

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

Date: July 26, 2021

### **VRMF Level Data Results:**

<b>VRMF level From:</b>	<b>87.50.114.0</b>
<b>VRMF Level To:</b>	<b>87.52.45.0</b>
<b>Report for:</b>	<b>DS8870</b>

### **Code Bundle Contents**

<b>DS8000 Code Bundle</b>	<b>SEA or LMC</b>	<b>DSCLI Client</b>	<b>STAT Tool</b>	<b>Easy Tier Client</b>	<b>Heat Map Transfer Utility</b>	<b>Storage Manager Code Level</b>
87.52.45.0	7.7.52.1370	7.7.52.1350	7.7.52.1350	7.7.52.1350	7.7.52.1350	5.7.52.1058
87.52.44.0	7.7.52.1350	7.7.52.1350	7.7.52.1350	7.7.52.1350	7.7.52.1350	5.7.52.1057
87.52.35.0	7.7.52.1060	7.7.52.1060	7.7.52.1060	7.7.52.1060	7.7.52.1060	5.7.52.1045
87.52.28.0	7.7.52.830	7.7.52.830	7.7.52.830	7.7.52.830	7.7.52.620	5.7.52.1036
87.52.19.0	7.7.52.620	7.7.52.620	7.7.52.620	7.7.52.620	7.7.52.620	5.7.52.1025
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
87.51.103.0	7.7.51.2700	7.8.24.11	7.7.51.2700	7.7.51.2700	7.7.51.2700	5.7.51.1123
87.51.93.0	7.7.51.2450	7.8.23.87	7.7.51.2450	7.7.51.2450	7.7.51.2450	5.7.51.1113
87.51.81.0	7.7.51.1990	7.7.51.1990	7.7.51.1990	7.7.51.1990	7.7.51.1990	5.7.51.1092
87.51.63.0	7.7.51.1400	7.7.51.1400	7.7.51.1400	7.7.51.1400	7.7.51.1400	5.7.51.1070
87.51.52.0	7.7.51.1110	7.7.51.1110	7.7.51.1110	7.7.51.1110	7.7.51.1110	5.7.51.1058
87.51.38.0	7.7.51.470	7.7.51.470	7.7.51.470	7.7.51.470	7.7.51.470	5.7.51.1041
87.51.23.4	7.7.51.69	7.7.51.66	7.7.51.66	7.7.51.66	7.7.51.66	5.7.51.1026
87.51.23.0	7.7.51.66	7.7.51.66	7.7.51.66	7.7.51.66	7.7.51.66	5.7.51.1026
87.51.14.0	7.7.51.48	7.7.51.48	7.7.51.48	7.7.51.48	7.7.51.48	5.7.51.1013
87.51.10.0	7.7.51.39	7.7.51.39	7.7.51.39	7.7.51.39	7.7.51.39	5.7.51.1013
87.51.5.0	7.7.51.18	7.7.51.18	7.7.51.18	7.7.51.18	7.7.51.18	5.7.51.1008
87.50.114.0	7.7.50.281	7.7.50.281	7.7.50.281	7.7.50.281	7.7.50.281	5.7.50.1303

This is a summary of the fixes in the R7.5 microcode releases.

### **Select Modifications Included in this Release Note:**

This is a list of modifications contained across one or more LIC levels (License Internal Code) or microcode release(s). The potential impact is variable. Specific environments may aggravate or degrade the potential impact.

Problem(s) reported in this release note may not be in higher levels of code bundles.

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Definition of Problem Severity:**

<b>1</b>	High Impact	- Acute: An irrecoverable error with potential loss of data. - Serious: An irrecoverable error with potential loss of access to data.
<b>2</b>	Moderate	- A function not operational and/or performance might be degraded.
<b>3</b>	Service	- A recoverable error (no impact) and service improvements.
<b>4</b>	Improvements	- Improvement changes for better Usability and Serviceability.

**HIPER:** High Impact problem that is Pervasive: 3 or more occurrences

**Acute: An irrecoverable error with potential loss of data.**

### **Inconsistent data on secondary after error recovery**

**1. Problem Description:** Error recovery while forming FlashCopy Consistency Groups, across multiple LSSs, may result in one or more LSSs coming out of freeze earlier than the others.

**Note:** Complete fix will require Co-Req APARs OA59936 (SDM) and PH26701 (GDPS)

**2. Potential Impact of Problem:** Data inconsistency

**3. Problem Severity:** High Impact

**4. Pervasive Problem:** No

**5. Release Bundle:** 87.52.44.0

ID#: 347624

### **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

**5. Release Bundle:** 87.52.28.0

ID# 341639

### **SRC=BE504940 on Flash Copy target volume**

**6. Problem Description:** While performing Copy Source to Target operation, a microcode error during host bay PCIe fabric recovery, resulted in a cache medium error.

**7. Potential Impact of Problem:** loss of data

**8. Problem Severity:** High Impact

**9. Pervasive Problem:** No

**10. Release Bundle:** 87.52.19.0

ID#: 333246

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.52.19.0
- ID#: 333464

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 334355

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 324307

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 319245

### **FlashCopy caused TFD mismatch on PPRC secondary**

1. **Problem Description:** Executing FlashCopy Establish to a target volume that is a PPRC primary, caused incorrect data to be written to the PPRC secondary.
  2. **Potential Impact of Problem:** loss of data
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 312069

### **HIPER XRC suspend, abend 9C4-10, No Record Found**

1. **Problem Description:** Write command with Bypass Extent Checking set, needs to still check for extent conflicts if prior I/Os did not also specify BEC.
  2. **Potential Impact of Problem:** Loss of Data on secondary
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 313493

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Flashcopy target volume deleted**

1. **Problem Description:** rmfbvol -force was issued to Flash Copy source devices with Extent Space Efficient targets. The relations were copy complete, persistent. The current design causes withdraw of the Flash Copy relations, releasing the space. Customer was using the target data and reported data loss.
  2. **Potential Impact of Problem:** loss of data
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 314380

### **HIPER Both V-RAID adapters fenced**

1. **Problem Description:** A flash card can fail in such a way as to expose microcode logic errors, that lead to fencing both V-RAID adapters.
  2. **Potential Impact of Problem:** loss of data and/or loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.4
- ID#: 312723, 313417

### **Enable PCIe ECRC checking for High Performance Flash**

1. **Problem Description:** End-to-end PCIe ECRC checking was disabled.
  2. **Potential Impact of Problem:** loss of data
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.10.0
- ID#: 309255

### **Failing DDM was not rejected**

1. **Problem Description:** Failed DDM is not rejected when Device Adapter is in takeover state.
  2. **Potential Impact of Problem:** loss of data
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.10.0
- ID#: 309406

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

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

### **HIPER HyperSwap may fail in Cascaded Metro Global Mirror managed by CSM**

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6259481>
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.45.0

ID# 350674

### **Production impact during incremental Flash Copy**

1. **Problem Description:** When managed out-of-band by CSM, the primary volume was being quiesced during PPRC failback.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.44.0

ID#: 331945

### **HIPER SRC=BE352662 Host Adapter zHPF Global CRC error**

1. **Problem Description:** An unusual zHPF chain led to CRC errors, and fencing of multiple Host Adapters.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.52.44.0

ID#: 345019

### **VRAID adapter left in service mode**

1. **Problem Description:** After a pseudo-repair of a VRAID adapter, the adapter was left in service mode. Subsequent repair of the partner adapter was allowed to proceed, causing loss of access.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.44.0

ID#: 346737

### **Repeated 0x0109 MLEs running Concurrent Copy**

1. **Problem Description:** 0x7D0E ODD Dump failed to clear a lock, leading to multiple 0x0109 MLEs and repeated warmstarts.
2. **Potential Impact of Problem:** Repeated warmstarts, single cluster reboot
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.44.0

ID#: 347490

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **0x05E0 MLE**

1. **Problem Description:** FlashCopy establish C->A was triggered while A->B was still in progress.
  2. **Potential Impact of Problem:** Warmstart, could lead to loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341222

### **Incorrect drive allocation in RAID-10 arrays**

1. **Problem Description:** Error conditions while creating arrays caused both primary and secondary drives to be on the same loop, creating a single point of failure
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341427

### **Failing PPRC links led to loss of access**

1. **Problem Description:** Repeated PPRC link recovery with large numbers of relationships can lead to an Out of Task Control Blocks condition on the primary system.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341443

### **Repeated 0x4143 MLE**

1. **Problem Description:** Mid-chain Locate Record / Erase commands sent by System Data Mover exposed a microcode logic error.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 342604

### **Repeated 0x4422 MLEs**

1. **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.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 340203

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Callhome if bypass power is set**

1. **Problem Description:** If the bypass power flag is set for > 1 month, create a serviceable event.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 331306

