



**Hewlett Packard  
Enterprise**

# **HPE 3PAR OS 3.2.2 MU4 Patch 94 Release Notes**

## **Abstract**

This release notes document is for Patch 94 and intended for HPE 3PAR Operating System Software 3.2.2.612 (MU4).

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## Notices

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# Purpose

The HPE 3PAR OS 3.2.2 MU4 Patch 94 provides quality improvements including LDAP, system manager, node processing.

## Guidance

- This is a recommended patch for HPE 3PAR OS 3.2.2 MU4.
- All HPE 3PAR StoreServ Storage systems running 3.2.2 MU4 are susceptible to issues corrected in this patch.

## Prerequisites

- SP prerequisite: SP-4.4.0.GA-58 + the latest SP patch.
- Base OS: OS-3.2.2.612-MU4. See the Requires field in the Patch details.

## Patch details

Patch ID: P94

Synopsis: Quality improvements including LDAP, system manager, node processing.

Date: November 27, 2017, 18:25:12 PST

Affected Packages: tpd-utils, tpd-sysmgr, tpd-darsvr, tpd-cli, tpd-libtpdtcl, tpd-update, tpd-kernelpatch, tpd-fipsvr, tpd-prerevert

Obsoletes: None

Requires: OS-3.2.2.612-MU4,OS-3.2.2.612-P59,OS-3.2.2.612-P84,OS-3.2.2.612-P92

Build Version: 3.2.2.712

Patches Partially Superseded: OS-3.2.2.612-P59,OS-3.2.2.612-P84,OS-3.2.2.612-P92

Patches Obsolete by Combination: Patch 94 + P90 obsoletes Patch 74, Patch 94 + Patch 91 obsoletes Patch 74, Patch 94 + Patch 95 obsoletes Patch 74

Revert Supported: Yes

Patches Included: None

Notes:

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## NOTE:

- Applying this patch to the 3PAR OS might restart the affected OS components. With these restarts, events and alerts might be generated and this is an expected behavior. The system continues to serve data, but existing CLI or SSMC sessions might be interrupted.
  - Hewlett Packard Enterprise recommends installing patches in the same sequence as they are released, unless instructed otherwise.
  - When displaying the `showversion` command output from the SP, the CLI Client version is fixed in the SP code and might differ from the output displayed from any other system.
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# Modifications

Patch 94 provides:

Issue ID	Description
191212	When restarting the System Manager on an array using persistent ports, the System Manager application may terminate unexpectedly.
208350	Prevents the authorization service on the array from consuming the controller node CPU when LDAP binding is unsuccessful using Simple Authentication & Security Layer (SASL).
213407	Resolves an unexpected termination of the <code>tunesys</code> command when low freespace conditions exist if small volumes are present.
213997	Improved dual boot drive error handling for StoreServ 20000.
215044	Prevents a given Virtual Volume (VV) from being exported more than once to a host.
215894	Snapshot removal or space reclamation on a Thinly Provisioned Virtual Volume (TPVV) causes internal logging issues which leads to unexpected controller node restarts.

## Affected components

Component	Version
CLI Server	3.2.2.712 (P94)
System Manager	3.2.2.712 (P94)
TPD Kernel Patch	3.2.2.712 (P94)
Software Updater	3.2.2.712 (P94)

## Verification

The installation of P94 can be verified from an interactive CLI session. Issue the `showversion -a -b` CLI command to verify that P94 is listed:

```
Release version 3.2.2.612 (MU4)
Patches: P56, P59, P84, P85, P92, P94, P95
```

Component Name	Version
CLI Server	<b>3.2.2.712 (P94)</b>
CLI Client	3.2.2.712
System Manager	<b>3.2.2.712 (P94)</b>
Kernel	3.2.2.612 (MU4)

