One Identity Safeguard for Privileged Sessions 6.9.3

Release Notes

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These release notes provide information about the One Identity Safeguard for Privileged Sessions 6.9.3 release.

About this release

One Identity Safeguard for Privileged Sessions Version 6.9.3 is a release with new features and resolved issues. For details, see:

- New features
- Resolved issues
- Known issues

NOTE: For a full list of key features in One Identity Safeguard for Privileged Sessions, see Administration Guide.

About the Safeguard product line

The One Identity Safeguard Appliance is built specifically for use only with the Safeguard privileged management software, which is pre-installed and ready for immediate use. The appliance is hardened to ensure the system is secured at the hardware, operating system and software levels. The hardened appliance approach protects the privileged management software from attacks while simplifying deployment and ongoing management -- and shortening the timeframe to value.

Safeguard privileged management software suite

Safeguard privileged management software is used to control, monitor, and govern privileged user accounts and activities to identify possible malicious activities, detect entitlement risks, and provide tamper proof evidence. The Safeguard products also aid incident investigation, forensics work, and compliance efforts.

The Safeguard products' unique strengths are:

- One-stop solution for all privileged access management needs
- Easy to deploy and integrate
- Unparalleled depth of recording
- Comprehensive risk analysis of entitlements and activities
- Thorough Governance for privileged account

The suite includes the following modules:

- **One Identity Safeguard for Privileged Passwords** automates, controls and secures the process of granting privileged credentials with role-based access management and automated workflows. Deployed on a hardened appliance, Safeguard for Privileged Passwords eliminates concerns about secured access to the solution itself, which helps to speed integration with your systems and IT strategies. Plus, its user-centered design means a small learning curve and the ability to manage passwords from anywhere and using nearly any device. The result is a solution that secures your enterprise and enables your privileged users with a new level of freedom and functionality.

- **One Identity Safeguard for Privileged Sessions** is part of One Identity's Privileged Access Management portfolio. Addressing large enterprise needs, Safeguard for Privileged Sessions is a privileged session management solution, which provides industry-leading access control, as well as session monitoring and recording to prevent privileged account misuse, facilitate compliance, and accelerate forensics investigations.

  Safeguard for Privileged Sessions is a quickly deployable enterprise appliance, completely independent from clients and servers - integrating seamlessly into existing networks. It captures the activity data necessary for user profiling and enables full user session drill-down for forensics investigations.

- **One Identity Safeguard for Privileged Analytics** integrates data from Safeguard for Privileged Sessions to use as the basis of privileged user behavior analysis. Safeguard for Privileged Analytics uses machine learning algorithms to scrutinize behavioral characteristics and generates user behavior profiles for each individual privileged user. Safeguard for Privileged Analytics compares actual user activity to user profiles in real time and profiles are continually adjusted using machine learning. Safeguard for Privileged Analytics detects anomalies and ranks them based on risk so you can prioritize and take appropriate action - and ultimately prevent data breaches.
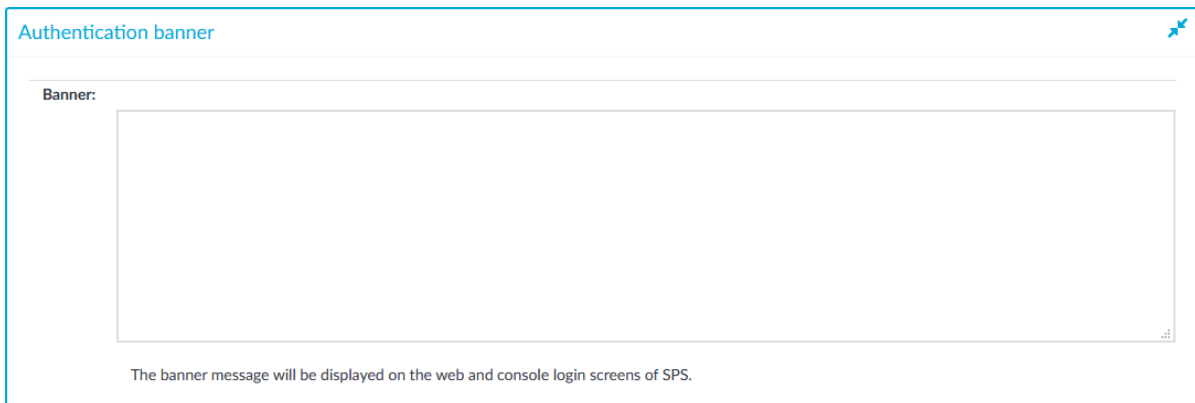
New features

New features in Safeguard for Privileged Sessions (SPS) version 6.9.3:

Authentication banner

You can display a banner with a configurable text on the web and console login screen of SPS. Users will see the banner every time they try to log in to SPS.

On SPS, navigate to **Basic Settings > Management > Authentication banner**.

