

IBM TotalStorage® DS8800 Disk Storage 1

Microcode Bundle 86.20.98.0 v2 Release Note Information

Release Date: November 18, 2011

VRMF Level Data Results:

| | |
|------------------|------------|
| VRMF level From: | N/A |
| VRMF Level To: | 86.20.98.0 |
| Report for: | All DS8800 |

Code Bundle Contents

| DS800 Code Bundle Level | SEA or LMC Version: Used with dscli <i>ver</i> command. | CLI Client Level | Storage Manager Code Level |
|-------------------------|---|------------------|----------------------------|
| 86.20.98.0 | 7.6.20.221 | 7.6.20.221 | 5.6.20.1086 |

Overview of new features and functions supported by Microcode Release 86.20.98.0 for DS8800 , 242x model 951.

At a glance:

- IBM System Storage Easy Tier III
- Thin Provisioning Enhancements
- z Synergy Items - I/O Priority Manager for z, Extended Addressing, zHFP, Hyperswap, DB2 list prefetch, Quick Init, Format writes
- Smart Rebuild
- Secure Data Overwrite
- User Interface Enhancements

This is a 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 HIPER - 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.

Pervasive: Problems with 3 or more occurrences

IBM TotalStorage® DS8800 Disk Storage 2

Microcode Bundle 86.20.98.0 v2 Release Note Information

Acute: An irrecoverable error with potential loss of data.

Warmstart Re-init during CKD Sort Jobs causing data error

- 1. Problem Description:** If there is a warmstart re-init during a sort job in a CKD environment the cache fast write ID does not increment. The host application is not aware of the possible loss of the cache fast write data and does not restart the job. The data may be corrupted and the host application gets down level data for the sort job.
- 2. Potential Impact of Problem:** loss of data
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 260801

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

Cluster reboots with the previous code level during CCL

- 1. Problem Description:** During code load an error causes cluster reboot and the cluster loads a previous code level which results in both clusters rebooting
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 256146

Microcode logic error results in dual cluster reboot

- 1. Problem Description:** During cluster IML Back the available DA sends global metadata to the partner DA. If an error is detected in the metadata then error recovery incorrectly reboots both clusters.
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 261787

Attention status sent to HyperPAV alias device

- 1. Problem Description:** If a command that requires a message is received on an alias device the attention status message is sent to the alias device. The message must be sent to the base device. This problem has been seen with Syncsort®
- 2. Potential Impact of Problem:** loss of access
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID#: 259187

IBM TotalStorage® DS8800 Disk Storage

Microcode Bundle 86.20.98.0 v2 Release Note Information

3

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

During host adapter configuration the wrong port topology is read

- 1. Problem Description:** During cluster resume when the host adapters are configured a microcode logic error causes an incorrect port topology to be read. This will result in the port failing to operate.
- 2. Potential Impact of Problem:** loss of paths, PPRC failures are possible
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 259452

I/O bay is fenced during cluster failover due to a microcode error

- 1. Problem Description:** During a cluster failover the operational cluster takes control of the remote I/O bays. If one of the I/O bays is marked for delay reset the takeover of the I/O bay will fail and the bay will be fenced
- 2. Potential Impact of Problem:** loss of path
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 259422

PPRC failback command time-out

- 1. Problem Description:** Auto-unsuspend and PPRC failback tasks interfere with each other and cause PPRC failback command to time-out
- 2. Potential Impact of Problem:** PPRC failback failure
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 254268

Global Mirror failure caused by incorrect volume state

- 1. Problem Description:** PPRC determines the volume state is offline when the volume is online and available. This causes Global Mirror to suspend.
- 2. Potential Impact of Problem:** Global Mirror failure
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID#: 238522

Service: A recoverable error, Service improvements.

NVS mail LRC error causes cluster failover

- 1. Problem Description:** Due to a microcode error an NVS mail LRC error is detected and cluster failover results
- 2. Potential Impact of Problem:** Cluster failover and failback
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 261561

IBM TotalStorage® DS8800 Disk Storage

Microcode Bundle 86.20.98.0 v2 Release Note Information

4

Query of a deleted volume on Global Mirror secondary causes error

- 1. Problem Description:** Query of a volume / LSS that has been deleted on a Global Mirror secondary will result in a microcode detected error and an automated warmstart. Enough queries to a nonexistent volume / LSS could result in a cluster failover and reboot
- 2. Potential Impact of Problem:** warmstart
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 259777

Host adapter time-out during warmstart causes cluster failover

- 1. Problem Description:** When a host adapter fails to respond to an internal command during warmstart then recursive warmstart and cluster failover can result. The host adapter should be fenced instead of cluster failover.
- 2. Potential Impact of Problem:** Cluster failover
- 3. Problem Severity:** Service
- 4. Pervasive Problem:** No

ID#: 253260

Improvements: Improvement for better usability

Auto-format when iSeries host creates a volume that is PPRC primary

- 1. Problem Description:** When an iSeries host creates a volume that is a PPRC Primary a format unit command is sent and an auto-format is run on the volume. The volume does not need to be formatted.
- 2. Potential Impact of Problem:** Unneeded volume format
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** N/A

ID#: 257817

IBM TotalStorage® DS8800 Disk Storage

Microcode Bundle 86.20.98.0 v2 Release Note Information

5

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IBM TotalStorage® DS8800 Disk Storage

Microcode Bundle 86.20.98.0 v2 Release Note Information

6

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