HPE 3PAR Service Processor Software 5.0.x User Guide

Abstract

This online help system provides information on the use of an installed instance of HPE 3PAR Service Console Software.

Contents

Introduction to the Service Console

The HPE 3PAR Service Console (SC) is the interface for the physical or virtual Service Processor (SP) which collects data from a managed HPE 3PAR StoreServ Storage system in predefined intervals as well as an on-demand basis and sends the data to Hewlett Packard Enterprise Remote Support, if configured. The SC also allows service functions to be performed by a company admin, HPE support, or an authorized service provider.

SC replaces Service Processor Onsite Customer Care (SPOCC), the Graphical User Interface (GUI) for SP versions 4.4 and earlier. SC functionality is similar to SPOCC.

Service Console features summary

HPE 3PAR Service Console software provides a browser-based interface for managing both the SP and the 3PAR StoreServ Storage system.

The Service Console includes the following key features:

- Screens for initializing, restoring, updating, and configuring a service processor, initializing and adding storage systems, collecting support data, and more.
- Screens for monitoring and updating attached storage systems and hardware components such as controller nodes, ports, drive enclosures, and physical drives.

More information

Service Processor overview

The SP is available in physical and virtual versions for the SP 5.0 release. The SP is designed to provide remote error detection and reporting and to support diagnostic and maintenance activities involving the storage systems. The SP is composed of a Linux operating system and the SP software, and it exists as a single undivided entity.

The physical SP is a hardware device mounted in the system rack. If the customer chooses a physical SP, each storage system installed at the operating site includes a physical SP installed in the same cabinet as the controller nodes. A physical SP uses two physical network connections; one (eth0) requires a connection from the customer network to communicate with the storage system. The other (eth1) is for maintenance purposes only and is not connected to the customer network.

The Virtual SP (VSP) software is provided in an Open Virtual Format (OVF) for VMware vSphere Hypervisor and self-extractable Virtual Hard Disk (VHD) package for Microsoft Hyper-V. The VSP is tested and supported on Microsoft Hyper-V (Windows Server 2012/2012 R2/2016) and the VMware vSphere hypervisor (VMware ESXi 5.5/6.0/6.5). The VSP has no physical connections. It runs on a customer-owned, customer-defined server and communicates with a 3PAR StoreServ Storage system over its own Ethernet connections.

SP software versioning

SP 5.x software versions use the format `SP M.m.U.P-B`

Where:

- M—Major
- m—Minor
- U—Maintenance update
- P—Patch number
- B—Build number

For example:

SP 5.0.0.0-33 refers to 5.0 GA (build 33)
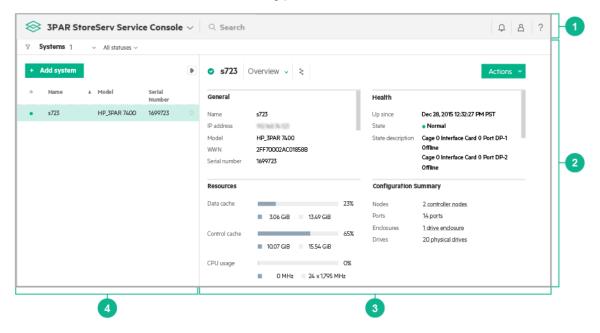
SP 5.0.0.1-23119 refers to 5.0 GA Patch 1 (build 23119)

SP 5.0.1.0-23227 refers to 5.0 MU1 (build 23227)

Service Console quick tours

Quick tour start

The Service Console consists of the following parts:

Main menu & banner (1) – The Main menu and banner area includes the menu for selecting screens, a search box, sidebars for activities and help, and a session menu.

Screens (2) – The screens area displays tabular and graphical information and provides action dialogs for managing storage systems. Screens include one or both of the following panes:

Detail pane (3)

List pane (4)

When you select an item in the list pane, additional information about it is displayed in the detail pane. When an item is selected, you can perform tasks related to the item through the Actions menu. Many lists can be sorted and filtered and include multiple views that you can select.

More information
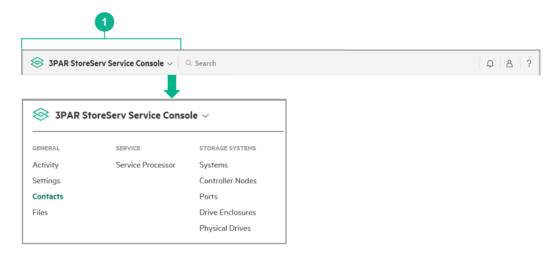
Main menu and banner quick tour

Main menu (1) – Clicking the menu area opens the main menu of screens. Selecting a screen from the menu displays a summary of configuration settings for the selected screen and provides actions menus. Depending on the screen selected, system resources such as CPU usage, throughput, physical memory, and so on may be displayed.

Search box (2) – Clicking the banner Search area opens the search box. As you type, a list of search results is displayed. Clicking an item selects and displays the item.

Activity sidebar (3) – Clicking the Activity icon ( ) opens the Activity sidebar on the right side of the screen. Clicking the pin icon(,) opens and closes the sidebar.

Session menu (4) – Clicking the Session icon ( ) opens a menu for logging out. The menu also displays the user name and the session duration.
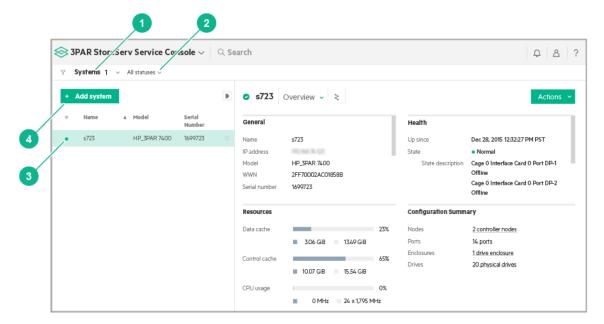
Help sidebar (5) – Clicking Help icon ( ) opens the Help sidebar on the right side of the screen.

More information

[Activity indicator and sidebar quick tour](#) on page 13

List panes quick tour

The main features of List panes include the following:

When you select an item in the List pane, additional information about it is displayed in the Detail pane. When an item is selected, you can perform actions on it. Many lists can be sorted and filtered and include multiple views that you can select.

Resource name and count (1) – The resource name and count are displayed at the top left of the pane. The count indicates the number of items in the list, based on the filters that are applied.

Filters (2) – By default, filter menus are displayed horizontally at the top of the pane. You can also display filters in a sidebar by clicking the filter pin (⏀) **Reset** link.

Resource list and **sorting** (3) – You can sort a list by clicking a column heading. A sort icon (▲ ▼).

Create/Add action (4) – Clicking a **Create** or **Add** button in the List pane opens a dialog for creating a resource. You can also create resources and perform other actions from the Actions menu in the detail pane. If you do not have permission to create the resource, the create button and actions are not displayed.
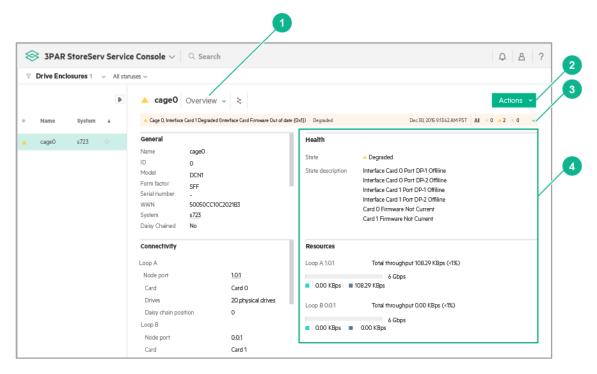
More information

Detail panes quick tour

The main features of Detail panes include the following:

Views (1) – The Views menu identifies the currently selected view. Most List panes have several views that you can select. Clicking the down arrow (⌄).

Actions (2) – The Actions menu allows you to perform actions on one or more resources that you have selected, in the list pane. If you do not have permission to perform an action, the action is not displayed in the menu. Also, some actions might not be displayed due to system configurations, user roles, or properties of the selected resource.

Notifications box (3) – The notifications box is displayed when an alert or task has affected the resource.
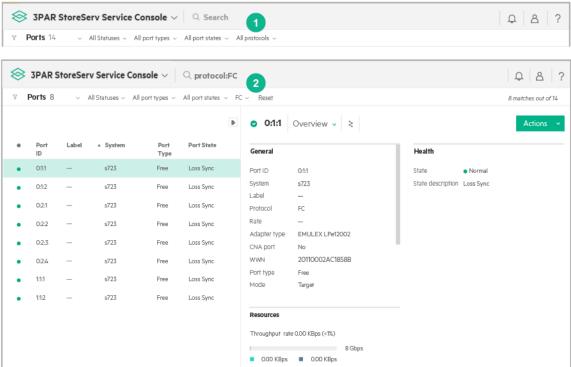
Resource detail (4) – Information for the selected view is displayed in the resource detail area.

Filters quick tour

By default, filter menus are displayed horizontally at the top of list panes. Clicking a filter menu and changing a filter parameter changes the items that are displayed in the list. You can also display filters in a vertical Filters sidebar by clicking the filter pin (▽) at the left side of the screen. Clicking the filter pin again changes the filters back to the horizontal format.
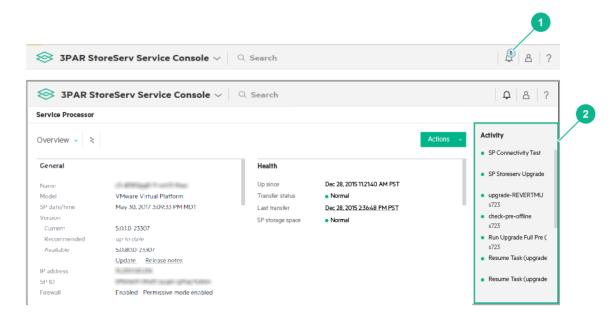
Filters (1) – Filters apply only to the screen that you are viewing. For example, the Ports screen has filters for Status, Type, State, and Protocol. As you select filter parameters, your choices are displayed on the filters line, in menus, and in the Search box. In this example, a filter is set to display information for FC ports only. Filters can be reset by clicking the "Reset" link.

Search box (2) – The search box provides an easy way to find information you're looking for.

