. **Problem Description:** A microcode logic error may result in data loss in systems running zHPF, with Format Write chains that have multi-track embedded Locate Record entries, such as those created for Torn Page Protection.
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 331965

System with multiple failed DDMs did not call home

1. **Problem Description:** Callhome did not occur because a prior repair action was not completed.
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 333464

HIPER DC-UPS firmware update

1. **Problem Description:** Update to mitigate a battery ground fault failure condition that can cause partner DC-UPS to also fail.
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID#: 334355

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

Multiple Host Adapters may reset at the same time

1. **Problem Description:** Before initiating a Host Adapter reset, recovery did not check whether another HA is also being reset.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 309450

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IOS080I or Start Pending on PPRC Primary system

1. **Problem Description:** 'Unit Check Next Start I/O' tasks can queue up on a PAV alias device, where they will never be processed. This problem is most likely to occur if device 00 in an LSS is configured as an alias.
2. **Potential Impact of Problem:** degraded performance, could progress to loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 325276

Temporary loss of access during DA error recovery

1. **Problem Description:** A Device Adapter was reset while the partner adapter was also being reset.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 326608

Loss of access during single CEC repair

1. **Problem Description:** During single CEC repair, a Rack Power Control (RPC) card error led to a reboot of the operational CEC.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 329659

Repeated 0x7003 MLE

1. **Problem Description:** During CS metadata track recovery, an unexpected reason code triggered a microcode logic error.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 330348

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

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V-RAID adapter timeouts during array rebuild

1. **Problem Description:** SAS T10 errors on rebuild target drive caused repeated resets of both V-RAID adapters.
 2. **Potential Impact of Problem:** loss of access
 3. **Problem Severity:** High Impact
 4. **Pervasive Problem:** No
- ID#: 332374

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

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

PPRC suspend with reason code 0x7

1. **Problem Description:** State change counters are able to exceed 65535, but only the lower 16 bits are being read.
 2. **Potential Impact of Problem:** PPRC suspend
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
- ID#: 314731

Poor All-Flash performance

1. **Problem Description:** Performance degradation when I/O Priority Manager is enabled on All-Flash configurations.
 2. **Potential Impact of Problem:** degraded performance
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** No
- ID#: 316650

0x7D0E MLE

1. **Problem Description:** A locking exception while performing two track writes with torn page caused a microcode logic error.
 2. **Potential Impact of Problem:** Warmstart
 3. **Problem Severity:** Moderate
 4. **Pervasive Problem:** Yes
- ID#: 325339

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0x23AC MLE

1. **Problem Description:** Cache Track Request status indicator was overwritten, causing a Microcode Logic Error
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 329646

0x1637 MLE

1. **Problem Description:** Processor locking exception caused a microcode logic error.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 330289

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

SRC=BE3526FC Host Adapter MLE

1. **Problem Description:** Host adapter firmware microcode logic error handling recovery for sequence timeouts.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 331663

Service: A recoverable error, Service improvements.

0x01B7 MLE during rank deconfig

1. **Problem Description:** When removing the last rank, function to initialize CS journal failed, causing a microcode logic error and ODD dump.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes

ID#: 281869

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Incorrect LPAR date/time

1. **Problem Description:** During LPAR boot, clock sync to HMC was not successful.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 328549

No access to DS GUI or DSCLI

1. **Problem Description:** ESSNI server fails to start if the password minimum length is set to 16 characters.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 329715

Missing HMC critical data backup files

1. **Problem Description:** HMC was not able to perform a backup for an extended period, and all existing backups were pruned.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 330073

No SRC posted for LPAR network problem

1. **Problem Description:** Problem with a single LPAR network interface did not generate a serviceable event.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 330677

Incomplete FRU lists

1. **Problem Description:** Device Adapter and Storage Enclosure loop error FRU lists did not include the fiber cables.
2. **Potential Impact of Problem:** Multiple repair actions
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 330980

REST API authentication failure

1. **Problem Description:** HMCs using remote authentication (LDAP) are not properly handling authentication requests for RESTful API service
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 331802

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Locate Record Erase function not counted in write performance stats

1. **Problem Description:** The Device Write performance counts are not updated when the Locate Record operation is Erase
2. **Potential Impact of Problem:** Incorrect statistics
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 331820

Message CMUN00015E 'Command execution timeout'

1. **Problem Description:** Various DS GUI and DSCLI processes are failing to complete.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes

ID#: 331847

0x01B7 MLE while removing logical config

1. **Problem Description:** Internal process was not able to complete within the time allowed.
2. **Potential Impact of Problem:** ODD dump
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 332153

HMC process hangs displaying performance info in DS GUI

1. **Problem Description:** Queries are not being closed properly, leading to Java memory leakage.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 332290

Battery Service Module exchange procedure update

1. **Problem Description:** BSM replacement procedures updated to address multiple issues seen during service actions
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes

ID#: 332466

DSCLI command displays incorrect output

1. **Problem Description:** DS GUI 'who' function shows incorrect protocol
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 332561

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Excessive logging of VOLSER change events

1. **Problem Description:** VOLSER volume change events can appear to flood the event logs.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 332635

Update callhome Certificate Authority (CA) trust store

1. **Problem Description:** Update CA certificates for URSF and ECC callhome connections.
2. **Potential Impact of Problem:** Unable to call home
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 333280, 334494

CSM shows 'Severe' status during CEC repair

1. **Problem Description:** During LPAR quiesce/resume, Copy Services Manager may incorrectly show 'Severe' session status.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 334086

Incorrect status displayed after MT-PPRC failback

1. **Problem Description:** After successful PPRC failback in a Multi-Target environment, query of PPRC status continues to show 'Pri-Sus'
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 334362

Improvements: Improvements for better usability

Customer notification of failed callhome

1. **Problem Description:** Add serviceable event number, SRC, and problem text to Customer notification when callhome is not successful.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No

ID#: 333375

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