

HPE 3PAR OS and Service Processor Software Update Guide HPE 3PAR OS 3.3.1 HPE 3PAR Service Processor 5.x

Abstract

This guide provides instructions for customers to update the HPE 3PAR Operating System 3.3.1 (and above) software and the HPE 3PAR Service Processor 5.x software using the HPE 3PAR Service Console.

Part Number: QR482-97373 Published: January 2018

Edition: 1

© Copyright 2018 Hewlett Packard Enterprise Development LP

Notices

The information contained herein is subject to change without notice. The only warranties for Hewlett Packard Enterprise products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. Hewlett Packard Enterprise shall not be liable for technical or editorial errors or omissions contained herein.

Confidential computer software. Valid license from Hewlett Packard Enterprise required for possession, use, or copying. Consistent with FAR 12.211 and 12.212, Commercial Computer Software, Computer Software Documentation, and Technical Data for Commercial Items are licensed to the U.S. Government under vendor's standard commercial license.

Links to third-party websites take you outside the Hewlett Packard Enterprise website. Hewlett Packard Enterprise has no control over and is not responsible for information outside the Hewlett Packard Enterprise website.

Acknowledgments

Intel[®], Itanium[®], Pentium[®], Intel Inside[®], and the Intel Inside logo are trademarks of Intel Corporation in the United States and other countries.

Microsoft[®] and Windows[®] are either registered trademarks or trademarks of Microsoft Corporation in the United States and/or other countries.

Adobe[®] and Acrobat[®] are trademarks of Adobe Systems Incorporated.

Java® and Oracle® are registered trademarks of Oracle and/or its affiliates.

UNIX[®] is a registered trademark of The Open Group.

Contents

Ur	pdate overview	4
•	Customer guidelines	
	Customer responsibilities	
	Update by Hewlett Packard Enterprise or an HPE Authorized Service Provider	
	Downloading software product updates	
	Supported browsers	
	Logging in to the HPE 3PAR Service Console	
Ur	pdating HPE 3PAR Service Processor 5.x software	7
•	Review the HPE 3PAR Service Processor Release Notes	
	Update the HPE 3PAR SP	
Ur	pdating HPE 3PAR OS software	9
- [Review the HPE 3PAR OS update details	
	Verify the HPE 3PAR SP 5.x requirements	
	Verify the HPE 3PAR OS requirements	
	Perform a health check on the storage system	
	Stage the Upgrade tool	
	Update the HPE 3PAR OS	
	Review the HPE 3PAR OS update results	
	Perform a health check on the storage system	
	Complete post HPE 3PAR OS update tasks	14
Hŀ	PE 3PAR OS and HPE 3PAR SP update concepts	
	HPE 3PAR SP update concepts	
	HPE 3PAR OS update concepts	
	HPE 3PAR OS Upgrade tool	
	HPE 3PAR OS update recovery	
	HPE 3PAR OS revert operations	18
. <i></i>		
W	'ebsites	19
_		
Sι	upport and other resources	
	Accessing Hewlett Packard Enterprise Support	
	Accessing updates	
	Customer self repair	
	Remote support	
	Warranty information	
	Regulatory information	
	Documentation feedback	22

Update overview

This guide provides instructions to update your HPE 3PAR Operating System (OS) 3.3.1 (and above) software and your HPE 3PAR Service Processor (SP) 5.x software without the assistance of an authorized service provider. You update the HPE 3PAR OS and HPE 3PAR SP software using the HPE 3PAR Service Console (SC).

(!)

IMPORTANT:

If update assistance is needed, contact your Hewlett Packard Enterprise sales representative or HPE Channel Partner to purchase HPE Deployment services.

