



Hewlett Packard
Enterprise

HPE 3PAR StoreServ Management Console 3.1 Release Notes

Abstract

The information in this document is developed for use by Hewlett Packard Enterprise customers, partners, and Hewlett Packard Enterprise field representatives. These release notes describe the features and fixes included in HPE 3PAR StoreServ Management Console 3.1.

Part Number: QL226-99378
Published: March 2017
Edition: 1

Notices

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

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

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

Acknowledgments

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

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

Contents

HPE 3PAR StoreServ Management Console 3.1 Release Notes	4
Description.....	4
New features.....	4
Update recommendation.....	7
Supersede information.....	7
Products.....	7
Accessing SSMC information in SPOCK.....	7
Operating systems.....	7
Supported HPE 3PAR Operating Systems for SSMC.....	7
Supported browsers for SSMC.....	7
Languages.....	8
Fixes.....	8
Expected behavior for Federation peer ports.....	9
Known issues and workarounds.....	9
Prerequisites.....	15
System requirements.....	15
Server sizing information.....	15
Security settings for SSMC.....	16
Changing the default SSMC inbound port.....	16
Setting up LDAP using the HPE 3PAR CLI	17
Installation instructions.....	17
Installing SSMC in a Windows environment.....	18
Using the SSMC silent install option with Windows.....	18
Installing in a Linux environment.....	18
Using the silent install option in Linux.....	19
Related information.....	19
Documentation feedback.....	19

HPE 3PAR StoreServ Management Console 3.1 Release Notes

Description

This document provides the release notes for HPE 3PAR StoreServ Management Console (SSMC) 3.1. SSMC is a standalone product that installs as a single package. It consists of two consoles: the Administrator console and the Main console. The Administrator console allows you to add, edit, and remove HPE 3PAR StoreServ systems. The main console provides access to the features you can use to manage 3PAR StoreServ systems.

! **IMPORTANT:**

With the release of the HPE 3PAR Operating System 3.2.2, SSMC is the default management tool for 3PAR arrays that support 3PAR OS 3.2.2 and later. The final major release of the HPE 3PAR Management Console (MC) is 4.7.

New features

In addition to providing support for 3PAR OS 3.3.1, SSMC 3.1 includes the new features described in the following table. For a summary of all SSMC features, see the latest version of the *HPE 3PAR StoreServ Management Console Administrator Guide* and the *HPE 3PAR StoreServ Management Console User Guide*.

Location	Includes	New features in SSMC 3.1
General	Dashboard Activity Schedules Settings	
File Persona	File Shares File Stores Virtual File Servers File Provisioning Groups Persona Configurations	Adds support for the following: <ul style="list-style-type: none">• Enterprise file lock.• Thin persistence SCSI UNMAP.• FPG grow increases in GiB.• Fully provisioned or thinly provisioned volumes.• Changes in SMB protocol settings.• CNA combo card.• FTP shares.

Table Continued

Location	Includes	New features in SSMC 3.1
Block Persona	Hosts Host Sets Virtual Volumes Virtual Volume Sets Common Provisioning Groups Templates	<ul style="list-style-type: none"> • Includes enhanced capacity savings/efficiency display. • Removes <i>Thinly deduped</i> as a provisioning type selection, making it a flag/setting on <i>Thin provisioned</i> instead. • Adds support for the following: <ul style="list-style-type: none"> ◦ Integration with HPE 3PAR Smart SAN Software 2.0 and later. ◦ Virtual Volume compression for SSD devices. ◦ 15TB SSD drives.
Storage Optimization	Adaptive Flash Cache Adaptive Optimization Priority Optimization	
Replication	Remote Copy Configurations Remote Copy Groups	<ul style="list-style-type: none"> • Adds a warning when using Remote Copy from encrypted to un-encrypted system. • Allows users to specify additional targets for SLD and 3DC Peer Persistence configurations.
Storage Systems	Federations Systems Controller Nodes Ports Drive Enclosures Physical Drives	<ul style="list-style-type: none"> • Federations <ul style="list-style-type: none"> ◦ Allows a Storage Federation to include up to eight source storage systems. ◦ Allows adding legacy 3PAR and IBM XIV (non-3PAR) sources to a storage federation as migration sources. <ul style="list-style-type: none"> – Refresh objects for legacy 3PAR and IBM XIV storage systems. – Import intended hosts for IBM XIV systems. ◦ Updates the create and edit Federation dialog to allow choosing 3PAR Smart SAN capable storage systems, and to establish zoning. ◦ Enables scheduling of Peer Motion migrations, and migrating data from legacy storage or non-3PAR systems to 3PAR storage systems that are part of a Federation. ◦ Creates a more accurate representation of virtual volume space migrated during a Peer Motion migration. ◦ Allows the user to create compressed volumes on destination system during Peer Motion, if all of the following apply : <ul style="list-style-type: none"> – Destination system supports compression. – CPG is SSD. – Volume type is thin or dedup. • Ports <ul style="list-style-type: none"> ◦ Includes support for HPE Smart SAN.