### **HIPER Dual disk enclosure controller failure**

1. **Problem Description:** A disk enclosure controller failed, and the surviving partner controller was unable to complete enclosure recovery actions.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.52.19.0
- ID#: 332765

### **Start Pending, devices boxed during PPRC suspend**

1. **Problem Description:** While attempting to recover a Global Mirror session that was in prepared/severe state, the suspend process was allowed an excessively long timeout value.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 333890

### **PPRC devices boxed**

1. **Problem Description:** After terminating a PPRC session through CSM, the 31 volumes in that session became boxed in z/OS
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 334957

### **Incorrect reporting of bad data block**

1. **Problem Description:** Sense data sent to IBM i host incorrectly identified the first block in the track as failed, rather than the actual failing block.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 335122



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HIPER High Performance Flash Enclosure dual expander hang**

1. **Problem Description:** During error recovery, i2c bus errors were not handled properly by V-RAID adapter firmware
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.52.19.0
- ID#: 335285

### **0x10F7 MLE**

1. **Problem Description:** Improper handling of multiple stage errors in a single adapter command caused microcode logic errors.
  2. **Potential Impact of Problem:** Repeated warmstarts, loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 335466

### **Permanent I/O errors after Hyperswap**

1. **Problem Description:** z/OS Metro/Global Mirror-Incremental Resync establish commands were issued to secondary devices in a suspended Global Mirror session. The commands were allowed to process because of incorrect status in a control block.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 337250

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 309450

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 325276

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 332004

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 332374

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 332581

### **HIPER Failover and cluster reboot during PCIe error recovery**

1. **Problem Description:** During PCIe error recovery, Device Adapter deconfiguration may hang while attempting to unload the device driver
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.103.0
- ID#: 300160

### **HPFE Gen1 logical disk failure**

1. **Problem Description:** During command timeout recovery, the SAS expanders may cause both V-RAID adapters to disconnect from the flash drives at the same time. This then causes the V-RAID adapters to fail multiple flash drives.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 326271

### **Cache LRU scan deadlock**

1. **Problem Description:** A microcode logic error caused the LRU list pointer to become stuck at the top of the list, rather than scanning up from the bottom.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 327821

### **0x014E MLE during LPAR quiesce**

1. **Problem Description:** PPRC context wait queue locking issue caused a microcode logic error during quiesce of an LPAR. This may cause a brief loss of access.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 308651

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Loss of access during VRA replacement**

1. **Problem Description:** When replacing a V-RAID Adapter, the array ownership was not transferred back to the new adapter
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 322318

### **0x2527 MLE and fenced Host Adapters**

1. **Problem Description:** When the system detects a physical address mismatch in metadata, it is incorrectly fencing HAs instead of failing over to the partner LPAR.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 323502

### **'IEA497I PERMANENT I/O ERROR' during Flashcopy establish**

1. **Problem Description:** Establishing a Multiple Incremental relationship on an existing Persistent FLC pair, may result in PARTNER\_OFFLINE sense.
  2. **Potential Impact of Problem:** May trigger Hyperswap
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 324600

### **Extended I/O hang during Device Adapter firmware recovery**

1. **Problem Description:** While a DA is in firmware error recovery, a secondary error on the partner DA can increase the duration of the overall recovery.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 325336

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 310655

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 318029

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 319838

### **Array offline, pinned data**

1. **Problem Description:** During device adapter recovery, function to disable adapter ports can take > 2 minutes to complete, causing temporary loss of access to arrays.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 320850

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 321944

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **TPC-R freeze caused by HMC internal network adapter issue**

1. **Problem Description:** Internal network issue between HMC and LPARs caused TPC-R missed heartbeats, and led TPC-R to issue a freeze, which in turn caused access loss to applications. Fix will lower the threshold to call home for the network adapter issue.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.81.0

ID#: 324396

### **Repeated warmstarts after processor memory riser failure**

1. **Problem Description:** Hardware failure in one cluster reduced it's available processor memory by half, exposing a memory management microcode error.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.63.0

ID#: 312745

### **Repeated PCIe fabric errors caused LoA**

1. **Problem Description:** During LPAR failover/failback, PCIe fabric errors on the failing LPAR can cause a loss of the last Device Adapter path.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.63.0

ID#: 312929

### **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
5. **Release Bundle:** 87.51.63.0

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
5. **Release Bundle:** 87.51.63.0

ID#: 315843

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 320238

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 322264

### **I/O timeout and host adapter MLE**

1. **Problem Description:** Two Track Commit was unable to allocate NVS slots, causing a deadlock, resulting in host adapter fence. In multipath configurations, this could fence multiple host adapters.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 310921

### **V-RAID unit check did not reset the adapter**

1. **Problem Description:** A V-RAID adapter was issuing repeated unit checks because expected recovery actions were not done.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 312824

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Loss of Access to RAID-6 arrays caused by DA NVRAM failure**

1. **Problem Description:** RAID-6 arrays may go offline for ~90 seconds after a Device Adapter NVRAM failure.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 313179

### **Storage Manager CMUN0410E error**

1. **Problem Description:** After a storage system power up, if encryption key servers are not available, DS GUI does not allow access to enter the recovery key.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 313345

### **GDPS freeze after Metro Mirror suspend**

1. **Problem Description:** Cache deadlock led to rank metadata prestage failures.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 313714

### **Ranks created without spares**

1. **Problem Description:** Ranks that should have been created with spares (6+P+S) were created without (7+P). If this happens with only two ranks on a DA Pair, no spares will be available.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 315128

### **Temporary loss of access and 0x14E MLE during failback**

1. **Problem Description:** A timing condition during cluster failback may result in NVS journal cleaner loop, that hangs the failback sequence for 30 seconds.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 316421



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Full copy required to recover from hyperswap in CFE mode**

1. **Problem Description:** Cascaded Failover Enhancement is a form of Multi-Target PPRC that allows failover to a 'B' copy. But the code did not allow recover from B -> A without doing a full copy.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.52.0

ID#: 316985

### **POR of host system may cause IFCCs on other hosts**

1. **Problem Description:** Power-On-Reset of System z host may result in DS8K 16Gb/S Host Adapters sending continuous Test Initialization (TIN) requests, until Host Adapters run out of exchanges.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.52.0

ID#: 317619

### **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
5. **Release Bundle:** 87.51.52.0

ID#: 317746

### **Array offline after Smart Rebuild abort**

1. **Problem Description:** Source DDM hang during smart rebuild caused the DDM to be rejected from the smart rebuild array, but not from the parent RAID-5 array, causing ~10 second loss of access
2. **Potential Impact of Problem:** Loss of access
3. **Problem Severity:** Serious
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.38.0

ID#: 289158

### **Device adapter hang during PCIe error recovery**

1. **Problem Description:** Device adapter performing a DMA operation couldn't release its lock during PCIe fabric recovery. Partner adapter had to wait for timeout and warmstarts to release the locks.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.38.0

ID#: 309129

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HIPER Device Adapter showstop**

1. **Problem Description:** After smart rebuild abort, the disk deconfigure process hangs, causing DDM replacement failures. If a second DDM fails in the same adapter pair, the prior deconfigure hang can lead to showstop of both DAs, and temporary loss of access.
2. **Potential Impact of Problem:** Loss of Access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.51.38.0

ID#: 309226

### **DA Takeover failed**

1. **Problem Description:** Rank state changes were not processed because periodic DATO path test processes were queued in the partner LPAR
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.38.0

ID#: 311068

### **LPAR /var filesystem full**

1. **Problem Description:** Essni logs were filling up /var
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.38.0

ID#: 311943, 312189

### **Repeated warmstarts with iSeries linked command chains**

1. **Problem Description:** A small timing window allows the next I/O in a linked command chain, before response was sent for the prior I/O.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.38.0

ID#: 313424

### **DSI on Both LPARs**

1. **Problem Description:** Define Subsystem Operation 0x77 (Manage Session Members) specifying an address range that contains 0xFF, will hold onto CPUs in an infinite loop.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.38.0

ID#: 314452

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HIPER Repeated V-RAID adapter resets**

1. **Problem Description:** A flash card failed in a way that led to repeated V-RAID adapter resets. Fix will detect the condition, and immediately bypass the failing flash card.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.4
- ID#: 312369

### **HIPER Track Format Descriptor mismatch**

1. **Problem Description:** Improper setting of flags leads to corruption of the modified sector bitmap.
  2. **Potential Impact of Problem:** Global Mirror suspend
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.4
- ID#: 312882

### **HIPER SVC mdisk offline**

1. **Problem Description:** SAN Volume Controller managed disk went offline when a DS8870 microcode logic error caused fixed block task timeouts.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.4
- ID#: 313106