Figure 1: Basic Settings > Management > Authentication banner — Adding the Authentication banner
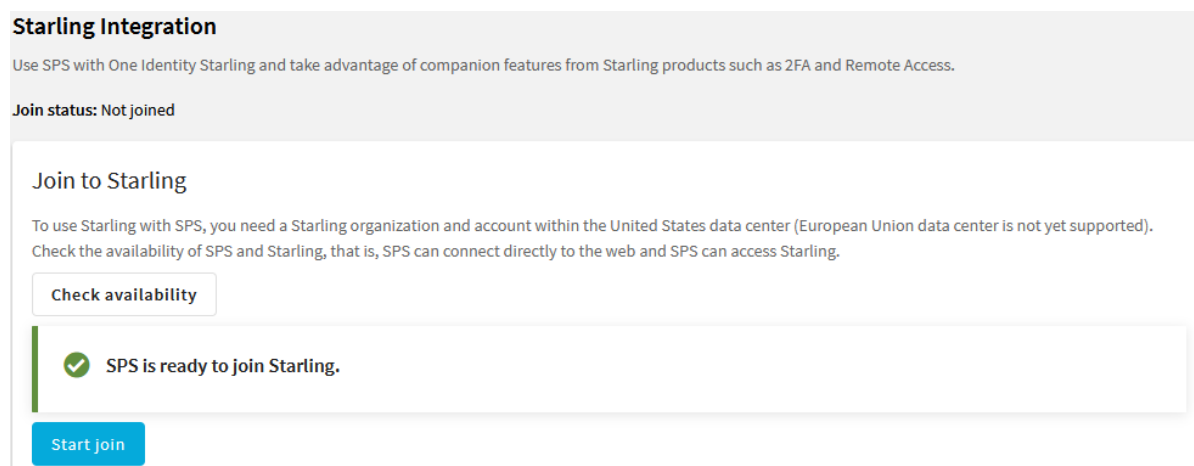

Creating report subchapters from search queries redesign

The process of creating report subchapters from search queries has been redesigned and simplified.

Join to Starling redesign

The process of joining SPS to Starling has been redesigned and simplified.

Figure 2: Basic Settings > Starling Integration — SPS is ready to join Starling

Starling Integration

Use SPS with One Identity Starling and take advantage of companion features from Starling products such as 2FA and Remote Access.

Join status: Not joined

Join to Starling

To use Starling with SPS, you need a Starling organization and account within the United States data center (European Union data center is not yet supported). Check the availability of SPS and Starling, that is, SPS can connect directly to the web and SPS can access Starling.

Check availability

✓ SPS is ready to join Starling.

Start join

On SPS, navigate to **Basic Settings > Starling Integration**.

Selecting only the Network Level Authentication option is allowed

The **Authentication mode** option enables you to select only the **Enable Network Level Authentication** option for higher security.

On SPS, navigate to **RDP Control > Settings — RDP settings**.

Configuring authentication failure retries and lockout period

You can configure the allowed number of unsuccessful authentication attempts and the period after which the blocked users can attempt logging in again.

On SPS, navigate to **Basic Settings > Local Services > Web login**.

Configuring minimal password length

You can configure the minimum number of characters for the web login passwords.

On SPS, navigate to **Users and Access Control > Settings**.

Accessing sessions from the report output

You can access the relevant sessions that contain the search keywords by using the clickable QR codes, or by using the link provided with the QR codes.

Figure 3: Example of a clickable QR code in the report output

https://<IP address> /portal/#/audit/sessions/svc-dwMiFouG9stDCVWhoRo59B-ssh-1/(tab:timeline)?query=echo&type=contents

Other improvements

- The **Timeline** tab has been enhanced and you can search in the screen contents of the audit trails using the **Contents** button.

- For Radius, you can now use the **MS-CHAPv2**, which is the Microsoft version of the Challenge-Handshake Authentication Protocol.

- The **Enable RDP4 style authentication** option has been removed.

- The supported private key algorithms are RSA, DSA, and EC.

- With the new `reuse_limit` parameter, you can now set the number of times that you can reuse the authentication cache before the Authentication and Authorization (AA) plugin requires from you a new authentication for the next session. The `reuse_limit` parameter has been added to the `authentication_cache` parameter class of the AA plugin.

Deprecated features

The Splunk forwarder is deprecated

The Splunk forwarder is deprecated as of Safeguard for Privileged Sessions(SPS) 6.7 and will be removed in an upcoming release. One Identity recommends using the universal SIEM forwarder instead.

Content policy biometrics are deprecated

- **Pointing device biometrics - DEPRECATED**: This feature is deprecated. Use the same option in Indexer Policies instead.

- **Typing biometrics - DEPRECATED**: This feature is deprecated. Use the same option in Indexer Policies instead.

Arguments of Authentication and Authorization and Credential Store plugins that begin with target_ have been deprecated

These arguments were deprecated because the target_host or target_server arguments either contained a hostname or an IP address.

Now, new arguments have been added to the Authentication and Authorization and Credential Store plugins to replace deprecated arguments. The new argument names explicitly define the values they contain. That is, a server_ip argument will always contain an IP address, and a server_hostname argument will always contain a hostname.

The deprecated arguments are the following:

Authentication and Authorization plugin: get_password_list and get_private_key_list input arguments:

- target_username
- target_host
- target_port
- target_domain

Credential Store plugin: authorize method:

- target_server
- target_port
- target_username

Resolved issues

The following is a list of issues addressed in this release.

