

# IBM System Storage - DS8900F Disk Storage

## Microcode Bundle 89.11.33.0 Release Note Information v1.2

Release Date: November 20, 2020

### VRMF Level Data Results:

VRMF level From:	89.10.92.0
VRMF Level To:	89.11.33.0
Report for:	DS8900F

### Code Bundle Contents

DS8900F Code Bundle Level	SEA or LMC Version:	DSCSI Client	Heat Map Transfer Utility	Storage Manager	Copy Services Manager
89.11.33.0	7.9.11.79	7.9.11.79	7.9.11.79	5.9.11.1029	6.2.10

Overview of new features and functions supported by this release on DS8900F 533x models 993/994/996

### At a glance:

- Remote auto-download of recommended Code Bundles
- Code Improvements
- Code fixes

**This new microcode release supports DS8900F systems only.**

### Select Modifications Included in this Release Note:

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

### Definition of Problem Severity:

1	High Impact	- Acute: Irrecoverable error with potential loss of data. - Serious: Irrecoverable error with potential loss of access to data, or critical function.
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.**

#### **HIPER Inconsistent SafeGuarded Backup data**

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6368715>
2. **Potential Impact of Problem:** Data inconsistency
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** No

ID# 349398

### **Serious: An irrecoverable error with potential loss of access to data, or critical function.**

#### **Last Device Adapter fenced**

1. **Problem Description:** A microcode logic error during adapter recovery caused the only available adapter to be fenced.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 341982

#### **Removing volumes from an active XRC session may cause both clusters to reboot.**

1. **Problem Description:** <https://www.ibm.com/support/pages/node/6439821>
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 350819

#### **REST API failure after code bundle update**

1. **Problem Description:** In systems running with an alternate internal IP address range, REST API requires manual intervention to restore Transparent Cloud Tiering function after code bundle update.
2. **Potential Impact of Problem:** loss of access to cloud data
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 350876

#### **0x014E MLE during failback**

1. **Problem Description:** Cluster failback could not complete because it could not access metadata on a quiesced rank.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 351315

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### **Pinned data after a power failure**

- 1. Problem Description:** Safe Data modified time was mis-calculated such that it was a negative value relative to Safe Data start time. This caused the pinned tracks to be left in NVS.
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID# 351363

### **Loss of access exposure running ESE Sizing Tool**

- 1. Problem Description:** If an LPAR is running the ESE Sizing Tool, and has a failure, the partner LPAR would be unable to take over, and would also fail. Once the system is recovered, copy services relations would have to be reconfigured. Exposure was discovered in code review.
- 2. Potential Impact of Problem:** loss of access, loss of replication
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID# 351682

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

### **0x01EF MLE while terminating SGC volume(s)**

- 1. Problem Description:** Terminating SafeGuarded Copy relations, that are still active, may result in a Microcode Logic Error.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 347908

### **HMC filesystem full**

- 1. Problem Description:** /tmp filesystem is filling up with NICacheEvent files
- 2. Potential Impact of Problem:** HMC failure
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 348877

### **DSCLI authentication failure**

- 1. Problem Description:** User login timed out while synchronizing the authentication state with the peer HMC.
- 2. Potential Impact of Problem:** Unable to process commands
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 349931

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### **0x01B7:2005 MLE during FlashCopy**

- 1. Problem Description:** Excessive lock contention querying In-Memory Relation Table entries during cache pre-stage grouping process.
- 2. Potential Impact of Problem:** ODD Dump, FlashCopy performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 350508

### **0x4730 MLE during logical configuration**

- 1. Problem Description:** When configuring a new Logical Subsystem (LSS), a timing window exists for a Microcode Logic Error, when LSS created flag is true, but performance stats table is not yet created.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 350570

### **0x05E0 MLE**

- 1. Problem Description:** zHyperLink processing failed to obtain a Task Control Block, and took a wrong recovery path, leading to a Microcode Logic Error.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 350974

### **TCT restore failure after TS7700 restarted**

- 1. Problem Description:** Error conditions on the Transparent Cloud Tiering network socket are not flushed by recovery routines.
- 2. Potential Impact of Problem:** Retryable restore failure
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351062

### **Incremental Resync failure**

- 1. Problem Description:** On R9.1 GA - 89.10.92.0, Metro-Global Mirror Incremental Resync from A->C with Force, will fail with 0F-7B-10 sense, if a C->L pair is present.
- 2. Potential Impact of Problem:** Replication failure
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351089

### **0x01B7:70E4 MLE**

- 1. Problem Description:** In 192 CPU systems with high Global Mirror collision activity, excessive contention on an LSS-level lock may cause task timeouts and impact performance.
- 2. Potential Impact of Problem:** Odd Dump, degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351146

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### **0x7EB0 MLE**

- 1. Problem Description:** In a cascaded relationship, if Fast Reverse Restore or ReverseFlash is running on a source volume that is being removed, a mismatch of 'B' volume source and target counters may occur.
- 2. Potential Impact of Problem:** Warmstart
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351227