Activity indicator and sidebar quick tour
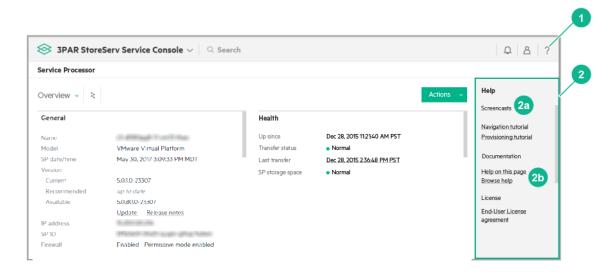
Activity indicator and sound (1) – The Activity indicator shows the number of unread activities in the Activity sidebar. When you initiate an activity (for example, adding a virtual volume) an activity notification is displayed briefly to the left of the icon and an alert sound is issued. You can enable and disable the alert notification sound on the Global Settings screen.

Activity sidebar (2) – Clicking the Activity icon opens the Activity sidebar, which shows all the activities you have performed in the Service Console during the session. Clicking an activity displays additional details.

Tip: The Activity sidebar provides different information than the Activity screen and Activity Views. This sidebar shows only the activities associated with your user name since your login session started. The Activity screen and Activity Views show all user- and system-generated activities for the connected storage systems.

Help sidebar quick tour
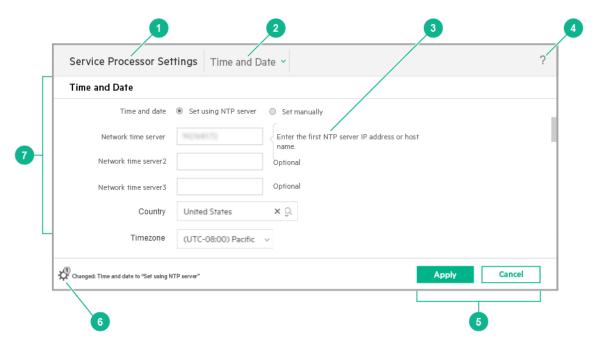
Clicking the Help icon (1) opens the Help sidebar (2).

Screencasts (2a) – You can also choose to run interactive screencast tutorials.

Online help (2b) – You can choose to browse the entire help system, or open the help topic for the screen (page) that is currently displayed.

Dialogs quick tour

Dialogs allow you to perform actions on resources. You can open dialogs from the Actions menu on the detail pane. The main features of dialogs include the following:

Dialog name (1) – The name of the dialog.

Views (2) – Many dialogs include a Views menu. Selecting a view positions the selected panel at the top of the dialog.

Tooltips (3) – Moving your cursor over a box or selection displays helpful information about making an entry or selection.

Help (4) – Clicking the Help icon (?) opens help for the dialog.

Action buttons (5) – Dialog actions are displayed at the bottom of the dialog. Clicking an action button performs the action and closes the dialog. Clicking an action + button performs the action and keeps the dialog open. Examples are buttons such as **Add +** and **Create +**.
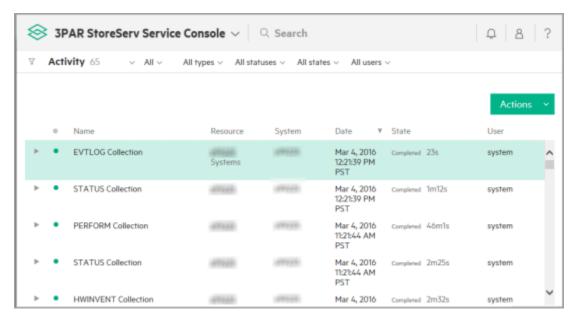
Changes indicator (6) – The changes indicator shows how many changes you have made in the dialog and the last change you entered. Clicking the icon opens a window that displays all the changes you have entered in the dialog.

Panels (7) – Related settings are grouped in panels. You can scroll panels up or down by using the scroll menu on the right side of the dialog.
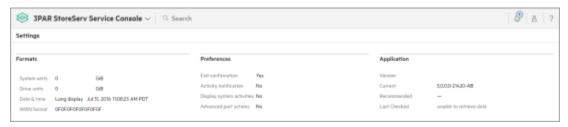
General screens quick tour

General screens include the following pages:
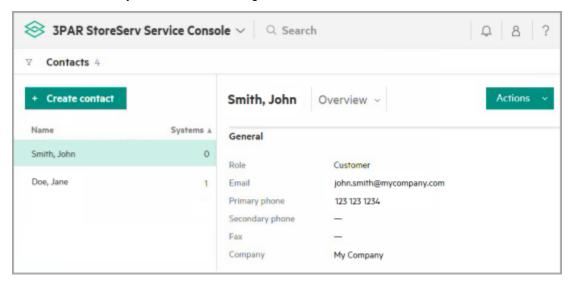
Activity – Displays activities running on the Service Processor. You can expand activities to show details.
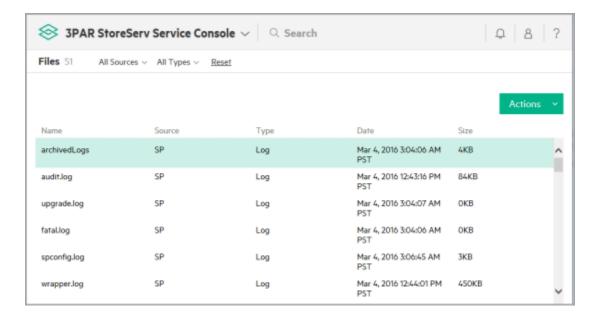
Settings – Allows you to view and change data display format; a confirmation dialog when you log out of a session, system tasks or advanced port actions, and version and certificate information.

Contacts – Allows you to view and change contact information.
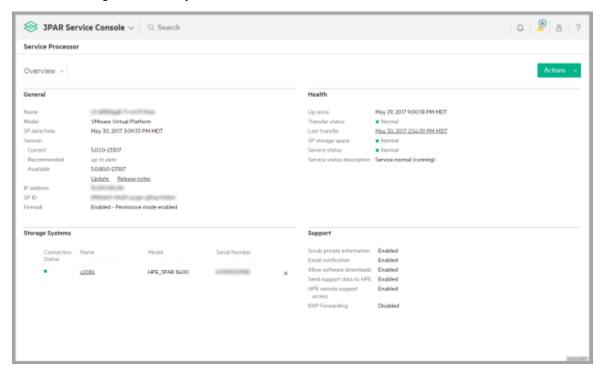
Files – Displays a list of files available on the Service Processor.

Service Processor screen quick tour

The Service Processor screen consists of the following page:
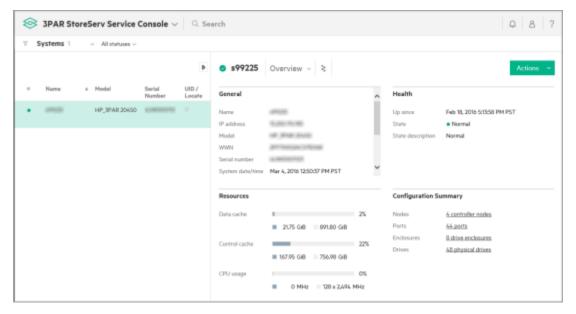
Service Processor – Displays an overview of the Service Processor system. Additional views available are Transfer, Settings, and Activity.
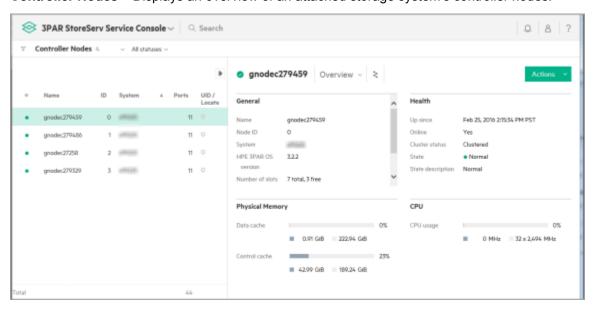
Storage Systems screens quick tour

Storage Systems screens include the following pages:
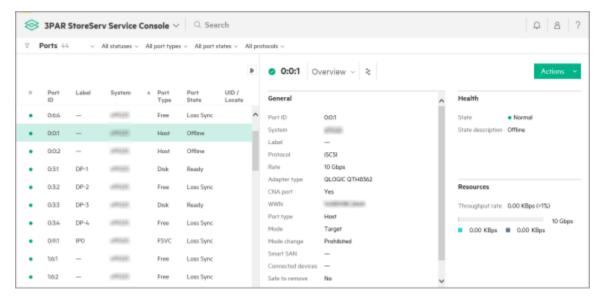
Systems –Displays an overview of the attached storage system or **+ Add system** button if no system is attached.
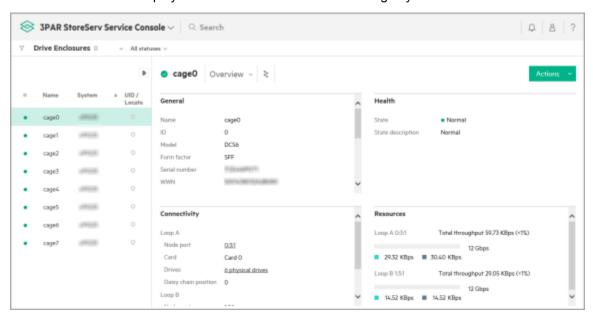
Controller Nodes – Displays an overview of an attached storage system's controller nodes.
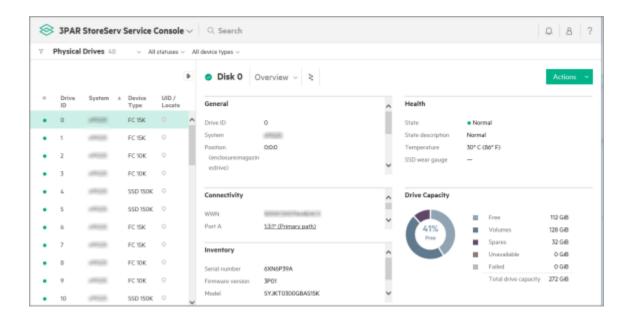
Ports – Displays an overview of an attached storage system's ports.

Drive Enclosures – Displays an overview of an attached storage system's drive enclosures.

Physical Drives – Displays an overview of an attached storage system's physical drives.

Performing Service Console tasks

These topics provide guidance on performing tasks using HPE 3PAR Service Console. You can select individual topics from the contents pane.

Setting up a Physical or Virtual SP

Accessing the Service Console setup screen

To set up the Service Processor, browse to the SP IP address: `https://<sp_ip_address>:8443`, then follow the instructions in **Connecting to the Service Processor** on page 20 .

