IBM TotalStorage® DS8800 Disk Storage
Microcode Bundle 86.10.139.0 v6 Release Note Information

Date: May 31, 2011

VRMF Level Data Results:

VRMF level From:	N/A
VRMF Level To:	86.10.139.0
Report for:	All DS8800

Code Bundle Contents

This table includes code component reference information.

DS8800 Code Bundle Level	SEA or LMC Version: Used with dscli *ver* command.	CLI Client Level	Storage Manager Code Level
86.10.139.0	7.6.10.511	7.6.10.511	5.6.1.1467

Overview of new features and functions supported by Microcode Release 86.10.139.0 for DS8800 , 242x model 951.

At a glance:

- IBM System Storage Easy Tier II
- DS8000 I/O Priority Manager
- Quick initialization and Thin Provisioning for open volumes
- IBM z/OS Distributed Data Backup
- Remote Pair FlashCopy®
- Prevent deletion of CKD and FB volumes in use
- Disable recovery key
- Rekey data keys of an encryption group
- z/HPF extended distance
- 8 Gb 4 port host adapters
- 16 TB LUN support (Host OS limitations or requirements may apply)
- Eight drive install groups of Solid State Disk (SSD)
- Copy Services scope management
- Compliant with ITSC password requirements

This is a new microcode release only supports the DS8800.

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

Acute: An irrecoverable error with potential loss of data.
FSP reset timeout failure results in pinned data
1. **Problem Description:** FSP reset timeout error handling in single cluster mode could result in pinned nontryable data due.
2. **Potential Impact of Problem:** Loss of access, data loss possible
3. **Frequency of Problem:** Low
ID#: 256146

Fence host adapter for SMP mail error
1. **Problem Description:** Mark host adapter as fenced when SMP mail error is detected when in single cluster mode.
2. **Potential Impact of Problem:** Data loss
3. **Frequency of Problem:** Low
ID#: 254572

No call home for serviceable events identifying MAP3200
1. **Problem Description:** There is no call home for serviceable events that MAP3200 needs to used, there is customer notification only. This event needs to call home as it indicates DDMs with media errors.
2. **Potential Impact of Problem:** Data loss
3. **Frequency of Problem:** Low
ID#: 253804

Serious: An irrecoverable error with potential loss of access to data.
I/O Fabric error causes DA cache read command to hang
1. **Problem Description:** An I/O fabric error causes a DA cache read command to hang due to an internal microcode error.
2. **Potential Impact of Problem:** Loss of access
3. **Frequency of Problem:** Low
ID#: 256941

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Fence RPC card when loss of power master is detected
1. **Problem Description:** When loss of power master due to communication error is detected the RPC card will be fenced during cluster failover.
2. **Potential Impact of Problem:** Loss of access
3. **Frequency of Problem:** Low
ID#: 253407

Performance improvement for IMS WADS datasets
1. **Problem Description:** A change to the handling of WADS datasets will allow cache to decrease the probability of cache misses on these specific datasets
2. **Potential Impact of Problem:** Improved performance for IMS WADS datasets
3. **Frequency of Problem:** High for IMS WADS
ID#: 249265

Host commands to undefined LUN ID causes loss of access
1. **Problem Description:** When a host issues a command to a LUN that is not defined to the control unit a microcode error will result in a dual cluster reboot.
2. **Potential Impact of Problem:** Loss of access
3. **Frequency of Problem:** Low
ID#: 252147

LUN marked long busy by PPRC during suspend
1. **Problem Description:** A LUN can be marked long busy by PPRC during suspend PSF due to a microcode error.
2. **Potential Impact of Problem:** Loss of access to LUN
3. **Frequency of Problem:** Low
ID#: 246566

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

Metro Mirror suspends due to a microcode logic error
1. **Problem Description:** Metro Mirror suspends due to microcode logic error 0x7002. The error condition is recovered by automated warmstart.
2. **Potential Impact of Problem:** Metro Mirror suspend
3. **Frequency of Problem:** High
ID#: 241089

Global Copy initial copy performance is slow
1. **Problem Description:** Global Copy initial copy performance is slow when the target mapping is not 1:1 due to a microcode error.
2. **Potential Impact of Problem:** Increased copy times
3. **Frequency of Problem:** Low
ID#: 245034