### **HIPER Host adapter 0x4B0E MLE**

1. **Problem Description:** zHPF workload was transferring a long chain of small records. The DS8K split the transfer into two DMAs, exposing a problem with the calculation for notAlignedBytes.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.0
- ID#: 308467

### **DC-UPS internal fence incorrectly cleared**

1. **Problem Description:** During DC-UPS repair, all partner power cables were not verified before clearing DC-UPS internal fence.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309660

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HIPER Cluster hang during failover**

1. **Problem Description:** When cluster failover is preceded by quickstart, the 'surviving' cluster fails to get the statesave lock, causing it to hang in "Cluster Failover" state.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.14.0
- ID#: 308404

### **FlashCopy with FRR set can encounter microcode logic error 0x7002**

1. **Problem Description:** Release 7.4 introduced a change to copy services that can result in an invalid timestamp being detected. This error can cause a dual cluster reboot.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.14.0
- ID#: 310103

### **LPAR timezone incorrectly set to 'null'**

1. **Problem Description:** null timezone can cause a failure in some error log analysis routines, resulting in problems going unreported.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.10.0
- ID#: 307696

### **Cache segment depletion in systems with 16GB system memory**

1. **Problem Description:** Too many tracks are being kept on CPU queues, in proportion to the available cache.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** High Impact
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.10.0
- ID#: 308476

### **HIPER Loop errors caused multiple DDM rejections**

1. **Problem Description:** Degraded loop led to array members being marked 'Security Degraded', which then caused them to be rejected from the array.
  2. **Potential Impact of Problem:** loss of access
  3. **Problem Severity:** HIPER
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.5.0
- ID#: 303528

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Remote FlashCopy failure**

1. **Problem Description:** During CDA, existing PreserveMirror FlashCopy relationships failed with msg ADR935W. Problem affects incremental PMFLC relationships, when updating to r7.4 levels, from a pre-7.4 level.
2. **Potential Impact of Problem:** Flashcopy failure
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.5.0

ID#: 307524

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

### **Resource Manager failure**

1. **Problem Description:** Resource Manager runs out of Adapter Platform Object Model file descriptors.
2. **Potential Impact of Problem:** Copy Service Manager/CS Toolkit communication failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.52.44.0

ID#: 320360

### **0x05E0 MLE**

1. **Problem Description:** A task freed it's lock before it was completely done processing.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.44.0

ID#: 347497

### **I/O bay repair failed deactivation**

1. **Problem Description:** On systems with 128 host ports, Host Adapter resource managers may run out of memory
2. **Potential Impact of Problem:** Extended I/O bay repair
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.52.35.0

ID#: 339888

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **0x4477 MLE**

1. **Problem Description:** A zHPF multi-track read operation encountered a microcode logic error during end-of-chain processing.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 340236

### **Rank depopulation failed**

1. **Problem Description:** Background QuickInit failed to acquire a Task Control Block
  2. **Potential Impact of Problem:** DePop failure
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341636

### **0x0632 MLE**

1. **Problem Description:** End-of-chain processing began while still processing a CKD write domain.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.52.35.0
- ID#: 342547

### **0x1645 MLE**

1. **Problem Description:** Device Adapter failure during array rebuild exposed a microcode logic error when bad sectors exist
  2. **Potential Impact of Problem:** Warmstart, cluster failover
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 344894

### **High read response times**

1. **Problem Description:** Excessive cache is being allocated to sequential workloads causing increased cache demote of random tracks.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.52.35.0
- ID#: 345393

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Performance degradation when one MTMM leg is suspended**

1. **Problem Description:** In Multi-Target Metro Mirror configuration, using zHyperWrite, when one of the target relationships is suspended, the MTMM primary shows some increase in disconnect times.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.28.0

ID#: 332739

### **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
5. **Release Bundle:** 87.52.28.0

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
5. **Release Bundle:** 87.52.28.0

ID#: 336221

### **PPRC Suspended**

1. **Problem Description:** PPRC multi-track writes deadlocked with safe data commit scan of cache metadata.
2. **Potential Impact of Problem:** PPRC Suspend
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.28.0

ID#: 337297

### **Host Adapter path fail after warmstart**

1. **Problem Description:** Abort during Process Logout phase left behind a stale exchange, preventing link cleanup.
2. **Potential Impact of Problem:** loss of path
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.28.0

ID#: 338688

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
5. **Release Bundle:** 87.52.28.0

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
5. **Release Bundle:** 87.52.28.0

ID#: 339936

### **0x05E0 MLE**

1. **Problem Description:** Locking exception while a PAV alias device is trying to query whether the base device has a reserve.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.52.19.0

ID#: 331106

### **0x0109 MLE running DELPAIR when single cluster**

1. **Problem Description:** A locking exception can occur when primary is running single cluster, and there are no paths to the secondary.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.19.0

ID#: 332574

### **Performance issues with low-volume PPRC workloads**

1. **Problem Description:** Add persistent pokeable csmgrSyncLowTierOnePart = 1 and make this the default setting.
2. **Potential Impact of Problem:** Performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.52.19.0

ID#: 337459



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 325339

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 330289

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 331663

### **0x01B7 MLE**

1. **Problem Description:** PPRC Write Intercept encountered a locking exception.
  2. **Potential Impact of Problem:** ODD dump
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.103.0
- ID#: 312361

### **PPRC Lock Contention and 0x01B7 MLE**

1. **Problem Description:** Track Access Write Intercept may encounter lock contention on systems with 96 CPUs
  2. **Potential Impact of Problem:** ODD dump
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 312654

### **0xDDA4 MLE during Easy Tier migration**

1. **Problem Description:** On large systems, Easy Tier may time out while searching for free segments
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 316701

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Repeated 0x01B7-506A MLE**

1. **Problem Description:** Copy services lock contention timeout on a lock that did not need to be active.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.103.0
- ID#: 319267

### **0x01B7 MLE**

1. **Problem Description:** Lock contention in Write Intercept path
  2. **Potential Impact of Problem:** ODD dump
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 320826

### **0x01B7 MLE scanloop timeout**

1. **Problem Description:** CPU lock contention may cause task control block starvation in copy services environments.
  2. **Potential Impact of Problem:** ODD dump
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 324202

### **0x166A MLE during DDM firmware update**

1. **Problem Description:** During DDM firmware update, DDM exceeded the pre-emptive reconstruct timeout value
  2. **Potential Impact of Problem:** ODD dump
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 325105

### **0x01B7 MLE**

1. **Problem Description:** Global Mirror collision function incorrectly setting Extended Distance Consistency session locks.
  2. **Potential Impact of Problem:** degraded performance, ODD dumps
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.103.0
- ID#: 325696

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Global Mirror suspend while removing a volume from the session**

1. **Problem Description:** Volume removal exposed a timing window where a consistency group was beginning to form, but was not yet aware that the volume had been removed from the session.
  2. **Potential Impact of Problem:** Global Mirror suspend
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 329059

### **LRC error incorrectly fenced a Host Adapter**

1. **Problem Description:** Sector LRC was good across the 524-byte IBM i sector, but was not good across the 512-byte data portion. When the sector was subsequently read, the data area LRC was not checked until it got to the host adapter.
  2. **Potential Impact of Problem:** loss of path
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 330688

### **0x1155 MLE**

1. **Problem Description:** A locking exception within a small timing window caused a mismatch between segment tables
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 310101

### **0x01B7 MLE allocating ESE volumes**

1. **Problem Description:** When allocating Extent Space-Efficient volumes, management processes may exceed the lock timeout duration.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.93.0
- ID#: 310866

### **RPO increased after code load**

1. **Problem Description:** Copy Services metadata pre-stage function was not pre-staging enough metadata tracks
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 317758

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **PPRC suspend during cluster resume**

1. **Problem Description:** PPRC path management failed to properly resume paths
  2. **Potential Impact of Problem:** PPRC suspend
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.93.0
- ID#: 319201

### **0x5039 MLE during volume unmap**

1. **Problem Description:** Quiesce requests for full-volume SCSI write same/unmap commands use the full-volume quiesce logic, which does not work for unmaps
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 320538

### **PPRC pair suspend while processing Write Same command**

1. **Problem Description:** PPRC primary that supports Write Same command may not properly determine whether that command is also supported by the PPRC secondary. Affects installations where PPRC secondary is running a LIC bundle level lower than R7.1.
  2. **Potential Impact of Problem:** PPRC suspend
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 321198

### **0x522F MLE when > 4096 datamovers on a PPRC port**

1. **Problem Description:** When a PPRC port exceeds 4096 datamovers, a microcode logic error incorrectly triggers a warmstart
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 322637

### **FHD devices remain fenced after CEC hard drive rebuild**

1. **Problem Description:** After rebuilding the CEC hard drives, the FireHose Dump devices were fenced again by the partner LPAR, preventing resume to dual-cluster mode.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 325945