Table Continued

Location	Includes	New features in SSMC 3.1
System reporter	Reports Threshold Alerts	<ul style="list-style-type: none"> • Enables selection of rules for VMware storage containers, virtual machines, VM hosts, and VVol states from the Virtual Volumes Capacity report. • Allows Threshold Alert editing on systems running 3PAR OS 3.3.1 and later. • Allows users to provide IPv6 SMTP Server address under Settings. • Adds summary metrics under System Performance View • Supports Performance view in Storage container and Virtual machine main menu. • Adds RPO metric for Remote copy volume report. • Supports compression metrics for VV and CPG Capacity reports. • Simplifies VV Capacity and CPG Capacity reports. • Adds Capacity Forecasting View to Systems main menu for System Capacity and CPG, to provide forecasting data for daily sample based on 1 year of historical data. • Includes the following Excel Addin features, supported from HPE 3PAR OS : <ul style="list-style-type: none"> ◦ Simplifies System Capacity report for systems running 3PAR OS 3.3.1 and later. ◦ Enables VMware VVOL metrics in VV Capacity, Exported Volume Performance, and Exported Volume histogram reports. ◦ Adds a System Capacity report for 3PAR systems running 3PAR OS 3.3.1 and later. ◦ Supports Vvol metrics for VV Capacity and Exported Volume Performance reports. ◦ Supports compression metrics for VV and CPG Capacity reports. ◦ Simplifies VV Capacity and CPG Capacity reports. ◦ Connects to SSMC server running IPv6. ◦ Adds summary metrics for Physical Drive, Port, and Exported volume components.
Security	Users LDAP Roles Connections Domains	<ul style="list-style-type: none"> • Adds support Two-factor authentication (2FA). • Adds a user interface Service Account panel and CAC Authentication panel under the <code>Create LDAP Configuration</code> and <code>Edit LDAP Configuration</code> dialogs. <p>See the Support Matrix in SPOCK for details on supported CACs.</p>
VMware	Storage Containers Virtual Machines	Displays replication information on Virtual Machines and VVols.
Other	Admin Console	Supports IPv6 connections to 3PAR StoreServ systems.

Update recommendation

Update recommendation: Recommended

Supersede information

Supersedes: HPE 3PAR StoreServ Management Console 3.0

Products

This release applies to the following product families:

- HPE 3PAR StoreServ 7000 Storage
- HPE 3PAR StoreServ 8000 Storage
- HPE 3PAR StoreServ 10000 Storage
- HPE 3PAR StoreServ 20000 Storage

SSMC 2.2 and later allows you to connect up to a maximum of 32 3PAR StoreServ storage arrays.

Accessing SSMC information in SPOCK

Procedure

1. Log into **SPOCK**.
2. In the left navigation pane of the SPOCK Home page, scroll down to Software, and then click **Array Software: 3PAR**.
3. Scroll down to HPE 3PAR Operating System Software: Array Software, and then click the latest SSMC version under HPE 3PAR StoreServ Management Console.