Table 1: General resolved issues in release 6.9.3

Resolved Issue	Issue ID
Resolving SPS IP address in content subchapter configuration has been fixed	PAM-14500
To display links to sessions recorded by SPS in reports, the IP address of the SPS appliance has to be resolved and presented in the content subchapter configuration.	
Previously, it was always the physical address of the default network interface (eth0) that was used as the IP address of SPS, which in rare cases, when a customer configured and used another network interface to access SPS, caused an error during the presentation of the subchapter configuration.	

Resolved Issue	Issue ID
This issue has been fixed by using the first available SPS IP address from **Basic Settings** > **Local Services** > **Web Login (Admin and User)**, which always points to a valid and usable IP address.	
Backward compatibility issue in custom subchapter configuration change has been fixed To display tables without row numbers in SPS reports, the custom subchapter configuration had to be modified. This modification added a new chart type for tables without row numbers. However, backward compatibility with older subchapter configurations was not addressed properly, which caused an error during firmware upgrade. This has been fixed and previously created subchapter configurations can be used as well.	PAM-14495
RDP connections through SPS fail to authenticate with target user names present in multiple domains SPS did not forward the domain name information properly when authenticating to remote desktop servers with Network Level Authentication. This caused connection issues if the username did not uniquely identify a target user. This issue has been fixed.	PAM-14493

Table 2: General resolved issues in release 6.9.2

Resolved Issue	Issue ID
RDP connection setup is unreliable with long user names Initiating Remote Desktop connections with user names longer than 128 characters were unreliable: the client either connected without issues or showed an error dialog right after trying to start the connection. Sessions initiated from Safeguard for Privileged Passwords use long user names and were affected. The issue with the Remote Desktop Protocol implementation has been fixed and the connection setup is reliable now with long user names as well.	PAM-14281

Table 3: General resolved issues in release 6.9.1

Resolved Issue	Issue ID
Incorrect parsing inband data with down-level usernames in RDP When using down-level usernames containing key-value pairs in the form of DOMAIN\key1~value1%username, the domain name was not parsed properly, leading to issues with configurations for the AA plugins. This has been fixed.	PAM-14200

Table 4: General resolved issues in release 6.9.0

Resolved Issue	Issue ID
The SPS RDP proxy terminated abruptly when trying to copy more than 8192 files over the clipboard When trying to copy more than 8192 files over the clipboard redirection of a Remote Desktop Protocol connection, the SPS proxy handling the connection terminated abruptly. This limit was too low; therefore, it has been increased to 32768 files and the proxy now properly reports an error and does not terminate abruptly.	PAM-13896
Harden grub password hash generation Fixed a potential security issue, where the box would generate a grub password without proper salting and insufficient HMAC iterations. Details of the new password: - PBKDF2-SHA512 - 300000 iterations - 32 bytes of cryptographically secure random salt	PAM-13891
SPS does not handle properly the domain name autologon suffix on the interactive interface When handling autologon credentials, SPS did not remove properly the domain name autologon suffix on the interactive interface, which lead to credentials not being looked up properly for the automatic logon. This has been fixed.	PAM-13804
The missing host key for "scb-other" has been added to the configuration to prevent the administrator from having to manually verify host keys when navigating between HA nodes When the administrator attempted to log in to the HA pair from an SPS node, the host key verification was up to the administrator. This was caused by the missing key value for the "scb-other" hostname. However, it worked correctly when the IP addresses, or the "scb1", or the "scb2" hostnames were used specifically. This fix makes the login easier and more convenient by allowing to use the "scb-other" hostname, regardless of the current node allocation. The "scb-other" hostname can be used to SSH from any of the nodes because the related host key is already known by the origin SSH client.	PAM-13773
If the SNMP service was enabled in Local Services, the disk-related information was not included If the SNMP service is enabled in Local Services, the disk-related information, such as, free space and total capacity, is now reported when the SNMP server is queried.	PAM-13741

Resolved Issue	Issue ID
The HTTP service aborts with "Fatal Python error: deallocating None" Under certain circumstances, the HTTP proxy on SPS printed "Fatal Python error: deallocating None" to the logs and aborted while generating a core dump. The underlying reference counting issue has been fixed.	PAM-13727
The GSSAPI gateway authentication could be skipped in some SSH connections The authentication state machine in the SPS SSH proxy contained an error that could be used to skip the actual GSSAPI authentication of the client and go on with connecting to the server. This has been fixed.	PAM-13715
The UI needs all private keys to decrypt screenshots The user was unable to decrypt screenshots with one key because the UI does not handle the 'OR' and 'AND' relationships between encryption certificates in screenshot decryption. This issue has been fixed.	PAM-13627
The Session Timeline page contents filter is not linkable The Session Timeline page contents filter is not linkable, this causes redirection to the 'All' filter.	PAM-13626
Structured information in xcbLoginFailure SNMP trap The xcbLoginFailure SNMP was emitted with all the information in the description field. According to the relevant MIB object definiton, the following should be in separate fields: - description - username - peerAddress This has been corrected.	PAM-13606
On the refactored Vault /SPP/ details page, there was no `Back to search` option There was no `Back to search` option on the refactored vault details page. This is now fixed and it is consistent with a basic session details page.	PAM-13604
SPS was logging a Python backtrace if the DNS lookup for the target name of an SSH server failed The SSH proxy of SPS was missing an additional check, which lead to a Python traceback being printed in the log. This has been fixed.	PAM-13597

