



**Hewlett Packard
Enterprise**

HPE 3PAR StoreServ Management Console 3.3 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 3.3.

Part Number: QL226-99783b
Published: March 2018
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 3.3 Release Notes 4**
- Description.....4
- New features.....4
- Update recommendation..... 8
- Supersede information..... 8
- Products..... 8
- SSMC compatibility and interoperability..... 9
- Accessing SSMC information in SPOCK..... 9
- Operating systems.....9
- Supported HPE 3PAR Operating Systems for SSMC..... 9
- Supported browsers for SSMC..... 9
- Languages.....10
- Known issues and workarounds.....10
- Fixes.....16
- Prerequisites.....16
- System requirements.....17
- Security settings for SSMC.....18
- Upgrade considerations for SSMC.....20
- Installation instructions.....20
- Installing SSMC in a Windows environment.....20
- Installing in a Linux environment.....21
- Related information.....22
- Documentation feedback.....23

HPE 3PAR StoreServ Management Console 3.3 Release Notes

Description

This document provides the release notes for HPE 3PAR StoreServ Management Console (SSMC) 3.3. 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, and to manage certificates for 3PAR StoreServ storage arrays. The Main Console provides access to the features you can use to manage 3PAR StoreServ systems. For documentation related to the Administrator Console see, *HPE 3PAR StoreServ Management Console Administrator Guide*. For documentation related to the Main Console see, *HPE 3PAR StoreServ Management Console User Guide*. All documentation is available from the HPE Storage Information Library.

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 HPE 3PAR Management Console (MC) has reached the end of its support life.

More information

[HPE Storage Information Library](#)

New features

In addition to supporting 3PAR OS 3.3.1 (and current MUs), SSMC 3.3 includes the new features described in the following table. For additional detail, see the latest version of the *HPE 3PAR StoreServ Management Console Administrator Guide* and of the *HPE 3PAR StoreServ Management Console User Guide*.

Category	Items	New features in SSMC 3.3
General**	Dashboard** Activity** Schedules** Settings**	<p>Create, copy, and manage customized dashboards with additional panels.</p> <p>Change dashboard names and select specific systems for each dashboard panel.</p> <p>View Data Protection status in three new dashboard panels.</p> <p>View a System Summary dashboard panel that displays an overview of the health state, capacity, and performance of a storage system.</p> <p>View system health, capacity, and performance using the new System Summary dashboard panel with at-a-glance views.</p> <p>Improve dashboard panel responsiveness to resizing.</p> <p>View IOPs, service times, and bandwidth for different types of ports on one or more systems using the new Port Utilization dashboard panel.</p>
Block Persona**	Hosts** Host Sets Virtual Volumes** Virtual Volume Sets Common Provisioning Groups Policies	<p>Add a host to all storage systems in a Federation if the selected system is also a Federation member.</p> <p>Create and edit Virtual Volumes:</p> <ul style="list-style-type: none"> • Create a snapshot schedule at the time of volume creation or volume set creation. • Add the volume to an existing Remote Copy group at the time of volume creation • View assigned policies and Remote Copy group when editing a selected volume. • View at-a-glance information related to a selected system from the Copies area of the Virtual Volumes Overview screen. <p>Take a one-time snapshot or assign an existing snapshot policy when creating a Virtual Volume set.</p> <p>Specify the estimated device size when creating a CPG.</p> <p>Create snapshot and Virtual Volume policies from new Policies option (formerly Templates). View policies only from HPE 3PAR SSMC.</p> <p>Use the integrated HPE Recovery Manager Central plug-in to provide three levels of protection including snapshot set policy, backup policy, and copy policy</p> <p>Create and manage protection policies to define target system, protocol, retention, and expiration data.</p>

