# Hewlett Packard Enterprise

# HPE 3PAR OS 3.2.2 MU6 Patch 135 Release Notes

**Abstract**

This release notes document is for 3.2.2 MU6 P135.

## Acknowledgements

# Purpose

The HPE 3PAR OS 3.2.2 MU6 P135 provides several critical quality improvements.

> (!) **IMPORTANT:** See the **HPE 3PAR OS and Service Processor Software Update Guide (HPE 3PAR OS 3.2.x HPE 3PAR Service Processor 4.x)** for instructions on updating your specific software.

**Guidance**

This is a critical patch.

**Prerequisites**

• Minimum Service Processor required: SP-4.4.0 MU6 + latest SP Patch.

• Base OS: OS-3.2.2 MU6. See the Requires field in the Patch details.

**Patch details**

Patch ID: P135

Synopsis: Provides several critical quality improvements

Date: November 15, 2018, 18:28:01 PST

Description: See the Release Notes for details about this patch

Affected Packages: tpd-sysmgr, tpd-kernelanalysis, tpd-nodesvr, tpd-kernelpatch, tpd-cli, tpd-libtpdtcl, tpd-evt, tpd-update, tpd-prerevert

Obsoletes: OS-3.2.2.709-P126

Requires: OS-3.2.2.709-MU6,OS-3.2.2.709-P99,OS-3.2.2.709-P119

Build Version: 3.2.2.771

Patches Included: OS-3.2.2.709-P131

Patches Partially Superseded: OS-3.2.2.709-P99,OS-3.2.2.709-P119,OS-3.2.2.709-P131

Patches Obsolete by Combination: None.

Supports Revert: Yes

Notes: Description of the obsoleted patches:

  Patch ID: P126

  Synopsis: Delivers critical quality improvements for end-to-end Data Integrity Fields

  Date: August 06, 2018, 16:26:39 PDT

  Description: See the Release Notes for details about this patch

  Affected Packages: tpd-sysmgr, tpd-prerevert

  Obsoletes: None

  Requires: OS-3.2.2.709-MU6,OS-3.2.2.709-P99,OS-3.2.2.709-P119

  Build Version: 3.2.2.758

  Notes:

**NOTE:**

Hewlett Packard Enterprise recommends installing patches in the same sequence as they are released, unless instructed otherwise.

# Modifications

HPE 3PAR patch 135 addresses the following issues:

| Issue ID | Description |
| --- | --- |
| 157989, 233586, 246758, 246759 | In a full virtual volume (VV), `unmap` commands immediately followed by rewrites to the same blocks lead to I/O operations not successfully completing. |
| 213894, 239147, 248306, 248305 | A VV block operation triggered by adaptive optimization region moves is delayed. This delay leads to the System Manager becoming unresponsive. A subsequent restart of System Manager leads to the array unexpectedly restarting. |
| 224669, 247016, 247017 | Control cache memory fragmentation leads to an unexpected controller node restart. |
| 237299, 248623, 248622 | No alerts are raised for faulty Active Optical Cables (AOC). |
| 245597 | Insufficient handling of device missing delay (DMD), SCSI check condition 06/29, causes host I/O operations to stall indefinitely. |
| 246694 | Unexpected controller node restart while processing Remote Copy failover I/O operations. |
| 247003, 244217 | An `InSplore` is not automatically collected following a System Manager restart. |
| 247037, 247038 | A data inconsistency or stale snapshots can occur when I/O starts on the base while the child snapshot is not ready. |
| 247170, 247171 | Region mover switch takes a long time when using Logical Disk Volumes from different masters. |
| 247179, 247180 | When a controller node is going offline, an inconsistent view of the VV mastership can occur. This condition leads to metadata inconsistency with an unexpected array restart. |

*Table Continued*

| 247412, 246852, 249948, 249947 | Thin Provisioned VVs grow using snap space even though there is unused space available from deleted snapshots. |
|---|---|
| 247470, 247042 | Host I/O stalls when a VV or its first Read-only snapshot is not in the expected state. |
| 247724, 246140 | A controller node restart occurs during Port Persistent failback if a loss of a SCSI initiator happens at the same time on the same vport that is disappearing. |
| 248621, 248620 | A SAS port reset can lead to VVs going into the preserved state because the reset was taking too long. |

# Affected components

| Component | Version |
|---|---|
| CLI Server | 3.2.2.771 (P135) |
| System Manager | 3.2.2.771 (P135) |
| TPD Kernel Patch | 3.2.2.771 (P135) |
| Event Manager | 3.2.2.771 (P135) |
| Per-Node Server | 3.2.2.771 (P135) |
| Software Updater | 3.2.2.771 (P135) |

**NOTE:** Applying an HPE 3PAR OS patch can cause a restart of the affected OS components. This restart is an expected behavior, which will generate events and alerts. The system continues to serve data, but existing CLI or SSMC sessions could be interrupted.