Resolved Issue	Issue ID
The search query input field on the refactored subchapter create side-sheet was not able to fully display long search queries The input field was changed to a bigger text area with dynamic height.	PAM-13594
SSH connections abort after receiving an incorrectly encoded keyboard-interactive response The SSH proxy on SPS did not properly handle non-UTF-8 input in keyboard-interactive authentication responses. Receiving such a value triggered abortion of the process, termination of all running SSH sessions, and generated a core file. This has been fixed.	PAM-13550
The fix prevents some unwanted exceptions to be present in the logs, previously, rarely caused by unavailable internal services during SNMP-related email sending Rarely, it can happen that the SNMP traps are sent before the whole system completely boots up. In these cases, if the system is configured to send SNMP traps in email, it could happen that the business logic attempted to connect to an internal service responsible for email sending before it was started and waiting for emails to deliver. The change prepares the sending part for these cases and ensures that email sending, even in these corner cases, is more reliable.	PAM-13541
Fixing wording issues reported on the cluster management page Wording issues reported on the cluster management page were fixed.	PAM-13522
None Sometimes, the search field does not suggest fields based on the input texts. This issue has been fixed.	PAM-13519
Subchapter needs to be reloaded after renaming After we renamed a subchapter, the name was not refreshed automatically, but the whole page had to be refreshed. This issue has been fixed.	PAM-13485
Although the user has edit rights for the PCI-DSS report, the user is unable to edit the PCI-DSS report The problem was that the PCI-DSS report creation was not based on the rights for the PCI-DSS, but on the rights for editing the custom reports. This is fixed now, the permission is separated on the report page.	PAM-13459
The chapter name must be unique Previously, if a chapter name was not unique, the server responded with error 500 if the user tried to commit the duplicate chapter name. The error	PAM-13451

Resolved Issue	Issue ID
500 message was not informative enough for the users. This issue has been corrected. In the current operation, if the users enter a chapter name that is not unique, the 'Chapter name must be unique' error message is displayed in the form, below the Chapter name field.	
Fix the image download problem in IE11 Previously, a user was unable to download a screenshot in IE11. With this fix, now a picture can be downloaded or opened from the timeline tab of the session.	PAM-13447
SPS was logging a Python backtrace if a DNS lookup for the target name of a Telnet server failed The Telnet proxy of SPS was missing an additional check, which lead to a Python traceback being printed in the log. This has been fixed.	PAM-13445
There was no information about the cluster status page when it was disabled The cluster page was empty when the feature was disabled. This issue has been fixed.	PAM-13411
The trust store delete error message was not understandable The error message has been fixed.	PAM-13370
Automatic reconnection to an RDP session after network issues fails in certain SPS configurations If the interactive RDP interface of SPS is in use, automatic reconnection to RDP sessions did not work and logged a Python traceback. This has been fixed: no traceback is printed in the log, and reconnection is possible if it is done within 10 seconds.	PAM-13318
Download reports header misalignment in Internet Explorer 11 The reports download page header is misaligned in Internet Explorer 11 and that caused usability issues. This issue has been fixed.	PAM-13299
Events are no longer saved to metadb and sent to the portal Events are no longer saved to metadb and sent to the portal from Zorp using content policies, instead we rely on indexers. To achieve near-real-time behavior, make sure to enable indexing with near real-time priority for the affected connections. Alerts are still handled in the same way as before.	PAM-13056
Inconsistent memory reporting on Web UI and REST API The REST API and the Web UI used slightly different metrics to report the available free memory on the system. The /api/health-status endpoint on the REST API has been extended to provide additional details about the system,	PAM-13012

Resolved Issue	Issue ID
such as processor usage and various memory figures. (Check the documentation for details.) The Web UI in turn has been changed to use the same metrics as the Health Status API. Note that SNMP alerts still use slightly different metrics when calculating the available free memory, as the calculation algorithm is fixed in the definition of the message. Also, the figures reported show a snapshot of the different usage metrics. The actual resource consumption may change more rapidly than it is possible to report.	
On the SSH Keys page, the filter disabled new items It was not possible to add a new SSH host key when the filter was on. This issue has been fixed.	PAM-12964
When a keystore was set up, on IE11, the screenshots were in an endless loading mode The user was unable to unlock the keystore with the given credentials because of an endless loading. This was resolved in IE11, now the lock and the unlock method is displayed correctly.	PAM-12949
Possible RDP connection failure when a TLS certificate with an RSA key greater than 2048 bits is configured When "Use the same certificate for each connection" was configured for an RDP connection policy with TLS enabled, and the uploaded RSA private key was greater than 2048 bits, an error could occur in the licensing protocol, and cause the client to terminate the connection. This has been fixed, licensing no longer depends on the TLS certificate.	PAM-12751
Documentation links fixed Some of the documentation links on the web interface pointed to an invalid site. This has been fixed.	PAM-12583

Table 5: General resolved issues for the Safeguard Desktop Player in release 6.9.0

Resolved Issue	Issue ID
The displayed ZAT/ZATX date does not contain the timezone of the host anymore Now the date information is displayed in the same way on every platform and it does not contain the timezone information of the host. The localized name of the day and month are in a short form and use the system language.	PAM-12589
SDP did not work on macOS Big Sur beta From now on, SDP requires macOS Catalina (10.15) or newer.	PAM-13039
TN3270 has been extended with new codecs TN3270 now correctly parses EBCDIC 835, 937, 939, 947, and 964 codecs.	PAM-12614