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Metro Mirror freeze when FlashCopy issues to Global Mirror primary
1. **Problem Description:** Metro Mirror freeze occurs when FlashCopy to Global Mirror primary devices. When the FlashCopy is copy complete and host issues PRSD 46 to terminate the relationship a microcode error causes a freeze of the Metro Mirror.
2. **Potential Impact of Problem:** Metro Mirror freeze
3. **Frequency of Problem:** Low
ID#: 252355

PPRC secondary not able to send asynchronous messages
1. **Problem Description:** When PPRC initiator logs out and back in a PPRC secondary is unable to send asynchronous messages to the primary.
2. **Potential Impact of Problem:** PPRC suspend or performance problems
3. **Frequency of Problem:** Low
ID#: 251371

Global Mirror drain timeout errors cause failures forming CGs
1. **Problem Description:** After a drain failure the number of OOS tracks is not calculated correctly the first time due to a microcode error. The second and subsequent calculations are correct.
2. **Potential Impact of Problem:** Failures forming consistency groups, host performance could be impacted
3. **Frequency of Problem:** Always, operational impact rare, environment dependent
ID#: 249937

Global Mirror extended distance session is hung
1. **Problem Description:** Global Mirror can be hung and Consistency Groups are older than expected. This is due to a microcode error on the subordinate control unit.
2. **Potential Impact of Problem:** GM hang, old CGs
3. **Frequency of Problem:** Low
ID#: 242476

Host performance issues during Global Mirror startup
1. **Problem Description:** Global Mirror forces a drain when forming the first consistency group. This can cause host performance problems if the Global Mirror is started during heavy host work loads
2. **Potential Impact of Problem:** Host performance impact
3. **Frequency of Problem:** High in long distance environments
ID#: 242323

Cluster failover on GM master results in degraded I/O performance
1. **Problem Description:** Cluster failover on GM master may result in a large number of out of sync tracks. After failover consistency groups with many out of sync tracks can result in degraded I/O performance
2. **Potential Impact of Problem:** Performance
3. **Frequency of Problem:** Low
ID#: 227436

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Establish PPRC Pair fails with ANTP0208I
1. **Problem Description:** When running the Establish PPRC Pair command with message required, if the asynchronous processing completes before the command chain completes the attention interrupt is raised and there is no message placed on the attention list for the next RSSD command to read.
2. **Potential Impact of Problem:** Job failures
3. **Frequency of Problem:** Low
ID#: 255582

XRC suspend caused by microcode detected error
1. **Problem Description:** XRC suspend is caused by a microcode error processing side file entries.
2. **Potential Impact of Problem:** XRC suspend, failover possible
3. **Frequency of Problem:** Low
ID#: 246531

Repeated warmstarts when SEFLC repository is nearly full
1. **Problem Description:** When the repository is nearly full a microcode error can occur when working with the last slice of the repository.
2. **Potential Impact of Problem:** Warmstarts, FlashCopy suspend
3. **Frequency of Problem:** Low
ID#: 245177

I/O Priority Manager excessively throttles medium priority I/O
1. **Problem Description:** For open systems configurations I/O Priority Manager will excessively throttle I/O on the volumes in the medium priority group, approximately 4x the expected value.
2. **Potential Impact of Problem:** Poor performance
3. **Problem Severity:** Moderate
4. **Pervasive Problem:** Yes
ID#: 259186

Service: A recoverable error, Service improvements.
Isolation improvement for host adapter LRC error
1. **Problem Description:** Problem isolation did not isolate a host adapter with the serviceable event. An analysis procedure was identified. The host adapter will not be identified.
2. **Potential Impact of Problem:** Problem isolation more difficult
3. **Frequency of Problem:** Low
ID#: 256347

Volume deletion fails for alias volume being detected as in use
1. **Problem Description:** During deletion of an alias volume a microcode error can cause a cluster failover and failback when checking if the alias volume is in use.
2. **Potential Impact of Problem:** Cluster failover and failback
3. **Frequency of Problem:** Low, high if running WLM and traditional PAV
ID#: 24797

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Improvements: Improvement for better usability
Call home and customer notification of warmstart
1. **Problem Description:** Call home and email notification to the user when a warmstart occurs can be enabled by IBM support.
2. **Potential Impact of Problem:** N/A
3. **Problem Severity: Improvement**
ID#: 254872

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