Customer guidelines

- If your HPE 3PAR StoreServ is under warranty and there is a service contract, Hewlett Packard Enterprise or an authorized service provider can perform the update.
 - A service technician can update the storage system software onsite with physical media or deploy and update remotely.
- If your HPE 3PAR StoreServ storage system is running HPE 3PAR OS 3.2.2 or earlier, for assistance with the update, contact the Hewlett Packard Enterprise global deployment center at 3par-sps@hpe.com and include the HPE 3PAR StoreServ Storage system serial number in the subject line.
- To access software updates and to install the HPE 3PAR OS, Maintenance Update (MU) releases, or patches, you must maintain an active Hewlett Packard Enterprise support contract and product entitlement.
- If the Allow software downloads option is enabled through the Service Console, the HPE 3PAR OS
 package is staged on your storage system. A grouped low urgency email notification and an alert inform
 you that a new update is available.

Customer responsibilities

 Review all the relevant documentation for the HPE 3PAR OS and HPE 3PAR SP before performing the update. The following documents, and others referenced in this document, are available on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

- HPE 3PAR OS 3.3.1 Release Notes
- HPE 3PAR OS Upgrade Tools Release Notes
- HPE 3PAR Service Processor Software 5.x Release Notes
- HPE 3PAR Upgrade Planning Guide
- HPE 3PAR Service Processor Software 5.0.x User Guide
- Ensure that the host and SAN environment is supported and compliant with Hewlett Packard Enterprise recommendations. Resolve any problems with the host and SAN environment prior to upgrading the HPE 3PAR OS and HPE 3PAR SP software.

- See the HPE 3PAR host implementation guides on the Hewlett Packard Enterprise Information Library:
 http://www.hpe.com/info/storage/docs
- See the HPE 3PAR Smart SAN User Guide on the Hewlett Packard Enterprise Support Center:

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

NOTE: Host and SAN components that might require an update have their own warranty policies. Refer to the documentation for those products for this information.

 To determine supported HPE 3PAR OS software and HPE 3PAR SP software update paths, see the HPE 3PAR StoreServ 3PAR OS 3.3.1 Support Matrix and the HPE 3PAR Service Processor Support Matrix. These documents are available on SPOCK:

http://www.hpe.com/storage/spock

Do not perform SP tasks during an SP update. Unpredictable results may occur.

Update by Hewlett Packard Enterprise or an HPE Authorized Service Provider

To arrange for Hewlett Packard Enterprise to perform the update, contact the Hewlett Packard Enterprise global deployment center at 3par-sps@hpe.com and include the HPE 3PAR StoreServ Storage system serial number in the subject line. The email service is available 24 hours a day, 7 days a week. If you have a service contract with an HPE authorized service provider, contact the authorized service provider to schedule a HPE 3PAR OS software update.

Downloading software product updates

Procedure

1. Confirm that you have your Service Agreement ID (SAID).

Your support agreement outlines your support coverage for your software product. Your 12 digit SAID number is located in your support agreement. If you need assistance, contact your Hewlett Packard Enterprise representative.

- 2. Go to the Software updates and licensing website: http://www.hpe.com/downloads/software.
 - **a.** Log in with your HPE Passport user ID. Create an HPE Passport account if you do not have one.
 - **b.** Enter your SAID. If you linked SAIDs to your profile on <u>Hewlett Packard Enterprise Support Center</u>, you can select the SAID from the list.
 - c. Accept the terms and conditions.
- 3. Download updates for your product.
 - a. Click View available products.
 - b. Enter the product name or number in the search box. Updates for the product are listed.
 - c. Select one or more updates and click **Get software updates**.

Supported browsers

The following browsers are supported when connecting to the HPE 3PAR Service Console:

- Microsoft Internet Explorer
- · Microsoft Windows Edge
- · Mozilla Firefox
- Google Chrome

For the most current browser version information, see the HPE 3PAR Service Processor Software 5.x Release Notes on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

Logging in to the HPE 3PAR Service Console

Prerequisites

Ensure that browser pop-ups are allowed.