> (!) **IMPORTANT:**
>
> If you receive a warning from your browser when you enter the SP URL, see **Browser warning with a service processor connection** on page 57. Later, you will be able to install appropriate certificates so that you do not see the warning message in the future.

Accessing the Service Console login screen

After the Service Processor has been initialized, you can log in to the Service Console by browsing to the SP IP address: `https://<sp_ip_address>:8443`.

Enter the user name and password, then click **Login**.

The Service Processor Overview screen is displayed by default.

Connecting to the Service Processor

Prerequisites

Tip: If you have already assigned an IP address to the SP using the Text-based User Interface (TUI), follow the instructions in **Setting up the Service Processor** on page 21.

Procedure

1. Connect to the SP using the IP address assigned by DHCP or a local network using the format `https://<sp_ip_address>:8443`.
2. The End User License Agreement (EULA) is displayed. Click **Accept** to continue.
3. Click **Continue** to close the Guided Setup window.
4. Click the **Connect Service Processor** button.

   The **Service Processor Network Configuration** dialog displays.
5. Make any necessary changes to the SP network configuration, and then click **OK**. Canceling returns you to the **Connect Service Processor** page.
6. If using a physical SP, connect the SP to your network using the SP Management (MGMT) port.
7. Browse to the IP address you assigned in the Service Processor Network Configuration dialog, and then follow the instructions in **Setting up the Service Processor** on page 21.

More information

The Text-based User Interface on page 61

Setting up the Service Processor

For information on prerequisites and initial setup of the SP, refer to the HPE 3PAR Service Console and HPE 3PAR StoreServ Management Console 3.0 Quick Setup Guide, available at the Hewlett Packard Enterprise Support Center website: **www.hpe.com/support/hpesc**

Procedure

1. If you are not already in Guided Setup on the SP, browse to the SP IP address: **https://<sp_ip_address>: 8443**.

   You will see a Service Processor Setup page with a single button and the Guided Setup window open withSstep one completed and **Step 2 Setup the Service Processor** ready to begin by clicking **Continue** on the Guided Setup screen.

   Tip: If you used the TUI to configure SP network settings, and this is the first time you have logged in to the Service Console, the EULA is displayed. To continue, click **Accept**.
2. Click **Continue** to close the Guided Setup window.
3. Click **Setup Service Processor**.
4. Follow the instructions on the dialog that opens. You will be given the option of setting up a new uninitialized Service Processor or to restore the SP using a recovery file.

   You will be able follow the setup progress on the Service Processor Setup screen. The full list of initialization steps is displayed on the right side the screen with its current status, while the steps that have net yet been completed are listed on the left side of the screen.

   Tip: If Setup remains incomplete due to an error, the checklist displays the error with a link to the section of the setup dialog related to the error condition.
5. Once Setup is complete, reboot the SP by clicking the **Reboot** link at the top of the screen. The SC should automatically reconnect to the login screen.

More information

The Text-based User Interface on page 61

Setting up the HPE 3PAR StoreServ Storage system

Procedure

1. After the Service Processor reboots at the end of the setup process, you will be directed to the next step in setting up the SP IP address: **https://<sp_ip_address>:8443.**

   You will see a Service Console login page with a single button and the Guided Setup window open for the first step.
2. Click **Continue**, enter the admin credentials you assigned during setup, and then click **Login**.
3. If no 3PAR StoreServ Storage system is added to the Service Console, you will be taken to the Systems page and the **Setup StoreServ** dialog opened with a Guided Setup window.
4. Click **Next** in the Guided Setup window.

   Another Guided Setup window will display more information and instructions.
5. Click **Continue** to close the Guided Setup window.

   You will then be able to fill in the required information for adding a StoreServ array. This includes accepting and caching a security certificate; entering system settings, date and time settings, and StoreServ credentials; entering information about the installation site, and adding a system support contact.
6. Follow the instructions on the dialog that opens. You will have the option of adding a new uninitialized 3PAR StoreServ Storage system or one that has already been initialized.
7. Once you have completed filling in the required settings, click **Setup**.

A Guided Setup window will display information about the system setup process and how the process can be monitored.

You will be able to follow the setup progress on the **StoreServ Setup** screen, which is similar to the **Service Processor Setup** screen.

Once the setup is complete, a Guided Setup window will explain the next steps to take. Refer to the *HPE 3PAR Service Console and HPE 3PAR StoreServ Management Console 3.0 Quick Setup Guide* and *HPE 3PAR StoreServ Management Console 3.0 User Guide* for instructions on installing SSMC, creating hosts and virtual volumes (VVs), and exporting VVs.

Tip: If the Setup remains incomplete due to an error, the checklist displays the error with a link to the section of the setup dialog related to the error condition.

Performing General tasks

The tasks described in this topic relate to screens accessed under the GENERAL heading on the Service Console main menu.

Accessing the Activity page

On the main menu, select **Activity**.

Accessing the Settings page

Procedure

1. On the main menu, select **Settings**.
2. Hover over the Formats, Preferences, or Application panel, and then click the Edit icon (🖉).
3. Follow the instructions on the dialog that opens.

   You can change the following settings:

   Display formats

   - Capacity (default is GiB)
   - Date and time (default is long display)
   - WWNs (default is 0F0F0F0F0F0F0F0F)
   - Whether a confirmation dialog is displayed when you log out of the session. The default is to display a confirmation dialog.
   - System Reporter scheduled report retention time, report file formats, and email settings.
   - Whether a sound is played when an activity notification is displayed in the Activity indicator. The default is to play a sound.

   Preferences

   - Display confirmation dialog when logging out of session (default is No)
   - Play a unique sound when an activity notification is displayed in the Activity bar (default is No)
   - Display system tasks and schedules when filtering by All types (default is No)
   - Enable access to advanced actions in Actions menus (default is No)

   Application

   - Select whether to use a self-signed or CA-signed certificate
   - Generate a Certificate Signing Request
   - Import a certificate

Generating a Certificate Signing Request

Procedure

1. On the main menu, select **Settings**.

2. Click the Edit icon (✐) next to Application.
3. Select **CA signed** as the **Certificate Type**.
4. Click **Certificate Signing Request**.
5. Follow the instructions on the dialog that opens.

   Once you receive the signed certificate and CA chain from the Certificate Authority, follow the instructions in **Importing a signed certificate and certificate chain** on page 23 to import the certificate.

Importing a signed certificate and certificate chain

Procedure

1. On the main menu, select **Settings**.

2. Click the Edit icon (✐) next to Application.
3. Select **CA signed** as the **Certificate Type**.
4. Click **Import Certificate**.
5. Paste the signed certificate and CA chain into the textbox and click **Import**.
6. On the Edit Application screen, click **OK** to complete the import of the certificate.
7. Navigate to the Service Processor screen and select **Reboot** from the Actions menu.
8. After the SP has rebooted, verify the Service Console is using the new certificate. The following steps describe how to view the certificate in Internet Explorer:
   a. Click the lock icon in your browser's URL bar.
   b. Click **View certificates**.

The CSR dialog will keep the last CSR and the information used to create it until a new CSR is generated.

Accessing the Contacts page

Procedure

1. On the main menu, select **Contacts**.
2. Do one of the following:

   - On the **Actions** menu, select **Create**, or in the list pane click **+ Create Contact**.
   - On the **Actions** menu, select **Edit**.
   - On the **Actions** menu, select **Delete**.

     Tip: The Delete action will not be available if the only contact in the list is a support contact.
3. Follow the instructions on the dialog that opens.
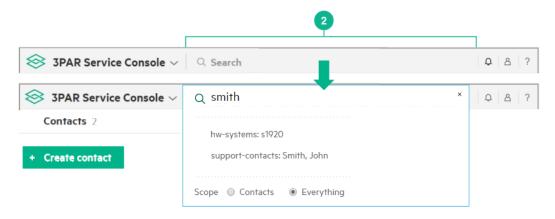
Accessing the Files page

Procedure

1. On the main menu, select **Files**.
2. Do one of the following:

   - On the **Actions** menu, select **Transfer to HPE Support**.
   - On the **Actions** menu, select **Download**.
3. Follow the instructions on the dialog that opens.

Accessing the Search feature

Procedure

1. Click the banner search area to open the search box.

Search behavior is based on the screen that you are viewing. For most screens, you can choose whether the search scope is for items in the current screen or for items in all screens.

2. As you type, a list of up to ten search results is shown in the search box. Press **Enter** to complete your entry or select (click) a search result.

Tips:

- To close the search box, click anywhere outside the box.
- To clear a search entry, click inside the search box, and then click the clearing icon (✕).
- Previous search entries, if any, are shown near the bottom of the search box.
- To search for a port ID, you must precede the colons in the port ID with a backslash (\) character. For example, to search for port 0:1:2, enter `0\:1\:2`.

Screen-specific searches

When searching a specific screen, the screen is filtered to show only the items that matched your search. Your search entry continues to be shown until you perform another search. A results indicator below the banner shows the number of items that matched your search, out of the total items searched.

Everything searches

For a search of **everything**, the search results are listed on the Search screen. The search results identify the screen in which the item is located, the item name, and, if applicable, the database field. Clicking anywhere on a search result displays the item in the appropriate screen.

Create-dialog searches

You can search for and open dialogs that create resources. For example, when viewing the Contacts screen, if you type create in the Search box, the search result list includes the item contacts: create contact. Clicking the item opens the **Create Contact** dialog.

If you perform a create-dialog search with a scope of **everything**, then all creation dialogs are listed.

Tip: If there are many alerts, tasks, or resources that contain the word create, you can often narrow the results by typing the word create followed by a space ("`create `").

Performing Service Processor tasks

The tasks described in this topic relate to the Service Processor screen, which is accessed under the SERVICE heading on the Service Console main menu.

Editing the SP configuration

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Edit SP configuration**.
3. Follow the instructions on the dialog that opens.

Disabling remote support after setup

> ⓘ **IMPORTANT:**
>
> Disabling remote support is not recommended. Disabling this feature will prevent HPE Support from receiving any data from your system. No alert notifications will be sent from HPE.

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Edit SP configuration**.
3. In the Support section of the **Service Processor Settings** dialog, toggle **Send support data to HPE** and **HPE remote support access** to **Disabled**.

Enabling/Disabling RAP forwarding

Disabling remote support gives you the option of enabling Real-time Alert Processing (RAP) forwarding. When enabled, RAP forwarding allows the system to email HPE support copies of all notification messages sent to subscribers. Enabling this option also adds the mail host name/IP, mail domain, and send test email options to the support settings section.

