

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.1.54.0 Release Note Information v1

Release Date: December 13, 2016

VRMF Level Data Results:

VRMF level From:	88.1.40.0
VRMF Level To:	88.1.54.0
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
88.1.54.0	7.8.1.133	7.8.1.133	7.8.1.133	7.8.1.133	5.8.1.1060

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

Dual I/O enclosure fence after PCIe error

1. **Problem Description:** During PCIe error recovery on one I/O enclosure, the partner enclosure was also fenced because of a microcode logic error.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 316746

HIPER IOS078I on multiple paths

1. **Problem Description:** A sequential track had 'Invalidate Metadata' flag set, so was skipped during demote scan. But it's timestamp was not changed, so it remained the oldest track.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID#: 319030

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

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Unit check returns invalid SCSI sense data

1. **Problem Description:** Unit check sense data for LRC and Sequence Number errors is all zeros
2. **Potential Impact of Problem:** May cause unexpected host errors
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 319253

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

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:** High Impact
4. **Pervasive Problem:** No

ID#: 322264

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

0x5504 MLE

1. **Problem Description:** Microcode logic error triggered by PPRC datamover task timeouts. Fix will prioritize datamover tasks before they time out.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 312774

EasyTier volume assignments missing on one LPAR after CDA

1. **Problem Description:** Volumes assigned to a single tier may revert to multi-tier after CDA, because of a microcode logic error.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 313228

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0x014E MLE during CDA

- 1. Problem Description:** A microcode logic error may occur when ESE volume space release occurs during CDA
- 2. Potential Impact of Problem:** Warmstart, CDA suspend
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 315971

Multiple 0x1C14 MLEs

- 1. Problem Description:** A specific flash card failure exposed a microcode logic error processing the enclosure disk list.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 317477

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

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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

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

Network Interface server event queue wrapped

- 1. Problem Description:** GUI may not accurately reflect the current system state.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 302466

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

False reporting of internal fence condition

- 1. Problem Description:** During a repair action, healthcheck may run, and detect an internal fence condition. This can then cause the repair to fail.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 315294

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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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Unable to resume LPAR after repair

1. **Problem Description:** LPAR failed during CDA. After repair, LPAR would not resume to dual.
2. **Potential Impact of Problem:** Extended service window
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 318602

SRC=BE190009 displays incorrect text

1. **Problem Description:** HMC text description does not use same terminology as Knowledge Center.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 319337

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

False SRC=BE340006 Cabling error detected

1. **Problem Description:** Plug order lists for Rack 5 enclosures G18 and below.
2. **Potential Impact of Problem:** Extended service action
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 319820

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

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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

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

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

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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