Abstract
This guide explains how customers can update the HPE 3PAR Service Processor and HPE 3PAR OS software using the HPE 3PAR Service Processor Onsite Customer Care (SPOCC) utility on HPE 3PAR StoreServ 7000 and 3PAR StoreServ 8000 storage systems.
With the release of the HPE 3PAR Operating System version 3.2.x and 3PAR Service Processor version 4.2, 3PAR StoreServ 7000 and 8000 customers have the **OPTION** of upgrading the 3PAR Operating System and Service Processor software using the 3PAR Service Processor Onsite Customer Care (SPOCC) utility. The update Wizard included with the Service Processor software guides you through the software update process for both OS and SP.

Refer to the [HPE 3PAR OS and Service Processor Software Update Guide](http://www.hpe.com/info/hpesoftwareupdatesupport) on instructions for updating OS 3.3.1.

**IMPORTANT:** Customers cannot update their storage systems to HPE 3PAR OS 3.3.1 from 3PAR OS 3.1.x/3.2.x.

Customers must maintain an active Hewlett Packard Enterprise Support Contract to be entitled to new software versions; this includes new versions of the 3PAR OS, MU releases and patches.

While customer self-update is optional at this time, if after reviewing all instructions you are not confident in upgrading, please contact your service provider for installation.

If **automatic software download from HPE** is enabled on the Service Processor, the 3PAR OS package will be staged onto the array, and a notification is sent to the user indicating that an update is available.

If automatic updates are not enabled (or allowed), you may download the package from the software depot at [http://www.hpe.com/info/hpesoftwareupdatesupport](http://www.hpe.com/info/hpesoftwareupdatesupport), or contact your service provider for installation.

The Customer Self update process is NOT supported on 3PAR F-Class, T-Class, or StoreServ 10000, StoreServ 20000 storage systems.

If the 3PAR StoreServ Storage system is running 3PAR OS 3.1.2 or earlier, contact Hewlett Packard Enterprise or a Hewlett Packard Enterprise authorized service provider to plan 3PAR OS and SP software updates.

**IMPORTANT:**

- Ensure that browser pop-ups are allowed.
- To exit the update interface at any time, click any of the tabs in the left navigation pane.
- If an update is currently in progress, the following message appears:

  The update process cannot proceed because an update is already in progress

  You must click **OK** to go to the last update status page.

- During an SP update, most other SP functions are unavailable. Do not perform any other SP tasks when another update is in progress. Doing so may cause unpredictable results.
- If the SP allows automatic updates, the updates are staged automatically and appear on the Home page with the current version. An alert lets you know when a new update is available.
- See the Hewlett Packard Enterprise Storage Single Point of Connectivity Knowledge (SPOCK) website: [http://www.hpe.com/storage/spock](http://www.hpe.com/storage/spock)
  for 3PAR support matrices and hardware support for 3PAR OS.
Customer Responsibilities

The customer will:

- Ensure that the host and SAN environment is supported and compliant with Hewlett Packard Enterprise recommendations and best practices.
  - See 3PAR host implementation guides on the HPE Storage Information Library at: http://www.hpe.com/info/storage/docs
  - See SAN implementation guides on the Hewlett Packard Enterprise Support Center at: http://www.hpe.com/support/hpesc
  - See the Support Matrix and the 3PAR Service Processor Support Matrix to determine supported update paths for SP software and 3PAR OS software on the HPE Storage Single Point of Connectivity Knowledge (SPOCK) at: http://www.hpe.com/storage/spock

- Resolve any problems with the SAN and host environment before initiating the software update.

  **NOTE:** Other SAN and host components that might require an update have their own warranty policies. You must refer to the documentation for those products for this information.