Table Continued

Category	Items	New features in SSMC 3.3
File Persona	File Shares File Stores Virtual File Servers File Provisioning Groups File Persona Configuration	Manage File Access Auditing, including list and export. Delete File Access Auditing logs. Define audit policy and log the appropriate SMB audit events for Logon, Logoff and tree connect using the File Access Audit option. Create logs for each Virtual File Server.
Storage Optimization	Adaptive Flash Cache Adaptive Optimization Priority Optimization	—
Data Protection	Remote Copy Configurations Remote Copy Groups RMC Credentials Restore Points	Use the enhanced Remote Copy filter options to filter storage systems based on Remote Copy configuration. Make point-in-time copies of data on specified targets using the new Restore Points features. Uses protection policies and allows specified scheduling. Create Custom Roles. Add, edit, and remove RMC Credentials (maximum of 4 instances). Use the new asynchronous streaming scalability improvements.
Storage Systems**	Systems** Controller Nodes** Ports** Drive Enclosures** Physical Drives**	Configure FIPs mode, to use FIPS 140-2 mode for all external interface cryptography. Configure <code>RemoteSyslog</code> , <code>RemoteSyslogHost</code> , and <code>RemoteSyslogSecurityHost</code> in the System Parameters section of the Systems Edit dialog. Use multi-select filters, which replace text filters for the following: <ul style="list-style-type: none"> • System, Drive Enclosures: UID/Locate • Controller Nodes: Safe to Remove, UID/Locate • Ports: Failover State, Mode, SFP State, Smart SAN, UID/Locate • Physical Drives: SED State, Safe to Remove Provides a link to the Service Processor if the array is managed by Service Processor. Enables a Set EKM action to generate a backup file if the configuration changes.

Table Continued

Category	Items	New features in SSMC 3.3
Federation	Federation Configurations Peer Motions	<p>Allows users to import and synchronize multiple remote syslog configurations in a Federation.</p> <p>Enables automatic zoning of an imported host from legacy and IBM XIV systems when Smart SAN is enabled.</p> <p>Allows the addition of Federated systems as migration sources of other Federations, providing migration between Federations.</p> <p>Provides functionality so that you can migrate a subset of volumes from an ALUA host on a legacy 3PAR migration source.</p> <p>Includes automatic Virtual Volume set and Host set creation on migration from non-3PAR systems.</p> <p>Supports FIPS 140-2 mode of compliance for 3PAR Online Import.</p> <p>Includes Federation filters.</p>
System Reporter**	Reports** Threshold Alerts**	<p>Changes to reports include:</p> <ul style="list-style-type: none"> • Import or export self-authored reports across SSMC instances. • Report Volume level data regardless of whether the volume is exported to host. • Domain-based object filtering.
Security**	Users** LDAP Roles Connections Domains	<p>Use FIPS 140-2 level 1 validated cryptographic modules.</p> <p>Avoid unexpected LDAP lockout caused by entering an invalid SSMC password.</p> <p>Assign extended roles to users in virtual domains (HPE 3PAR OS 3.3.1 MU1 and later).</p> <p>Use the new time out settings to log out idle SSMC sessions.</p> <p>Transmit log output to a remote syslog server.</p> <p>Configure limits to the maximum number of active SSMC login sessions allowed.</p> <p>White list or black list IP addresses using Client IP Filtering.</p>

Table Continued

Category	Items	New features in SSMC 3.3
VMware	Storage Containers Virtual Machines	—
Other	User Interface	<p>Adds a Print this page feature to the online help.</p> <p>Includes content snippets in the Online Help search results.</p> <p>Changes to the Administrator Console include:</p> <ul style="list-style-type: none"> • A Manage Certificates dialog for listing, adding and removing security for the HPE 3PAR StoreServ certificates. • A Remote syslog configuration dialog for HPE 3PAR SSMC logging. • Client IP filtering by selecting the IP addresses or subnets. • Preservation of the current CA-signed certificate after SSMC upgrade. <p>From the Administrator Console, add a new storage system by its DNS name or by its IP address, and providing username and password credentials.</p>

** Categories and items shown in **show less** menu.

Update recommendation

Update recommendation: Recommended

More information

[Upgrade considerations for SSMC](#) on page 20

Supersede information

Supersedes: HPE 3PAR StoreServ Management Console 3.2

Products

- HPE 3PAR StoreServ 7000 Storage Series
- HPE 3PAR StoreServ 8000 Storage Series
- HPE 3PAR StoreServ 9000 Storage Series
- HPE 3PAR StoreServ 10000 Storage Series
- HPE 3PAR StoreServ 20000 Storage Series

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

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

SSMC compatibility and interoperability

For the most current and detailed information on supported browsers, server models, firmware, and operating systems, see [Accessing SSMC information in SPOCK](#).