Operating systems

You can install SSMC on the following host platform operating systems:

- Red Hat Enterprise Linux
- Microsoft Windows Server
- VMware vSphere

For the most current list of the supported operating system versions see, [Accessing SSMC information in SPOCK](#).

Supported HPE 3PAR Operating Systems for SSMC

- HPE 3PAR 3.1.3 (includes all MUs)
- HPE 3PAR 3.2.1 (includes all MUs)
- HPE 3PAR 3.2.2 (includes all MUs)
- HPE 3PAR 3.3.1

To access the most current information, see [Accessing SSMC information in SPOCK](#).

Supported browsers for SSMC

SSMC supports the following browsers (64-bit preferred):

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

To access the most current version information, see [Accessing SSMC information in SPOCK](#).

Languages

Generally, SSMC supports English, German, Japanese, and Simplified Chinese. For the most current list of the supported languages for SSMC installation on the supported operating systems, see, [Accessing SSMC information in SPOCK](#).

Fixes

This version fixes the following issues:

Issue ID	Issue
132575	Mismatch in virtual volumes count.
144315	Host Explorer table lists incorrect information.
169777	Federations create new Smart SAN enabled peer ports when non-Smart SAN peer ports already exist (see, Expected behavior for Federation peer ports).
183019	Edit Port Pair dialog fields do not update properly on OK.
184778	Modes filter in RC Group filter pane selects the incorrect modes when selecting All modes .
184994	Create host shows incorrect selection of Host OSs and the create operation fails.
186510	Main menu configuration shows all categories have None in Japanese.
187126	Chrome browser crashes with "Aw, Snap!" error while using SSMC (Fixed with Chrome version 54 and later)
187410	Removing and then recreating a Remote Copy group with the same name fails with a 500 error.
187427	Request times out waiting for arrays to be removed from SSMC.
187444	Problems with popup error <code>Not authorized 3paradm is not authorized to view this page.</code>
187457	Server down error when copying hundreds of hosts (maybe other objects too).
188094	Unable to reboot SSMC server when missing a <code>libpng12</code> security update on Redhat 7.2.
188479	System shows an invalid error message when changing System Reporter volume size.
188612	System incorrectly determined as Unknown status when issue with cage data encountered.
188921	Retention of scheduled reports stored under user specified directory

Table Continued

Issue ID	Issue
189071	Peer links status could be inaccurate when creating a Federation involving host port-to-peer port conversion.
189811	Specifying Global Settings -> System Reporter Settings -> Shared directory path
190304	SSMC attempts to authenticate against a 3PAR server using invalid credentials.
190708	Migration source shown as Available when creating or editing a Federation.
192769	Mode change is prohibited for ports <n:n:n> error when adding an array for migration source on systems running SSMC 3.0 and earlier.
194482	User is unable to log into SSMC with an LDAP user in the format "domain\user"
197137	Migration error for compressed volumes.

Expected behavior for Federation peer ports

With the resolution of issue 169777 (170911), expected behavior includes:

- Systems with more than two peer ports appear as Unavailable for adding to a Federation. Systems with existing non-SmartSAN peer ports appear as Unavailable for adding to a SmartSAN Federation. Where non-SmartSAN systems have more than two peer ports, see the yellow banner, shown when you select the system, for details.
- When creating a Federation, you must select existing peer ports, if any. If you select new peer ports, the UI returns an error and does not allow you proceed. A system cannot have more than two peer ports.
- When editing a Federation for a system with two existing peer ports, selecting new ports resets the existing ports to host ports. Unless there is an error during reconfiguration of existing peer points, a system cannot have more than two peer ports after editing. Look for a message in the Activity panel.

Known issues and workarounds

ⓘ IMPORTANT:

HPE 3PAR Remote Copy asynchronous streaming configurations do not support compression. Do not use the asynchronous streaming replication mode with compressed volumes.