- Ensure that all relevant documentation is reviewed before initiating the software update. The documentation includes but is not limited to:
  - HPE 3PAR OS Release Notes
  - HPE 3PAR Service Processor Software Release Notes
  - HPE 3PAR Upgrade Planning Guide
  - HPE 3PAR Service Processor Onsite Customer Care (SPOCC) User Guide

This documentation is located on the HPE Storage Information Library at: http://www.hpe.com/info/storage/docs

Review the documentation thoroughly. Hewlett Packard Enterprise recommends engaging a service provider to perform the updates if you are unfamiliar with the self-update process. If the 3PAR StoreServ is under warranty and there is a service contract, you may have Hewlett Packard Enterprise or an authorized service provider to perform the update.

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.
Updating HPE 3PAR Service Processor Software

This section guides you through upgrading the 3PAR Service Processor software. Screens and versions shown are examples only. It is important that you carefully review the release notes for the SP version you are installing.

**IMPORTANT:** SP software updates might 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. 3PAR StoreServ data availability is not affected during the time that the Service Processor is restarting. See the Service Processor release notes on [http://www.hpe.com/info/storage/docs](http://www.hpe.com/info/storage/docs) to determine if the version you are installing will restart the SP.

### Maintenance Mode

Maintenance Mode is used to prevent unnecessary events and alerts from being sent to 3PAR Central. The service processor is put into Maintenance Mode while scheduled service is performed. Events or actions recognized by the software will resume logged status but they will not trigger back-end processes that will generate alerts and service calls. Disabling notifications through SPMAINT or SPOCC puts the array in Maintenance Mode. The following will describe the tasks to enable Maintenance Mode on SPMAINT and SPOCC.

### Enabling Maintenance Mode from SPMAINT

To enable Maintenance Mode from SPMAINT:

**Procedure**

1. Log in to the SP and type `spmaint`.
2. Select 3 InServ Configuration Management.
3. Select 3 Modify InServ.
4. Select the InServ you want to put in Maintenance Mode.
5. Select 7 Maintenance Mode: OFF
   a. The menu will repaint and show Maintenance Mode: ON
6. Select 1 Save changes then exit.
7. Select the timeout value for Maintenance Mode. This is a safety check in case you forget to turn off maintenance mode when you complete your activity. Select one of six preset values or select 7 to enter the time in minutes you want to set.
8. The following is returned:

   stopping current instance...
   Stopping spcollect tasks for InServ cs.s400.dev2
   Stopping spevent task for InServ cs.s400.dev2
   If running, stopping InSplore for InServ cs.s400.dev2
   No InSplore currently running
   Rewriting config file...
   Update complete.
9. Press <enter/return> to continue.

10. The next screen will indicate: One or more clusters are in Maintenance Mode

**Enabling Maintenance Mode from SPOCC**

**Procedure**

1. Browse to the IP address of the SP/VSP.
2. Click the Spmaint button.
3. Select 3 InServ Configuration Management.
4. Select the Modify button for the specific InServ.
5. Select the ON radio button under Maintenance Mode.
6. Enter the duration in the pull-down menu.
7. The select Update InServ Info.
Procedure

1. If you are not currently logged into SPOCC, launch a web browser and connect to \(<IP \text{ address of the SP}>\). Enter your user name and password.

2. In the left navigation pane of SPOCC, click Update. When the Service Processor and HP 3PAR OS Update window appears, click Update Service Processor.

   **NOTE:** Use the Update function for either updating to a new SP version or installing a patch to the current version.

3. Carefully review the steps shown and then click Next to continue.

4. Select one of the following options to identify the location of the SP version to which you want to update:
a. **Pre-loaded**: This is the default option. The Pre-loaded list contains software versions that were either automatically loaded for you from Hewlett Packard Enterprise or previously staged from an ISO image or DVD. You may need to scroll through the list to find the version you need from the drop-down box and then click Next to continue.

b. **ISO Image**: Choose this option if the update is stored in an ISO image file.
   - Click **Browse** to navigate to the software version you wish to install.
   - Click **Next** to continue.

c. **Service Processor DVD drive**: Choose this option if the software is on a DVD.
   - Click **Next** to continue.
   - Place the DVD in the media drive, a message appears:
     
     A DVD was detected in the Service Processor media drive. The media drive will open for you to remove the DVD after the staging is finished. Press OK to continue or Cancel to abort.