Procedure

- 1. Browse to the SP IP address: https://<sp_ip_address>:8443.
- 2. Enter the user name and password, then click Login.

The Service Processor Overview view is displayed by default.

Updating HPE 3PAR Service Processor 5.x software

- 1. Review the HPE 3PAR Service Processor Release Notes on page 7
- 2. Update the HPE 3PAR SP on page 7

Review the HPE 3PAR Service Processor Release Notes

Procedure

1. Download the HPE 3PAR Service Processor Software 5.x Release Notes. Release notes are available on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

- 2. Review the release notes for the SP version you will use for the update to:
 - · Understand the enhancements and fixes
 - Verify minimum supported versions
 - Identify known issues

Update the HPE 3PAR SP

This procedure is the same for installing SP patches and maintenance updates.

IMPORTANT:

Service Processor software updates may automatically restart the Service Processor to activate changes. It can take up to 5 minutes before the Service Processor is available again and you will be disconnected during that time. StoreServ data availability is not affected during the time that the Service Processor is restarting. To determine if the version you are installing will restart the Service Processor, see the HPE 3PAR Service Processor Software 5.x Release Notes.

Prerequisites

- If the SP software version you want to install is not yet available on the SP, you must download the Service Processor software. See **<u>Downloading software product updates</u>** on page 5.
- To determine supported update paths for SP software, review the HPE 3PAR Service Processor Support Matrix, which is available on SPOCK:

http://www.hpe.com/storage/spock

If needed, review HPE 3PAR Service Console options in the HPE 3PAR Service Processor Software 5.0.x User Guide on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

Procedure

- 1. Log in to the Service Console.
- 2. Open the Service Console main menu and select Service Processor.
- 3. On the Actions menu, select Update.
- **4.** Use one of the following methods to select the HPE 3PAR SP update package.
 - Use a pre-loaded SP update package—To use a pre-loaded SP update package, from the Update dialog, select the Service Processor version from the Available update package(s) list.
 - The pre-loaded list contains HPE 3PAR SP software versions that were either automatically loaded for you from Hewlett Packard Enterprise or previously staged from an ISO image or DVD.
 - Load a different update package—If the SP package is not listed in the Available update
 package(s) list, from the Update dialog, select Load a different update package. Then select one of
 the following options:
 - **ISO image**—Either drag or drop the image file in the file drop box or select **Choose File** to browse the local system for the file. When the file appears in the box, click **Start upload**.
 - Service Processor DVD drive—Import the update from the physical media drive of the Service Processor. Insert the media into the Service Processor media drive and click Start upload.

For all options, once selected, the software package is displayed as the default in **Available update** package(s).

5. Click **Update** and then click **Yes**, **Update** to start the update process. The update progress is displayed on the Service Processor Update page.

More information

Logging in to the HPE 3PAR Service Console on page 6

Updating HPE 3PAR OS software

- 1. Review the HPE 3PAR OS update details on page 9
- Verify the HPE 3PAR SP 5.x requirements on page 9
- 3. Verify the HPE 3PAR OS requirements on page 10
- 4. Perform a health check on the storage system on page 10
- 5. Stage the Upgrade tool on page 10
- 6. Update the HPE 3PAR OS on page 11
- 7. Review the HPE 3PAR OS update results on page 14
- 8. Perform a health check on the storage system on page 10

Review the HPE 3PAR OS update details

Procedure

1. Download the release notes for the HPE 3PAR OS version to which you are updating. Release notes are available on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

- **2.** Review the release notes to:
 - · Understand the enhancements and fixes
 - Verify minimum supported versions
 - · Identify known issues

Verify the HPE 3PAR SP 5.x requirements

Procedure

- 1. Open the Service Console main menu and select Service Processor.
- 2. In the General panel on the Service Processor Overview view, verify that the Current Version field displays the minimum SP version listed in the applicable HPE 3PAR OS release notes.