Accessing SSMC information in SPOCK

Procedure

1. Log in to SPOCK (<https://h20272.www2.hpe.com/spock/>) from any browser.
2. View the left navigation pane of the SPOCK Home page, and scroll down to the Software heading.
3. Click **Array SW: 3PAR**.
4. View the 3PAR Array Software window and scroll down to the HPE 3PAR Operating System Software: Array Software heading.
5. Under HPE 3PAR StoreServ Management Console, click **HPE 3PAR SSMC**.

Operating systems

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

- Red Hat Enterprise Linux
- Microsoft Windows Server

You can install SSMC as a VM guest running any of the above host platform operating systems in any of the supported Hypervisors.

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

Supported HPE 3PAR Operating Systems for SSMC

- HPE 3PAR 3.2.1 and all MUs (HPE 3PAR StoreServ 7000 and 10000 storage arrays)
- HPE 3PAR 3.2.2 and all MUs (HPE 3PAR StoreServ 7000, 8000, 10000, and 20000 storage arrays)
- HPE 3PAR 3.3.1 and MU1 (HPE 3PAR StoreServ 7000, 8000, 9000, 10000 and 20000 storage arrays)

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

More information

[Accessing SSMC information in SPOCK](#) on page 9

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](#).

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 :

- When a user schedules a report , the owner shown in the activity when the schedule is triggered shows the username of the person who added the array to SSMC.
- Capacity reports are not supported for 3PAR StoreServ systems that are in different time zones.
- 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 than 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.

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 expand 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.
124078	Failure messages, including the following variations, occur when editing or creating file objects. <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: 	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.	Avoid using special characters in comment fields.

Table Continued

Issue ID	Issue	Description	Corrective Action
127408	Deleted report objects continue to show in report.	After generating a report with specific object selections, and then deleting all selected objects, the report still displays data for all objects.	Delete the report at the same time as you delete the selected objects, and then create a new report with new object selections.
129834	Reports are in a critical or warning state, but no error message was generated.	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.	N/A
136797	Server error occurs when selecting a large number of items in a table.	Selecting more than ninety-nine items in a table can cause a server error.	Refresh browser to clear the error. To avoid this issue, limit your selections to fewer than ninety-nine objects.
138893	System returns a 500 error when rebooting an active node.	When rebooting an active node from the array while on the AFC page of SSMC, the system returns a server 500 error.	Do not reboot the active node of the array while viewing the Adaptive Flash Cache page.
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.
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.

Table Continued

Issue ID	Issue	Description	Corrective Action
156636	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 <code>showfsquota ...</code> 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.
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.	The browser and smart card middle ware handle PIN prompting. Check to see if the middleware includes an option to cache the PIN. Also, SSMC uses a self-signed certificate for HTTPS communication with the browser. Using a certificate from an issuer that is trusted by the browser might reduce the repeated prompting.
184261	Search background discovery does not detect changes to trusted credentials in the Administrator 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.

Table Continued

Issue ID	Issue	Description	Corrective Action
184907 (190807, 193765, 224076)	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.
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.
209577	Seeing an exception/stack trace error from the Dashboard when some systems are selected.	—	Retry the operation by navigating away and returning.
210235	Cannot edit target zones after creating a host on a Smart SAN enabled system.	When creating a host on a Smart SAN enabled system in SSMC 3.2, the host creation succeeds, but creation of some target zones might fail because of conflicting zone names. SSMC treats the failed zones as manual entries and does not allow users to edit them.	Verify that conflicting zone names do not exist, and then recreate the host. See the HPE SmartSAN user guides for additional troubleshooting details.
216710	Unable to view some activities after reinstating a lost connection between SSMC the storage system.	After restoring a lost SSMC connection to a storage system, certain application tasks disappear from the Activity page.	—
217616	Idle session timeout is not supported for users logged in with 2FA/SSO.	After a session idle timeout, the user session might be reauthenticated without prompting for the 2FA token's PIN.	To manually end the session, lock or detach the 2FA token (CAC, Virtual Smart Card, software token), and then close browser windows.