Table 6: General resolved issues in release 6.8.0

Resolved Issue	Issue ID
SPS now supports certificate chains with keys other than RSA/DSA. When a certificate chain is uploaded (for example, as the web server certificate), SPS verifies that the entire certificate chain is valid. A certificate chain is considered valid if it does not include weak certificates and a trust relationship exists between them. Previously, certificate chain validation has worked only for certificates that had RSA and DSA public keys. Other chains have been rejected with a **No such digest method** error message. This issue is now fixed so that every certificate chain that can be verified by OpenSSL 1.1.1 is now accepted.	PAM-13154
Fixed memory leak during HTTP WebSocket connections. Previously, memory leak could occur during audit-enabled HTTP WebSocket connections under certain conditions. This issue is now fixed.	PAM-13086
Fixed screenshot preview reload issues on the **Events** tab of the **Search** interface with the introduction of the new **Timeline** tab. Previously, recorded screenshots sometimes unexpectedly reloaded on the **Search > Events** tab. This issue has been fixed following the introduction of the new **Timeline** tab, superseding the former **Events**, **Alerts** and **Contents** tabs.	PAM-13079
Fixed an issue resulting in the **Search > Details** tab showing an invalid indexing status for certain sessions. Previously, when configuring a connection policy without indexing, the **Search > Details** tab could show an invalid indexing status for some sessions of the connection (namely, showing the **Auditing not enabled** message instead of **Session indexing not required** in the **Indexing status** field). This issue is now fixed to ensure that the **Indexing status** field always shows the correct monitoring information for each session.	PAM-13040
Fixed a potential **Permission denied** error on the **Sessions > Details > Analytics** tab. Previously, if you have tried opening the **Analytics** tab of a session in **Sessions > Details** with a user that belonged to a user group with a specific set of permissions, you could receive a **Permission denied** error, preventing you to check the contents of the **Analytics** tab. This issue has been fixed so that the **Analytics** tab appears only if your user has the proper permissions to access it.	PAM-13014
Fixed an issue where the user interface sometimes remained interactable while a commit was in progress. In certain cases, it could happen that the SPS UI remained interactable while a configuration change commit was in progress. This has been fixed by adding an overlay to the UI that prevents navigation while the commit is in progress.	PAM-12786

Resolved Issue	Issue ID
The password of the `admin` user can now be changed over the REST API when using an LDAP user database. Previously, when an LDAP user database was configured, you could not change the password of the `admin` user via the REST API. This has been fixed by having the `admin` user always authenticated locally, so you can always change its password using an LDAP user database. NOTE: Changing the password of normal users is still not supported in such cases.	PAM-12706
Improved application proxy and message queuing data collection. The data collection process related to the internal application proxy and the message queuing subsystem has been improved to provide a deeper insight for SPS product experts for troubleshooting. The collected data is available in the generated support bundle.	PAM-12686
Added rollback feature to firmware update process. To make the firmware update process more fault-tolerant, the procedure has been enhanced with a rollback feature. The rollback feature restores the original firmware, if the firmware update procedure fails on any node of a High Availability SPS cluster.	PAM-12681
Fixed an issue where the **Unsaved changes** popup dialog prevented automatic logout in case of an idle session. SPS has an automatic logout feature that closes the user login session if no user interaction is detected for 5 minutes. However, previously, if the **Unsaved changes** popup dialog remained open, it prevented the automatic logout popup dialog from appearing and then closing the idle session. This has been fixed so that idle sessions are now automatically logged out, even if the **Unsaved changes** popup dialog is also open.	PAM-12588
Fixed the aspect ratio of screenshots in the **Search** interface on Internet Explorer 11 browsers. Previously, the screenshots shown on the former **Contents** tab of the **Search** interface could appear with an incorrect aspect ratio when using Internet Explorer 11. This has been fixed so that captured screenshots now always appear with the correct aspect ratio on the new **Timeline** tab of the **Search** interface.	PAM-12529
Python tracebacks are now immediately printed to the log. Zorp processes print tracebacks into the log for certain error types that provide detailed information about the error. However, in some cases, these tracebacks have not been printed until the Zorp process was stopped. This issue is now fixed, so tracebacks are now logged immediately.	PAM-12359
Removed a harmless error message that could occur when executing large	PAM-