If the HPE 3PAR SP version is not at the minimum version required, you must update the HPE 3PAR SP before upgrading the HPE 3PAR OS.

More information

Update the HPE 3PAR SP on page 7

Verify the HPE 3PAR OS requirements

Δ

CAUTION:

It is highly recommended that the array has all available and applicable patches applied before beginning an update.

Procedure

- Open the Service Console main menu and select Systems. Only one available storage system is displayed in the list.
- 2. Select the storage system. An overview of the storage system is displayed.
- **3.** In the **General** panel on the **Overview** view, verify that the current HPE 3PAR OS version for the selected storage system is at the minimum level listed in the applicable HPE 3PAR OS release notes.

Perform a health check on the storage system

Procedure

- 1. Open the Service Console main menu and select **Systems**. Only one available storage system is displayed in the list.
- 2. Select the storage system. An overview of the storage system is displayed.
- 3. Click Actions, then select Check health.
- 4. Verify that the storage system does not have any issues.
- **5.** Resolve any issues found by the check health action before proceeding.
- 6. Click Close.

Stage the Upgrade tool

Prerequisites

 Review information on the Upgrade tool in the HPE 3PAR OS Upgrade Tools Release Notes on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

- Download the Upgrade tool to a local file. See **Downloading software product updates** on page 5.
- If needed, review HPE 3PAR Service Console options in the HPE 3PAR Service Processor Software 5.0.x User Guide on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

Procedure

- 1. Log in to the Service Console.
- Open the Service Console main menu and select Systems. Only one available storage system is displayed in the list.
- 3. Select the storage system. An overview of the storage system is displayed.
- 4. On the Actions menu, select Update HPE 3PAR OS. The Update window appears.
- 5. Load the Upgrade tool. Always load the Upgrade tool for both patch and non-patch updates. If the Upgrade tool package is not listed in the Available update package(s) list, from the Select Update view, of the Update dialog, select Load a different update package. Then select one of the following options:
 - ISO image—Either drag or drop the image file in the file drop box or select Choose File to browse the local system for the file. When the file appears in the box, click **Start upload**.
 - Service Processor DVD drive—Import the software package from the physical media drive of the Service Processor. Insert the media into the Service Processor media drive and click Start upload.

For all options, once selected, the software package is displayed as the default in Available update package(s).

NOTE:

At this point, you have only loaded the Upgrade tool. Selecting the Run Checks option during the update of the HPE 3PAR OS will automatically install the Upgrade tool.

More information

Logging in to the HPE 3PAR Service Console on page 6

Update the HPE 3PAR OS

This procedure is the same for installing patches and maintenance updates.

Prerequisites

Stage the Upgrade tool on page 10.

IMPORTANT:

For every OS update, always download and stage the latest version of the Upgrade tool.

If you enable the Allow software downloads option through the Service Console, the Upgrade tool is not automatically downloaded.

The Upgrade tool is only staged in the Service Console and does not require installation.

- If the OS software version you want to install is not yet available on the SP, you must download the HPE 3PAR OS software package. See Downloading software product updates on page 5.
- Stop or allow the following system administration activities to complete before initiating an online update. These activities must remain stopped until the online update is completed.
 - Provisioning
 - Physical or Virtual Copy

- Snap Removal
- Dynamic Optimization

You do not have to stop Remote Copy and Remote Copy groups.

If needed, review HPE 3PAR Service Console options in the HPE 3PAR Service Processor Software 5.0.x *User Guide* on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

Procedure

- **1.** Log in to the Service Console.
- 2. Open the Service Console main menu and select Systems. Only one available storage system is displayed in the list.
- **3.** Select the storage system. An overview of the storage system is displayed.
- 4. On the Actions menu, select Update HPE 3PAR OS. The Update window appears.
- 5. Use one of the following methods to select the HPE 3PAR OS update package.
 - Use a pre-loaded 3PAR OS update package—To use a pre-loaded OS update package, from the Update dialog, select the OS version from the Available update package(s) list.