### **0x19A4 MLE and failover during a warmstart**

- 1. Problem Description:** An LRC error occurred during rank creation, when a process failed to obtain a lock. Later, an unrelated warmstart discovered the LRC error, and by design, the LPAR was restarted to clean up the rank LRC.
- 2. Potential Impact of Problem:** Warmstart, single LPAR reboot
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351525

### **0x7DB3 MLEs during RPFLC withdraw on suspended GM primary**

- 1. Problem Description:** Systems running Multi-Target PPRC on R8.5 SP7 - 88.57.8.0 or R9.0 SP4 - 89.4.8.0, are exposed to Microcode Logic Errors when withdrawing Remote Pair FlashCopy relations on a Global Mirror primary that is suspended.
- 2. Potential Impact of Problem:** Warmstarts, failover
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351609, 351910

### **LPAR DSI during mkfbvol**

- 1. Problem Description:** DSI during mkfbvol if two threads try to update the LUN traces for the new volume at the same time.
- 2. Potential Impact of Problem:** LPAR DSI and failover
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 351729

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

### **0x01B7:50DB MLE**

- 1. Problem Description:** A task timed out because a prior task in the thread ran longer than expected.
- 2. Potential Impact of Problem:** ODD Dump
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350212

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### **Remove unused AOS Access Control List entries**

- 1. Problem Description:** Clean up ACL entries in the Assist OnSite remote support configuration file.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350357

### **Incorrect TKLM status display**

- 1. Problem Description:** lskeymanager command incorrectly showed 'critical' status when a thread with multiple processes exceeded the timeout value.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350404

### **MES install failure**

- 1. Problem Description:** Drive failure during HPFE Gen2 MES install required manual intervention to complete the install.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350777

### **Unable to export system summary using DS GUI**

- 1. Problem Description:** An empty attribute in an HMC Resource Manager object caused a number format exception.
- 2. Potential Impact of Problem:** Export function failure
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** Yes

ID# 351420

### **LPAR Extended Error Data not offloaded to HMC**

- 1. Problem Description:** During serviceable event data collection, a microcode logic error cause some LPAR Extended Error Data (EED) types to be missed.
- 2. Potential Impact of Problem:** First-Time Data Capture failure
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350555

### **CSM update failure on HMC1**

- 1. Problem Description:** When Copy Services Manager is updated using DSCLI via HMC1, installation files are not removed after update is completed on HMC2. Install process then fails on HMC1, because it does not have space to download the files again.
- 2. Potential Impact of Problem:** CSM upgrade failure
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350684

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### **Unable to determine user role permissions in logs**

- 1. Problem Description:** Custom user role permissions are only shown when creating them. Once those logs are wrapped, the permissions assigned to a custom user role cannot be determined.
- 2. Potential Impact of Problem:** Extended problem determination
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350757

### **Resource Manager crash during system field install**

- 1. Problem Description:** During flash drive certify phase, a timing window exists where Storage Enclosure Power Supply Unit harvest may trigger Resource Manager process to fail.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350758

### **0x063C MLE and failover during system field install**

- 1. Problem Description:** During system install, one server initially came up with a reduced number of available processors. This caused the Host Adapter Port harvest function to exceed system resources.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350763

### **MES install failure**

- 1. Problem Description:** Drive failure during HPFE Gen2 MES install required manual intervention to complete the install.
- 2. Potential Impact of Problem:** Extended service action
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350777

### **Missed key server responses**

- 1. Problem Description:** When key server is configured using IP addresses, code incorrectly tries to reverse-resolve the address. If the name server does not contain PTR records for the key servers, the key server handshake may not complete in time.
- 2. Potential Impact of Problem:** Key server degraded indication
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 350988

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### **Unable to export system summary using DS GUI**

- 1. Problem Description:** An empty attribute in an HMC Resource Manager object caused a number format exception.
- 2. Potential Impact of Problem:** Export function failure
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** Yes

ID# 351420

### **Incorrect information in mkauthpol command help**

- 1. Problem Description:** mkautopol 'short' usage help message is showing [-enc enabled|disabled] flag, but the function is not implemented.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID# 351524

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

### **SafeGuarded Copy performance enhancement**

- 1. Problem Description:** Support a cascaded Global Mirror session to perform the SafeGuarded Copy. The cascaded session will form consistency groups when the primary GM is paused with consistency.

**Note:** Implementation requires APAR PH31059.

- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 350308

### **Customer access to AOS logs**

- 1. Problem Description:** Provide ability for Customer to view and offload AOS audit logs from the HMC WUI.
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 351015

### **LSS-Based Query for improved SGC Performance**

- 1. Problem Description:** SafeGuarded Copy performance improvement using a new 0x4E LSS-based query command
- 2. Potential Impact of Problem:** none
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 351100



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