Reports :

- Compare with Stacked charts is not supported for 3PAR StoreServ systems that are in different time zones.
- Compare with feature is not supported for scheduled reports or export to PDF or CSV.
- Export to PDF and Scheduled report PDF are not supported for Histogram reports with Access Count Percentage Area charts.
- Compare with report provides meaningful data only when comparing systems running the same 3PAR Operating System version. Some versions include changes in the supported metrics/options.
- For Specific time data, `Next` and `Previous` options for the Hires sampling interval is always fixed to 5 Minutes, regardless of the Hires sampling interval set in On Node SR.
- Creating reports that request more than 20k in records results in an RHS report of `No Data to display`. Scheduled tasks that request more that 20k in records will fail. Instead, use filtering to narrow the request.

Threshold alerts :

- Threshold alert editing is not supported for alert rules created using either the CLI or using the SSMC UI and then modified using the CLI. Use the 3PAR CLI client to edit alerts.
- Threshold alerts created using the CLI with options that SSMC does not support might not include the proper details in the overview. Use the 3PAR CLI client to view these alert parameters.

Mismatch in physical versus reported Total Data Cache and Control Cache sizes

In the Controller Nodes Physical Memory chart and the Systems Resources chart, SSMC reports the total data cache and total control cache at a number lower than the actual, physical size installed. For example, SSMC shows Total Data Cache as 28.96 GB, and the physical size installed is 32 GB.

The difference in output occurs because the SSMC calculation does not include either page credits from `statcmp` or the portion of partitioned cluster memory reserved for other uses, such as mirroring.

System Reporter

- Upgrading to SSMC 3.0 or later optimizes report sampling resolution for better performance. For example, 1 month of Hires reports are optimized to 1 month of hourly reports.
- Real-time port reports do not support IP-based ports.
- In a scaled environment, depending on how scaled the environment is, report generation might take more time.

To avoid these issues when generating reports, Hewlett Packard Enterprise recommends using **Filter by objects**, **Filter by rules**, or **Top or Bottom** options wherever possible instead of selecting the **All** option. Hewlett Packard Enterprise also recommends using the Chrome browser.

General issues

Issue ID	Issue	Description	Corrective Action
122152	Removing File Services from SSMC fails.	Attempting to delete VFS and File Stores fails.	When attempting to remove all File Services components from SSMC, delete the File Persona Groups from SSMC. This causes removal of all child objects at the same time.
122178	Moving quarantined files succeeds, but the activity reports a failure.	The activity resulting from using the Manage Antivirus Quarantine to move quarantined files can report a failure even though the files were moved. This happens because the permissions for the moved files could not be preserved after the move.	Verify whether the quarantined files were moved despite the error being reported. Examine the permissions for the moved files to make sure they are correct.
122205	Sometimes the Actions menu is not visible.	The Actions menu might not be visible when you expand the left-hand list pane and have either the filters or the activity side bars displayed.	Do not expand the left-hand list pane, use a higher screen resolution, or extend the browser window size.
122838	Create/Edit report dialog always uses the local time zone of the browser.	When the StoreServ Storage system and the SSMC browser are in different time zones, the user cannot directly input the StoreServ time during custom time report generation.	Manually convert the StoreServ time to local browser time and enter the converted time as custom time.

Table Continued

Issue ID	Issue	Description	Corrective Action
124078	<p>Failure messages, including the following variations, occur when editing or creating file objects.</p> <ul style="list-style-type: none"> Failed: status=500, exception Failed: unmatched open brace in list Failed: list element in braces followed by "\" instead of space FAILED : Command contains unprintable characters: 	<p>Creating and editing FPG, VFS, File Store, or File Share with special characters in the comment field can cause the creation or edit to fail or cause the comment to display incorrectly.</p>	<p>Avoid using special characters in comment fields.</p>
127408	<p>Deleted report objects continue to show in report.</p>	<p>After generating a report with specific object selections, and then deleting all selected objects, the report still displays data for all objects.</p>	<p>Delete the report at the same time as you delete the selected objects, and then create a new report with new object selections.</p>
129834	<p>Reports are in a critical or warning state, but no error message was generated.</p>	<p>SSMC might not display an error message if a report enters into a bad state. For example, if the on-node System Reporter service is not running on the array, the report can enter into a bad state, and no error message displays in SSMC.</p>	<p>N/A</p>
136797	<p>Server error occurs when selecting a large number of items in a table.</p>	<p>Selecting more than ninety-nine items in a table can cause a server error.</p>	<p>Refresh browser to clear the error. To avoid this issue, limit your selections to fewer than ninety-nine objects.</p>
137856	<p>Specific time display report for comparing multiple systems does not show some system data for the selected time.</p>	<p>The report displays performance data for the systems at the given specific time; however, if data at that point in time is not available, the report displays data for the nearest timestamp only.</p>	<p>This is expected behavior. The generated report popup graph displays data for those systems that have data available at that point in time.</p>
138893	<p>System returns a 500 error when rebooting an active node.</p>	<p>When rebooting an active node from the array while on the AFC page of SSMC, the system returns a server 500 error.</p>	<p>Do not reboot the active node of the array while viewing the Adaptive Flash Cache page.</p>

