

# IBM System Storage - DS8700 Disk Storage 1 **Microcode Bundle 76.31.105.0 Release Note Information v1**

**Release Date: June 30, 2014**

## **VRMF Level Data Results:**

<b>VRMF level From:</b>	<b>76.31.92.0</b>
<b>VRMF Level To:</b>	<b>76.31.105.0</b>
<b>Report for:</b>	<b>All DS8700</b>

## **Code Bundle Contents**

This table includes code component reference information.

<b>DS8000 Code Bundle Level</b>	<b>SEA or LMC Version: Used with dscli <i>ver</i> command.</b>	<b>CLI Client Level</b>	<b>Storage Manager Code Level</b>
<b>76.31.105.0</b>	<b>6.6.31.1000</b>	<b>6.6.31.1000</b>	<b>5.6.31.1230</b>

Overview of new features and functions supported by this release on DS8700, 242x model 941

### **At a glance:**

- Apache Struts v1 vulnerability fix
- Problem fixes
- Serviceability enhancements
- Improvements

**This new microcode release only supports the DS8800.**

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

This is a list of some modifications contained across one or more LIC (License Internal Code) or microcode release(s). The potential impact is variable. Specific environments may aggravate or degrade the potential impact. Problem(s) fixed and reported in this release note may not be in higher levels of code bundles.

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

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

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

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

None

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

## **Loss of access during Smart Rebuild**

1. **Problem Description:** Smart rebuild abort because of errors on source drive caused Device Adapter showstop errors
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID#: 266319

## **I/O timeout caused by Smart Rebuild source drive failure**

1. **Problem Description:** During Smart Rebuild, source drive failed, and disappeared from the loop, causing array offline for ~90 seconds
2. **Potential Impact of Problem:** I/O timeout, loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID#: 283070

## **Internal communication error causes enclosure power off**

1. **Problem Description:** Communication failure between the enclosure controller cards can result in both cards taking control of the internal serial bus which can result in the storage enclosure powering off.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** Yes

ID#: 292022

## **Track Space Efficient repository greater than 19GB exposure**

1. **Problem Description:** Track Space Efficient (TSE) repositories greater than 19TB (19456 GB) are exposed to corruption of the data contained in the repository that can result in a loss of access.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 293344

## **Multiple 0x0632 MLE when set or reset soft fence**

1. **Problem Description:** Command chain containing 0x2A order to set/ reset soft fence is prohibited, triggering a warmstart. The warmstart then returns redrive sense to the host.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 294701

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## **Dual host bay PCIe recovery**

1. **Problem Description:** During PCIe error recovery, arrays attempt to fail over to the alternate adapter, but a latent fabric error in the alternate host bay triggered PCIe error recovery in that bay as well.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID#: 294812

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

## **LUNs in hybrid pools reported as SSD**

1. **Problem Description:** LUNs in hybrid pools consisting of both solid-state and rotational drives are all being reported as SSD.
2. **Potential Impact of Problem:** degraded performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 295996

## **Global Mirror drain failure recovery**

1. **Problem Description:** When the Global Copy Collision code is enabled, if a Global Mirror collision occurs together with a Global Copy collision, the Global Mirror collision may be queued behind the Global Copy transfer.
2. **Potential Impact of Problem:** Elongated consistency group times
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No

ID#: 296338

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

## **Failed USB ethernet adapter detection**

1. **Problem Description:** If one USB ethernet adapter is failing during an HMC reboot, the problem does not generate a serviceable event until healthcheck discovers the problem. This change will generate a serviceable event for the failed adapter once the reboot completes.
2. **Potential Impact of Problem:** Additional service call
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 280696

## **SRVE0232E Internal Server Error**

1. **Problem Description:** DS GUI fails login with SRVE0232E because of an out-of-memory condition
2. **Potential Impact of Problem:** Unable to login to HMC
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 284863

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### **RAS FRU isolation improvement for loop errors**

- 1. Problem Description:** Corrects an issue where a DDM was rejected, and the loop errors caused by that DDM were incorrectly attributed to the device adapter
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 286661

### **Improved handling of Lost Data Frame errors**

- 1. Problem Description:** When a serviceable event is generated for Lost Data Frame errors on a Device Adapter loop, the affected loop will be placed in service mode.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 289221

### **0x1638 MLE updating erProduct switch**

- 1. Problem Description:** While device adapter was updating erProduct switch flag, the operation was swapped out, then resumed on a different processor, resulting in a locking exception.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 291258

### **Secure Data Overwrite failure on CEC hard drives**

- 1. Problem Description:** One CEC completes the SDO process ahead of the other, and attempts to resume before the other completes the mirroring process
- 2. Potential Impact of Problem:** SDO does not complete
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 292548

### **0x11C MLE offloading multiple correctable PCIe events**

- 1. Problem Description:** Rather than offload multiple correctable error events one at a time, this change will offload and clear all correctable error status registers in a single operation.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 293023

### **CDA suspend when updating p6 firmware**

- 1. Problem Description:** Latent HMC-to-CEC communication problem caused CDA to suspend.
- 2. Potential Impact of Problem:** Extended CDA service window
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 293228

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## HMC hang during repair

1. **Problem Description:** In dual HMC configurations, if the HMC object for one HMC is lost or deleted, the partner HMC can enter a retry loop
2. **Potential Impact of Problem:** Unable to access the 'good' HMC
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 293710

## Incomplete secure erase of self-encrypting drives

1. **Problem Description:** Areas of self-encrypting drives that are reserved for metadata and adapter dumps are not being overwritten during secure erase.
2. **Potential Impact of Problem:** Incomplete erase, and false drive failures
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 294675

## Device harvest on large systems causes extended code update time

1. **Problem Description:** During code update, there are normally errors generated that are expected, but must still be handled. On large systems, the handling of these errors consumes resources needed to complete the code update process.
2. **Potential Impact of Problem:** Extended concurrent update window
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes

ID#: 294751

## Drive failures during Secure Data Overwrite

1. **Problem Description:** Drive failures during SDO cause early termination, and multiple attempts to complete the process.
2. **Potential Impact of Problem:** Extended SDO runtime
3. **Problem Severity:** Service
4. **Pervasive Problem:** No

ID#: 295522

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

### Eliminate Apache Struts v1 vulnerability

1. **Problem Description:** Change implements a new servlet class (ParamFilter) that will filter out injected parameters that can otherwise be used to exploit the vulnerability.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Improvement
4. **Pervasive Problem:** No

ID#: 297176

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