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **DA Async Secondary mode is not enabled on PPRC 'C' system**

1. **Problem Description:** In 'ABCD' PPRC environment, DA Async Secondary mode could not be enabled, because the volumes are also Global Copy primary for the 'D' system.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.93.0
- ID#: 327045

### **Unable to recover lost paths**

1. **Problem Description:** Alias devices were removed while still online. System continued to attempt to write to those devices. When the operation failed, Sequence Buffer Memory was not being freed.
  2. **Potential Impact of Problem:** loss of path
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 328572

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 297591

### **0x7003 MLE**

1. **Problem Description:** Cache attempts to read or write the csStatus member of a Task Control Block after the TCB has been reallocated
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.81.0
- ID#: 310235

### **Host Adapter MLE**

1. **Problem Description:** Host adapter reported TX\_DMA error on an inactive link
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 312819

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 315393

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 317761

### **0xB02C MLE**

1. **Problem Description:** During live reset while processing an ODD, FICON operations do not terminate, and as a result, the live reset times out and forces a warmstart.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 317775

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 320420

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
5. **Release Bundle:** 87.51.81.0

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
5. **Release Bundle:** 87.51.81.0

ID#: 321413

### **0x1321 MLE**

1. **Problem Description:** Device Adapter config request structure was cleared by the partner adapter
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.81.0

ID#: 322736

### **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
5. **Release Bundle:** 87.51.81.0

ID#: 324961

### **I/O error when withdrawing FlashCopy relationship**

1. **Problem Description:** Withdraw issued to FLC relationship with multi-incremental change recording, can hit a timing window where the target volume is withdrawn, and an I/O occurs before the source has also been withdrawn.
2. **Potential Impact of Problem:** I/O error, could trigger Hyperswap
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.81.0

ID#: 324943



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **MT-PPRC pairs could not be deleted**

1. **Problem Description:** Unable to delete pairs when paths are no longer defined, because placeholder CU serial number does not match.
  2. **Potential Impact of Problem:** Extended Global Mirror recovery
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 309151

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 312774

### **Easy Tier 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 313228

### **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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 317477

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
5. **Release Bundle:** 87.51.63.0

ID#: 317717

### **LPAR DSI and failover during I/O bay repair**

1. **Problem Description:** DSI caused by a microcode logic error while updating bay firmware
2. **Potential Impact of Problem:** Warmstart, degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.63.0

ID#: 318189

### **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
5. **Release Bundle:** 87.51.63.0

ID#: 318448

### **Performance impact during Flash Card firmware update**

1. **Problem Description:** Flash Card failed while downloading firmware, causing command timeouts. This impacted Flashcopy synchronous destage.
2. **Potential Impact of Problem:** degraded performance, warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.63.0

ID#: 318889

### **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
5. **Release Bundle:** 87.51.63.0

ID#: 318952

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **0x1101 MLE during failback**

1. **Problem Description:** During failback after CDA update of first LPAR, an internal timestamp mismatch triggered a microcode logic error.
  2. **Potential Impact of Problem:** Warmstart, CDA suspend
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 319639

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 320116

### **0x1C3D MLE during flash rank create or delete**

1. **Problem Description:** VRAID adapter processing two Query Array Config commands at the same time, caused a microcode logic error.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.52.0
- ID#: 308351

### **0x5168 MLE with 145 ranks configured**

1. **Problem Description:** When 145 total ranks are configured, incorrect data transfer on Log sense 34h command can trigger a microcode logic error.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 310447

### **0x07D2 MLE during host adapter repair**

1. **Problem Description:** False interprocessor timeouts are being reported during repair, causing a microcode logic error.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 310678

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **I/O timeouts, transaction purge**

1. **Problem Description:** A failing DDM in a RAID-5 array may impact write performance, until it is rejected from the array.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 311955

### **Bypass Extent Check not working**

1. **Problem Description:** Using the Change Recording bit as an indicator that FlashCopy is active, is no longer reliable.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 312392

### **0x01B7 MLE when establishing MT-PPRC**

1. **Problem Description:** Establishing Multi-Target PPRC relation fails with a locking exception.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.52.0
- ID#: 312779

### **Performance impact during host adapter update**

1. **Problem Description:** PPRC was continuing to use a path that was experiencing errors. Host adapter update recycled the good path, exposing the problem.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 312808

### **Host Adapter MLE on zHPF write**

1. **Problem Description:** A zHPF write having more than 55 records exposes a microcode logic error
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 312842

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Device Adapter MLE**

1. **Problem Description:** Hot Spare flags were not properly initialized.
  2. **Potential Impact of Problem:** Adapter dump, Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 314144

### **0x700B MLE**

1. **Problem Description:** A timing window exists when a Consistency Group fails, and a Global Copy collision was in flight, Global Mirror may think the GC collision is still in flight, triggering a microcode logic error.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 314648

### **Slow DB2 Reorg on System z.**

1. **Problem Description:** Unusual PAV configuration resulted in EasyTier heat data being presented to the host on an alias device. Fix will check that the device being used for offload is in an active path group, and that it is not an alias device.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 314718

### **0x5E0 MLE, and fenced cluster**

1. **Problem Description:** A timing window exists where a V-RAID adapter is being configured and a periodic process to collect rank and adapter statistics receives invalid data, triggering an LPAR crashdump.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 315779

### **0x1C3C MLE during array create**

1. **Problem Description:** Log sense timeout in davradisklist and davradiskinfo routines.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 317511

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Easy Tier not re-enabled after CDA**

1. **Problem Description:** Automate the removal of the Easy Tier disablement during CDA if 'from' level is not an R7.0 or R7.0.5 level
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.52.0
- ID#: 319607

### **0x9F1B MLE**

1. **Problem Description:** An RPC communication error was not handled gracefully.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.38.0
- ID#: 262354

### **0x7D13 MLE**

1. **Problem Description:** A function that checks for out-of-sync track bitmap corruption, caused an out-of-order locking exception
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.38.0
- ID#: 302086

### **PPRC full copy when Brocade fast write is enabled**

1. **Problem Description:** A PPRC incremental operation performed a full copy, because Brocade fast write was not handled properly.
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 307648

### **PPRC bad path caused suspend**

1. **Problem Description:** Link errors on one PPRC path caused suspend, when other good paths were available
  2. **Potential Impact of Problem:** PPRC Suspend
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 307668

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Global Mirror long response time**

1. **Problem Description:** Path errors while processing global copy collisions can result in long response times
  2. **Potential Impact of Problem:** degraded performance
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 308049

### **Long global mirror RPO times**

1. **Problem Description:** Changes made for Multi-Target PPRC support exposed a microcode logic error that results in delays forming consistency groups. This can be seen most often when a large number of volumes have low activity.
  2. **Potential Impact of Problem:** Increased RPO
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.38.0
- ID#: 309360

### **HMC /var filesystem full**

1. **Problem Description:** dmesg log file was not being rotated
  2. **Potential Impact of Problem:** Unable to control system/CS relations
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311539

### **0x629 MLE**

1. **Problem Description:** Microcode logic error caused by cross-cluster mail locking exception
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311562

### **PPRC extended query reports volume pending status**

1. **Problem Description:** When performing flashcopy to a Global Mirror volume pair, the volume status always shows as 'pending'. The underlying state was intended to only be used for Metro Mirror pairs.
  2. **Potential Impact of Problem:** May cause DR test to fail
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311653

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Virtual Command Ring full**

1. **Problem Description:** Size of VCR is not large enough for very large FICON read I/O chains
  2. **Potential Impact of Problem:** Interface Control Checks
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311893

### **Battery End-of-Life detection**

1. **Problem Description:** Weekly proactive check for battery EoL date fails to properly detect battery age
  2. **Potential Impact of Problem:** No early warning of battery EoL
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312447

### **0xB40B MLE**

1. **Problem Description:** I/O responses can be put on the wrong response queue when processing linked command chains on IBM i hosts
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 314765

### **0x7D13 MLE**

1. **Problem Description:** A function that checks for out-of-sync track bitmap corruption, caused an out-of-order locking exception
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.4
- ID#: 302086

### **Long global mirror RPO times**

1. **Problem Description:** Changes made for Multi-Target PPRC support exposed a microcode logic error that results in delays forming consistency groups. This can be seen most often when a large number of volumes have low activity.
  2. **Potential Impact of Problem:** Increased RPO
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.4
- ID#: 309360



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **PPRC extended query reports volume pending status**

1. **Problem Description:** When performing flashcopy to a Global Mirror volume pair, the volume status always shows as 'pending'. The underlying state was intended to only be used for Metro Mirror pairs.
2. **Potential Impact of Problem:** May cause DR test to fail
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.23.4