Table Continued

Issue ID	Issue	Description	Corrective Action
139231	Map view does not behave correctly when using a touch-screen device.	When using touch control in Map view, tablet users cannot hover over an object to see its information. A slight touch on that object while hovering takes the user to a different screen.	Use a desktop browser or an external pointing device.
139556	Local language font issue.	Currently only English and Japanese fonts are available in SSMC.	---
144309	Host Explorer table does not show all hosts.	If a user removes a host name that belongs to the cluster, the SSMC Add FC dialog might not show all the hosts related to the cluster host.	Create the cluster host using the WWNs related to the cluster hosts.
146323	Missing Firmware Version, Driver Version, Speed, and Multiple Attach information.	After creating a host that has iSCSI connections, the SSMC Host Details page under HBA section might not show the information expected.	None.
146347	Unable to see information after exporting volumes.	When exporting volumes, SSMC does not always show Multipathing, FailedPathPolicy, and MonIntervalSecs data from the RHS Volume Exports table.	None.
156636 check to here	Two Federations listed with the same name in SSMC.	SSMC server cannot prevent users from creating Federation configurations with the same name on different arrays. Auto-detect discovers Federations on different arrays and displays them in SSMC where users might see Federations with the same name on different arrays.	Use unique Federation configuration names to avoid confusion. If you discover a duplicated Federation name, change one of them to a new name.
161249	Current values against which quotas are measured are not updated automatically.	On screens listing user, group, and filestore quotas, the current values against which the quotas are being measured are not being updated.	To see the latest values, stop and re-start the SSMC server, or use the showsquota ... codeph of the CLI.
164738	VMware VVOLs are showing in the SSMC Virtual Volumes table.	SSMC does not manage VMware VVOL objects that reside on the 3PAR array; however, these objects sometimes appear in the SSMC Virtual Volumes table.	The presence of these objects in the table does not cause any issue, and you can safely ignore them.

Table Continued

Issue ID	Issue	Description	Corrective Action
168354	Repeated request for PIN for 2-factor authentication	In some environments, the browser repeatedly requests the PIN to the CaC card/2-factor authentication device.	See https://trycatchthrow.wordpress.com/2013/07/19/annoying-multi-pin-prompts-when-using-common-access-cards-cac for some possible corrective actions.
183960	Create Federation does not create all 8 NPIV peer ports.	When you create a new Federation on an array where the 3PAR Firmware version is 3.2.2 EMU3, the action might not create all 8 NPIV peer ports on the array.	Use the following 3PAR CLI commands to create all 8 virtual ports for the affected peer port: <pre>controlport offline -f n:s:p</pre> <pre>controlport config peer -ct point -virt_ports 8 -f n:s:p</pre>
184261	Search background discovery does not detect changes to trusted credentials in the admin console	The background discovery used to populate the Search database does not detect a change in the trusted credentials and continues to use the old credentials. Depending upon how you changed, the Search function might complete the discovery polling twice, or it might report login failures in the server log.	—
184398 (153906)	Federation comments do not wrap.	The CSS style sheets are unable to break long words without spaces. This causes long comments to run off the page.	Include spaces in your comments.
184907 (190807, 193765)	Receiving an error related to cache within Peer Motion workflow.	If a partial failure occurs while admitting multiple volumes at the same time, Federation is not notified of the failure. This leads to an error message stating that the volume is not found in cache.	Retry the workflow.
186097	Table of Contents in the non-English PDF displays in English.	Localization / Internationalization is not supported for Table of Contents displayed in PDF, so the Table of Contents displays in English for all supported languages.	None.