TPD Kernel Code	3.2.2.642 (P59)
TPD Kernel Patch	<b>3.2.2.712 (P94)</b>
CIM Server	3.2.2.612 (MU4)
WSAPI Server	3.2.2.612 (MU4)
Console Menu	3.2.2.612 (MU4)
Event Manager	3.2.2.612 (MU4)
Internal Test Tools	3.2.2.612 (MU4)
LD Check Tools	3.2.2.612 (MU4)
Network Controller	3.2.2.612 (MU4)
Node Disk Scrubber	3.2.2.612 (MU4)
PD Scrubber	3.2.2.612 (MU4)
Per-Node Server	3.2.2.687 (P92)
Persistent Repository	3.2.2.612 (MU4)
Powerfail Tools	3.2.2.612 (MU4)
Preserved Data Tools	3.2.2.612 (MU4)
Process Monitor	3.2.2.626 (P56)
Rolling Upgrade Tools	3.2.2.612 (MU4)
Software Updater	<b>3.2.2.712 (P94)</b>
TOC Server	3.2.2.687 (P92)
VV Check Tools	3.2.2.612 (MU4)
File Persona	1.2.4.3-20170601 (P85)
SNMP Agent	1.8.0
SSH	6.6p1-4~bpo70+1
VASA Provider	2.2.10
Firmware Database	3.2.2.710 (P95)
Drive Firmware	3.2.2.710 (P95)
UEFI BIOS	04.08.38
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)	4078
Cage Firmware (DCN2)	4078
Cage Firmware (DCS1)	4078
Cage Firmware (DCS2)	4078
Cage Firmware (DCS5)	1.93
Cage Firmware (DCS6)	1.93
Cage Firmware (DCS7)	4078
Cage Firmware (DCS8)	4078
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	05.07.06
Emulex LP11002 HBA Firmware	02.82.x10
Emulex LPe12002 HBA Firmware	02.03.x11
Emulex LPe12004 HBA Firmware	02.03.x11
Emulex LPe16002 HBA Firmware	10.6.248.4
Emulex LPe16004 HBA Firmware	10.6.248.4
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	07.00.00

# Websites

## **General websites**

**Hewlett Packard Enterprise Information Library**

**[www.hpe.com/info/EIL](http://www.hpe.com/info/EIL)**

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

**[www.hpe.com/storage/spock](http://www.hpe.com/storage/spock)**

**Storage white papers and analyst reports**

**[www.hpe.com/storage/whitepapers](http://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](http://www.hpe.com/support/hpesc)

### Hewlett Packard Enterprise Support Center: Software downloads

[www.hpe.com/support/downloads](http://www.hpe.com/support/downloads)

### Software Depot

[www.hpe.com/support/softwaredepot](http://www.hpe.com/support/softwaredepot)

- To subscribe to eNewsletters and alerts:  
[www.hpe.com/support/e-updates](http://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:



**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.

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## 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](http://www.hpe.com/services/getconnected)

#### HPE Proactive Care services

[www.hpe.com/services/proactivecare](http://www.hpe.com/services/proactivecare)

#### HPE Proactive Care service: Supported products list

[www.hpe.com/services/proactivecaresupportedproducts](http://www.hpe.com/services/proactivecaresupportedproducts)

#### HPE Proactive Care advanced service: Supported products list

[www.hpe.com/services/proactivecareadvancedsupportedproducts](http://www.hpe.com/services/proactivecareadvancedsupportedproducts)

### Proactive Care customer information

#### Proactive Care central

[www.hpe.com/services/proactivecarecentral](http://www.hpe.com/services/proactivecarecentral)

#### Proactive Care service activation

[www.hpe.com/services/proactivecarecentralgetstarted](http://www.hpe.com/services/proactivecarecentralgetstarted)

## Warranty information

To view the warranty for your product or to view the *Safety and Compliance Information for Server, Storage, Power, Networking, and Rack Products* reference document, go to the Enterprise Safety and Compliance website:

[www.hpe.com/support/Safety-Compliance-EnterpriseProducts](http://www.hpe.com/support/Safety-Compliance-EnterpriseProducts)

#### **Additional warranty information**

##### **HPE ProLiant and x86 Servers and Options**

[www.hpe.com/support/ProLiantServers-Warranties](http://www.hpe.com/support/ProLiantServers-Warranties)

##### **HPE Enterprise Servers**

[www.hpe.com/support/EnterpriseServers-Warranties](http://www.hpe.com/support/EnterpriseServers-Warranties)

##### **HPE Storage Products**

[www.hpe.com/support/Storage-Warranties](http://www.hpe.com/support/Storage-Warranties)

##### **HPE Networking Products**

[www.hpe.com/support/Networking-Warranties](http://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](http://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](http://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](http://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](http://www.hpe.com/info/environment)

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