Table Continued

Issue ID	Issue	Description	Corrective Action
217655	RMC schedules do not match the user-requested schedule.	Created a volume and added protection policies and schedules, but the created schedules are different from the requested schedules.	The start time input of the schedule in SSMC should be the same as the RMC system time. Be sure to take into account any time zone difference between SSMC and RMC when creating schedules using SSMC.
218096	The Peer Motion workflow does not display a warning message when a protected volume is migrated	Even when a Peer Motion source virtual volume has RMC protection enabled, it is removed if Peer Motion is completed with the <code>Delete source virtual volumes</code> option enabled. Additionally, RMC protection policy is not automatically migrated by Peer Motion.	If source virtual volumes with RMC protection need to be retained, disable the <code>Delete source virtual volumes</code> option in the advanced options of the Start Peer Motion dialog. If the destination volume needs RMC protection, configure it after Peer Motion completes.
218444	Filtering on numeric lists is done using text values	When filtering a list of numeric values, such as CPG Copy Space, the comparisons are done as though the values were text fields and not numerical. For example, the queried value of "23" matches a value in the list of "123".	—
220040	SSMC search does not find an RMC created protection policy.	RMC protection policy creation allows special characters that SSMC does not.	Avoid using special characters in policy names created with RMC.
220848	SSMC returns a 500 error after <code>Unable to access directory path</code> clicking the Test directory path button	SSMC running in FIPS enabled mode requires the updated shared directory path setting in the <code>java.policy</code> file to enable the System Reporter shared directory path.	Update the System Reporter shared directory path setting in the <code>java.policy</code> file. Provide read/write/delete access permission for the directory, and then restart SSMC to apply the new policy.
222742	After upgrading from SSMC 3.1 or earlier to SSMC 3.2 or later, SSMC is unable to start.	When SSMC 3.1 has custom passwords for the key and trust stores set in <code>jetty-ssl-context.xml</code> , upgrading to SSMC 3.2 or later does not preserve custom key store and trust store passwords.	After upgrade from SSMC 3.1 or earlier, update any custom password in the <code>jetty-ssl-context.xml</code> file. Upgrades from SSMC 3.2 to 3.3 or later are not affected by this issue.

Table Continued

Issue ID	Issue	Description	Corrective Action
227619	System returns a <code>Failed:timed out</code> error message.	The <code>Failed:timed out</code> that an action has timed out, or that the action is still in progress and might complete at a later time. This time out condition can occur when the system is busy.	Check the result of the initiated action and retry it if needed.
227621	When editing threshold alert email notifications, the Activity is RED, even after a successful edit operation.	This occurs when users modify the alert email notifications using the Edit dialog, but works as expected using the Action menu.	Verify that the alert email notifications occur as expected by enabling or disabling them using the Action menu.

Fixes

This version fixes the following issues:

Issue ID	Issue
208070	When importing the configuration from OIU migration source there is no message returned telling users that the Smart SAN is not enabled.
209846	Historical Capacity drops to zero with many arrays manage.
210266	Federation state shows normal with incomplete virtual peer link zoning.
211914	Reset Battery Test Log task fails with Timeout exception while waiting for object to update in cache.
218822	Summary View shows details of a different user's schedule. The activity message for a given scheduled report might show the owner as someone other than the user who scheduled it.
219779	When editing a domain on the edit fails. NOTE: To set or unset the max volume retention time for a domain, upgrade to HPE 3PAR OS 3.2.2 or later.

Prerequisites

Procedure

1. Verify that the system on which you intend to install SSMC meets the SSMC compatibility and interoperability requirements.
2. Verify that your CPU size and memory cores are sufficient for your purposes (see, Server sizing information).
3. Set up security for SSMC using Security settings for SSMC.

More information

[SSMC compatibility and interoperability](#) on page 9

[Server sizing information](#) on page 18

[Security settings for SSMC](#) on page 18

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, [HPE Storage Information Library](#))

! IMPORTANT:

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

- HPE Recovery Manager Central (RMC) compatibility with HPE 3PAR SSMC requires the following prerequisites to be met:
 - Install HPE 3PAR Operating System 3.2.2 or later.
 - Configure SSMC and RMC on the same HPE StoreServ Storage System.
 - Verify that SSMC can connect to RMC using HTTP.
 - Create protection policies in RMC.

NOTE:

You can add up to four HPE RMC instances through **RMC Credentials** in HPE 3PAR SSMC.

For details see, *HPE Recover Manager Central (RMC)* documentation in the [HPE Storage Information Library](#).

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](#))

More information

[Accessing SSMC information in SPOCK](#) on page 9

[Server sizing information](#) on page 18

[HPE Storage Information Library](#)

Server sizing information

The SSMC server uses up to 65% of system RAM, which can impact other software installed on the same system.