Table Continued

Issue ID	Issue	Description	Corrective Action
186947	The Federation topology in the Federations Overview window contains a system box with the system name truncated.	When the system displays a long system name the Federations Overview window sometimes appears cut off.	On a desktop, hover over the long system name to make the entire system name visible.
187321	Seeing no data in Exports section of vvset RHS. Exports table times out.	The RHS hosts link can time out if the number of active VLUNs increases to 86K when exporting vvsets using ports.	Do not export vvsets to ports that have existing hosts.
190077	Seeing incorrect values from Dedup Estimate Results table.	When estimating dedup savings using the Virtual Volumes plug-in, the activity details can return incorrect values from the Dedup Estimate Results table.	None
191782	VV set migration failure indicates a LUN issue.	—	Before migrating volumes to an existing VVset on a destination, make sure the range of LUN IDs reserved by the VVset can accommodate the volumes you migrate.
192622	Need to merge SSD100 and SSD150 metrics in SSMC SR reports and alerts.	Each metric should apply to all SSDs combined.	You can still create alert criteria with SSD100 or SSD150 metrics. They are still allowed after upgrade and will generate alerts.
193042	Cannot add a previously removed Federation member using Smart SAN	<p>Adding a Federation member to a Smart SAN enabled federation configuration immediately after removing the Federation member removed from the same or another Smart SAN enabled Federation configuration might return an error indicating the array status as manually zoned.</p> <p>This occurs because the previous zoning removal and cache update is still in progress on the array.</p>	Wait 10 minutes, then try again.
193151	System session displays in cache after restarting due to a certificate change on the array.	SSMC detects changes in the storage system certificate (expiration or CLI update) and marks the session as requiring certificate acceptance. Users who are logged in when this occurs might see the storage system listed as Unknown.	Log out, and then log back in.

Table Continued

Issue ID	Issue	Description	Corrective Action
198420	Adding multiple hosts using <code>createhost</code> produces unexpected results.	Smart SAN based <code>Create Host</code> in SSMC adds WWNs into zones in some cases.	Add port WWN one at a time using <code>Create Hosts</code> . Create the Host with one port, and then Edit it to add the second port WWN, and so on.
200189	Email notification for threshold alert rules are disabled after upgrade or after SSMC restarts.	After an SSMC service restart or upgrading to SSMC 3.1 from an earlier version, email notifications for threshold alert rules are disabled automatically.	Manually select the threshold alert rule and select the <code>Enable email notification</code> under Actions.

Prerequisites

System requirements

Minimum system requirements include:

- Supported 64-bit operating system (see, [Accessing SSMC information in SPOCK](#))
- Core i5 dual core CPU
- 4GB of installed RAM (see, [Server sizing information](#) for recommended memory and core sizing)
- 2 GB free disk space
- 1366 x 768 or better screen resolution
- Federation membership and compatibility requires the following:
 - 3PAR Operating System 3.2.2 or later
 - Peer Motion, Storage Federation, and Online Import licenses
 - Cabling and port configuration requirements (see, [Hewlett Packard Enterprise Information Library](#))



IMPORTANT:

A storage federation can be managed by a single SSMC instance only.

Recommended additional system requirements include:

- Core i5 or i7 quad core CPU
- 8 GB RAM (see, [Server sizing information](#) for recommended memory and core sizing)

Server sizing information

The SSMC server uses up to 65% of system RAM, which can impact other software installed on the same system. Hewlett Packard Enterprise recommends installing SSMC on a dedicated system (not a laptop). SSMC does not support laptop power saving features.