To enable RAP forwarding:

1. On the main menu, select **Service Processor**.
2. In the Support section of the **Service Processor Settings** dialog, set the **Send support data to HPE** toggle to **Disabled**.
3. Set the **RAP forwarding** toggle to **Enabled**.

To disable RAP forwarding:

1. On the main menu, select **Service Processor**.
2. In the Support section of the **Service Processor Settings** dialog, set the **RAP forwarding** toggle to **Disabled** or set **Send support data to HPE** toggle to **Enabled.**

Collecting support data (SP)

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Collect support data**.
3. Follow the instructions on the dialog that opens.

Testing SP connectivity

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Test SP connectivity**.
3. (Optional) Switch to Activity view to monitor the task's progress.

Cleaning up SP files

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Cleanup SP files**.
3. Follow the instructions on the dialog that opens.

Updating the SP

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Update**.
3. Follow the instructions on the dialog that opens.

Unmounting the SP DVD drive

The SP DVD should automatically mount and unmount when used to update the SP or to load a recover file. However, if the unmount fails, you can manually unmount the DVD using the Service Console.

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Unmount SP DVD drive**.
3. Follow the instructions on the dialog that opens.

If no DVD is mounted, the action returns a message indicating that no DVD is mounted on the Service Processor.

Setting the HPE Support password

Only the Administrator can set the `hpesupport` password.

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **HPE Support password**.
3. Follow the instructions on the dialog that opens.

Backing up SP recovery data

In the event a Service Processor system fails and needs to be replaced with a new SP system, a recovery file containing the previous SP's configuration information can be used to rebuild the SP. The SP backs up SP the configuration information periodically and whenever there is a configuration change on the SP, and then sends it to HPE. You can also back up the recovery data manually.

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Backup SP recovery data**.
3. Follow the instructions on the dialog that opens.

Shutting down the SP

NOTE:

The SP cannot be shut down from the Actions menu while an update is in progress.

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Shutdown**.
3. Follow the instructions on the dialog that opens.

Rebooting the SP

NOTE:

The SP cannot be rebooted from the Actions menu while an update is in progress.

Procedure

1. On the main menu, select **Service Processor**.
2. On the **Actions** menu, select **Reboot**.
3. Follow the instructions on the dialog that opens.

Performing Storage System Tasks

The tasks described in this topic relate to screens accessed under the SYSTEMS heading on the Service Console main menu.

Performing Systems screen tasks

Editing system configuration

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Edit**.
3. Follow the instructions on the dialog that opens.

Locating a system (turning on the Locate LED)

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Locate**.

   You can also locate a system by clicking the locate (○) icon in the list pane of the Systems page.

Stopping the locate task (turning off the Locate LED)

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Stop locate**.

   You can also stop the locate task by clicking locate (○).

Editing system information

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Edit system**.
3. Follow the instructions on the dialog that opens.

Adding a system

To add an HPE 3PAR StoreServ Storage system to the Service Console:

Prerequisites

The following information is required to initialize an HPE 3PAR StoreServ Storage system:

StoreServ serial number – Serial number of the HPE 3PAR StoreServ Storage system being added to the SP. The number must be validated to generate a link local IP address, connect to the StoreServ, and receive information about the StoreServ. If the serial number is entered in an incorrect format, a field discovery error is displayed.

System settings – HPE 3PAR StoreServ Storage system name and IP address, DNS, Time and Date, and 3paradm user password. The password is limited to 31 characters and can be alpha-numerical plus the following characters: +, -, _, *, @

Installation site – Information about the site where the SP is installed.

Contacts – Contact information for Hewlett Packard Enterprise support to contact for the system as well as for the contacts who will receive email notifications of system alerts. At least one system support contact must be provided to Hewlett Packard Enterprise support for each system.

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Add system**.
3. Follow the instructions on the dialog that opens.

Collecting support data (system)

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Collect support data**.
3. Follow the instructions on the dialog that opens.

Starting a CLI session

> **NOTE:**
>
> Only CLI commands that do not require user input can be used in the CLI session dialog.

Prerequisites

Ensure that maintenance mode is enabled before executing CLI commands for maintenance related activities.

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Start CLI session**.
3. Follow the instructions on the dialog that opens.

Checking the health of a system

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Check health**.
3. Follow the instructions on the dialog that opens.

Updating the HPE 3PAR OS

> **NOTE:**
>
> If you want to check the status of the host connections before or after the update, follow the instructions in **Checking host connections** on page 29.

Prerequisites

For 3PAR StoreServ 10000 and 20000 systems, you must be logged in as `hpesupport` or `hpepartner` to update the OS.

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Update HPE 3PAR OS**.
3. Follow the instructions on the dialog that opens.

Checking host connections

Procedure

1. Log in to the HPE 3PAR StoreServ Storage system using SSMC.
2. In the upper right corner of the main menu, click **Show all**.
3. Under the SECURITY heading, click **Connections**.

Running post update checks

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Post update checks**.
3. Follow the instructions on the dialog that opens.

Running admit hardware

> **△ CAUTION:**
>
> **Admit hardware** admits new hardware into the storage system and updates firmware on new and existing hardware. It should be run after software updates are complete.

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Admit hardware**.
3. Follow the instructions on the dialog that opens.

Setting maintenance mode

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Set maintenance mode**.
3. Follow the instructions on the dialog that opens.

Tip: When the system is in maintenance mode, the storage system will show as degraded on the Systems page, and the state description will indicate the system is in maintenance mode.

Editing a maintenance window

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Set maintenance mode**.
3. Select a maintenance window, and then click the Edit icon ( ) next to it.
4. Follow the instructions on the dialog that opens.

Deleting a maintenance window

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Set maintenance mode**.
3. Select a maintenance window, and then click the Delete icon (✕) next to it.
4. Select **Yes, delete maintenance window** when asked to confirm the deletion.

Removing a system

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Remove system**.
3. Follow the instructions on the dialog that opens.

Rebooting a system

> ⚠ **CAUTION:**
>
> Choosing **All Nodes** will result in the loss of connectivity or service outage.
>
> Rebooting a single node will cause a performance degradation of the system. It may also cause an outage if host connectivity is not properly configured.

> **NOTE:**
>
> The system cannot be rebooted from the Actions menu while an update is in progress.

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Reboot**.
3. Follow the instructions on the dialog that opens.

Shutting down a system

> △ **CAUTION:**
>
> Shutdown should only be used at the time service is going to be performed on a node. Restarting a node requires the node to be physically power cycled.
>
> Choosing **All Nodes** will result in the loss of connectivity or outage, and you will need to restart the system by power cycling all nodes in the cluster.
>
> Shutting down a single node will cause a performance degradation of the system. It may also cause an outage if host connectivity is not properly configured.

> **NOTE:**
>
> The system cannot be shut down from the Actions menu while an update is in progress.

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Shutdown**.
3. Follow the instructions on the dialog that opens.

Adding a license

Procedure

1. On the main menu, select **Systems**.
2. On the **Actions** menu, select **Add license**.
3. Follow the instructions on the dialog that opens.

Performing Controller Nodes screen tasks

Locating controller nodes (turning on the Locate LED)

Procedure

1. On the main menu, select **Controller Nodes**.
2. On the **Actions** menu, select **Locate**.

   You can also a locate controller node in the **Schematic** view.

Stopping the locate task (turning off the Locate LED)

Procedure

1. On the main menu, select **Controller Nodes**.
2. On the **Actions** menu, select **Stop locate**.

Showing the battery test log

This action can only be performed on HPE 3PAR StoreServ 10000 or HPE 3PAR StoreServ 20000 Storage systems.

Procedure

1. On the main menu, select **Controller Nodes**.
2. On the **Actions** menu, select **Show battery test log**.
3. Follow the instructions on the dialog that opens.

Resetting the battery test log

This action can only be performed on 3PAR StoreServ 10000 or HPE 3PAR StoreServ 20000 Storage systems.

Procedure

1. On the main menu, select **Controller Nodes**.
2. On the **Actions** menu, select **Reset battery test log**.
3. Follow the instructions on the dialog that opens.

Rebooting a node

⚠ **CAUTION:**

Rebooting a node will cause a performance degradation of the system. It may also cause an outage if host connectivity is not properly configured.

NOTE:

A controller node cannot be rebooted from the Actions menu while an update is in progress.

Procedure

1. On the main menu, select **Controller Nodes**.
2. Select a node in the list pane.
3. On the **Actions** menu, select **Reboot** .
4. Follow the instructions on the dialog that opens.

Shutting down a node

⚠ **CAUTION:**

Shutdown should only be used at the time service is going to be performed on a node. Restarting a node requires the node to be physically power cycled.

Shutting down single node will cause a performance degradation of the system. It may also cause an outage if host connectivity is not properly configured.

NOTE:

A controller node cannot be shut down from the Actions menu while an update is in progress.

Procedure

1. On the main menu, select **Controller Nodes**.
2. Select a node in the list pane.
3. On the **Actions** menu, select **Shutdown**.
4. Follow the instructions on the dialog that opens.

Performing Ports screen tasks

Editing port settings

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Edit**.
3. Follow the instructions on the dialog that opens.

Editing port labels

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Edit label**.
3. Follow the instructions on the dialog that opens.

Disabling a port

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Disable**.
3. Follow the instructions on the dialog that opens.

Enabling a port

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Enable**.
3. Follow the instructions on the dialog that opens.

Initializing a port

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Initialize**.
3. Follow the instructions on the dialog that opens.

Clearing a port

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Clear**.
3. Follow the instructions on the dialog that opens.

Reloading firmware

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Reload firmware**.
3. Follow the instructions on the dialog that opens.

Syncing to a name server

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Sync to name server**.
3. Follow the instructions on the dialog that opens.

Pinging a port

This operation is allowed for RCIP and iSCSI ports only.

Procedure

1. On the main menu, select **Ports**.
2. On the **Actions** menu, select **Ping**.
3. Follow the instructions on the dialog that opens.

Performing Drive Enclosures screen tasks

Editing drive enclosure settings

Procedure

1. On the main menu, select **Drive Enclosures**.
2. On the **Actions** menu, select **Edit**.
3. Follow the instructions on the dialog that opens.

Locating drive enclosures (turning on the Locate LED)

Procedure

1. On the main menu, select **Drive Enclosures**.
2. To locate a drive enclosure, select **Locate** on the **Actions** menu.