# Verification

The installation of Patch 135 can be verified from an interactive CLI session. Issue the CLI command `showversion -a -b` to verify that Patch 135 is listed:

```
root@jnoded1621635:~# showversion -a -b
Release version 3.2.2.709 (MU6)
Patches:  P99,P119,P125,P131,P135

Component Name                     Version
CLI Server                         3.2.2.771 (P135)
CLI Client                         3.2.2.771
System Manager                     3.2.2.771 (P135)
Kernel                             3.2.2.709 (MU6)
TPD Kernel Code                    3.2.2.709 (MU6)
TPD Kernel Patch                   3.2.2.771 (P135)
CIM Server                         3.2.2.750 (P119)
WSAPI Server                       3.2.2.750 (P119)
Console Menu                       3.2.2.709 (MU6)
Event Manager                      3.2.2.771 (P135)
Internal Test Tools                3.2.2.709 (MU6)
LD Check Tools                     3.2.2.709 (MU6)
Network Controller                 3.2.2.725 (P99)
Node Disk Scrubber                 3.2.2.709 (MU6)
PD Scrubber                        3.2.2.709 (MU6)
Per-Node Server                    3.2.2.771 (P135)
Persistent Repository              3.2.2.709 (MU6)
Powerfail Tools                    3.2.2.709 (MU6)
Preserved Data Tools               3.2.2.709 (MU6)
Process Monitor                    3.2.2.709 (MU6)
Rolling Upgrade Tools              3.2.2.709 (MU6)
Software Updater                   3.2.2.771 (P135)
TOC Server                         3.2.2.725 (P99)
VV Check Tools                     3.2.2.725 (P99)
File Persona                       1.2.4.3-20170601
SNMP Agent                         1.8.0
SSH                                6.6p1-4~bpo70+1
VASA Provider                      2.2.12 (P119)
Firmware Database                  3.2.2.709 (MU6)
Drive Firmware                     3.2.2.709 (MU6)
UEFI BIOS                          04.08.39
MCU Firmware (OKI)                 4.8.29
MCU Firmware (STM)                 5.2.53
Cage Firmware (DC1)                4.44
Cage Firmware (DC2)                2.64
Cage Firmware (DC3)                08
Cage Firmware (DC4)                2.64
Cage Firmware (DCN1)               4096
Cage Firmware (DCN2)               4096
Cage Firmware (DCS1)               4096
Cage Firmware (DCS2)               4096
Cage Firmware (DCS5)               2.86
Cage Firmware (DCS6)               2.86
Cage Firmware (DCS7)               4096
Cage Firmware (DCS8)               4096
QLogic QLA4052C HBA Firmware       03.00.01.77
QLogic QLE8242 CNA Firmware        04.15.08
QLogic 8300 HBA FC Firmware        08.01.05
QLogic 8300 HBA FCoE Firmware      08.01.05
```

```
QLogic 8300 HBA iSCSI Firmware    05.07.07
Emulex LP11002 HBA Firmware       02.82.x10
Emulex LPe12002 HBA Firmware      02.10.x03
Emulex LPe12004 HBA Firmware      02.10.x03
Emulex LPe16002 HBA Firmware      10.6.248.8
Emulex LPe16004 HBA Firmware      10.6.248.8
3PAR FC044X HBA Firmware          200A8
LSI 9201-16e HBA Firmware         17.11.00
LSI 9205-8e HBA Firmware          17.11.00
LSI 9300-8e HBA Firmware          07.10.01
```

**NOTE:** When displaying the `showversion` command output from the SP, the CLI Client version is static in the SP code and may differ from the output from any other system.

# Websites

**General websites**

**Hewlett Packard Enterprise Information Library**

    **www.hpe.com/info/EIL**

**Single Point of Connectivity Knowledge (SPOCK) Storage compatibility matrix**

    **www.hpe.com/storage/spock**

**Storage white papers and analyst reports**

    **www.hpe.com/storage/whitepapers**

For additional websites, see **Support and other resources**.