ID#: 311653

### **Cross-cluster DMA failure during cluster resume**

1. **Problem Description:** When a failover is caused by a PCIe fabric error, the I/O bay is recovered during the failover but the cross-cluster DMA engine is not properly cleaned up. This causes a failure when we attempt to use the bay during resume to dual cluster.
2. **Potential Impact of Problem:** Extended service action
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.51.23.0

ID#: 284229

### **Improve Easy Tier random vs sequential calculations**

1. **Problem Description:** Easy Tier may promote hot extents based on total IOPS, that may not be the best candidates for SSD or flash.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.23.0

ID#: 304652

### **'Refresh Cache' message in DS GUI**

1. **Problem Description:** After logging into DS GUI on systems with a large number of volumes, a GUI cache refresh process may run for an extended period, preventing use of the DS GUI until the refresh finishes.
2. **Potential Impact of Problem:** Unable to manage the storage
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
5. **Release Bundle:** 87.51.23.0

ID#: 305188

### **HA port offline, logs false SRC=BE9C7890**

1. **Problem Description:** Host Adapter port online process may take longer than the time allotted.
2. **Potential Impact of Problem:** loss of pathnone
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
5. **Release Bundle:** 87.51.23.0

ID#: 309118

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **0x27CA MLE**

1. **Problem Description:** Metadata mismatch on track 0 causes warmstart. Behavior will change to do On Demand Dump instead.
  2. **Potential Impact of Problem:** Warmstart
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309992

### **Long Flash Copy increment-last times with Preserve Mirror**

1. **Problem Description:** Establish command is waiting for the change recording bitmap merge to complete. The delay is proportional to volume size.
  2. **Potential Impact of Problem:** Delayed FLC establish
  3. **Problem Severity:** Moderate
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 310373

## **Service: A recoverable error, Service improvements.**

### **AOS connection failure**

1. **Problem Description:** Assist OnSite connection via proxy fails, and AOS must be restarted.
  2. **Potential Impact of Problem:** Remote support access failure
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 327293

### **Rank creation fails with SRC=BE51627A**

1. **Problem Description:** Initial rank creation failed because a flash drive failed format. After drive replacement, stale format progress status remained in the VRAID adapter, causing subsequent rank creation attempts to fail.
  2. **Potential Impact of Problem:** Unable to create a rank
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 330929

### **ODD dump format failure**

1. **Problem Description:** During ODD dump formatting, stale data in the dump caused a failure to format post-statesave data, used in copy services analysis.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 334613

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HPFE Gen2 firmware fails to update during MES**

1. **Problem Description:** During install of new HPFE Gen2 enclosures or drive sets, the firmware update may begin before format is finished.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 336177

### **Test Callhome utility failure**

1. **Problem Description:** When running Test Callhome utility, two synchronous processes conflict, causing process hang and eventual test failure.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 346851

### **CMUN80000E login failure after Customer network IP change**

1. **Problem Description:** If the first configured remote authentication URL is unreachable, HMC does not retry over the second configured URL.
  2. **Potential Impact of Problem:** Unable to authenticate via LDAP
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 346946

### **AOS config panel display incorrect**

1. **Problem Description:** AssistOnSite config panel displays incorrectly when authenticated proxy is configured with a password containing "@".
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 348208

### **mkarray failed with CMUN02013E**

1. **Problem Description:** In device adapter pairs with an intermix of drive capacities and speeds, an array site may become intermixed because of prior failures and subsequent repair actions. If an intermixed array is removed, the intermix condition may prevent reconfiguring the array.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 348279

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HMC heartbeat callhome triggers SNMP alert**

1. **Problem Description:** If SNMP is configured for Trap 3 notifications, after the next HMC reboot, SNMP will begin also reporting Trap 13 events.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 348520

### **HMC WUI fails CE and Customer login**

1. **Problem Description:** CE or Customer login returned "Invalid user name or password specified" because of a Pluggable Authentication Module (PAM) failure.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 348649

### **NTP server config missing after HMC update**

1. **Problem Description:** Function to remove default public NTP servers can also remove Customer-configured public NTP servers.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.44.0
- ID#: 348834

### **CMUN80000E DS Network server is unavailable**

1. **Problem Description:** When remote authentication is enabled, local admin user could not connect because authentication request is being sent to LDAP
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 334265

### **0x723E MLE**

1. **Problem Description:** When deleting a Fixed Block volume, not all metadata for the volume was deleted.
  2. **Potential Impact of Problem:** On Demand Data (ODD) dump
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 337002

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **CMUN04003E lshost: Operation failure: internal error**

1. **Problem Description:** When creating a very large number of host port definitions, internal Resource Manager query may exceed the allowed memory page size
  2. **Potential Impact of Problem:** Cannot display/create host ports
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 339127

### **Unable to download code bundles from Fix Central**

1. **Problem Description:** System was configured with administrator contact in a different country, and download did not try entitlement using both country codes
  2. **Potential Impact of Problem:** Unable to perform Remote Code Load
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 340798

### **DSCLI unable to connect**

1. **Problem Description:** HMC had ESSNI queue full condition, and did not redirect DSCLI request through the partner HMC
  2. **Potential Impact of Problem:** DSCLI command failures
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 340933

### **Collect additional code levels in heartbeat data**

1. **Problem Description:** Heartbeat collected code levels file only contains HMC and ICS related entries. Process improved to collect all currently installed levels.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341259

### **HMCs inaccessible**

1. **Problem Description:** Java.net.SocketException: Too many open files error caused by use of an incorrect parameter
  2. **Potential Impact of Problem:** Unable to monitor/control DS8000
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341328

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Unable to repair failed DDM**

1. **Problem Description:** Replacement drive was rejected because a stale resource manager attribute was not cleared by the repair.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 341505

### **DSCLI CMUN00018E message on HP-UX host**

1. **Problem Description:** HMC code incorrectly attempted to connect using the wrong SSL protocols
  2. **Potential Impact of Problem:** Host unable to connect to HMC
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 342415

### **Deleted user ID reappears after reboot**

1. **Problem Description:** When default local users like 'CE' or 'Customer' have been deleted, logic to recreate them during reboot was not suppressed.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 342469

### **Spectrum Control out-of-memory condition**

1. **Problem Description:** Log processor queue can fill faster than logs are able to be written to file
  2. **Potential Impact of Problem:** Frequent out-of-memory dumps
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 342724

### **Unable to set SIM reporting to 4**

1. **Problem Description:** Setting SIM reporting to 4 (none) results in an 'invalid value' message
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 342765, 342956

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Spectrum Control NullPointerException**

1. **Problem Description:** NullPointerException connecting to ESSNI service in HMCs
  2. **Potential Impact of Problem:** Unable to monitor the system
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 342857

### **Auto PE Package offload failure**

1. **Problem Description:** Function was present in code, but was not enabled.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 343769

### **DSCLI 'shows' incomplete output**

1. **Problem Description:** DSCLI 'shows' output does not show power and environmental output
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 343854

### **Heartbeat interval changed after CDA**

1. **Problem Description:** After HMC transformation or rebuild, heartbeat callhome reverts to the default 7 day interval.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 344092

### **DS GUI CMUN80564E message loading cache**

1. **Problem Description:** In systems with large numbers of volume groups, the query selection string exceeds the maximum length
  2. **Potential Impact of Problem:** DS GUI failure
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 344232

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **False BE19B084 SRC during RPC replacement**

1. **Problem Description:** While replacing Rack Power Control card, a new serviceable event was posted because of a register mismatch condition.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.35.0
- ID#: 344546

### **0x01B7 MLE**

1. **Problem Description:** Lock contention during Copy Services write intercept to set/reset track Out of Sync bit
  2. **Potential Impact of Problem:** On Demand Data (ODD) dump
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.52.28.0
- ID#: 330095

### **Auto-Offload PE package incomplete**

1. **Problem Description:** Auto-offload process sent the PE package before all compress operations were completed.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 336710

### **SRC=BE3825A8 FRU list incomplete**

1. **Problem Description:** PCIe link failure SRC=BE3825A8 included the PCIe adapters in the CEC and I/O bay, but did not include the PCIe cable that connects between them
  2. **Potential Impact of Problem:** Extended service actions
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 336848

### **Serious alert, but no callhome**

1. **Problem Description:** Callhome of the event was left disabled by a prior failed repair attempt that was aborted by HMC reboot.
  2. **Potential Impact of Problem:** Callhome failure
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 337554



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Expand FRU list for SRC=BE316003**

1. **Problem Description:** Improve FRU call for transient LRC errors on Device Adapter loops
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 337555

### **Unable to terminate MTIR pairs**

1. **Problem Description:** Multi-Target Incremental Resync secondary pairs could not be manually terminated, where no path exists between the two secondary storage systems.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 339236

