

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.11.45.0 Release Note Information v1.1

Release Date: March 30, 2017

VRMF Level Data Results:

VRMF level From:	88.11.32.0
VRMF Level To:	88.11.45.0
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
88.11.45.0	7.8.11.125	7.8.11.125	7.8.11.125	7.8.11.125	5.8.11.1052	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:

- Remove all 8.1 Restrictions
- Model Conversion DS8870 to DS8886 (3 Phase Power Support)
- Pokables and ER Product Switches Query
- 800 GB 1.8" Flash Card
- 1.8 TB 1.8" Flash Card
- 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.

XRC data miscompare

1. **Problem Description:** A channel error occurred while processing a bitmap toggle command. The command was redriven, resetting bitmap values that should not have been reset.
2. **Potential Impact of Problem:** Loss of data on XRC secondary
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 324307

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

Call Home on first instance of a Host Adapter MLE

1. **Problem Description:** Original design of DS8K was not to call home for HA Microcode Logic Errors until the third occurrence. These are normally recoverable by warmstart, but in some cases, temporary loss of access can occur.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 310655

0x7F91 TCB manager deadlock

1. **Problem Description:** Cache was out of free segments, and a deadlock condition did not allow demote to free up additional cache segments.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 318029

Multiple DDMs rejected during loop recovery

1. **Problem Description:** Device Adapter loop instability can cause failures reading drive capacity information
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 322533

PPRC suspend caused by blocked path

1. **Problem Description:** PPRC path blocked because of a microcode logic error. PPRC still attempts to use the blocked path, and the transfers queue until they time out. Affected path(s) must be removed and reestablished to clear the condition
2. **Potential Impact of Problem:** PPRC suspend
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 324219

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HIPER Small-Extent volume missing extents

1. **Problem Description:** <http://www.ibm.com/support/docview.wss?uid=ssg1S1010480>
2. **Potential Impact of Problem:** Warmstarts, loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID#: 324390

IBM i LUN discovery problem

1. **Problem Description:** IBM i serial number prefix is captured incorrectly if it has a leading zero
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 324682

/var filesystem full

1. **Problem Description:** Temporary log jar files are accumulating. Can occur on HMCs or LPARs.
2. **Potential Impact of Problem:** Potential loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 324988

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

Inactive Multi-Target incremental out-of-sync tracks do not decrease

1. **Problem Description:** When an inactive MTIR relationship shares a target with an active global copy, the OOS bitmap does not decrease, even if there is no write activity
2. **Potential Impact of Problem:** Longer sync times
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 297591

Host reports sense F019 and stalled modules

1. **Problem Description:** Under certain conditions, a smart rebuild abort on a RAID-10 array may pause I/O to the array for ~5 seconds.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#:315393

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0x7D0E MLE

- 1. Problem Description:** XRC tried to release a lock that was not being held, causing a microcode logic error.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes

ID#:316139

No failover to remaining TPC Auth server after one TPC server failed

- 1. Problem Description:** Process to authenticate via LDAP became hung after one TPC Authentication server went down.
- 2. Potential Impact of Problem:** Unable to manage DS8K via TPC
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#:317761

0x1C92 MLE

- 1. Problem Description:** Device Adapter completion polling hit a DA spinlock timeout, which resulted in a Microcode Logic Error.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#:320420

0x4B05 MLE

- 1. Problem Description:** zHPF write I/O with > 55 records in a track is split into two DMAs. An error during the first DMA exposed a microcode logic error when attempting to process the second DMA.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#:320670

DDM media errors caused performance impact

- 1. Problem Description:** Fix lowers correctable media error thresholds
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#:321413

0x01B7 MLE

- 1. Problem Description:** When creating consistency groups, the functions to post long busy, and state change interrupt are synchronous functions that may exceed 1mS per device
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#:323455

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0x1159 MLE, data pinned in cache

- 1. Problem Description:** Read command was modified to become a write command, but DA did not allocate an extent to destage the write data.
- 2. Potential Impact of Problem:** Warmstart, pinned write data.
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** Yes

ID#:324675

Performance degraded on workloads dependent on hw reserves

- 1. Problem Description:** Hardware device reserve processing may delay allowing a disconnected device to reconnect
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 324961

Poor performance on IBM i host

- 1. Problem Description:** Improperly initialized fields may return incorrect data to a mode_sense command, causing frequent mode_select commands to be issued
- 2. Potential Impact of Problem:** degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#:325871

Service: A recoverable error, Service improvements.