# Support and other resources

## Accessing Hewlett Packard Enterprise Support

- For live assistance, go to the Contact Hewlett Packard Enterprise Worldwide website:

  **http://www.hpe.com/assistance**

- To access documentation and support services, go to the Hewlett Packard Enterprise Support Center website:

  **http://www.hpe.com/support/hpesc**

**Information to collect**

- Technical support registration number (if applicable)

- Product name, model or version, and serial number

- Operating system name and version

- Firmware version

- Error messages

- Product-specific reports and logs

- Add-on products or components

- Third-party products or components

## Accessing updates

- Some software products provide a mechanism for accessing software updates through the product interface. Review your product documentation to identify the recommended software update method.

- To download product updates:

  **Hewlett Packard Enterprise Support Center**
  > **www.hpe.com/support/hpesc**

  **Hewlett Packard Enterprise Support Center: Software downloads**
  > **www.hpe.com/support/downloads**

  **Software Depot**
  > **www.hpe.com/support/softwaredepot**

- To subscribe to eNewsletters and alerts:

  **www.hpe.com/support/e-updates**

- To view and update your entitlements, and to link your contracts and warranties with your profile, go to the Hewlett Packard Enterprise Support Center **More Information on Access to Support Materials** page:

  **www.hpe.com/support/AccessToSupportMaterials**

> **IMPORTANT:** Access to some updates might require product entitlement when accessed through the Hewlett Packard Enterprise Support Center. You must have an HPE Passport set up with relevant entitlements.

# Customer self repair

Hewlett Packard Enterprise customer self repair (CSR) programs allow you to repair your product. If a CSR part needs to be replaced, it will be shipped directly to you so that you can install it at your convenience. Some parts do not qualify for CSR. Your Hewlett Packard Enterprise authorized service provider will determine whether a repair can be accomplished by CSR.

For more information about CSR, contact your local service provider or go to the CSR website:

**http://www.hpe.com/support/selfrepair**

# Remote support

Remote support is available with supported devices as part of your warranty or contractual support agreement. It provides intelligent event diagnosis, and automatic, secure submission of hardware event notifications to Hewlett Packard Enterprise, which will initiate a fast and accurate resolution based on your product's service level. Hewlett Packard Enterprise strongly recommends that you register your device for remote support.

If your product includes additional remote support details, use search to locate that information.

**Remote support and Proactive Care information**
**HPE Get Connected**
> **www.hpe.com/services/getconnected**

**HPE Proactive Care services**
> **www.hpe.com/services/proactivecare**

**HPE Proactive Care service: Supported products list**
> **www.hpe.com/services/proactivecaresupportedproducts**

**HPE Proactive Care advanced service: Supported products list**
> **www.hpe.com/services/proactivecareadvancedsupportedproducts**

**Proactive Care customer information**
**Proactive Care central**
> **www.hpe.com/services/proactivecarecentral**

**Proactive Care service activation**
> **www.hpe.com/services/proactivecarecentralgetstarted**

# Warranty information

To view the warranty information for your product, see the links provided below:

**HPE ProLiant and IA-32 Servers and Options**
> **www.hpe.com/support/ProLiantServers-Warranties**

**HPE Enterprise and Cloudline Servers**
> **www.hpe.com/support/EnterpriseServers-Warranties**

**HPE Storage Products**
> **www.hpe.com/support/Storage-Warranties**

**HPE Networking Products**
> **www.hpe.com/support/Networking-Warranties**

# Regulatory information

To view the regulatory information for your product, view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products*, available at the Hewlett Packard Enterprise Support Center:

**www.hpe.com/support/Safety-Compliance-EnterpriseProducts**

**Additional regulatory information**

Hewlett Packard Enterprise is committed to providing our customers with information about the chemical substances in our products as needed to comply with legal requirements such as REACH (Regulation EC No 1907/2006 of the European Parliament and the Council). A chemical information report for this product can be found at:

**www.hpe.com/info/reach**

For Hewlett Packard Enterprise product environmental and safety information and compliance data, including RoHS and REACH, see:

**www.hpe.com/info/ecodata**

For Hewlett Packard Enterprise environmental information, including company programs, product recycling, and energy efficiency, see:

**www.hpe.com/info/environment**

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