   To locate a magazine, select the **Magazine** view on the detail pane, find the magazine in the list, and then and click its LED icon (

).

   You can also locate a magazine using the **Schematic** view.

Stopping the locate task (turning off the Locate LED)

Procedure

1. On the main menu, select **Drive Enclosures**.
2. On the **Actions** menu, select **Stop locate**.

Performing Physical Drives screen tasks

Locating physical drives (turning on the Locate LED)

Procedure

1. On the main menu, select **Physical Drives**.
2. On the **Actions** menu, select **Locate**.

Tip: You can also locate a drive using the **Schematic** view

Stopping the locate task (turning off the Locate LED)

Procedure

1. On the main menu, select **Physical Drives**.
2. On the **Actions** menu, select **Stop locate**.

Service Console concepts

These topics explain key concepts for HPE 3PAR Service Console features.

Service Processor setup

The Service Processor comes preinstalled with a Service Console text-based tool that is run automatically when you log in to the Linux console as admin. There is initially no password for `admin`. The script lets you set the IP address of the SP. You can also see the current IP if DHCP is enabled on the network.

The preferred setup method is to connect to the SP's preconfigured, nonroutable IP address through a local network using a browser. In this case, Guided Setup will start automatically for new SPs.

Once the Service Processor is connected to the network, you can then use this IP address to connect to the Service Processor through a browser.

More information

SP Service Console CA-signed certificates

During SP installation, a self-signed SSL certificate is created for the Service Console web server to use. Most environments do not want or allow servers to use self-signed certificates. All browsers flag/warn and possibly refuse to connect when a server is using a self-signed certificate, or certificate that is not signed by a trusted Certificate Authority (CA) that is installed in the user's browser. You must install the certificate on each browser that you use to connect to the Service Console.

The Service Console allows you to install your own SSL certificate for the SP web server. In most cases this will be an SSL Certificate that has been signed by a CA that is trusted in the customer's environment. The CA could be an external company such as Verisign, GoDaddy, etc. or it can be an internal CA using a product like Microsoft Certificate Services, or a home grown Certificate Authority using OpenSSL.

To use a CA-signed certificate, you must first generate a Certificate Signing Request (CSR).The CSR generated is sent to the Certificate Authority to be signed. The CA then returns the signed certificate and the CA certificate chain to the user. You then install the signed certificate and CA certificate chain onto the server.

StoreServ systems and the Service Console

After the Service Processor is initialized, the next task is to add a storage system to this Service Console, which attaches the system to the SP. Guided setup automatically takes you through this task if no systems have been added to the Service Console. Adding/Removing a system can also be done through the **Systems** page of the Service Console.

You can add a StoreServ system that has already been initialized or add a new, uninitialized system. After the StoreServ system is initialized, the system will automatically be connected to the Service Processor so it will appear in the Service Console, and all Service Console functionality will be available to the StoreServ.

Service Processor connectivity

The Service Console allows you to check connectivity on demand. The Test SP connectivity action runs tests to the Public Network, the 3PAR Secure Service Collector Server, and the 3PAR Secure Service Policy Server.

After a connectivity test has been started, the GUI will show the process as a task in a notifications box. When the notifications box is open, you can click the **Details** link to see the results of the test. You will also be notified when the connectivity test has completed.

The details are shown in Activity view and on the Activity page. The task details will show the results of the test.

Contacts management

The Service Console has a Contacts page that allows you to manage system support contacts (for Hewlett Packard Enterprise to contact about issues with the system) and local notification contacts (to receive email notifications).

Each attached storage system requires at least one contact to be assigned as a system support contact.

The Contacts page includes a list of all contacts stored on the SP the Service Console is running on. The list of contacts includes the name and the number of systems that contact is assigned to.

Contacts can be either individuals or groups using a single email address. Group contacts can only receive local notifications. They cannot be system support contacts for HPE support.

SC also allows for the creation of local notification rules for suppression and disclosure of specific alerts for contacts:

Default notifications – Give the set of notifications currently used by default.

All notifications – Selects all notifications available.

No notifications – Suppresses all notifications from the system.

Custom – Creates a user-defined set of notification rules.

More information

Service Processor updates

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.

More information

HPE 3PAR OS updates

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 3PAR StoreServ Storage system be shut down before the update is installed. While this method is faster, it requires system downtime, so this option should only be used 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 (upgrade), 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 being performed (online, offline, patch, REVERT, or REVERT PATCH). Validation test (pre-checks) are not performed for patch upgrades. 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 this option is deselected. This action admits new hardware into the system and updates firmware on new and existing hardware. It should be run 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 update recovery

In the case of an update being aborted or the Service Processor system going down in the middle of the update, or some unforeseen failure either on the array or on the SP, the array may be left in a mid-update state where an update started but did not finish. In this case, the update must be re-initiated to complete the update or to revert to the state before the update. This 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 **HPE 3PAR OS Update Recovery** dialog with details of that state.

Array states

- If the array is not currently in the middle of an update, the SP presents the normal **Update 3PAR OS** dialog.
- If the array is currently in the middle of an update initiated by this Service Processor is still in progress, the SP generates an error message indicating an update is in progress, and that a new update cannot be started. A link to Activity view for seeing the current status of the update will be provided.
- If the array is in the middle of an update that is not currently running on the Service Processor, the SP presents the option of resuming the update or, if using the Advanced Online update method, reverting the array to the state it was in before the start of the update.

Once the update is completed, **Admit hardware** will be run automatically unless the option for automatically running Admit hardware is deselected.

More information

[HPE 3PAR OS updates](#) on page 37

[Updating the HPE 3PAR OS](#) on page 29

[Accessing the Activity page](#) on page 22

[Running admit hardware](#) on page 29

HPE 3PAR OS Revert operations

The Revert operation can be initiated from the recovery dialog or from the **Update HPE 3PAR OS** dialog. In addition to 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** will be run automatically unless the option for automatically running Admit Hardware is unchecked.

NOTE:

If a downgrade from 3.3.1 to 3.2.2 or revert from 3.3.1 to 3.3.2, 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 upgrade checks and `admithw`.
- Re-image the SP to SP 4.3 after revert to 3.2.1 and complete post upgrade checks and `admithw`.

More information

[Accessing the Activity page](#) on page 22

[Running admit hardware](#) on page 29

Array hardware overview

Technical Support and Partners logging in to the Service Console will need to view and service the array hardware for the storage systems serviced by the Service Processor. For this purpose, the Service Console makes available many of the storage systems pages that are also available in the HPE 3PAR StoreServ Management Console (SSMC) including:

- Systems
- Controller Nodes
- Ports
- Drive Enclosures
- Physical Drives

Service Console guidelines

These topics explain parameters and specifications necessary for completing Service Console tasks.

About online help

Welcome to online help for

HPE 3PAR Service Console

5.0

Notices

Online help: basic search

In the online help window, clicking **Search** opens the search panel. You can enter search terms and click **List Topics**, or you can click an item in the autocomplete list to display the search results. Clicking a search result displays the help topic.

The basic word search finds topics that contain all the words that you enter in the search box. For example, entering "dogs chase cats" finds topics that contain the words **dogs** and **chase** and **cats**.

To search for a phrase, you must enclose the phrase in quotes. For example, entering "dogs chase cats" finds topics that contain the exact phrase **dogs chase cats**.

Search results are listed in the results in rank order, from highest to lowest. Ranking indicates the relative number of occurrences of the search word or phrase in the topics. When a topic is displayed, the search word or phrase is highlighted in yellow.

TIPS:

- Searches are case insensitive by default. You can also choose case-sensitive searches.
- You can include special characters in phrase searches. If you include special characters in basic word searches, the special characters are treated as spaces.

Online help: advanced search

Tip: Wildcard and Boolean searches cannot be used in phrase searches.

Wildcard searches

You can use the following wildcard characters individually or in combinations.

Question mark (?) – You can use a question mark to represent a single character. For example, entering **c?t** would find topics that contain words such as **cat** and **cot**. Entering **cat???** would find topics that contain words such as **cattle**.

Asterisk (*) – You can use an asterisk to represent multiple characters. For example, entering **d*g** would find topics containing words that start with **d** and end with **g**, such as **donating**.

Boolean searches

And – In a word search, a space between search words is treated as a Boolean **and** operator. For example, entering **dogs cats** would find topics that contain the words **dogs** and **cats**.

Or – You can also use the word **or** between words. For example, entering **dogs or cats** would find topics that contain the word **dogs** or **cats**.

Not (-) – To search for topics that do not include a specific word, you can enter a minus sign in front of the word. For example, entering **dogs -cats** would find topics that contain the word **dogs** but do not contain the word **cats**. You must enter a space before the minus sign; otherwise, the search treats the words as hyphenated.

Proximity searches

Proximity searches apply to English strings in an English environment only.

Near – You can use the word **near** to search for words that are within 10 words of each other, in any order. For example, entering **dogs near cats** would find topics in which the words **dogs** and **cats** are within 10 words of each other.

Fby – You can use the letters **fby** (followed by) to search for words that are within 10 words of each other, in a specific order. For example, entering **dogs fby cats** would find topics in which the words **dogs** and **cats** are within 10 words of each other, in the order of **dogs** then **cats**.

Service Console and SSMC

For SP 5.0, SSMC must be installed separately on your local system, and only one stand-alone 3PAR StoreServ Storage system can be added to a single SP or Service Console.

Supported platforms and browsers

Physical SPs

- HPE ProLiant DL320e (Gen8)
- HPE ProLiant DL360e (Gen8)
- HPE ProLiant DL120 (Gen9)

Virtual SPs

- VMware ESXi 5.5/6.0/6.5
- Microsoft Hyper-V 2012/2012 R2/2016

Browsers

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

To access the most current browser version information, go to the Single Point of Connectivity Knowledge for Hewlett Packard Enterprise Storage Products at **https://h20272.www2.hpe.com/SPOCK/**.

Firewall and proxy server configuration

Firewall and proxy server configuration must be updated on the customer network to allow outbound connections from the Service Processor to the existing HP servers and new HPE servers.

