

IBM System Storage - DS8880 Disk Storage Microcode Bundle 88.59.49.0 Release Note Information

Release Date: September 27, 2023

VRMF Level Data Results:

VRMF level From:	88.59.42.0
VRMF Level To:	88.59.49.0
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
88.59.49.0	7.8.59.215	7.8.59.215	7.8.59.215	5.8.59.1087	6.3.2

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

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.59.49.0 Release Note Information

Acute: An irrecoverable error with potential loss of data.

None.

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

zOS HyperSwap failure

- 1. Problem Description:** An unusual channel configuration resulted in excessive asynchronous status events and channel aborts during HyperSwap.
 - 2. Potential Impact of Problem:** Loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID# 358897

PPRC path unusable

- 1. Problem Description:** When a PPRC path is in High Failure Rate status, test I/Os are sent to the secondary to evaluate if the condition still exists. A microcode issue may cause a resource leak during this process, that can cause the Host Adapter port to become unusable.
 - 2. Potential Impact of Problem:** PPRC path unusable
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID# 360287

PPRC volumes stuck in duplex pending

- 1. Problem Description:** When converting a PPRC pair from Global Copy to Metro Mirror, queued zHyperLink write chains that could not be processed, were not cleared.
 - 2. Potential Impact of Problem:** PPRC failure
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID# 360292

Volumes stuck in long busy state

- 1. Problem Description:** A Flash drive failed in an unusual way, exposing an issue in a rarely used code path, that failed to send state change notifications, leaving multiple volumes in extended long busy state
 - 2. Potential Impact of Problem:** Loss of access
 - 3. Problem Severity:** High Impact
 - 4. Pervasive Problem:** No
- ID# 360793

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.59.49.0 Release Note Information

Copy Services Manager query received an empty list

- 1. Problem Description:** When ESSNI is down on an LPAR, copy services queries may return incorrect results to the client, instead of returning an error.
- 2. Potential Impact of Problem:** Unable to manage copy services
- 3. Problem Severity:** High Impact
- 4. Pervasive Problem:** No

ID# 360865

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

Enhance PPRC retry behavior related to secondary long busy

- 1. Problem Description:** Provide a copy services poke to drive internal retry when I/O to the secondary exceeds the specified timeout value.
- 2. Potential Impact of Problem:** Degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 315141

A FlashCopy track was incorrectly prestaged

- 1. Problem Description:** Prestage was attempted on some tracks that were already copied.
- 2. Potential Impact of Problem:** Degraded performance
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 355847

Safeguarded Copy roll-off failure

- 1. Problem Description:** An external roll-off request may collide with an internally requested roll-off, resulting in roll-off failure.
- 2. Potential Impact of Problem:** Safeguarded Copy out-of-space
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 356806

HMC /extra filesystem full

- 1. Problem Description:** ESSNI uses /extra to store CS events when memory queue is full, but does not pull the events back from /extra when the events are processed.
- 2. Potential Impact of Problem:** HMC filesystem full
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 358541

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.59.49.0 Release Note Information

DS CLI mkhost command failed with CMUN02270E

- 1. Problem Description:** mkhost failed with maximum count reached, after 4191 ports created, well short of the architected maximum of 8192.
- 2. Potential Impact of Problem:** Unable to create host ports
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 358956

Global Mirror session went fatal

- 1. Problem Description:** GM Establish Revertible failed because an unexpected FlashCopy revertible command in progress flag was set.
- 2. Potential Impact of Problem:** Extended GM recovery
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 359215

Copy Services Manager PPRC query failed with reason 3800

- 1. Problem Description:** ESSNI fails to get table entries from multiple kernel pipe requests, resulting in 0xF28 timeouts.
- 2. Potential Impact of Problem:** Degraded CSM performance,
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 359691

FB timeout waiting on SCSI task

- 1. Problem Description:** A process lock was not being released during warmstart or failover events
- 2. Potential Impact of Problem:** I/O delay, PPRC suspend
- 3. Problem Severity:** Moderate
- 4. Pervasive Problem:** No

ID# 360257

Service: A recoverable error, Service improvements.