     Click **OK** to continue.
   - A progress bar appears while files are staged.

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**NOTE**: Staging fails if SP Storage space is very low. The wizard provides a link to **SP Cleanup** where you can delete files to free up storage space.

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   - When staging is complete, the media drive on the physical SP opens to remove the DVD.

5. The **Review release notes** page appears. Click the link to view the release notes for the SP version that you selected, or click the **HP Support Center** link for more information about the product.

6. When you have thoroughly reviewed the release notes, click **Next**.
7. A confirmation message appears showing the version being installed. Carefully review the selection and then click **Install** to continue or click **Back** to change your selection.

8. The update status screen appears showing detailed information during the update.

When the update completes, the status changes to **Status: Update succeeded**. If the SP must restart, a message appears in red.
If the SP restarts because of the update, when you log back in the current SP version is listed on the Home page.
Updating the HPE 3PAR Operating System using SPOCC

This chapter guides you through updating the 3PAR Operating System Software.

**NOTE:** When using SPOCC to apply a patch to HPE 3PAR OS 3.2.2, the update might fail and indicate that a required patch is not installed on the array. Install the required patch and retry the update. If the problem persists, contact HPE support.

**NOTE:** HPE highly recommends enabling maintenance mode. For more information, see [Maintenance Mode](#).

**Procedure**

1. If you are not currently logged into SPOCC, launch a web browser and connect to <IP address of the SP>. Enter your user name and password.
2. In the left navigation pane of SPOCC, click **Update**.

   **NOTE:** Use the **Update** function for updating either to a new 3PAR OS version or installing a patch to the current version.

3. Click **Update HP 3PAR OS**, review the outlined update steps, and then click **Next**.

4. Select one of the following options to identify the location of the 3PAR OS version to which you want to update:
a. **Pre-loaded**: This is the default option. The Pre-loaded list contains software versions that were either automatically loaded for you from Hewlett Packard Enterprise or previously staged from an ISO image or DVD. You may need to scroll through the list to find the version you need from the drop-down box and then click **Next** to continue.

b. **ISO Image**: Choose this option if the update is stored in an ISO image file.
   - Click **Browse** to navigate to the software version you wish to install.
   - Click **Next** to continue.

c. **Service Processor DVD drive**: Choose this option if the software is on a DVD.
   - Click **Next** to continue.
   - Place the DVD in the media drive, a message appears:
     
     A DVD was detected in the Service Processor media drive. The media drive will open for you to remove the DVD after the staging is finished. Press OK to continue or Cancel to abort.

     Click **OK** to continue.
   
   - A progress bar appears while files are staged.

   **NOTE**: Staging fails if SP Storage space is very low. The wizard provides a link to **SP Cleanup** where you can delete files to free up storage space.

   - When staging is complete, the media drive on the physical SP opens to remove the DVD.

5. The **Review documentation and responsibilities** page appears with links to the current 3PAR OS release notes, and the Hewlett Packard Enterprise Support Center where you will find important information for the update as well as an overview of features, changes, and known issues. Review the recommended documentation and best practices.

6. Click the link to review the Hewlett Packard Enterprise End User License Agreement.

7. When you have thoroughly reviewed the information, click the acknowledgment check box to activate the **Next** button.
8. Click **Next** to continue.

9. Select the update method to use. The **Online** update method is selected by default.

**NOTE:**

- Patches to the 3PAR OS can only be installed using the online method.
- Installing a software patch does not require restarting controller nodes.

10. A screen appears confirming the update method you selected, persistent port status, and host information.

   **a.** The persistent ports feature helps to ensure that connectivity is not lost as nodes are rebooted during the online update process. If the persistent ports feature is unused or improperly configured, before you perform an online update, compare your host configuration to the
b. Export host data in CSV format so that you can view it as a spreadsheet by clicking **Export Host Data**.