Unable to resume LPAR after CDA suspend

- 1. Problem Description:** CDA suspended because of a procedural problem, but once the issue was found and corrected, multiple recovery actions were queued, and had to be manually cleared.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 315378

Frequent SNMP Trap202

- 1. Problem Description:** SNMP reporting large numbers of PPRC Freeze and Pause With Consistency events.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 316458

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Periodic Key Retrieval timeout

- 1. Problem Description:** Key retrieval timeout can occur if PKR runs within the first ~20 seconds after a warmstart
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 317359

No serviceable event generated for DDM failure

- 1. Problem Description:** DDM was rejected by DAHP while in the process of being spared out using smart rebuild.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 319400

Unable to remove key server using DS GUI

- 1. Problem Description:** DS GUI did not allow removal of a key server definition when only two are defined
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321108

CMUN00015E command execution timeout

- 1. Problem Description:** DSCLI 'lshostconnect -l' command timeout with large numbers of host connections. Fix implements a faster query method.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321112

Storage Enclosure install failure

- 1. Problem Description:** Storage enclosure install in Rack 3 failed because of errors in a plugOrder file
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321251

Some SRC=BE14EAFx events do not auto-close

- 1. Problem Description:** Serviceable events for Key Server connection problems should auto-close when the connection is restored.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321483

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Array and Rank creation slow or may time out

- 1. Problem Description:** Problem caused by internal server hard drive contention with a data scrubbing process.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 321536

Host map still exists after volume deletion

- 1. Problem Description:** After deleting a logical volume, the volume host mapping persists.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 322093

Invalid heat map data from ESS01

- 1. Problem Description:** EasyTier produces invalid heat map data for LPAR ESS01, if extent 0 of LUN 0 is performing I/O
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 322390

No SNMP alert after system firehose dump shutdown

- 1. Problem Description:** Check for power mode was done before HMC had established communication to the system.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 322408

Secure Data Overwrite false pre-check failure

- 1. Problem Description:** Drives were in a good state for SDO, but failed pre-check because a service state flag was not reset.
- 2. Potential Impact of Problem:** Extended SDO duration
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 322705

I/O bay MES install failure

- 1. Problem Description:** I/O bay install of bays 1B1 and 1B2 were incorrectly flagged as invalid locations.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 323178

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False V-RAID adapter fan errors

1. **Problem Description:** Increase error thresholds to reduce serviceable events for false fan errors.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes

ID#: 323259

PE Package offload via DSCLI returns false error

1. **Problem Description:** PE package offload can return a false failure if HMC has FTP offload enabled.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 323306

Incorrect translation in DS GUI

1. **Problem Description:** DS GUI incorrectly translates "KIOPS" for French language implementations.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 323848

Change Assist OnSite Access Control List group

1. **Problem Description:** Change to allow only the single AOS ACL group IBM/BLUE/GTS/EMEA/STORAGE/DS8000 for EMEA systems.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 324050

SRC=BE14EAF1 does not auto-close

1. **Problem Description:** HMC Key Manager communication errors should auto-close when communication is restored.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 324091

Security scan flags SLPd service active

1. **Problem Description:** Service Location Protocol service was left active when CIM Agent was not running
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 324342

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RSC terminated with broken pipe

- 1. Problem Description:** Remote Support Console missed connected message because it was mixed with other unexpected data
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 324800

Improvements: Improvements for better usability

Collect PE package from both HMCs

- 1. Problem Description:** In dual-HMC systems, PE package collection on one HMC will automatically collect data from both HMCs
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID#: 319477

Update AOS to latest 4.0.1

- 1. Problem Description:** Assist OnSite maintenance release
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID#: 320543

'Delete pool with Volumes' function

- 1. Problem Description:** Enable DS GUI function to delete a segment pool, and it's associated volumes, if they exist.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID#: 320927

Export CSV for "Volumes by LSS" function

- 1. Problem Description:** Add function in DS GUI to export volumes by LSS data to CSV file
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID#: 320935

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