HP and HPE server host names and IP addresses:

- HPE Remote Support Connectivity Collector Servers:

  ◦ **https://storage-support.glb.itcs.hpe.com** (16.248.72.63)
  ◦ **https://storage-support2.itcs.hpe.com** (16.250.72.82)

- HPE Remote Support Connectivity Global Access Servers:

- ◦ **https://c4t18808.itcs.hpe.com** (16.249.3.18)
- ◦ **https://c4t18809.itcs.hpe.com** (16.249.3.14)
- ◦ **https://c9t18806.itcs.hpe.com** (16.251.3.82)
- ◦ **https://c9t18807.itcs.hpe.com** (16.251.4.224)

- • HP Remote Support Connectivity Global Access Servers:

  - ◦ **https://g4t2481g.houston.hp.com** (15.201.200.205)
  - ◦ **https://g4t2482g.houston.hp.com** (15.201.200.206)
  - ◦ **https://g9t1615g.houston.hp.com** (15.240.0.73)
  - ◦ **https://g9t1616g.houston.hp.com** (15.240.0.74)

- • HPE RDA Midway Servers:

  - ◦ **https://midway5v6.houston.hpe.com** (2620:0:a13:100::105)
  - ◦ **https://midway6v6.houston.hpe.com** (2620:0:a12:100::106)
  - ◦ **https://s54t0109g.sdc.ext.hpe.com** (15.203.174.94)
  - ◦ **https://s54t0108g.sdc.ext.hpe.com** (15.203.174.95)
  - ◦ **https://s54t0107g.sdc.ext.hpe.com** (15.203.174.96)
  - ◦ **https://g4t8660g.houston.hpe.com** (15.241.136.80)
  - ◦ **https://s79t0166g.sgp.ext.hpe.com** (15.211.158.65)
  - ◦ **https://s79t0165g.sgp.ext.hpe.com** (15.211.158.66)
  - ◦ **https://g9t6659g.houston.hpe.com** (15.241.48.100)

- • HPE StoreFront Remote Servers:

  - ◦ **https://sfrm-production-llb-austin1.itcs.hpe.com** (16.252.64.51)
  - ◦ **https://sfrm-production-llb-houston9.itcs.hpe.com** (16.250.64.99)

- • For communication between the Service Processor and the HPE 3PAR StoreServ Storage system, the customer network must allow access to the following ports on the storage system.

  - ◦ Port 22 (SSH)
  - ◦ Port 5781 (Event Monitor)
  - ◦ Port 5783 (CLI)

- • For communication between the browser and the Service Processor, the customer network must allow access to port 8443 on the SP.

FAQ

- • **What is the relationship between HPE 3PAR Service Console and HPE 3PAR StoreServ Management console?**
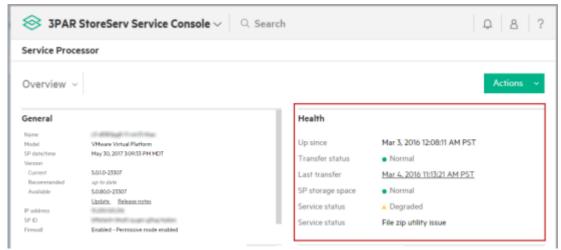
  The Service Console has the same look and feel as the HPE 3PAR StoreServ Management Console. Some of the same pages are available in both with certain noted differences.

  SSMC will not be running on the Service Processor, but must be installed on a customer system by the customer in a "stand-alone SSMC" configuration. There are two consoles in the stand-alone SSMC configuration: StoreServ Management Console (SSMC or Management Console) and StoreServ Administrator Console (SSAC or Admin Console). You can switch the consoles back and forth by clicking the Administrator console check box below the login button. Users log in to StoreServ Management Console using array credentials and can then use SSMC to manage StoreServs that are added to the SSMC configuration that their credentials allow them to see. A local admin can log in to the StoreServ Admin console, which is used to set up SSMC on the customer's system and add/remove StoreServs to/from the SSMC configuration.

For SP 5.0, the Systems page of the Service Console includes a Service Processor box showing the name of the Service Processor managing the 3PAR StoreServ Storage system. The value of this field displays the SP ID of the Service Processor and will be a hyperlink to the Service Processor page.
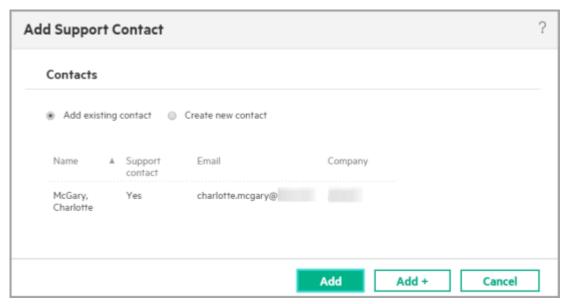
- **Where can I see health details?**

  Health panels are included in the Overview view of most detail panes.

- **Why is there an action button and an action + button on some dialogs?**

  Clicking an action button performs the action and closes the dialog. Clicking an **action +** button performs the action but the dialog remains open and the entries are cleared. This is helpful when you perform the same action repeatedly, such as adding contacts.

General screens, views, and actions summary

Activity screen

Views:

- List pane: Default View

Actions:

- Mark as New
- Mark as Fixed

- Acknowledge
- Delete
- Stop/Resume Advanced OS Update

Settings screen

Views: Not applicable

Actions:

- Edit Formats
- Edit Preferences
- Edit Application

Contacts screen

Views:

- List pane: Default View
- Detail pane:

  - Overview
  - Systems

Actions:

- Create
- Edit
- Delete

Files screen

Views: Not Applicable

Actions:

- Transfer to HPE support
- Download

Service screens, views, and actions summary

This topic summarizes the Views and Action menus that you can use to perform tasks from the Service screens.

Service Processor screen

Views:

- Detail pane:

  - Overview
  - Transfer
  - Setup
  - Activity

Actions:

- Edit SP configuration
- Collect support data
- Test SP connectivity
- Cleanup SP files
- Update
- Unmount SP DVD drive
- HPE Support password

- Backup SP recovery Data
- Shutdown
- Reboot

Storage Systems screens, views, and actions summary

This topic summarizes the Views and Action menus that you can use to perform tasks from the Storage Systems screens.

Systems screen

Views:

- List pane: default view
- Detail pane:
  - Overview
  - Configuration
  - Capacity
  - Capacity Savings
  - Capacity Forecasting
  - Compaction
  - Encryption
  - System Reporter
  - Settings
  - Services
  - Software
  - Licenses
  - Layout
  - Performance
  - Update
  - Activity
  - Map

Actions:

- Edit
- Locate / Stop locate
- Edit System
- Add system
- Collect support data
- Start CLI session
- Check health
- Update HPE 3PAR OS
- Admit hardware
- Post update checks
- Set maintenance mode
- Remove System
- Reboot
- Shutdown
- Add license

Controller Nodes screen

Views:

- List pane: default view
- Detail pane:

  ◦ Overview
  ◦ Schematic (HPE 3PAR StoreServ 7000 and 8000 series only)
  ◦ Adapter Cards
  ◦ Power Supplies
  ◦ Microcontroller
  ◦ System Fans
  ◦ Internal Drive
  ◦ Batteries
  ◦ Activity
  ◦ Performance
  ◦ Map

Actions:

- Locate / Stop locate
- Show battery test log (HPE 3PAR StoreServ 10000 and 20000 series only)
- Reset battery test log (HPE 3PAR StoreServ 10000 and 20000 series only)
- Reboot
- Shutdown

Ports screen

Views:

- List pane: default view
- Detail pane:

  ◦ Overview
  ◦ Schematic (HPE 3PAR StoreServ 7000 and 8000 series only)
  ◦ Settings
  ◦ Hosts
  ◦ Sessions
  ◦ Performance
  ◦ Activity
  ◦ Map

Actions:

- Edit
- Edit label
- Disable
- Enable
- Initialize
- Clear
- Reload Firmware
- Sync to name server
- Ping

Drive Enclosures screen

Views:

- List pane: default view
- Detail pane:

- ◦ Overview
- ◦ Schematic (HPE 3PAR StoreServ 7000 and 8000 series only)
- ◦ Magazines
- ◦ Interface Cards
- ◦ Power Supplies
- ◦ Cooling Fans
- ◦ Physical Drives
- ◦ SFPs
- ◦ Activity
- ◦ Map

Actions:

- Edit
- Locate / Stop locate

Physical Drives screen

Views:

- List pane: default view
- Detail pane:

  - ◦ Overview
  - ◦ Schematic (HPE 3PAR StoreServ 7000 and 8000 series only)
  - ◦ Performance
  - ◦ Activity
  - ◦ Map

Actions:

- Locate / Stop locate

Service Processor health
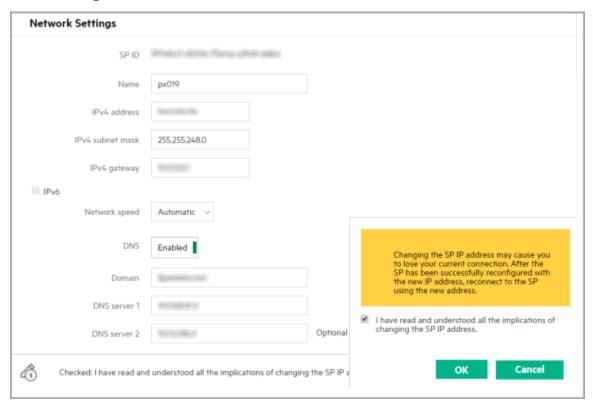
The health and status of the SP and associated services can be viewed in the Health section of the Overview of the Service Processor page. The overall status of the SP service is indicated with one of the following:

- **Normal** – Service is up and running normally.
- **Warning** – Service is up and running but has an issue.
- **Failure** – Service is down.

Service Processor configuration settings

The following SP settings can be modified through the **Edit SP configuration** action from the Service Processor page.

Network settings

Name – Host name of Service Processor.

IP address/IPv6 address – Service Processor IP address. Changing the SP IP address may cause you to lose your current connection and requires confirmation to proceed.

Subnet mask/Subnet prefix length – Subnet mask associated with the SP IPv4 address/number of bits used to identify network (IPv6).
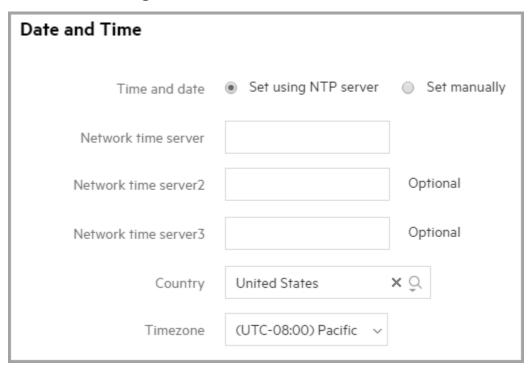
Gateway – Default gateway IP address.