Total # of objects managed by SSMC ¹	Number of managed arrays				
	2	4	8	16	32
	CPU cores / system memory				
32,000	2 cores	2 cores	4 cores	8 cores	16 cores
	4 GB	4 GB	4 GB	4 GB	4 GB
64,000	2 cores	2 cores	4 cores	8 cores	16 cores
	8 GB	8 GB	8 GB	8 GB	8 GB
128,000	2 cores	2 cores	4 cores	8 cores	16 cores
	16 GB	16 GB	16 GB	16 GB	16 GB
256,000+	2 cores	2 cores	4 cores	8 cores	16 cores
	32 GB	32 GB	32 GB	32 GB	32 GB

¹ For help calculating the total number of objects managed by SSMC, see the HPE 3PAR StoreServ SSMC Administrator Guide, for *metrics.log* details.

Security settings for SSMC

SSMC requires specific ports for communication. Hewlett Packard Enterprise also recommends configuring an LDAP server as an authentication method for connecting to a 3PAR StoreServ array.

Inbound and outbound port settings

To allow inbound communication from a browser, SSMC uses inbound port 8443 (default). You can change this port to another secured port setting without reinstalling SSMC (see [Changing the default SSMC inbound port](#)).

To communicate with an array, SSMC uses outbound port 5783. You cannot change this port.

SSMC also uses port 443 to communicate with [Hewlett Packard Enterprise StoreFront Remote](#) and retrieve version information about SSMC and the HPE 3PAR operating system.

For the most current port information, see the Site Planning Guide for your platform, available from the [HPE Storage Information Library](#).

LDAP settings

The LDAP server is an authentication method for connecting to the 3PAR StoreServ Storage System array (see, [LDAP Authentication Best Practices](#)). For configuration information, see [Setting up LDAP using the HPE 3PAR CLI](#).

Changing the default SSMC inbound port

You can change the inbound port between the client browser and the SSMC server without reinstalling SSMC.



IMPORTANT:

In Windows, if you are using the desktop shortcut to open SSMC, you must also change the port number in the Web Document tab of the **Properties** dialog box. The format is `https://<localhost>:<port number>/`.

Procedure

1. Shut down the SSMC server:
 - **Windows command:** `sc stop ssmc`
 - **Linux command:** `service ssmc stop`
2. Edit the `jetty-ssl.xml` file:
 - **Windows location:** `C:\Program Files\Hewlett Packard Enterprise Enterprise\SSMC\ssmcbase\etc\jetty-ssl.xml`
 - **Linux location:** `/opt/hpe/ssmc/ssmcbase/etc/jetty-ssl.xml`
3. Locate the following line in the file, and then specify the new port number: `default="port_number"`:
 - **Windows location:** `<Set name="port"><Property default="8443" deprecated="ssl.port" name="jetty.ssl.port"/></Set>`
 - **Linux location:** `<Set name="port"><Property name="jetty.ssl.port" deprecated="ssl.port" default="8443" /></Set>`
4. Save the file, and then restart the service.
 - **Windows command:** `sc start ssmc`
 - **Linux command:** `service ssmc start`

Setting up LDAP using the HPE 3PAR CLI

Capturing the AD configuration for LDAP provides details and information required to simplify and direct your SSMC experience.

See, [LDAP Authentication Best Practices](#).

Procedure

1. Set the LDAP service account fields:

```
setauthparam -f ldap-service-account <account_name>
setauthparam -f ldap-service-account-password <password>
```
2. Set the cert field and object attribute fields:

```
setauthparam -f ldap-2FA-cert-field <value>
setauthparam -f ldap-2FA-object-attr <value>
```

Installation instructions

ⓘ **IMPORTANT:**

The upgrade process overwrites the CA certificate. If you have imported a CA certificate to replace the SSMC self-signed certificate, you must import your CA certificate again. See the *HPE 3PAR StoreServ Management Console Administrator's Guide* for instructions.

The SSMC server is available for various Windows and Linux environments. A silent install option is also available.

For information on downloading the SSMC installation package, see Hewlett Packard Enterprise [Software Depot](#).

For more information on installation requirements and recommendations, see *HPE 3PAR StoreServ Management Console 3.0 Administrator Guide*.

