



PRIMERGY CUSTOMER INFORMATION BULLETIN

Number/Revision:

PY-CIB059-02

Issue Date:

August 9, 2021

Title:

Embedded Hot-Spare HDD May Bring System Down

Applies to:

- PRIMERGY CX2550 M1/M2/M4/M5/M6
- PRIMERGY CX2560 M4/M5
- PRIMERGY CX2570 M1/M2/M4/M5
- PRIMERGY RX100 S8, RX200 S8, RX 300 S8, RX 350 S8
- PRIMERGY RX1330 M1/M2/M3/M4
- PRIMERGY RX2510 M1/M2
- PRIMERGY RX2520 M1/M4/M5
- PRIMERGY RX2530 M1/M2/M4/M5/M6
- PRIMERGY RX2540 M1/M2/M4/M5/M6
- PRIMERGY RX2560 M1/M2
- PRIMERGY RX4770 M1/M2/M3/M4/M5
- PRIMERGY TX140 S2, TX300 S8
- PRIMERGY TX1320 M1/M2/M3/M4
- PRIMERGY TX1330 M2/M3/M4
- PRIMERGY TX2540 M1, TX2550 M4/M5, TX2560 M1/M2
- PRIMERGY BX2560 M1, BX2560 M2
- PRIMERGY BX2580 M1, BX2580 M2
- PRIMERGY SX960 S1

Above mentioned systems with following MegaRAID SAS array controllers:

- PRAID EP400i
 - PRAID EP420i
 - PRAID EP440i
 - PRAID EP420e
 - PRAID EM400i
 - PRAID CM400i
 - PRAID CP400i
- With FW package version earlier than 24.21.0-0076
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PRIMERGY CUSTOMER INFORMATION BULLETIN

- PRAID EP520i
- PRAID EP540i
- PRAID EP580i
- PRAID EP540e
With any FW version

- RAID Ctrl SAS 6G 1GB (D3116C)
- MegaRAID SAS 9286CV-8e
With any FW version

Effective Duration:

Permanent

Problem:

Under rare circumstances the system may come down when an embedded HDD configured as a hot-spare transits from power-saving mode to normal operation mode.

This may occur when all the following conditions are met:

- The affected versions of SAS controller installed
- iRMC S4 with FW version 9.04F or later, or iRMC S5 with any FW
- Hot spare disk configuration has been set
- Hot spare spinning down is enabled

Cause:

This is caused due to an issue in the firmware for the SAS array controller. When the hot-spare drive in power-saving mode returns to the normal operation, the array controller may reset when it is accessed from the iRMC S4 (FW: 9.04F or later) or iRMC S5 (FW: any versions).

Symptoms:

When the hot-spare HDD state transits from power-saving mode to normal operation mode, a fatal firmware error can rarely occur in the RAID card firmware, which causes a system down. In rare cases though, a multi-dead error might also be caused by a frequent command timeout in the HDD. When the issue occurs the logs can indicate the following:

From the RAID management tool:

* Log showing hot-spare HDD transits from power-saving mode to normal operation mode:

10823 Power state change on disk (2) from stopped to transition

10825 Power state change on disk (2) from transition to active



PRIMERGY CUSTOMER INFORMATION BULLETIN

* Log showing that a fatal firmware error occurred:
10204 Fatal firmware error: Line 1155 in ../../dm/src/dm.c

* Log showing that a fatal firmware error occurred:
10804 Controller encountered a fatal error and was reset

From the OS:

- In Windows

Log recorded to OS event log (system log):

Source: megasas2

Event ID: 11

Level: Error

Description: The driver detected a controller error at ¥Device¥RaidPortX.

Source: megasas2

Event ID: 129

Level: Warning

Description: A reset request was issued to ¥Device¥RaidPortX.

Source: disk

Event ID: 153

Level: Warning

Description: An I/O operation was attempted at Disk X logical block address xxxxxxxx.