The pre-loaded list contains HPE 3PAR OS software versions that were either automatically loaded for you from Hewlett Packard Enterprise or previously staged from an ISO image or DVD.

On the Update Method view, Online Update and Admit hardware on completion are selected by default.

NOTE:

When the Admit hardware on completion option is selected, the admithw command is run automatically after an update. If you choose not to run the command at that time, you can start it later manually from the **Actions** menu.



IMPORTANT:

Always run admithw after an update. See Complete post HPE 3PAR OS update tasks on page 14.

- Load a different update package—If the OS package is not listed in the Available update package(s) list, from the Select Update view of the Update dialog, select Load a different update package. Then select one of the following options:
 - ISO image—Either drag or drop the image file in the file drop box or select Choose File to browse the local system for the file. When the file appears in the box, click **Start upload**.
 - Service Processor DVD drive—Import the update from the physical media drive of the Service Processor. Insert the media into the Service Processor media drive and click Start upload.

For all options, once selected, the software package is displayed as the default in **Available update** package(s).

- 6. Select one of the following Update options and perform the HPE 3PAR OS update:
 - Online Update (default)—An update is applied to all the nodes and the nodes reboot one at a time automatically. Recommended update method. Required for patch updates or when reverting a patch update.
 - To load and run checks, click Run Checks from the System Readiness view of the Update dialog.
 - b. Click Update.
 - c. If File Persona is enabled, confirm the update. Enter ONLINE and click Yes, Update.

The **Customer Self Update Agreement** page is displayed.

Offline Update—All hosts connected to the storage system must be shut down before the update. All nodes are updated and rebooted at the same time. The storage system is unavailable to the hosts during the update.

Offline update is the only option available when reverting to the prior HPE 3PAR OS version.

- To load and run checks, click Run Checks from the System Readiness view of the Update dialog.
- b. Click Update.
- c. To confirm the update, enter OFFLINE and click Yes, Update.

The Customer Self Update Agreement page is displayed.

NOTE:

- The Upgrade tool is automatically installed when you click Run Checks from the System Readiness view of the Update dialog. The Upgrade tool version is listed in the Upgrade Check Scripts field in the showversion -a -b output.
- Installing a software patch does not require restarting the controller nodes.
- Updating the HPE 3PAR OS can cause a restart of the affected OS components. When components are restarted, events and alerts are generated, which is an expected behavior. The system continues to serve data, but existing CLI or SSMC sessions could be interrupted.
- Read the Customer Self Update Agreement and click Agree to proceed with the update.
 - **IMPORTANT:** ◑

An update cannot be canceled after it is started.

The update starts and the status of the update is displayed in the update dialog box.

8. Monitor the progress of the update in the **Update Details** view.

The available statuses are Running, Completed, or Failed. If the update fails, contact Hewlett Packard Enterprise support. Details for each step are also shown following the step.

More information

Logging in to the HPE 3PAR Service Console on page 6 Stage the Upgrade tool on page 10

Review the HPE 3PAR OS update results

Perform the following steps after the update completes and the admithw command runs.

Procedure

- Open the Service Console main menu and select Systems. Only one available storage system is displayed in the list.
- 2. Select the storage system. An overview of the storage system is displayed.
- **3.** Perform one of the following to verify the update version. For a patch update, verify that the patch is installed by checking the patch number displayed.
 - In the General panel of the Overview view, verify the OS version listed under Current. You can also verify the OS release version and patches by selecting the Software view.
 - Click Actions, then select Start CLI session. Enter showversion -a -b in the CLI command field and verify the update version.

```
Release version x.x.x.xxx
Patches: Pxx,Pxx

Component Name Version
CLI Server x.x.x.xxx
CLI Client x.x.x.xxx
System Manager x.x.x.xxx
Kernel x.x.x.xxx
TPD Kernel Code x.x.x.xxx
```

Perform a health check on the storage system

Procedure

- 1. Open the Service Console main menu and select **Systems**. Only one available storage system is displayed in the list.
- 2. Select the storage system. An overview of the storage system is displayed.
- 3. Click Actions, then select Check health.
- **4.** Verify that the storage system does not have any issues.
- 5. Resolve any issues found by the check health action before proceeding.
- 6. Click Close.