⚠ IMPORTANT:

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

Basic security settings for SSMC include inbound and outbound port settings, and LDAP settings. For detailed information about certificate authority, two-factor authentication, and FIPS see, *HPE 3PAR StoreServ Management Console Administrator Guide* and the *HPE 3PAR StoreServ Management Console User Guide*. Both documents are available from the HPE Storage Information Library.

More information

[HPE Storage Information Library](#)

SSMC 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 outgoing connections to port 443 to communicate with Hewlett Packard Enterprise StoreFront Remote (HPE InfoSight) 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.

More information

[Changing the default SSMC inbound port](#) on page 19

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`

SSMC LDAP settings

The LDAP server is an authentication method used to connect to a 3PAR StoreServ Storage System array. You can use HPE 3PAR SSMC to configure LDAP authentication on your StoreServ arrays.

SSMC uses information in an LDAP server to authenticate and authorize LDAP users. When multiple storage servers use the same LDAP server, authorized users can use the same credentials to access all servers with the same LDAP configuration.

The HPE 3PAR OS contains an LDAP client that you can configure to use an LDAP server for authentication and authorization of storage system users.

To configure LDAP settings in SSMC, see the *HPE 3PAR StoreServ Management Console User Guide*, available from the HPE Storage Information Library.

Upgrade considerations for SSMC

When upgrading from SSMC 2.x to SSMC 3.0, 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. When upgrading from SSMC 3.0 and later, certificate information is maintained.

SSMC 3.3 is the last release that supports a direct (single-hop) upgrade from SSMC 2.x releases. Customers using SSMC 2.x may upgrade directly to SSMC 3.3.

Upgrading from SSMC 2.x to an SSMC version later than SSMC 3.3 will need to upgrade in two steps. For example, customers who are using SSMC 2.4 and want to upgrade to an SSMC version later than SSMC 3.3 will be required to upgrade to SSMC 3.2 or SSMC 3.3 first, and then upgrade to a version of SSMC later than 3.3.

Installation instructions

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

For more product details and specifications, and to download the SSMC installation package, see HPE 3PAR StoreServ Management Console on Hewlett Packard Enterprise Software Depot.

To use the SSMC Administrator Console, see, *HPE 3PAR StoreServ Management Console Administrator Guide*. The Main Console includes online and context-sensitive help, as does the *HPE 3PAR StoreServ Management Console User Guide* (see, HPE Storage Information Library).

For specific upgrade considerations see, Upgrade considerations for SSMC.

ⓘ IMPORTANT:

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

More information

[Upgrade considerations for SSMC](#) on page 20

[HPE Storage Information Library](#)

[Hewlett Packard Enterprise Software Depot](#)

Installing SSMC in a Windows environment

Procedure

1. Use one of the following methods to locate your installation media (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.
2. Locate, and then double-click, the setup file to start the installation wizard.
3. If prompted, select your preferred language. Otherwise, read the Introduction screen, and then click **Next**.
4. Accept the License Agreement, and then click **Next**.
5. **Optional** - 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.
6. Select a destination folder for the installation or accept the default folder (recommended), and then click **Next**.
 7. Enter the secure TCP port number that the browser uses to access SSMC, or keep the default port 8443 (recommended), and then click **Next**.
The summary screen displays the settings you selected and the amount of disk space required for the installation.
 8. 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.
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.
```
 9. Click **Next** to complete the installation.
 10. 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 SSMC silently using default settings

Procedure

1. Open a command prompt window.
2. Run the installer with the `-i silent` option

Installing SSMC silently using non-default settings

Procedure

1. Open a command prompt window.
2. Generate a response file by running the installer with the `-r <response file>` option.
3. Run the installer using the `-i silent -f <response file>` option.

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).

! **IMPORTANT:**

SSMC uses default inbound port number 8443. If you want to change the default secure port, you must do so manually after the installation or after upgrading from SSMC 2.x or 3.0 to a later version (see, [Changing the default SSMC inbound port](#)).

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.

Installing SSMC silently for 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:

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

! **IMPORTANT:**

SSMC uses default inbound port number 8443. If you want to change the default secure port, you must do so manually after the installation or after upgrading from SSMC 2.x or 3.0 to a later version (see, [Changing the default SSMC inbound port](#)).

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*
- *HPE 3PAR File Persona User Guide*

More information

[HPE Storage Information Library](#)

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.