Network speed – Automatic, 1000 Mb/s, or 100 Mb/s.

Duplex – Half/Full. (Available only when network speed is not set to Automatic.)

DNS – Enable/Disable. If enabled, DNS domain name and server information are configurable.

Time and date settings
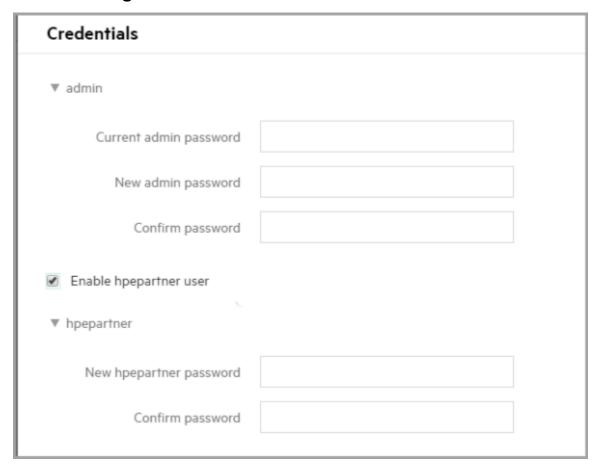
Time and date – NTP server (recommended) or Manual. If set using NTP server, Network time servers 1, 2, and 3 are configurable.

Country – Country in which Service Processor is located.

Timezone – Time zone in which Service Processor is located. (Only time zones for the selected country will appear.)

Credentials settings

NOTE:

The Credentials settings will appear only if you are logged in as the admin user account.

admin – Credentials for Service Console users managing the system. If editing an existing password, the current password must also be supplied.

hpepartner – Credentials used by authorized support users. If editing an existing password, the current password must also be supplied. (Displayed only when **Enable hpepartner user** is selected.)

Service Processor firewall settings

Firewall – Enable/Disabled.

Permissive mode – Enable/Disabled. Enabling permissive mode allows any system to connect to the SP using HTTPS or SSH protocols (recommended). Disabling permissive mode allows only systems with specific IP addresses to connect to the SP.

Rules – Enable/Disabled. Add/remove firewall rules for specific IP addresses.

Support settings

Send support data to HPE – Enabled/Disabled. If enabled, the SP sends collected support data to Hewlett Packard Enterprise. Disabling this feature (not recommended) will prevent HPE Support from receiving any data from your system and disable HPE remote support access and software downloads to your system. No alert notifications will be sent from HPE when this feature is disabled.

Scrub private information from support data – Enabled/Disabled. If enabled, all customer-sensitive data is scrubbed from all telemetry uploaded to HPE Support from the SP.

HPE remote support access – Enable/Disabled. If enabled, authorized Hewlett Packard Enterprise support personnel are allowed to access the SP. (This option is available only when **Send support data to HPE** is enabled.)

Allow software downloads – Enabled/Disabled. (This option is available only when **Send support data to HPE** and **HPE remote support access** are enabled.)

Remote support proxy – Enabled/Disabled. If enabled, the protocol, proxy name/IP, proxy port, and proxy authentication are configurable.

RAP forwarding – Enabled/Disabled. If enabled, it allows the system to email HPE Support copies of notification messages sent to subscribers as specified under RAP rules. (This option is available only when the **Send support data to HPE** option is disabled.)
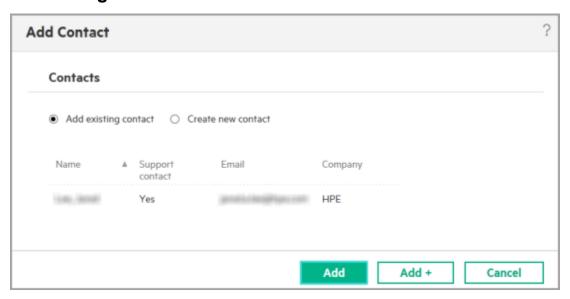
Send email notification of system alerts – Enabled/Disabled. If enabled, the SP can send email notifications of alerts from systems to contacts. The mail host name or IP address must be provided along with the mail host domain. You are also provided with the option to send a test email when the configuration is applied to the SP.

Send test email – Enabled/Disabled. If enabled, you are also provided with the option to send a test email to the specified email address when the configuration is applied to the SP.

Transport agent – SSA or RDA. (This option is available only when logged in as `hpepartner` or `hpesupport`.)

Collection server – Production or Internal HPE 3PAR QA. (This option is available only when logged in as `hpepartner` or `hpesupport`.)

Contacts settings

Contacts – Add existing contact / Create new contact.

File cleanup settings

Automatically delete non-critical files – Deletes noncritical files older than the specified number of days. The number of days must be between 0 and 14. Setting the number of days to 0 will delete files older than 1 hour.

Delete SP packages – Deletes all SP packages older than the currently installed package when SP storage space is below the indicated limit.

Delete 3PAR OS packages – Deletes all HPE 3PAR OS packages older than the oldest currently installed OS when SP storage space is below the indicated limit.

Service Console users and passwords

There are three accounts on the Service Console: admin, hpepartner, and hpesupport. The same user names and passwords can be used to log in to the Service Console and the SP system.

User name	Description
admin	Customer SP administrator. This account is not used by Hewlett Packard Enterprise personnel and can be modified by the user. This account can be used to change admin and hpepartner passwords, and obtain root and hpesupport password keys to send to Hewlett Packard Enterprise technical support.
hpepartner	Hewlett Packard Enterprise support partner. This account is used only by authorized service providers to perform service and diagnostic functions on the system. The hpepartner password is set by the customer and stored so that it can be shared with onsite Hewlett Packard Enterprise or authorized service personnel during maintenance activities (and changed again afterwards).
hpesupport	Hewlett Packard Enterprise technical support. This account is used only by Hewlett Packard Enterprise support personnel to perform service and diagnostic functions on the system.

Passwords for the admin and hpepartner users must be 8–32 characters in length, and contain at least one uppercase, one lowercase letter, one digit, and one nonalphanumeric character. The admin user can set the hpepartner password to control access to the service console and the SP.

When setting the hpesupport account password for your Service Processor, you must specify the type of password generation used to create the hpesupport password.

Passwords generation can be one of the following types:

Time-based – (Default) Password is reset every hour on the hour based on the SP's clock.

Encryption-based – Uses encrypted passwords for Hewlett Packard Enterprise support. Customers generate the encrypted password key either through the **Set HPE Support password** action or through the TUI option "Secure Password Management." The customer then sends the key to the HPE Support person, who uses the key to obtain the HPE Support password.

The password will be changed each time the key is regenerated, and the password derived from the previous key will no longer be valid.

More information

Support data collection (SP)

Service Console gives you the ability to collect the following support data from the Service Processor through the Service Processor Screen Actions menu:

SPLOR data – Collects health data from the Service Processor and sends it to Hewlett Packard Enterprise.

Weekly data – Collects weekly files from the Service Processor since the last weekly process was run and stores it on the file system. Users can manually download the data and send it to Hewlett Packard Enterprise.

More information

Support data collection (Systems)

Service Console gives you the ability to collect the following support data from an attached StoreServ:

Generated data

- **InSplore data**
  - CLI data
  - Node data
  - TOC data
  - File services data
- **File Persona collection**
  - Slim
  - Comprehensive
- **Performance Analysis**
  - Default
  - Comprehensive
  - Custom

Existing files

- Application Core files
- System crash dumps
- File Persona automatic collection
- File Persona live dump

InSplore data – Collects the selected health data from the storage system and sends it to Hewlett Packard Enterprise.

File Persona collection – Collects the selected health data from the File Persona product on the storage system and sends it to Hewlett Packard Enterprise.

Performance Analysis – Includes multiple options you can select to further define the data collected by the feature. When this option is selected three options for the data to be collected are displayed: **Default**, **Comprehensive**, and **Custom**. Settings for the number of iterations and the duration for each integration of performance analysis collection are also displayed.

If you select the **Details** check box for the Performance Analysis, all the possible statistics that can be collected are displayed. The selected options will depend on the selection of either Default or Comprehensive. If you select or deselect any options from the default or comprehensive selections, the radio button selection will automatically switch to custom. If default or comprehensive is selected again, the statistics selected will change to the corresponding options.

If you select **Custom** for the Performance Analysis, all the possible statistics that can be collected are displayed.

When customizing the settings for the Performance Analysis settings, you are able to select and deselect any of the statistics and options that are not mutually exclusive. Options for each statistic are shown if the statistic is selected and hidden when the statistic is not selected.

When a support data collection is in progress, it starts a task which will be shown at the top of the page.

If you click the details link to any of the collection tasks, you will be taken to the details for the selected data collection task in the Systems Activity view.

For information about the collection tasks and their options, see *HPE 3PAR Command Line Interface Reference*.

Application Core files – Collects core files from the storage system and sends them to Hewlett Packard Enterprise.

System crash dumps – Collects health data from the storage system and sends it to Hewlett Packard Enterprise.

File Persona automatic collection – Collections that contain additional system information, which are triggered automatically and sent to Hewlett Packard Enterprise when the File Persona system detects serious problems or conditions.

File Persona live dump – A memory dump of the File Persona system that can be manually triggered by Hewlett Packard Enterprise support when required for system triage.

More information

Browser Warnings

When connecting to your Service Processor IP address, you may receive a warning from your browser that there is a problem with the website's security certificate (Internet Explorer), that the connection is not private (Google Chrome), or the connection is not secure (Mozilla Firefox). To continue to the site, follow the instructions below :

Procedure

1.

Browser warning with a service processor connection

Symptom

When connecting to your HPE 3PAR Service Processor (SP) IP address, you might receive a warning from your browser that there is a problem with the security certificate or that the connection is not private.
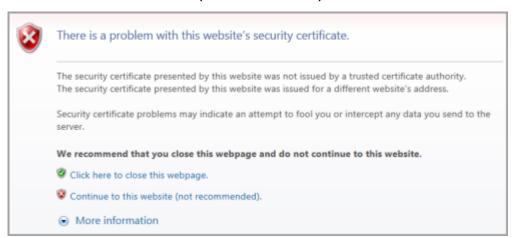
Solution 1

Cause

Warning message in Internet Explorer browser.

Action

- Click **Continue to this website (not recommended)**.

There is a problem with this website's security certificate.