- In Linux

Log recorded to messages:

kernel : megaraid_sas: FW detected to be in faultstate, restarting it...

kernel : ADP_RESET_GENX: HostDiag=xX

kernel : megasas: waitingfor controller reset to finish

kernel : megaraid_sas: FW restarted successfully, initiating next stage...

kernel : megaraid_sas: HBA recovery state machine, state X starting...

kernel : megasas: waiting for controller reset to finish



PRIMERGY CUSTOMER INFORMATION BULLETIN

- In VMware

Log recorded to vmkernel.log:

megasas : ABORT sn XXXXXXXXXX cmd=Xxxx retries=X tmo=X

megasas : RESET -XXXXXXXXX cmd=XX retries=X

megaraid_sas : HBA reset handler invoked without an internal reset condition.

WARNING : LinScsi : SCSI Linux Queue Command:XXXX:queuecommand failed with status = XxXXXX Host Busy vmhbaX:X:X:X (driver name: LSI Logic SAS based MegaRAID driver) - Message repeated X time

Solution:

- If any of the PRAID xx4xxx Controllers are used apply Controller FW package version 24.21.0-0076 or later
- If RAID Ctrl SAS 6G 1GB or MegaRAID SAS 9286CV-8e is used on a system with iRMC S4 apply iRMC S4 FW version 9.62F or later
- If PRAID EP5xxx or RAID Ctrl SAS 6G 1GB or MegaRAID SAS 9286CV-8e is used on a system with iRMC S4/S5 or on a system where the recommended FW can't be applied for any reason, disable the Spin-down setting for hot spare using any of the following procedures:

It is strongly recommended to use offline change settings on PRAID controllers. Offline change settings are not available on RAID Ctrl SAS 6G 1GB and MegaRAID SAS 9286CV-8e.

Online Change Setting

[With ServerView RAID Manager]

1. Launch ServerView RAID Manager (GUI).
2. Select the adapter object for the corresponding SAS controller card displayed in the tree view on the left of the main window.
3. Select the Settings tab.
4. Click the [Edit] button for power management.
5. Disable the Spin-down setting for hot spares.
6. Click [OK].

Offline Change Setting

[With HII Configuration Utility]

1. Press <F2> key while the server is in POST operation to launch BIOS Setup Utility.
 2. From the Advanced menu, select "AVAGO MegaRAID <PRAID xxxx> Configuration Utility" for the corresponding SAS array controller card.
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PRIMERGY CUSTOMER INFORMATION BULLETIN

3. From the Main menu, select “Controller Management” → “Advanced Controller Properties” → “Power Save Settings.”
4. Change the setting for “Spin Down Hot Spare Drives” to “Disabled.”
5. Select “Apply Changes.”
6. In response to a confirmation message, click [OK].

[With Ctrl-R Utility]

1. Power on the server
2. Press <Ctrl> + <R> keys while the following dialog is displayed during system booting:
Copyright LSI Corporation Press <Ctrl><R> for Ctrl-R
3. Press <Ctrl> + <N> keys twice to open the “Ctrl Mgmt” window
4. Press the upper-arrow key once to move the cursor to “Next,” and then press <Enter> key
5. Press the upper-arrow key to select “Manage Power Save”, and then press <Enter> key
6. In the “Manage Power Save” dialog, move the cursor to “Spin down Hot Spares,” and press <space> key to uncheck it
7. Press the upper-arrow key to move the cursor to “OK”, and then press the <Enter> key
8. Press <Esc> key to proceed
9. In reply to the popup message “Are you sure you want to exit?”, select “OK” to exit
10. To reboot, press <Ctrl><Alt>+.

The iRMC and RAID Controller FW can be obtained from the download site:

<https://support.ts.fujitsu.com>

Revision History:

REVISION	DATE	CHANGE SUMMARY
000	December 7, 2020	Initial Release
001	January 12, 2021	Added M5 systems
002	August 9, 2021	Update server list
