

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.11.32.0 Release Note Information v1.3

Release Date: December 14, 2016

VRMF Level Data Results:

VRMF level From:	88.11.25.0
VRMF Level To:	88.11.32.0
Report for:	All DS8880

Code Bundle Contents

DS8880 Code Bundle Level	SEA or LMC Version:	DS CLI Client	STAT Tool	Heat Map Transfer Utility	Storage Manager	Copy Services Manager
88.11.32.0	7.8.11.83	7.8.11.83	7.8.11.83	7.8.11.83	5.8.11.1037	6.1.3

Overview of new features and functions supported by this release on DS8884 283x model 980, DS8886 283x model 981, and DS8888 283x model 982

At a glance:

- DS GUI show GUID for Fixed Block devices
- Bug 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.

None.

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

Loss of access during Device Adapter replacement

- 1. Problem Description:** Temporary loss of access may occur during DA replacement in a large configuration, because of a microcode logic error.
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 315732

Adapter showstop errors on both Device Adapters

- 1. Problem Description:** A microcode logic error triggered repeated showstop errors on both DAs in the pair.
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 315843

ABORT VOL TASKS 2 error on nSeries systems

- 1. Problem Description:** Change the DS8K default QERR setting of 01 to 00 for nSeries hosts
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 317746

Incomplete list of bad sectors

- 1. Problem Description:** When processing the list of bad sectors during rank rebuild, the list may be incomplete if it is processed before the rank is back online. Full extent of data loss will be unknown.
- 2. Potential Impact of Problem:** A host scan of the potentially affected volume(s) is required.
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 319245

Copy Services TCB manager detected a deadlock

- 1. Problem Description:** Deadlock caused Cluster reboot. Subsequent deadlock could then cause the partner Cluster to reboot.
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 319838

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0x60CA timeout MLE

- 1. Problem Description:** Multiple microcode logic timeout errors were triggered by a specific CCW chain:
CCW RC/RCMT with ccwByteCount=8, followed by
Data Chain CCW RC/RCMT with any ccwByteCount
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 320238

Operating LPAR DSI during resume of partner LPAR

- 1. Problem Description:** A PCIe failure caused a warmstart during failback, exposing a timing condition that caused Cache Directory Control Block corruption. A second warmstart then hit the corruption, causing DSI.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 321939

0xE50 MLEs

- 1. Problem Description:** Failed cleanup of Task Control Block for task that was being retried
 - 2. Potential Impact of Problem:** Repeated warmstarts
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 321944

HIPER Global Mirror stops forming consistency groups after volume removal

- 1. Problem Description:** <http://www-01.ibm.com/support/docview.wss?uid=ssg1S1009636>
 - 2. Potential Impact of Problem:** Global Mirror error
 - 3. Problem Severity:** HIPER
 - 4. Pervasive Problem:** No
- ID#: 322264

LPAR DSI and reboot

- 1. Problem Description:** Easy Tier code is able to use up to 1GB of memory for statistic buffers. But ET hard-allocates only 256MB at IML. DSI occurs If statistic buffer utilization exceeds 256MB.
 - 2. Potential Impact of Problem:** loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID#: 322589

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

Very high sequential workloads affect random performance

1. **Problem Description:** With very high sequential workloads, cache hit ratios can decline for random workloads. Fix provides an optional persistent pokeable to increase retention of random workload tracks in cache.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 317717

Unable to remove FlashCopy relationship

1. **Problem Description:** A volume with format in process was interrupted by an unrelated warmstart. After the warmstart, the format was still in process, but did not actually resume.
2. **Potential Impact of Problem:** Unable to remove FLC relationship
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 318448

0x740D MLE

1. **Problem Description:** Global Mirror write thread encountered an invalid device ID because of a microcode logic error.
2. **Potential Impact of Problem:** Warmstarts
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 318952

0x01B7 MLE

1. **Problem Description:** Copy services lock is taking > 180mS to clear. Function change to use OS locking instead.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 319929

zLinux path errors during CDA

1. **Problem Description:** zLinux does not support the default QERR setting in DS8K, for fibre channel SCSI events. Fix maps zLinux to the 'nSeries' initiator type, which provides the correct QERR behavior.
2. **Potential Impact of Problem:** loss of path
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 320116

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I/O timeouts, performance degradation

- 1. Problem Description:** In systems with many small-extent ESE volumes, locking contention between I/O workload and Easy Tier processes may cause periods of performance degradation.
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 322228

0x4433 MLE with zHPF and DB2 castout accelerator

- 1. Problem Description:** In systems running XRC or Concurrent Copy, a timing window exists in multi-domain zHPF write chains with DB2 Castout Accelerator, where the prior domain is reflected in a portion of the command control structures rather than the current domain.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 322348

Service: A recoverable error, Service improvements.