Resolved Issue	Issue ID
archiving jobs concurrently.	12344
When an archive job affected a large amount of data, it could occur that multiple archive processes worked on the same directory. In certain cases, when these processes handled the existence and creation of specific directories in parallel, a race condition could occur, resulting in a **Failed to create archive directory** error message when the processes attempted to create the directories the second time. This error message was then logged and (depending on the active configuration) could be sent out in an e-mail or as an SNMP alert.	
To solve this issue, One Identity increased the robustness of directory checking and creation in this release.	
Fixed the unnecessary horizontal scroll of the **Basic System > Network** page.	PAM-11709
Previously, the **Basic System > Network** page was always scrollable horizontally, even if the contents of the page were completely visible. This has been fixed so that horizontal scrolling is enabled only if the contents of the screen do not fit the size of the browser window.	
Linking a Safeguard for Privileged Passwords (SPP) node to SPS now redirects to the new SPS UI.	PAM-11707
Previously, when linking an SPP node to SPS via the **Cluster management** settings, the redirect URL loaded the old SPS UI once the SPP node sent the authentication information to SPS. This is now fixed, so once SPP has been linked to SPS, the current SPS UI loads.	
Fixed an internal error that could occur when opening the **User Menu > Private Keystore** tab after configuring a new passphrase.	PAM-11476
When you created a new passphrase in the **User Menu > Private Keystore** tab, it could occur that reopening the **Private Keystore** tab after logging out and logging in again resulted in a **Passphrase Invalid** error message. Reloading the last page or the main page then redirected to the old UI. This issue is now fixed with the redesign of the **User Menu**.	
Fixed the issue of clicking **Go back** on the **Search** interface clearing the configured search filters or opening the page you visited before the **Search** interface.	PAM-11256
When you checked session data on the **Search** interface with custom filters (such as a date range or a search expression) configured, it could occur that opening the details of a session with the **Details** button and then clicking the **Go back** button resulted either in the filter settings being reset, or opening the UI page that you visited before opening the **Search** interface. This issue has been fixed with the redesign of the **Search** interface, and the **Go back** button has also been renamed to **Search results**.	

Resolved Issue	Issue ID
Fixed interference between the **Go back** button of the SPS UI and the Back button of the web browser.	PAM-10283
When checking the details of the sessions listed in the **Search > Details** page, it could occur that clicking the **Go back** button on the **Details** page opened the **Details** page of the previously viewed session instead of going back to the **Search** interface. This scenario happened if you previously navigated from the **Details** page of the previous session back to the **Search** interface with the Back button of the web browser instead of the **Go back** button of the SPS UI. This issue has been fixed with the redesign of the **Search** interface, so that clicking the Back button of the browser no longer interferes with the **Go back** button of SPS (now known as **Search results**).	
Fixed the **Generate video** (now known as **Start rendering**) button missing from the **Search > Details** page for SSH connections with a **Session exec** channel type.	PAM-10245
Previously, when opening the **Details** page of an SSH session on the **Search** interface, the **Generate video** button has been missing for SSH sessions with a **Session exec** channel type. This has been now fixed, so that the button (now known as **Start rendering**) always appears for such channels if they have renderable content.	
Fixed an issue with the drop-down filter combo boxes on the **Search** interface being reset after clicking **Go back** on the **Details** page of a session.	PAM-10212
Previously, when setting up a **Simplified Search** via drop-down combo boxes, the configured combo boxes were reset to their default empty state after you clicked **Go back** on the **Details** page of a selected session. This has been fixed with the redesign of the **Search** interface, so opening the **Details** page of a session and then returning to the **Search** interface with the **Search results** button now longer resets the configured search filters.	
Fixed misleading search bar in the **Details** page of the **Search** interface.	PAM-9890
Previously, when checking the details of a session in the **Search** interface by clicking the **Details** button of a session, opening the **Contents** tab showed a content search bar, even if the session contained no searchable content (for example, because of lightweight indexing or the lack of any audit trails). This issue has been fixed during the redesign of the **Search** interface: now the new **Search > Details > Timeline** tab displays a **No results found** message if no searchable content is available for the selected session.	
Changing RDP domain membership settings over REST API did not persist.	PAM-4827
You can configure RDP domain membership over the REST API, except for actually joining the domain.	
When you changed RDP domain membership using the REST API, and you committed the changes, the configuration has been applied. However, it has not been persisted, which resulted in reverting to the previous RDP domain	

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settings shortly thereafter, for example after committing changes on the web UI.

This has been fixed, so that changing RDP domain membership settings on the REST API now properly persists.

| NOTE: Joining the domain using the REST API is still not supported.

Fixed the IPv6 **Add** button of the **Basic Settings > Network > Routing** table setting not being visible in lower screen resolutions.	PAM-4779

Previously, when opening the SPS UI on screens using a resolution width of 1024 pixels (for example, 1024x768), the **Add** button of the IPv6 routing settings in **Basic Settings > Network > Routing Table** was not visible. The Routing Table interface has been modified to resolve this problem.

Fixed text wrapping to make tables in PDF reports always fit the page.	PAM-3364

Previously, when generating PDF reports in **Reporting > Create & Manage Reports**, it could occur that the tables in the report PDF downloaded via **Reporting > Download Reports** did not fit the page and were truncated. This has been fixed by wrapping the text in the tables, ensuring that their content fits the page of the PDF document.

Known issues

The following is a list of issues, including those attributed to third-party products, known to exist at the time of release.

Table 7: Safeguard Desktop Player known issues

Known Issue

The Safeguard Desktop Player has rendering issues with bad opengl drivers on Windows, for example, when running a Windows 10 guest on a Linux host (VirtualBox).

This only affects the Windows version and mostly the virtual environments, however, the root cause is the bad opengl driver.

A quick workaround is to set a QT_OPENGL=angle system wide environment variable.

Related to Safeguard for Privileged Passwords (SPP): You cannot use the Safeguard Desktop Player version 1.10.11 to replay audit trails initiated from SPP. Alternatively, use the Safeguard Desktop Player 1.9.27.

System requirements

Before installing SPS 6.9.3, ensure that your system meets the following minimum hardware and software requirements.