 **IMPORTANT:**

SSMC does not support remote installation, installation using a symbolic link, or other installation methods.

Installing SSMC in a Windows environment

 **IMPORTANT:**

Hewlett Packard Enterprise does not ship installation CDs with the system. If you selected the LTU (License to Use) as the physical delivery method when ordering your system, use the installation media that shipped at the time of your order. If you selected electronic delivery, see the Hewlett Packard Enterprise e-Software Delivery Confirmation email for detailed instructions.

To install SSMC in a Windows environment:

Procedure

1. Double-click the setup file to start the installation wizard.
 2. If prompted, select your preferred language. Otherwise, read the Introduction screen, and then click **Next**.
 3. Accept the License Agreement, and then click **Next**.
-

 **TIP:**

If you are reinstalling or upgrading SSMC and you did not remove existing data, the system prompts you to keep or remove this information. Select **Yes** to keep pre-existing data. Select **No** to remove all previous SSMC data.

4. Select a destination folder for the installation or accept the default folder (recommended), and then click **Next**.
5. Enter the secure TCP port number that the browser uses to access SSMC, or keep the default port 8443 (recommended), and then click **Next** (see, *HPE 3PAR StoreServ Administrator's Guide*).

The summary screen displays the settings you selected and the amount of disk space required for the installation.

6. To accept these settings and continue with the installation, click **Install**. To change these settings, click **Previous** until you see the screen containing the settings you want to change.

If the system does not meet the minimum installation requirements, the installer displays an error message. For information on error messages, see *HPE 3PAR StoreServ Administrator's Guide*

The **Installing...** screen displays the progress of the installation.

When the installation is complete, the system displays the following message:

```
If you are using a firewall to protect this system, please ensure that the
inbound SSMC TCP port 8443 is accessible from an outside system.
```

7. Click **Next** to complete the installation.
8. Click **Done** to exit the installation wizard.

Using the SSMC silent install option with Windows

You can install silently using either the default settings or using non-default settings.

Installing in a Linux environment

Prerequisites

Because SSMC requires the use of libraries not found in the headless version of Linux, be sure that you have the headfull version installed for your environment.

Procedure

1. As superuser, execute the following command to start the installation:

```
sh HPESSMC-<version number>-linux-x86_64.bin.HPb
```

As an alternative, you can change the file permissions and start the installation with the following commands:

```
chmod 775 HPESSMC-<version number>-linux-x86_64.bin.HPb
./HPESSMC-<version number>-linux-x86_64.bin.HPb
```

2. Enter **Yes** to accept the displayed End User License Agreement (EULA).
3. Enter the secure TCP port number the browser uses to access SSMC, or press the **Enter** key to accept the default port 8443 (recommended).

The summary message displays the settings you selected, plus the amount of disk space required for installation.

If the system does not meet the minimum installation requirements, the installer displays an error message. For information on error messages, see *HPE 3PAR StoreServ Management Console Administrator's Guide*.

Using the silent install option in Linux

Procedure

1. Extract the files from the `bin.HPb` package using the Linux command:

```
sh HPESSMC-<version number>-linux-x86_64.bin.HPb --tar xvf
```

This extracts the file `hpeSSMC-<version number>-x86_64.rpm`

2. Execute the following Linux commands to install the product:

```
chmod 775 hpeSSMC-<version number>-x86_64.rpm
```

```
rpm -i hpeSSMC-<version number>-x86_64.rpm
```

If you want to change the default secure port, you must do so manually after the installation.

3. Once installed, enter the Linux command to start the service:

```
service ssmc start
```

Related information

The latest documentation for SSMC is available from the [Hewlett Packard Enterprise Information Library](#).

Available documents include:

- *HPE 3PAR StoreServ Management Console Administrator's Guides*
- *HPE 3PAR StoreServ Management Console User Guides*
- *HPE 3PAR Command Line Interface Administrator's Manual*
- *HPE 3PAR StoreServ Storage Concepts Guide*
- *HPE 3PAR Peer Motion and HPE 3PAR Online Import User Guide*

Documentation feedback

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