### **SRC=BE610034 after Secure Data Overwrite**

1. **Problem Description:** After SDO completes, if HMC is rebooted, SRC is logged for unexpected reboot during SDO.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 339446

### **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
  5. **Release Bundle:** 87.52.28.0
- ID#: 339486

### **REST API fails to connect**

1. **Problem Description:** REST functions intermittently failing with internal SRC=BE7A1012 error
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 339516

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Callhome entitlement failure**

1. **Problem Description:** System was attempting to call home using an incorrect machine type/serial number.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 339664

### **SRC=340029 during update to R7.5 SP10**

1. **Problem Description:** An HMC function failed to run after HMC update, because the LPARs were not yet updated with the companion function.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 340029

### **Incorrect Copy Services User access controls**

1. **Problem Description:** Users with "Copy Services User" role are able to view and export log data that they should not be able to access.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 340362

### **DS GUI 'Events' view empty after CDA**

1. **Problem Description:** After code bundle upgrade, a missing javascript file causes DS GUI to show an empty 'Events' view
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 341226

### **DS GUI displays wrong LIC bundle level**

1. **Problem Description:** DS GUI incorrectly parsed the CDA history
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 327155

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.52.19.0
- ID#: 328549

### **Unable to change array scrub rate**

1. **Problem Description:** Change to array scrub rate was rejected because another resource value was incorrectly initialized.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 331744

### **DS GUI did not display VOLSER of a CKD volume**

1. **Problem Description:** When a new volume was created, DS GUI did not refresh the VOLSER, because there was no old VOLSER to update.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 331799

### **CMUN80973E when enabling encryption**

1. **Problem Description:** Error in configuring HMC as KMIP proxy
  2. **Potential Impact of Problem:** loss of data, loss of access, loss of path, degraded performance, none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 332881

### **CMUN00018E error accessing DS GUI or DSCLI**

1. **Problem Description:** ESSNI process fails to start because of an endless loop while processing user id / password pairs
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 333019

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.52.19.0
- ID#: 333280

### **False SRC=BE33CE9C logged during warmstart**

1. **Problem Description:** During warmstart, Device Adapter reset code incorrectly flags a temporary loss of access.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 333586

### **Heartbeat callhome failed**

1. **Problem Description:** Memory leak in resource action used by ESSNI
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.52.19.0
- ID#: 334120

### **Remote login authentication fails intermittently**

1. **Problem Description:** High volume of authentications, or DSCLI 'testauthpol' commands, can lead to a Java out-of-bounds condition.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 334449

### **HMC backups could fill up /var filesystem in LPARs**

1. **Problem Description:** Function to prune old backup files fails to remove the files.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 336080

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **CDA suspended because of open problem**

1. **Problem Description:** SRC=BE14EAF1 is logged for TKLM/SKLM communication error. This should not impact Code Load, and can be ignored.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 336646

### **Java.lang.OutOfMemoryError on LPARs**

1. **Problem Description:** Copy Services Commands contained too many repetitive strings
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 337260

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 281869

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 329715

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 331802

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 331820

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 332561

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- 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
  5. **Release Bundle:** 87.51.121.0
- ID#: 334362

### **DSCLI lsarraysite, lsextpool, and lsioport fail with CMUN00015E**

1. **Problem Description:** Command hang when failing internal query of fibre channel ports caused an out-of-memory condition.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.103.0
- ID#: 323754



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **DS GUI unable to delete an extent pool**

1. **Problem Description:** Removal of an empty extent pool failed with CMUN02258E message, saying ranks were still assigned.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 311843

### **DSCLI will not install in Windows 10 environment**

1. **Problem Description:** DSCLI installer using an older version of InstallAnywhere that is not compatible with Windows 10
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 314695

### **'End-of-Call' check could not show open serviceable events**

1. **Problem Description:** Routine to list serviceable events encountered a Java null pointer exception
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 321619

### **HMC hang caused by network adapter error**

1. **Problem Description:** USB-Ethernet adapter errors on some T540 HMCs. The errors are related to the specific USB port that is being used. Fix allows connecting the adapter to a different USB port.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.93.0
- ID#: 323303

### **Easy Tier missing statistics**

1. **Problem Description:** Easy Tier Application volume statistics do not show detailed workload statistics
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 323642

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Resource object mismatch between Ranks and Segment Pools**

1. **Problem Description:** Rank and Segment Pool objects may not show accurate counts in DSCLI.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 323761

### **ESSNI does not use alternate path**

1. **Problem Description:** When one HMC has communication problems with the LPARs, ESSNI commands are not being retried on the alternate HMC.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 324209

### **HPFE error counts combine stats from both VRAs**

1. **Problem Description:** The thresholding of Gen-1 High Performance Flash Enclosure error counters does not show separate counts for each V-RAID adapter.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 324828

### **Improve missing drive isolation**

1. **Problem Description:** When healthcheck finds multiple "not installed" drives in an enclosure, problem isolation may not call the correct FRU replacement order.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 324996

### **Multiple drives rejected in an enclosure during power cycle**

1. **Problem Description:** Drive notification of power off was incorrectly treated as an error.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 325229

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HMC WUI shows incorrect battery end-of-life value**

1. **Problem Description:** HMC WUI is referencing a deprecated field in the Resource Manager object
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 325689

### **HMC not responding if one internal network interface is down**

1. **Problem Description:** DSCLI and CSM commands are not processed on the remaining internal network path.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 325728

### **Hung Device Adapter health check process**

1. **Problem Description:** DA health check process was hung, which then prevented subsequent health checks to run.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 326097

### **DDM firmware update did not update resource objects**

1. **Problem Description:** After DDM firmware update, the resource objects for Flash Cards still reflected the older firmware level
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 326100

### **Repaired HPFE SES error reported again after CDA**

1. **Problem Description:** LPAR SES log directories were not sync'd to the new CDA preload image.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 326441

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Restore ICSs and CS Pokes after LPAR hard drive rebuild**

1. **Problem Description:** Add necessary directories to HDR backup restore list.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 326561

### **HMC hang during boot, when querying LPAR resources**

1. **Problem Description:** During boot, HMC may hang at 'Initialization in Progress' phase because of a resource manager communication problem.
  2. **Potential Impact of Problem:** Unable to use HMC(s).
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 327217

### **Dual HMC hang when both HMCs are rebooted at the same time**

1. **Problem Description:** During HMC initialization, both HMCs were attempting to update Storage Facility resource objects at the same time.
  2. **Potential Impact of Problem:** Unable to use HMCs
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 327264

### **HMC very slow after HPFE rank removal**

1. **Problem Description:** During rank removal, a Flash Card failed format, which did not allow the removal to complete. This in turn caused a resource manager hang condition.
  2. **Potential Impact of Problem:** Unable to use HMC
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 327626

### **Deferred 'state 10' DDM display**

1. **Problem Description:** DSCLI 'lsddm' command response was changed to show 'state 10' DDMs as 'Unconfigured', rather than 'Failed - Deferred Service'. Fix restores the prior behavior for Clients with Deferred DDM Disablement RPQ.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.93.0
- ID#: 327961, 327977

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Incomplete lost frame analysis**

1. **Problem Description:** Fibre Channel Lost Data Frame counters also include counts for Lost Non-Data Frames. Also there is no summary for lost non-data frame counts
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 298786

### **Incomplete FRU list for DC-UPS failure**

1. **Problem Description:** An error against the DC Supply Unit was found to be caused by a defective Battery Service Module
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 304092

### **HMC repeatedly trying to update LPAR IP addresses**

1. **Problem Description:** In dual HMC configuration, one HMC may repeatedly try to update LPAR private IP addresses after the partner has already performed the update.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 315151

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 316458

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Memory warning after p7 memory riser replacement**

1. **Problem Description:** Repair path for memory riser replacement did not perform all steps necessary to reactivate deconfigured memory
  2. **Potential Impact of Problem:** Extended repair action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 318083

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 321112

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 321483

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 322705

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **SRC=BE193001 did not call home**

1. **Problem Description:** SRC was incorrectly flagged as a temporary condition, with call home not required
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 323169

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 323259

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 323848

### **Incorrect Key Manager path status with single HMC**

1. **Problem Description:** Path status was being incorrectly reported as degraded on HMC2, when there was no HMC2
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 323996

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 324050



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 324342

### **AllProblems file generation failed**

1. **Problem Description:** AllProblems generation failed because a required socket service was not running
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 324464

### **Unable to install HPFEs in rack 2**

1. **Problem Description:** High Performance Flash Enclosure install in Business-Class rack 2 fails, because of incorrect plugOrder files
  2. **Potential Impact of Problem:** Extended install duration
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 325113

### **No serviceable event for HMC ethernet adapter failure**

1. **Problem Description:** Add detection code for adapter interface errors, and generate callhome
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 325469