The One Identity Safeguard for Privileged Sessions Appliance is built specifically for use only with the One Identity Safeguard for Privileged Sessions software that is already installed and ready for immediate use. It comes hardened to ensure the system is secure at the hardware, operating system, and software levels.

For the requirements about installing One Identity Safeguard for Privileged Sessions as a virtual appliance, see one of the following documents:

NOTE: When setting up a virtual environment, carefully consider the configuration aspects such as CPU, memory availability, I/O subsystem, and network infrastructure to ensure the virtual layer has the necessary resources available. Please consult One Identity's Product Support Policies for more information on environment virtualization.

- Installation Guide
- Deployment from Azure Marketplace
- Deployment on Amazon Web Services
- Evaluation Guide

Supported web browsers and operating systems

> ⚠ **CAUTION:**
>
> **Since the official support of Internet Explorer 9 and 10 ended in January, 2016, they are not supported in One Identity Safeguard for Privileged Sessions (SPS) version 4 F3 and later.**

> ⚠ **CAUTION:**
>
> **Even though the One Identity Safeguard for Privileged Sessions (SPS) web interface supports Internet Explorer and Microsoft Edge in general, to replay audit trails you need to use Internet Explorer 11, and install the Google WebM Video for Microsoft Internet Explorer plugin. If you cannot install Internet Explorer 11 or another supported browser on your computer, use the the Safeguard Desktop Player application. For details, see "Replaying audit trails in your browser" in the Administration Guide and Safeguard Desktop Player User Guide.**

NOTE: SPS displays a warning message if your browser is not supported or JavaScript is disabled.

NOTE: The minimum recommended screen resolution for viewing One Identity Safeguard for Privileged Sessions's (SPS's) web interface is 1366 x 768 pixels on a 14-inch widescreen (standard 16:9 ratio) laptop screen. Screen sizes and screen resolutions that

are equal to or are above these values will guarantee an optimal display of the web interface.

Supported browsers

The current version of Mozilla Firefox, Google Chrome, Microsoft Edge (Microsoft Edge Legacy is not supported), and Microsoft Internet Explorer 11 or newer. The browser must support TLS-encrypted HTTPS connections, JavaScript, and cookies. Make sure that both JavaScript and cookies are enabled.

Supported operating systems

Windows 2008 Server, Windows 7, Windows 2012 Server, Windows 2012 R2 Server, Windows 8, Windows 8.1, Windows 10, Windows 2016, and Linux.

The SPS web interface can be accessed only using TLS-encryption and strong cipher algorithms.

Opening the web interface in multiple browser windows or tabs is not supported.

Safeguard Desktop Player system requirements

The Safeguard Desktop Player application supports the following platforms:

- **Microsoft Windows:**

  64-bit version of Windows 7 or newer. Install the appropriate driver for your graphic card.

- **Linux:**

  RHEL 7, CentOS 7, or newer. The Safeguard Desktop Player application will probably run on other distributions as well that have at least libc6 version 2.17 installed.

  Depending on the distribution, you will need the following packages installed:
    - On Debian-based GNU/Linux:
        - libxcb-render-util0
        - libxcb-keysyms1
        - libxcb-image0
        - libxcb-randr0
        - libxcb-xkb1
        - libxcb-xinerama0
        - libxcb-icccm4
    - On CentOS/Red Hat:

- xcb-util-renderutil
- xcb-util-keysyms
- xcb-util-image
- **Mac:**

  macOS High Sierra 10.13, or newer.

Installing the Safeguard Desktop Player application requires about 200MB disk space, and a temporarily used disk space to store the audit trails that are replayed. The size of the temporary files depends on the size of the replayed audit trails.

You can install the Safeguard Desktop Player application with user privileges.

Hardware specifications

One Identity Safeguard for Privileged Sessions appliances are built on high performance, energy efficient, and reliable hardware that are easily mounted into standard rack mounts.

Table 8: Hardware specifications

Product	Redundant PSU	Processor	Memory	Capacity	RAID	IPMI
SPS T-1	No	1x Intel Xeon X3430 2.40GHz	2 x 4 GB	2 x 1 TB	Software RAID	Yes
SPS T-4	Yes	1x Intel Xeon E3-1275 v2 3.50GHz	2 x 4 GB	4 x 2 TB	LSI MegaRAID SAS 9271-4i SGL	Yes
SPS T-10	Yes	2 x Intel Xeon E5-2630 v2 2.6GHz	8 x 4 GB	13 x 1 TB	LSI 2208 (1GB cache)	Yes
Safeguard Sessions Appliance 3000	Yes	1x Intel Xeon E3-1275 v6 3.80GHz	2 x 16 GB	4x2 TB NLSAS	LSI MegaRAID SAS 9361-4i Single	Yes
Safeguard Sessions Appliance 3500	Yes	2x Intel Xeon Silver 4110 2.1GHz	8 x 8 GB	9x2 TB NLSAS	1 x Broadcom MegaRAID SAS 9361-16i + LSI Avago CacheVault Power Module 02 (CVPM02) Kit	Yes

The Safeguard Sessions Appliance 3500 is equipped with a dual-port 10Gbit interface. This interface has SFP+ connectors (not RJ-45) labeled A and B, and can be found right of the Label 1 and 2 Ethernet interfaces. If you want faster communication, for example, in case of high data load, you can connect up to two 10Gbit network cards. These cards are not shipped with the original package and have to be purchased separately.