Unable to offload DC-UPS internal data when DC-UPS is fenced

- 1. Problem Description:** Unable to retrieve internal debug data. Fix will offload the data prior to fencing the DC-UPS
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 291926

Secure Data Overwrite failure

- 1. Problem Description:** No completion certificate generated if overwrite process fails on HMC Hard drive.
- 2. Potential Impact of Problem:** Extended SDO process
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 307647

HMC contacting addons.mozilla.org

- 1. Problem Description:** Firefox language pack addons periodically check for updates. This is benign, but the traffic appears suspicious. HMC configuration has been changed to block the outbound traffic.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 314354

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Firefox requests profile update

- 1. Problem Description:** When HMC WUI has not been running for an extended period, Firefox requests a profile update at the next startup. Updating the profile will cause WUI failure, and can require HMC reload to recover.
 - 2. Potential Impact of Problem:** HMC WUI failure
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** No
- ID#: 317433

Update Assist OnSite fixpack

- 1. Problem Description:** AOS fixpack resolves certain types of connection failures.
 - 2. Potential Impact of Problem:** none
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** No
- ID#: 317789

Incorrect logging of 16Gb HA link counters

- 1. Problem Description:** Host Adapter ports logging incorrect send_buffer_zero counts because of a microcode logic error.
 - 2. Potential Impact of Problem:** none
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** No
- ID#: 317802

Improve remapping of host port definitions

- 1. Problem Description:** Version of DS GUI introduced in r7.4 requires a one-time remap of open system host port definitions. Fix provides an improved method to perform this task.
 - 2. Potential Impact of Problem:** none
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** Yes
- ID#: 317950

Multiple call-home for a single serviceable event

- 1. Problem Description:** HMC problem analysis may not properly determine that a serviceable event was already called in.
 - 2. Potential Impact of Problem:** none
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** No
- ID#: 318252

Secure Data Overwrite failure

- 1. Problem Description:** CEC hard drive mirroring could not be terminated because a member drive was not in a good state. Fix will perform additional checks prior to beginning SDO.
 - 2. Potential Impact of Problem:** Extended SDO process
 - 3. Problem Severity:** Service
 - 4. Pervasive Problem:** No
- ID#: 318506

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Copy Services enablement missing on LPARs

- 1. Problem Description:** Manufacturing process missed a Software PID enablement check
- 2. Potential Impact of Problem:** CMUN00023E error
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 318772

NI Client out of memory error

- 1. Problem Description:** When a connection failure occurs, server is retrying too quickly
- 2. Potential Impact of Problem:** None
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 319404

Serviceable event location code label incorrect

- 1. Problem Description:** Location code incorrectly labeled "serial number"
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 319787

Excessive "VOLSER changed" messages

- 1. Problem Description:** GUI is polling for VOLSER changes, but is logging even when the VOLSER did not change.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** Yes

ID#: 319969

VRAID adapter serial numbers not updated

- 1. Problem Description:** During VRAID adapter repair, enclosure serial number and firmware level are not updated in the new adapter.
- 2. Potential Impact of Problem:** Manual update required
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** Yes

ID#: 320106

Stale data in heartbeat callhome

- 1. Problem Description:** Heartbeat snap data was collected from the wrong location
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 320320

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lsddm displays incorrect DDM model information

- 1. Problem Description:** DSCLI appends capacity after the DDM family info which results in incorrect model info
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 320767

SRC=BE9C22A5 during code update

- 1. Problem Description:** Dual HMC environment may not properly track ICS images that need to be reinstalled during the code update process.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321040

VRAID adapter fan failure

- 1. Problem Description:** Threshold for fan failures is too low, resulting in difficulty differentiating between false triggers and real failures.
- 2. Potential Impact of Problem:** Unnecessary service actions
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321813

DDM firmware update did not complete

- 1. Problem Description:** During firmware update, drives may temporarily report a 'no detect' return code, causing the process to abort for the adapter pair. Fix will retry the operation.
- 2. Potential Impact of Problem:** DDMs left on older firmware
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 322343

Improvements: Improvements for better usability

Show volume GUID in DS GUI

- 1. Problem Description:** Show GUID in volume properties dialog and exported summary.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID#:320507

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