IBM System Storage - DS8880 Disk Storage
Microcode Bundle 88.58.3.0 Release Note Information v1.1

Release Date: March 29, 2020

VRMF Level Data Results:

VRMF level From:	88.57.8.0
VRMF Level To:	88.58.3.0
Report for:	All DS8880

Code Bundle Contents

DS8880 Code Bundle Level	SEA or LMC Version:	DSCLI Client	Heat Map Transfer Utility	Storage Manager	Copy Services Manager
88.58.3.0	7.8.58.11	7.8.58.11	7.8.58.11	5.8.58.1004	6.2.10

Overview of new features and functions supported by this release

At a glance:

- Code fixes
- Improvements

This new microcode release supports DS8880 systems only.

Select Modifications Included in this Release Note:

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

Definition of Problem Severity:

1	High Impact	- Acute: 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 Timeouts and drive failures on Flash Drives with low usage
1. **Problem Description:** Certain specific Flash Drive models are exposed to conditions that may lead to a permanent read error when accessing data.
   https://www.ibm.com/support/pages/node/6414097
2. **Potential Impact of Problem:** loss of data
3. **Problem Severity:** HIPER
4. **Pervasive Problem:** No

ID# 352345

SafeGuarded Copy volume stuck in Rolloff state
1. **Problem Description:** After an error recovery event during SGC Rolloff, SGC consistency group formation fails with "try later" sense.
2. **Potential Impact of Problem:** Loss of SafeGuarded Backup
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 353027

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

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

0x1024 MLE and dual reboot
1. **Problem Description:** When expanding a large extents volume that does not end on an extent boundary, and had been migrated from a different geometry, the first and last track information for the last extent may be mis-calculated.
2. **Potential Impact of Problem:** loss of access
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 349898

Incorrect IEA497I message issued
1. **Problem Description:** An Invalid Track Format error was mis-reported as invalid Device Control Word error.
2. **Potential Impact of Problem:** Unplanned HyperSwap
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No

ID# 351060

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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

MGM session would not start after site swap
1. **Problem Description:** Metro-Global-Mirror start H1-H2-H3 failed because of incorrect Out-of-Sync track bitmaps.
2. **Potential Impact of Problem:** Replication failure
3. **Problem Severity:** High Impact
4. **Pervasive Problem:** No
ID# 351900

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

0x7003 MLE
1. **Problem Description:** With PPRC paths in a High Failure Rate condition, a data mover task was failed, while another completed with success. A microcode logic error led to reporting an illegal status combination.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID# 343404

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

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

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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

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

Warmstart during code update
1. **Problem Description:** During FastPath CDA, LPAR quiesce collided with a background ODD dump process.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID# 351157

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

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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

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

DS GUI/DSCLI CMUN00018E failure accessing HMC
1. **Problem Description:** An ESSNI deadlock condition caused login token processing failures.
2. **Potential Impact of Problem:** HMC access failure
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID# 351973

Transparent Cloud Tiering slowdown
1. **Problem Description:** Timeout duration for TCT sockets can impact overall copy job performance.
2. **Potential Impact of Problem:** degraded TCT performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID# 352830

0x7F0E MLE
1. **Problem Description:** A status field in a Data Mover task control block was updated after the task control block had been freed.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID# 352851

0x0221 MLE
1. **Problem Description:** A function was attempting to peek into a Task Control Block at the same time the TCB was being flushed from cache.
2. **Potential Impact of Problem:** Warmstart
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** No
ID# 353012

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Service: A recoverable error, Service improvements.

0x01B7:1006 MLE
1. **Problem Description:** A segment pool function is holding a thread longer than allowed.
2. **Potential Impact of Problem:** ODD dump
3. **Problem Severity:** Service
4. **Pervasive Problem:** Yes
ID# 338996

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

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

Transparent Cloud Tiering setnetworkport error
1. **Problem Description:** CMUN04003E error setting TCT network interface IP address, when Primary/Secondary DNS are '0.0.0.0'
2. **Potential Impact of Problem:** Unable to configure IP addresses
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
ID# 350546

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

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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

Code bundle activation hang
1. **Problem Description:** A locking exception caused the code update process to hang while backing up HMC critical data.
2. **Potential Impact of Problem:** Extended service action
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
ID# 351993

Incorrect VRAID adapter resource state
1. **Problem Description:** After a CDA recovery, VRAID adapter Resource Manager attributes incorrectly showed the adapters in 'Offline' state.
2. **Potential Impact of Problem:** Extended service action
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
ID# 352042

Incorrect system inlet temperature indication
1. **Problem Description:** Function to read system inlet temperature was attempting to read an unsupported zone sensor
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
ID# 352467

DSCLI 'showcluster' command failure
1. **Problem Description:** Using the embedded HMC DSCLI, 'showcluster' failed with CMMCI909E error.
2. **Potential Impact of Problem:** none
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
ID# 352554

CDA suspend while second LPAR is being updated
1. **Problem Description:** An ESSNI query of a new Resource Manager attribute caused the Resource Manager to terminate.
2. **Potential Impact of Problem:** Extended service action
3. **Problem Severity:** Service
4. **Pervasive Problem:** No
ID# 353588

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Improvements: Improvements for better usability

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

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