Product licensing

To enable a trial license

1. Visit the Download Trials page, and navigate to **One Identity Safeguard for Privileged Sessions > Download Free trial**.

2. Complete the registration form, and click **Download Trial**.

3. You will receive the details on how to access your license key and the download the ISO files in email.

To enable a purchased commercial license

1. Navigate to **My Account > My License Assets** on the support portal.

2. To access your license key, click **Retrieve Key** next to your product.

3. Once you have the license keys, navigate to **My Account > My Products** and click **Download** next to your product. The **Download Software** page is displayed.

4. Download the ISO image (install cdrom) of your product.

If you need help with accessing your license, navigate to the Licensing Assistance page, and follow the instructions on screen.

Upgrade and installation instructions

The One Identity Safeguard for Privileged Sessions appliance is built specifically for use only with the One Identity Safeguard for Privileged Sessions software that is already installed and ready for immediate use.

To upgrade to One Identity Safeguard for Privileged Sessions6.9.3

For step-by-step instructions on upgrading to SPS6.9.3, see Upgrade Guide.

NOTE: Due to legal reasons, installation packages of the external indexer application will be available only from the SPS web interface. After SPS versions 6.4 and 6.0.3 are released, the installation packages will be removed from our website.

About feature releases

This is a feature release, which means that it will be supported for 6 months after the release date or 2 months after the release of a succeeding feature release (whichever date is later). It also means that if you are running a previous feature release (such as versions 6.1), you have 2 months to upgrade to version 6.9.3 if you want to keep running on a supported release.

For a full description of long-term-supported and feature releases, open the SPS product page on the Support Portal and navigate to **Self Service Tools > Product Support > Product Life Cycle & Policies > Product Support Policies > Software Product Support Lifecycle Policy**.

If you have a physical appliance based on MBX hardware

One Identity recommends you to upgrade to SPS6.9.3, if you are not running SPS on Pyramid hardware and any of the following is true:

NOTE: If you do not know the type of your hardware, see If you have a physical appliance based on Pyramid hardware.

- You wish to take advantage of any of the new features.
- You are running a previous feature release.
- You are OK with having to continuously upgrade to the latest feature release to remain supported.

   We are releasing new feature releases approximately once every 2 months.

If you have a physical appliance based on Pyramid hardware

Do NOT upgrade to SPS6.9.3 if you are running SPS on Pyramid hardware:

Downgrading from a feature release

Do NOT downgrade from a feature release.

⚠ **CAUTION:**

Downgrading from a feature release is not supported. If you upgrade from an LTS release (for example, 4.0) to a feature release (4.1), you have to keep upgrading with each new feature release until the next LTS version (in this case, 5.0) is published.

Verify successful installation

Navigate to **Basic Settings > System > Version details** and verify that SPS is running version 6.9.3 of the firmware. If not, it means that the upgrade process did not complete properly and SPS performed a rollback to revert to the earlier firmware version. In this case, complete the following steps:

1. Navigate to **Basic Settings > Troubleshooting > Create support bundle** and click **Create support bundle**.

2. Save the resulting ZIP file.

3. contact our Support Team and send them the file. They will analyze its contents to determine why the upgrade was not completed and assist you in solving the problem.

More resources

To obtain more information, read the technical documentation or consult the community:

- One Identity Safeguard for Privileged Sessions - Technical Documentation
- One Identity Community

Globalization

This section contains information about installing and operating this product in non-English configurations, such as those needed by customers outside of North America. This section does not replace the materials about supported platforms and configurations found elsewhere in the product documentation.

This release is Unicode-enabled and supports any character set. In this release, all product components should be configured to use the same or compatible character encodings and should be installed to use the same locale and regional options. This release is targeted to support operations in the following regions: North America, Western Europe and Latin America, Central and Eastern Europe, Far-East Asia, Japan. It supports bidirectional writing (Arabic and Hebrew). The release supports Complex Script (Central Asia – India, Thailand).

This release has the following known capabilities or limitations: OCR is limited to Nuance supported languages. No support for RTL languages.

About us

One Identity solutions eliminate the complexities and time-consuming processes often required to govern identities, manage privileged accounts and control access. Our solutions enhance business agility while addressing your IAM challenges with on-premises, cloud and hybrid environments.

Contacting us

For sales and other inquiries, such as licensing, support, and renewals, visit https://www.oneidentity.com/company/contact-us.aspx.

Technical support resources

Technical support is available to One Identity customers with a valid maintenance contract and customers who have trial versions. You can access the Support Portal at https://support.oneidentity.com/.

The Support Portal provides self-help tools you can use to solve problems quickly and independently, 24 hours a day, 365 days a year. The Support Portal enables you to:

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- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
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- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product

Third-party contributions

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Version 2, June 1991

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(For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

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Section 3

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Section 4

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which must be distributed under the terms of Section 1 and Section 2 above on a medium customarily used for software interchange.

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Section 5

A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a "work that uses the Library". Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

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Section 6

As an exception to the Sections above, you may also combine or link a "work that uses the Library" with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer's own use and reverse engineering for debugging such modifications.

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b. Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user's computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.

c. Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.

d. If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.

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