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 302466

### **Rack attention LED stays lit after CEC repair**

1. **Problem Description:** Rack attention LED stays lit because of a p7 system firmware error.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 305593

### **Expansion Rack installation failure**

1. **Problem Description:** Rack install fails if battery last charge date is greater than 8 months.
  2. **Potential Impact of Problem:** Extended maintenance window
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 307621

### **Secure Data Overwrite failure**

1. **Problem Description:** No completion certificate generated if overwrite process fails on HMC drive.
  2. **Potential Impact of Problem:** Extended SDO process
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 307647

### **Dual HMC sync problems**

1. **Problem Description:** When dual HMCs both start up together, Problem Analysis primary domain assignment process may never finish.
  2. **Potential Impact of Problem:** Serviceable Event callhome failure
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 315282

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **'Event List Trimmed' messages in DS GUI**

1. **Problem Description:** Excessive 'Event List Trimmed' messages, and some also have misleading descriptions.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 316046

### **No auto-logout after policy change**

1. **Problem Description:** After changing login policy from local to remote, the local user is not automatically logged out
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 316977

### **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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 317950

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 318506

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 318602

### **Dual HMC clocks drifting apart**

1. **Problem Description:** SNTP is not starting because of changes to the internal version information.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 319309

### **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
  5. **Release Bundle:** 87.51.63.0
- ID#: 319337

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 320320

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.63.0
- 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
  5. **Release Bundle:** 87.51.63.0
- ID#: 321813

### **Automate DC-UPS event log collection after IML**

1. **Problem Description:** Improve data collection after power off event.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 291512

### **DS GUI does not show host connections**

1. **Problem Description:** The new-since-R7.4 DS GUI informs users on first launch that host connections need to be updated. If that update is skipped, the host connections will be grouped in the GUI as "Unassigned Host Ports". The messages have been improved to better describe what needs to be done, and that the changes will not result in loss of any host paths.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:305201

### **False loss-of-access messages during LPAR restart**

1. **Problem Description:** The LPAR that was restarting could not see the host bays, but the other LPAR was fully operational
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:307868

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **DDM failure did not call home**

1. **Problem Description:** After a Smart Rebuild abort, the failing drive was rejected, but no SRC was surfaced for callhome.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:309181

### **Background media scan false positives**

1. **Problem Description:** On certain 300G/15K drive families, log entries created by internal scan routines are being mis-counted as media events.
  2. **Potential Impact of Problem:** Excessive drive replacements
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 309568

### **Selectively filter state=10 DDM information**

1. **Problem Description:** DDMs marked for deferred replacement (state=10) are incorrectly being shown in DS GUI, DSCLI, and TPC-R queries.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 310532

### **Unable to create managed system connections**

1. **Problem Description:** Unable to recover or add service processor connections because of missing HMC crypto libraries.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#: 313575

### **Incorrect V-RAID adapter status in GUI**

1. **Problem Description:** Storage Manager GUI shows incorrect V-RAID adapter status information. V-RAID status information should only be shown as part of the Flash Enclosure status.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:313726

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Incorrect TKLM bad path status**

1. **Problem Description:** Primary and secondary HMC key manager heartbeat modes disagree
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:313800

### **False SRC=BE820115**

1. **Problem Description:** During a service action healthcheck surfaced an I2C bus error, and created a false serviceable event.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:314348

### **HMC contacting addons.mozilla.org**

1. **Problem Description:** Firefox language pack add-ons 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
  5. **Release Bundle:** 87.51.52.0
- ID#:314354

### **Security scan missing TLS v1.2**

1. **Problem Description:** Legacy port 9660 was open for MSIE applet compatibility. This port was no longer used, so was not updated for TLS v1.2 authentication, causing security scans to flag the vulnerability.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:314401

### **DS GUI still shows serviceable events that were resolved**

1. **Problem Description:** Problem affects dual-HMC systems that were upgraded from a pre-R7.5 level, to R7.5. A new field was added to the system events class, and the field may not be populated on both HMCs.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:314852



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HMC restore failure**

1. **Problem Description:** Dual HMCs backup can transfer the data to the LPARs at the same time, which can cause corrupted backup.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:315489

### **LPAR hard drive reload failure**

1. **Problem Description:** Ping failures cause abort, even though communication was already established
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:315612

### **DSCLI unable to login to older systems**

1. **Problem Description:** Java security updates have disabled older ciphers that are needed to login to older systems, even when the disableSSLv3 workaround is applied.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:316136

### **SRC=BE1E2182 text is not clear**

1. **Problem Description:** BE1E2182 should indicate that the LPAR resume could not complete because the operational LPAR is at a higher LIC level.
  2. **Potential Impact of Problem:** Extended service window
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:316588

### **False key manager connection timeouts**

1. **Problem Description:** When running key manager connectivity test, the operation gave a false failure result, because of an error in the GUI code.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:316729

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Storage Enclosure add MES failed**

1. **Problem Description:** Failure was caused by Resource Manager out-of-memory condition. Fix adds RM memory usage tracing
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:316929

### **DS GUI 'Capacity' indicator colors are confusing**

1. **Problem Description:** Meaning of colors has been changed as follows:  
If any pool is over-provisioned and over threshold, show capacity in yellow. If any pool is over-provisioned and full, show capacity in red
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:317008

### **V-RAID adapter replacement failure**

1. **Problem Description:** Repair did not recognize Customer Card ID Number (CCIN) PSWH as a valid replacement part.
  2. **Potential Impact of Problem:** Extended service window
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.52.0
- ID#:318026

### **FRU list incorrect for SRC=BE197073**

1. **Problem Description:** Symbolic procedure calls RPC C2 port T206, should be port T205.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:318575

### **Flash enclosure midplane repair failure**

1. **Problem Description:** Intermittent illegal memory access when expected DDM count does not equal current DDM count.
  2. **Potential Impact of Problem:** Extended repair action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 308532

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **TPC reports higher write response times than expected**

1. **Problem Description:** Performance routines were including stats collection as write activity
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 308840

### **DS GUI fails to refresh VOLSER info**

1. **Problem Description:** After changing volume label on CKD volumes, GUI continues to display the old label.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 309143

### **DDM replacement failure**

1. **Problem Description:** Replacement fails because of ODM configuration timeouts on the LPARs
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.38.0
- ID#: 309226

### **Secure Data Overwrite failure**

1. **Problem Description:** SDO fails if too many DDMs on a DA pair are failing, leading to multiple reruns to complete the process.
  2. **Potential Impact of Problem:** Extended SDO duration
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 310914

### **Unable to configure LCUs**

1. **Problem Description:** If HMC or LPARs change internal IP addresses, and an IP address was reused, commands may go to the wrong target.
  2. **Potential Impact of Problem:** Unable to perform config changes
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311065

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Timeout deleting multiple volume aliases**

1. **Problem Description:** When deleting a single CKD volume that has multiple aliases, a microcode timeout caused failure to delete the aliases.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311403

### **CMUN00014E error in legacy DS GUI**

1. **Problem Description:** DS GUI fails opening "Copy Services" page, when no LSSs have been created yet.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311405

### **SRC BE19BDA1 callhome**

1. **Problem Description:** Box called home when AC input power was restored to a DC-UPS
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311534

### **Improve data collection for SRC BE34CA11**

1. **Problem Description:** Change trace file directory so that traces will be collected in a PE package, change order of collection for adapter and storage enclosure statesaves
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311549

### **SRC=BE1E1405 displays improper text**

1. **Problem Description:** Remove improper "Corrective Action" text
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311606

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Error replacing Flash Card**

1. **Problem Description:** Flash card was a member of an array where rank creation had previously failed.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311783

### **Heartbeat callhome failure on 2x2 systems**

1. **Problem Description:** Internal callhome array size may not be large enough to contain data from both storage facilities.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312120

### **Improve first-time data capture for DDM deconfigure**

1. **Problem Description:** Live dump during DDM deconfigure can fail when recovery actions are in progress. Fix will verify that the deconfigure dump is valid, and if not, we will capture another.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312265

### **SRC BEB30001 HMC filesystem size check failed**

1. **Problem Description:** During PE package collection, the process that collects HMC traces produced corrupted output.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312273

### **Unable to remove High Performance Flash Enclosure**

1. **Problem Description:** Enclosure removal process stalls when the enclosure is powered off
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312706

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **PE package only collects HMC data**

1. **Problem Description:** Change to the file compression method created some incompatibilities when the HMC and LPARs are at different code levels.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312718

### **No Customer email notification for SRC=BE310B01**

1. **Problem Description:** Email notification did not occur because the SRC flag was not set for email notification.  
This fix will also clarify the options on the Customer notify configuration setup pane. The first option will change from "Call home problem events only" to "Serviceable Event Notification only"
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312939