The security certificate presented by this website was not issued by a trusted certificate authority.
The security certificate presented by this website was issued for a different website's address.

Security certificate problems may indicate an attempt to fool you or intercept any data you send to the server.

We recommend that you close this webpage and do not continue to this website.

✔ Click here to close this webpage.

✖ Continue to this website (not recommended).
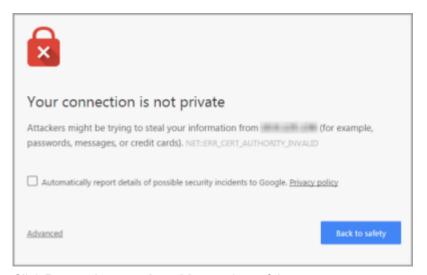
⊙ More information

Solution 2

Cause

Warning message in Google Chrome browser.

Action

1. Click the **Advanced** link.

2. Click **Proceed to <sp_ip_address> (unsafe)**.
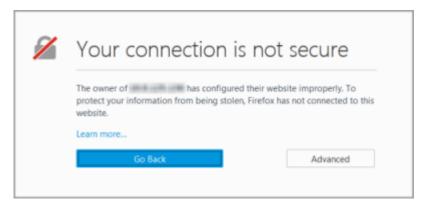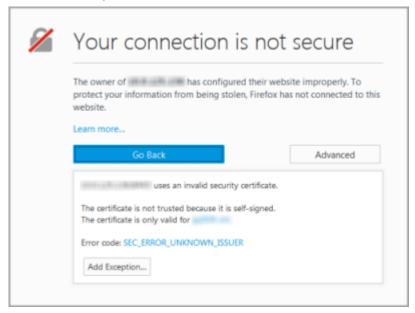

Solution 3

Cause

Warning message in Mozilla Firefox browser.

Action

1. Click **Advanced**.

2. Click **Add Exception...**.

3. (Optional) To remove the warning for this site in the future, select **Permanently store this exception** in the **Add Security Exception** dialog.

4. In the **Add Security Exception** dialog, click **Confirm Security Exception**.

The Text-based User Interface

The Text-based User Interface (TUI) is a utility on the Service Processor (SP) that enables limited configuration and management of the SP and access to an attached StoreServ's CLI. The intent of the TUI is not to duplicate the functionality of the SC GUI, but to allow a way to fix problems that may prevent you from using the SC GUI.

The TUI appears the first time you log in to the Linux console opened from the VMware vSphere Client or through a terminal emulator using SSH. Prior to SP initialization, you can log in to the TUI with the user name `admin` and no password. To access the TUI after the SP has been initialized, log in with the `admin` user password you created during the initialization or as the `hpepartner` user. The `admin` and `hpepartner` users will automatically be placed in the TUI when they login to the Linux console.

The Service Processor ID and model are always displayed in the heading. Before the SP is initialized, the SP ID is displayed as `SP00000`. After initialization, the actual ID assigned to the SP during initialization is displayed.

TUI navigation

To access the dialog associated with an option, press the number key associated with that option. For example, to select the **Configure Network** option, press the **1** key.

> **NOTE:**
>
> The TUI does not accept numbers entered using the numpad of the keyboard.

Use the up and down arrow keys to move from one option to another. The currently selected option will be highlighted. Pressing the **Enter** key will select the currently highlighted option.

To return to the console login screen, press the **X** key on any screen where that option appears.

Text-based User Interface tasks

Main menu options

Prior to SP initialization, the TUI utility provides the following options:

1. Configure Network
2. Shutdown/Start SP services
3. Reboot SP
4. Shutdown SP
5. Disable Remote Support on initial SP Setup
6. Connect to production servers at initial SP Setup/Connect to internal test servers at initial SP Setup
7. Configure Date and Time
8. Add data scrubbing feature to Service Console

After initialization, the TUI utility provides the following options:

1. Configure Network
2. Shutdown/Start SP services
3. Reboot SP
4. Shutdown SP
5. Secure Password Management
6. Enable/Disable firewall permissive mode
7. Interactive CLI / Maintenance Mode

8. Configure Date and Time
9. Add data scrubbing feature to Service Console

Configuring the network

Procedure

1. From the main menu, enter 1 for **1 == Configure Network**.
2. For a Service Processor whose network settings have not yet been configured, press **Enter** when the **Configure Network** screen appears.
3. If network settings have already been configured, a message will be displayed indicating you can change the settings. (Not recommended unless absolutely necessary.) If you choose to change the settings, press **Enter**. Otherwise, press **X** to return to the main menu.
4. Enter the Service Processor host name, IP address, or press **Escape** to quit and abandon your changes.
5. Enter the subnet mask, or press **Escape** to quit and abandon your changes.
6. Enter the default gateway, or press **Escape** to quit and abandon your changes.
7. Press **Y** or **N** to confirm the settings.
8. After the "Network configuration successful" message displays, press **X** to return to main menu.

Shutting down/starting SP services

Procedure

- From the TUI main menu, enter 2 for **2 == Shutdown SP services** or **2 == Start SP services**.

Shutting down SP services makes the Service Console GUI no longer accessible through your web browser. Starting SP services enables SP management with the Service Console GUI through your web browser.

Rebooting the Service Processor

Procedure

- From the TUI main menu, enter 3 for **3 == Reboot SP**.

This option will reboot the Service Processor. You must log in to the console as admin again if you want to access the TUI. You can log in as admin without a password until the SP is initialized. After initialization you must log in with the administrator credentials you set during initialization.

Shutting down the Service Processor

Procedure

- From the TUI main menu, enter 4 for **4 == Shutdown SP**.

This option will shutdown the Service Processor and exit the console. You must manually restart the SP to access it again.

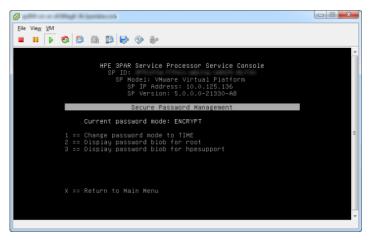# Accessing Secure Password Management

This option is only available after SP Setup.

Procedure

1. From the TUI main menu, enter 5 for **5 == Secure Password Management**.
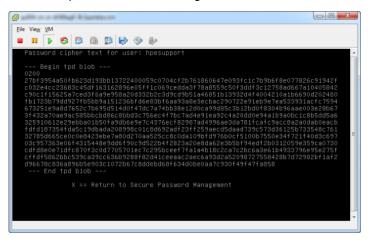
   The current password mode (**TIME** or **ENCRYPT**) is displayed, along with the option to change the mode.

   For encrypted passwords, you are given additional options to display the root or hpesupport password blobs.

2. When you select an option to display the password blob for the root or hpesupport accounts, the password ciphertext for the specified user is displayed. You can then copy the entire ciphertext blob and send it to Hewlett Packard Enterprise for Hewlett Packard Enterprise Support to obtain the password.

When copying the ciphertext, copy the text starting with the line "- - - Begin tpd blob - - - " and ending with "- - - End tpd blob - - - " including those two lines.

Disabling Remote Support on initial SP setup

This option is available only prior to SP initialization.

Procedure

1. From the TUI main menu, enter **5** for `5 == Disable Remote Support on initial SP Setup.`

This option will cause the SP to be initialized with Remote Support disabled.

> ⓘ **IMPORTANT:**
>
> Disabling Remote Support is not recommended. Disabling this feature will prevent HPE Support from receiving any data from your system. No alert notifications will be sent from HPE.

2. Enter **Y** for `Y == Yes.`

Enabling/Disabling firewall permissive mode

Procedure

1. From the TUI main menu, enter **6** for either `6 == Enable firewall permissive mode` or `6 == Disble firewall permissive mode.`
2. Enter **Y** for `Y == Yes.`

Starting an interactive CLI session and Maintenance Mode

This option is only available after SP Setup and if there is an HPE 3PAR StoreServ Storage system attached to the SP.

When putting the storage system in maintenance mode or editing the maintenance mode, you need to specify the duration in hours and a description of the reason for the maintenance mode.

Procedure

1. From the TUI main menu, enter **7** for `7 == Interactive CLI / Maintenance Mode.`
2. Enter one of the following:

   - If not in maintenance mode, enter one of options shown in the following example:

     ```
     Maintenance mode is turned off

     1 == Create Maintenance Mode
     2 == Open interactive CLI
     ```

   - If in maintenance mode by user, enter one of options shown in the following example:

     ```
     Maintenance mode on by admin until
     July 24, 2017 6:48:19 PM PDT

     1 == Modify Maintenance Mode for admin
     2 == Delete Maintenance Mode for admin
     3 == Open interactive CLI
     ```

   - If in maintenance mode by system (for OS update), enter one of options shown in the following example:

     ```
     Maintenance Mode on by System until
     July 25, 2017 7:37:16 PM PDT

     1 == Delete Maintenance Mode for System
     2 == Create Maintenance Mode
     3 == Open interactive CLI
     ```

   - If in maintenance mode by both user and system, enter one of options shown in the following example:

     ```
     Maintenance Mode on by System until
     July 25, 2017 7:37:16 PM PDT


     1 == Modify Maintenance Mode for admin
     2 == Delete Maintenance Mode for admin
     3 == Delete Maintenance Mode for System
     4 == Open interactive CLI
     ```

Configuring date and time

Procedure

1. From the TUI main menu, enter one of the following:

- On initial setup, enter **7** for `7 == Configure Date and Time`.
- After setup, enter **8** for `8 == Configure Date and Time`

.

2. If the SP has already been initialized, you must press **ENTER** to continue. (Using the TUI to change the date and time after the SP has been initialized is not recommended.)
3. Enter the date.
4. Enter the time.

Adding the data scrubbing feature to the Service Console

Procedure

1. From the TUI main menu, enter one of the following:

   - On initial SP setup, enter **8** for `8 == Add data scrubbing feature to Service Console`.
   - After setup, enter **9** for `9 == Add data scrubbing feature to Service Console`.

   This option will add the scrubbing feature to the Service Console, enabling the user to turn it on/off during SP Setup or through editing the SP configuration. The default will remain as off.

2. Enter **Y** for `Y == Yes`.

Glossary

MC

HPE 3PAR StoreServ Management Console

OVF

Open Virtual Format

SC

HPE 3PAR Service Console

SP

Service Processor

SPOCC

Service Process Onsite Customer Care

SSMC

HPE 3PAR StoreServ Management Console

TUI

Text-based User Interface

VM

Virtual Machine

VSP

Virtual Service Processor