Complete post HPE 3PAR OS update tasks

Procedure

 If Admit hardware on completion was not selected for the update, do the following to manually run admithw. This action admits new hardware into the system and updates firmware on new and existing hardware.

- a. On the Service Console main menu, select Systems.
- **b.** Click **Actions**, then select **Admit Hardware**.
- c. Click Yes, Admit Hardware.
- 2. Apply any additional relevant patches.

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

HPE 3PAR OS and HPE 3PAR SP update concepts

HPE 3PAR SP update concepts

A notification appears on the Service Processor screen when an update is available for the SP. Clicking the SP version link will open the **Update** dialog. The update action can also be reached from the Actions menu.

You can select from updates that are loaded and applicable based on the version currently installed, or you can load a specific update package. Specific packages can be loaded from an ISO image or DVD.

HPE 3PAR OS update concepts

A notification appears on the Systems screen when an update is available for the HPE 3PAR OS. You can get more information about the update by clicking the notification, which will display a link to the Release Notes and a link to the **Update HPE 3PAR OS** action. The update action can also be reached from the Actions menu.

You can select from updates that are loaded and applicable based on the version currently installed. If applicable, the option to revert to the OS version on the alternate partition of the array nodes (REVERT) or to revert a patch (REVERT PATCH) will be available in the list of update packages. The latest available update is selected by default. If you do not want to use one of the updates in the list provided, you can load a specific update package. Specific packages can be loaded from an ISO image or DVD.

Available update methods include **Online**, **Advanced Online**, and **Offline**, depending on the update package selected.

Online – (Recommended) Hosts remain connected to the StoreServ during the update.

Advanced Online – Same as online update, but the update task pauses before each node is rebooted and gives you the option of resuming or aborting the update. (The Advanced Online update option is available only when logged in as hpepartner or hpesupport.)

Offline – Requires all hosts connected to the HPE 3PAR StoreServ Storage system be shut down before the update is installed. While this method is faster, it requires system downtime. Only use this option if the system can be taken offline for servicing.

Available update methods

- If the update package is the same or newer than the currently installed release, then all three update
 methods will be available. The default will be Online. (The Advanced Online update option will force the
 update task to pause before each node is rebooted. You will then have the option of resuming the update
 or aborting the update.)
- If the update package is a patch, or if the REVERT PATCH option is selected, then only the Online option will be available.
- If the update package is older than the currently installed release (downgrade), or if the REVERT option is selected, then only the Offline option will be available.

A list of validation tests will come from the array and might vary depending on the type of update performed (online, offline, patch, REVERT, or REVERT PATCH). Validation tests (pre-checks) are not performed for patch updates. When validation begins, the dialog is dynamically updated as each test is run. Each test will display one of the following four states:

- Not checked
- Running
- Passed
- Failed

The update progress is displayed in the notification box. When a message appears that the update has paused (Advanced Online update method only), clicking the message will expand the box and display detailed information about the update task along with Resume, Abort, and Details links.

The admithw command is run automatically after an update unless the check box for this option is cleared. This action admits new hardware into the system and updates firmware on new and existing hardware. Run admithw after software updates are complete. If you choose not to run the command at that time, you can start it later manually from the Actions menu. When you click the **Admit hardware** action, the notification box will alert you to the new task.