None.

Improvements: Improvements for better usability

Suppress link down notifications for zHyperLinks

- 1. Problem Description:** Reduce nuisance SRC BE3A290D zHyperLink notifications for external link down events.
- 2. Potential Impact of Problem:** None
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 351153

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.59.49.0 Release Note Information

Throttle PPRC initial copy

- 1. Problem Description:** PPRC initial copy can cause host impact if too much copying is initiated in parallel. This change will limit the number of empty tracks that can be transferred in parallel.
- 2. Potential Impact of Problem:** Degraded performance
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 359018

Remove ODDs from warmstart notification

- 1. Problem Description:** Non-disruptive ODD Dumps should not trigger warmstart notifications.
- 2. Potential Impact of Problem:** None
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 359318

Host Adapter First-Time Data Capture

- 1. Problem Description:** FTDC - Detect possible buffer leakage in FICON microcode
- 2. Potential Impact of Problem:** None
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 359432

Disable weak cipher suites

- 1. Problem Description:** Security scans complain about the presence of weak ciphers.
- 2. Potential Impact of Problem:** None
- 3. Problem Severity:** Improvement
- 4. Pervasive Problem:** No

ID# 360399

IBM System Storage - DS8880 Disk Storage

Microcode Bundle 88.59.49.0 Release Note Information

Trademarks

The following terms are trademarks of the International Business Machines Corporation in the United States, other countries, or both.

- > AIX
- > Enterprise Storage Server
- > ESCON
- > FICON
- > i5/OS
- > iSeries
- > IBM
- > pSeries
- > S/390
- > System Storage
- > TotalStorage
- > z/OS
- > zSeries

IBM, the IBM logo, and ibm.com are trademarks or registered trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. Other product and service names might be trademarks of IBM or other companies. A current list of IBM trademarks is available on the web at Copyright and trademark information at <http://www.ibm.com/legal/us/en/copytrade.shtml>. Adobe, the Adobe logo, PostScript, and the PostScript logo are either registered trademarks or trademarks of Adobe Systems Incorporated in the United States, and/or other countries.

Java and all Java-based trademarks and logos are trademarks or registered trademarks of Oracle and/or its affiliates.

Linux is a trademark of Linus Torvalds in the United States, other countries, or both.

Microsoft, Windows, and Windows NT are trademarks of Microsoft Corporation in the United States, other countries, or both.

© Copyright IBM Corp. 2004, 2011

Notices

This information was developed for products and services offered in the U.S.A. IBM may not offer the products, services, or features discussed in this document in other countries. Consult your local IBM representative for information on the products and services currently available in your area. Any reference to an IBM product, program, or service is not intended to state or imply that only that IBM product, program, or service may be used. Any functionally equivalent product, program, or service that does not infringe any IBM intellectual property right may be used instead. However, it is the user's responsibility to evaluate and verify the operation of any non-IBM product, program, or service.

IBM may have patents or pending patent applications covering subject matter described in this document. The furnishing of this document does not give you any license to these patents. You can send license inquiries, in writing, to:

IBM Director of Licensing
IBM Corporation
North Castle Drive
Armonk, NY 10504-1785
U.S.A.

IBM System Storage - DS8880 Disk Storage **Microcode Bundle 88.59.49.0 Release Note Information**

The following paragraph does not apply to the United Kingdom or any other country where such provisions are inconsistent with local law:

INTERNATIONAL BUSINESS MACHINES CORPORATION PROVIDES THIS PUBLICATIONS "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Some states do not allow disclaimer of express or implied warranties in certain transactions, therefore, this statement may not apply to you.

This information could include technical inaccuracies or typographical errors. Changes are periodically made to the information herein; these changes will be incorporated in new editions of the publication. IBM may make improvements and/or changes in the product(s) and/or the program(s) described in this publication at any time without notice.