### **Health status message was not sent after data loss**

1. **Problem Description:** When a data loss event occurs, a health status message is sent, conditioned by a warmstart. If a second event occurs within a 24 hour period, the warmstart may be suppressed, and the health status message does not get sent.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 313335

### **Incorrect AOS status in callhome data**

1. **Problem Description:** Code is not correctly parsing Assist Onsite version 4 config information
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 313586

### **HMC failed to callhome a problem**

1. **Problem Description:** After a reboot, the storage facility object was refreshed with corrupted machine type/serial number data
  2. **Potential Impact of Problem:** Unable to call home for problems
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 313761

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **HMC LDAP Create Authentication failed**

1. **Problem Description:** When configuring LDAP authentication, user can not upload trust store file
  2. **Potential Impact of Problem:** Unable to configure LDAP
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 314385

### **Add certificate to HMC AOS config file**

1. **Problem Description:** Ensure HMC will only communicate with a legitimate broker
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 314702

### **Assist On Site cannot connect**

1. **Problem Description:** After AOS service pack update, permissions are incorrect on the configuration file
  2. **Potential Impact of Problem:** Unable to connect for remote support
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 315566

### **CDA suspends with SRC=BEB10020**

1. **Problem Description:** During service processor firmware update, HMC logs a loss of communication with the service processor, as expected. This error should be suppressed during CDA.
  2. **Potential Impact of Problem:** Extended service window
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 307871

### **Write same with unmap timeout when formatting LUNs**

1. **Problem Description:** Linux LVM track format does not align with the DS8000 extent boundaries. This caused DS8K to write zeroes, rather than discard the extents.
  2. **Potential Impact of Problem:** LVM format timeouts
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 307949

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Msg CMUA00024E running STAT tool**

1. **Problem Description:** r7.4 STAT tool fails, because it is unable to parse an r7.3 heat map. User will be directed to run the compatible STAT tool version.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 308032

### **Flash card install certify failed with no serviceable event**

1. **Problem Description:** Flash card failed in a way that caused the certify process to abort for the failing card, without creating a serviceable event.
  2. **Potential Impact of Problem:** Could prevent rank creation
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 308169

### **Improve isolation for SRC=BE34029C**

1. **Problem Description:** Typically this is a recoverable firmware error, but the current analysis routines call for parts replacement on the first error.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** Yes
  5. **Release Bundle:** 87.51.23.0
- ID#: 308354

### **DSCLI 'showextpool' takes a long time to complete**

1. **Problem Description:** sizeofRepository parameter was not properly defined in r7.4 and r7.5 versions of DSCLI.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 308918

### **DSGUI posts error message when extent pool is full**

1. **Problem Description:** If extent pool is intentionally full, this should not be reported as an error.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309364



# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **0x2694 MLE during IML back**

1. **Problem Description:** During IML back, with cross-cluster flash copy relations, cross-cluster query triggered a microcode logic error, and cluster failed to resume.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309386

### **Network check failure caused CDA suspend**

1. **Problem Description:** During CDA, an error on one network caused CDA to suspend, without trying to use the alternate network connection.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309525

### **Storage enclosure firmware update suspend**

1. **Problem Description:** Expected sympathetic errors were not suppressed.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309842

### **CMUN04003E ESS QUERY UNSUCCESSFUL EXCEPTION**

1. **Problem Description:** A memory leak in Storage Agent resource manager will eventually cause query tasks to fail.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 311011

### **Cannot connect to HMC via AOS**

1. **Problem Description:** After HMC install or rebuild, AOS is set to disabled because of a configuration file problem.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.23.0
- ID#: 309365

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **DSGUI server fails to start**

1. **Problem Description:** A problem with timestamp formatting causes Storage Manager to fail during startup
  2. **Potential Impact of Problem:** Unable to access DSGUI
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.10.0
- ID#: 308178

### **Option to disable 240-byte performance data**

1. **Problem Description:** Code levels that supply 240-byte performance data to zOS are problematic for Customers that are running versions of zOS older than 1.12, or z/VM without VM65248. This fix provides the option to revert to the older 192-byte device performance stats.
  2. **Potential Impact of Problem:** Abends
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.5.0
- ID#: 305219

### **0x05E MLE during CDA**

1. **Problem Description:** During CDA failover to update the second LPAR, the Device Adapter failover code improperly handled the format of the message from the down-level LPAR, causing a Microcode Logic Error.
  2. **Potential Impact of Problem:** Warmstart caused CDA to suspend
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.5.0
- ID#: 306939

### **Map 4970 escape**

1. **Problem Description:** DDM replacement failed to unbypass the FC ports, and the resultant SRC BE340027 failure was not properly handled by the Map procedures.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.5.0
- ID#: 307028

### **DDM replacement failure**

1. **Problem Description:** Map 4970 enhancement for SRC BE340027 where DDM is bypassed by FCIC firmware.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.5.0
- ID#: 307067

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **DDM storage upgrade failure**

1. **Problem Description:** Incorrect attribute value was set on air baffle objects, which caused the installation failure of DDMs into those slots.
  2. **Potential Impact of Problem:** Extended service action
  3. **Problem Severity:** Service
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.5.0
- ID#: 307630

## **Improvements: Improvement for better usability**

### **Disable direct ssh login from Customer network**

1. **Problem Description:** Improve security by closing ssh port 22 for direct login. Does not affect remote support via AOS or RSC
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.53.35.0
- ID#: 338691

### **ESSNI tracing improvements**

1. **Problem Description:** Improve logging in ESSNI, to provide better information about the cause of HMC communication issues.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.53.35.0
- ID#: 339955

### **Update remote access information in callhome data**

1. **Problem Description:** Provide additional information for AOS and RSC remote support access methods
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.53.35.0
- ID#: 345136

### **Improve DA LRC checking**

1. **Problem Description:** Change CKD LRC strategy from per-track to per-record.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 338865

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Remove HMC warning popup**

1. **Problem Description:** Remove unnecessary warning message that displays when performing a repair action using an HMC that is not acting as Problem Analysis primary.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.28.0
- ID#: 339498

### **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
  5. **Release Bundle:** 87.52.19.0
- ID#: 333375

### **Suppress server version information in DS GUI error message**

1. **Problem Description:** Exposing server version information could lead to an exploit of HMC code
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.52.19.0
- ID#: 336304

### **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
  5. **Release Bundle:** 87.51.121.0
- ID#: 333375

### **RSC auto-reconnect after HMC reboot**

1. **Problem Description:** After rebooting HMC, Remote Support Console will auto-reconnect to an existing session.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.97.0
- ID#: 325601

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Change notification time for HMC network surveillance errors**

1. **Problem Description:** Enables function in WUI to change the current 8 hour notification time to a shorter value
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.97.0
- ID#: 326007

### **Add support for remote HMC base code upgrade**

1. **Problem Description:** Implements support for remote execution of HMC reload and upgrade data save/restore.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.97.0
- ID#: 328619

### **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
  5. **Release Bundle:** 87.51.81.0
- 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
  5. **Release Bundle:** 87.51.81.0
- ID#: 320543

### **'Delete pool with Volumes' function**

1. **Problem Description:** Enable DS GUI function to delete a segment pool, and the associated volumes, if they exist.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 320927

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **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
  5. **Release Bundle:** 87.51.81.0
- ID#: 320935

### **Remote Support Console**

1. **Problem Description:** Add support for RSC method for remote access.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.81.0
- ID#: 325539

### **Show volume GUID in DS GUI and DSCLI**

1. **Problem Description:** Show GUID in volume properties dialog and exported summary, and also in DSCLI lsfbvol output
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.63.0
- ID#: 320507, 320602

### **Autoclose key manager SRC BE14EAF1**

1. **Problem Description:** SRC BE14EAF1 is surfaced if communication is lost to a key manager server. If communication is restored within 4 hours, the SRC will be automatically closed.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.52.0
- ID#:314751

### **Add REST API function to display VRMF**

1. **Problem Description:**
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 312621

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

### **Add info to GUI and DSCLI display of DDMs**

1. **Problem Description:** Add Manufacturer Serial Number info, as printed on DDM labels, to facilitate tracking of DDMs that are removed from a system.
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 309120

### **Update HMC AOS fixpack version**

1. **Problem Description:** HMC AssistOnSite v4 FP 2 update
  2. **Potential Impact of Problem:** none
  3. **Problem Severity:** Improvement
  4. **Pervasive Problem:** No
  5. **Release Bundle:** 87.51.38.0
- ID#: 311281

# **IBM System Storage DS8870 Disk Storage**

## **87.50.x.x Release Notes Cumulative Summary v13.3**

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**IBM System Storage DS8870 Disk Storage**  
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## **87.50.x.x Release Notes Cumulative Summary v13.3**

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