11. For more information, click the persistent ports link. Click **OK** when you are done.

12. After you have reviewed your update selections, click **Next**. You may need to scroll horizontally before you see the **Next** button as shown in the following example:

13. A series of validation checks are performed. Click **Details** for more information on any of the checks. You can click **Rerun Validation** to run the checks again without exiting. Click **Next** to continue.
14. A screen displays the update version and installation type as shown in the following example. Click **Install** to confirm and begin the installation.

**IMPORTANT:** You cannot cancel an update procedure after it starts.

![Update HP 3PAR OS screen](image)

**NOTE:** If an update operation is currently in progress, the following message appears: The update process cannot proceed because an update is already in progress.

You must click **OK** to go to the **updating HP 3PAR OS** status page.

15. The update status screen appears showing a status of **Update in progress**. The Details section of the screen shows status information as the installation progresses. If the update fails, contact Hewlett Packard Enterprise Support Center.

![Update HP 3PAR OS status screen](image)

**NOTE:** updating of drives and cages continues in the background and may take some time depending on your configuration and system utilization.
When the update is complete, the screen shows the message **Update succeeded.**
Verifying the Health of the Storage System from SPOCC

After performing 3PAR software updates, Hewlett Packard Enterprise recommends that you verify the overall health of the storage system.

**NOTE:** When running the Health Check using Internet Explorer, the screen might remain blank while information is gathered. This process could take a few minutes before displaying results. Do not attempt to cancel or close your browser.

**Procedure**

1. Click **Support** in the left navigation pane, the following screen appears:

   ![Support Screen](image)

   **InServs**
   - Model: a399
   - System: 100039
   - Version: 3.1.2.42
   - IP: 192.168.69.164
   - Maintenance Mode: OFF

   **Service Processor**
   - Model: SP0441EA1D00FC8
   - Version: SP 4.1.6.307
   - Action:
     - Health Check
     - Guided Maintenance
     - InService
     - Performance Analyzer
     - LogView
     - Execute a CLI command
     - InServ Product Maintenance

2. Click **Health Check** from the list of StoreServ Actions. A pop-up box appears showing a status message while the process runs:

   **StoreServ:**

   **Generating Cluster Status:** be patient, this may take a couple of minutes.

3. When the health check process completes, it creates a report and displays in a new browser window similar to the following example:
# checkhealth X.X.X.XXX
#Fri Jul 17 11:25:33 PDT 2014
### showversion -b
Release version X.X.X.XXX (MUX)
Patches None

<table>
<thead>
<tr>
<th>Component Name</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLI Server</td>
<td>X.X.X.XXX (MUX)</td>
</tr>
<tr>
<td>CLI Client</td>
<td>X.X.X.XXX</td>
</tr>
<tr>
<td>System Manager</td>
<td>X.X.X.XXX (MUX)</td>
</tr>
<tr>
<td>Kernel</td>
<td>X.X.X.XXX (MUX)</td>
</tr>
<tr>
<td>TPD Kernel Code</td>
<td>X.X.X.XXX (MUX)</td>
</tr>
</tbody>
</table>

### showsys

```
-----------------General-------------
System Name        : sXXX
System Model       : HP_3PAR XXXX
Serial Number      : XXXXXXXX
System ID          : XXXXX
Number of Nodes    : X
Master Node        : X
Nodes Online       : X,X
Nodes in Cluster   : X,X
Chunklet Size (MB) : XXXX

--------System Capacity (MB)-----
Total Capacity     : XXXXXXXX
Allocated Capacity : XXXXXXXX
Free Capacity      : XXXXXXXX
Failed Capacity    : X

There is no system fan information

-------System Descriptors--------
Location :
Owner :
Contact :
Comment :
```

4. Review the results of the health check and make corrections as needed.
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/info/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

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.