HPE 3PAR OS Upgrade tool

The HPE 3PAR OS Upgrade tool provides upgrade enablement for HPE 3PAR OS 3.2.1 GA and above. Upgrade tools do not affect the StoreServ operation outside of the upgrade process. This tool improves the online or offline upgrade experience by performing steps to ensure the StoreServ is in a known state. The Upgrade tool performs pre-checks, post-checks and other validations. This tool is required. Without the Upgrade tool, upgrading HPE 3PAR OS 3.3.1 will not succeed.

For more information on the Upgrade tool, see the HPE 3PAR OS Upgrade Tools Release Notes on the Hewlett Packard Enterprise Information Library:

http://www.hpe.com/info/storage/docs

HPE 3PAR OS update recovery

If an update is aborted or some unforeseen failure occurs in the middle of the update, the update may be left in an incomplete state.

In these cases, the update must be reinitiated to complete the update or to revert to the state before the update. The revert is accomplished by selecting the Update HPE 3PAR OS link, in the same way that a new update is invoked.

The Service Processor determines the state of the array and presents the **Update HPE 3PAR OS** dialog with details of that state.

Array states

- If the array is not performing an HPE 3PAR OS update, the SP presents the normal Update 3PAR OS dialog.
- If the array is performing an HPE 3PAR OS update initiated by this Service Processor, an error generates. The error message indicates that an update is in progress and a new update cannot be started. A link to Activity view for seeing the status of the update will be provided.
- If the array was performing an update that is not currently running on the Service Processor, the SP presents the option to resume the update. Or, if using the Advanced Online update method, you can revert the array to the state it was in before the start of the update.

Once the update is completed, Admit hardware is run unless you clear the check box option for automatically running Admit hardware.

HPE 3PAR OS revert operations

The Revert operation can be initiated from the recovery dialog or from the **Update HPE 3PAR OS** dialog. Along with the staged packages listed, if there is a patch installed that can be reverted, there will also be a **REVERT PATCH** option.

A revert operation is started and run in the same way as an update operation, except that the messages will clearly indicate that it is a revert rather than an update operation.

Once the revert operation has started, you can expand the revert task message to see more information about the task. Clicking the details link in the expanded message will open the Activity view for the system with the update task expanded.

Once the revert operation is completed, **Admit Hardware** runs unless you clear the check box option for automatically running Admit Hardware.

NOTE:

If a downgrade from 3.3.1 to 3.2.2 or revert from 3.3.1 to 3.2.2 or 3.2.1 fails:

- Correct the failure and ensure all the nodes are in targeted version in the downgrade or revert path.
- Re-image the SP to SP 4.4 after downgrade or revert to 3.2.2 and complete post update checks and admithw.
- Re-image the SP to SP 4.3 after revert to 3.2.1 and complete post update checks and admithw.

Websites

Hewlett Packard Enterprise general websites:

Information Library

www.hpe.com/info/EIL

Customer Self Repair Services Media Library

www.hpe.com/support/sml-csr

InfoSight

infosight.hpe.com

Safety and Compliance

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

Software Depot

www.hpe.com/support/softwaredepot

Software License Manager

enterpriselicense.hpe.com/

Software updates and licensing

www.hpe.com/downloads/software

Support Center

www.hpe.com/support/hpesc

SPOCK

www.hpe.com/storage/spock

White papers and analyst reports

www.hpe.com/storage/whitepapers

Hewlett Packard Enterprise storage websites:

Data Storage

www.hpe.com/info/storage

Information Library Storage

www.hpe.com/info/storage/docs

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 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

Additional warranty information **HPE ProLiant and x86 Servers and Options** www.hpe.com/support/ProLiantServers-Warranties HPE Enterprise 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

Documentation feedback

Hewlett Packard Enterprise is committed to providing documentation that meets your needs. To help us improve the documentation, send any errors, suggestions, or comments to Documentation Feedback (docsfeedback@hpe.com). When submitting your feedback, include the document title, part number, edition, and publication date located on the front cover of the document. For online help content, include the product name, product version, help edition, and publication date located on the legal notices page.