One Identity Safeguard for Privileged Sessions 6.12.0

Release Notes

16 February 2022, 13:52

These release notes provide information about the One Identity Safeguard for Privileged Sessions release. For the most recent documents and product information, see One Identity Safeguard for Privileged Sessions - Technical Documentation.

NOTE: CVE-2021-44228, also named Log4Shell, is a Remote Code Execution (RCE) class vulnerability. The Apache Log4j library has been updated to version 2.17.1; therefore, SPS is protected against CVE-2021-44228 and against the following related vulnerabilities:

- CVE-2021-44832
- CVE-2021-45046
- CVE-2021-45105

About this release

One Identity Safeguard for Privileged Sessions Version 6.12.0 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 One Identity Safeguard for Privileged Sessions (SPS) version 6.12.0:

- Using the **Export audio** option of Safeguard Desktop Player, you can export the input sound (coming from the audited user) and the output sound (received by the audited user) into .wav files.

- The SPS and Starling join procedure has been simplified: from SPS 6.12.0, you do not need to copy the credential string that allows SPS to communicate with Starling. Navigate to **Basic settings > Starling integration > Joining SPS to One Identity Starling**.

- As a part of the backup and restore procedure, the PAA database is saved to the db directory of the system backup. The PAA database stores the user baselines, which are processed by the analytics function. Depending on the size of the PAA database, the backup size may increase significantly.

- Before SPS 6.12.0, when the LDAP, RADIUS or X.509 authentication method was configured, the admin user was always authenticated locally. No other users could log in with their local credentials.

  Starting from SPS 6.12.0, you can configure multiple databases for login, thus it becomes necessary to select the correct database that will be used for authentication. To log in as the local admin user while the appliance is configured to use a different method, you need to click on the local login link on the login screen.

  As a consequence of this change, all other local users can be authenticated using the local login link not just the admin user. To prevent unauthorized access, if the appliance is configured to use a login method that is different from local, the passwords of all non-admin local users are reset during the upgrade.

  After the upgrade, if you want to re-enable login for the locked out non-admin local users, you can set a new password for them. As the local login is always active, the admin fallback option for the X.509 login is deprecated.
You can create and customize HTTP error templates to send users customized HTTP error messages. Besides the error messages that you can customize, you can set a name, color, and optionally a logo for the error page. Navigate to HTTP-specific settings > Customizing HTTP error templates.

From SPS 6.12.0, you can use Starling in an EU datacenter as well. To use Starling with SPS, you need a Starling organization and account within a United States or a European Union data center. Note that if you want to use Starling 2FA, you must use a United States data center (European Union data center is not yet supported). Navigate to Basic Settings > Starling Integration.

On the SPS UI, the following options have been moved from Basic Settings to Users & Access Control > Settings:

- Protecting against brute-force attacks
- Authentication banner
- Web interface timeout

The login settings have been moved from Basic Settings to Users & Access Control > Settings to Basic Settings to Users & Access Control > Login Options. Under Login Options, the available login methods correspond to the respective authentication method:

- Local
- X.509
- RADIUS
- Active Directory
- POSIX LDAP

**RDP RemoteApp credential injection using the RemoteApp Launcher**

The RemoteApp Launcher enables users the access they need to an application without revealing credentials and passwords. By using the RemoteApp Launcher, you can protect shared credentials and limit an end user’s access to an allowed or required application.

**Context-sensitive help**

SPS offers context-sensitive help, which is used to display information about the user interface relative to the task a user performs.

There are different levels of context sensitivity that have been implemented in SPS.

- **Screen-level help**
  
  When available, SPS opens the help topic for that screen. Instead of having the user browse through the help system to find the right topic, SPS can quickly and directly display the topic that corresponds to the screen.

  To open a screen-level help, click I need help, when available.

- **Field-level help**
When available, field-level help provides help text detailing the purpose and function of a field.

The following is an example of a field-level help where you can click How should I choose? and the help opens with more details about making the relevant destination settings.

Figure 1: Quick Connection Setup — Example of a field-level help

Other improvements:

- The SPP fetcher role is no longer an experimental feature.
- You can display a banner with a configurable text on the web and console login screen of SPS. Navigate to Users & Access Control > Settings > Authentication banner.

Changes and improvements in SPS REST API Reference Guide version 6.12.0

- You can use templates to configure custom HTTP error pages.
- You can list basic information about One Identity Starling products that are integrated with SPS.
- You can test and upgrade SPS firmware.
- You can configure multiple login methods for SPS.
Deprecated features

Apache Lucene database
Starting from SPS 7.0 LTS, One Identity plans to modify the search for screen content in session data to use the Elasticsearch database only. The current Apache Lucene database support will be phased out, but the query language will remain Lucene-like.

After the switch to the Elasticsearch database, you will be able to access content stored in an Apache Lucene database only if you regenerate the content with the reindex tool.

Splunk forwarder
The Splunk forwarder is deprecated as of SPS 6.7 and is now removed. One Identity recommends using the universal SIEM forwarder instead.

Resolved issues

NOTE: CVE-2021-44228, also named Log4Shell, is a Remote Code Execution (RCE) class vulnerability. The Apache Log4j library has been updated to version 2.17.1; therefore, SPS is protected against CVE-2021-44228 and against the following related vulnerabilities:

- CVE-2021-44832
- CVE-2021-45046
- CVE-2021-45105

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

Table 1: General resolved issues in release 6.12.0

<table>
<thead>
<tr>
<th>Resolved Issue</th>
<th>Issue ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Right after the welcome wizard, there was a small time window when SPS could not login the users.</td>
<td>PAM-15595</td>
</tr>
<tr>
<td>The login is implemented by multiple services on SPS. Right after the welcome wizard, when SPS showed the login screen, not all the required services were ready. With this fix the required services are started before the login screen appears.</td>
<td></td>
</tr>
<tr>
<td>Text overflowed when the session had additional metadata, because the whole text was displayed in one line.</td>
<td>PAM-15593</td>
</tr>
<tr>
<td>Text overflow was fixed by applying line break for this filed.</td>
<td></td>
</tr>
<tr>
<td>Incorrect copyright notice was displayed on the &quot;About&quot; page.</td>
<td>PAM-15580</td>
</tr>
<tr>
<td>Resolved Issue</td>
<td>Issue ID</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------------------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Copyright notice is fixed on the &quot;About&quot; page.</td>
<td></td>
</tr>
<tr>
<td>Online Player screen sometimes falls apart in SSH terminal sessions.</td>
<td>PAM-15553</td>
</tr>
<tr>
<td>Online Player did not display the SSH terminal sessions correctly. It displayed a little space after each line. This issue has been fixed.</td>
<td></td>
</tr>
<tr>
<td>Configuration synchronization failed when the SNMP v3 agent was in use in the SNMP server local service on the Managed Host nodes. When the SNMP server local services option was enabled and the SNMP v3 agent was configured on a Managed Host node of an SPS cluster, then that node failed to synchronize configuration from the Central Management node, and an error appeared in the log of the Managed Host node saying: &quot;nnx.unmarshaller.UnmarshalError:Supplying both plain and hashed values is not supported&quot;.</td>
<td>PAM-15541</td>
</tr>
<tr>
<td>SPP detects that SPS is unavailable. The possible reason is that when SPP checks the &quot;configuration_sync&quot; field of the response from <code>/api/cluster/status/&lt;node-id&gt;</code> SPS did not fill out the &quot;configuration_sync&quot; field for the <code>central-management</code> node. Now SPS fills out the &quot;configuration_sync&quot; field for the <code>central-management</code> node as an <code>up-to-date</code> node.</td>
<td>PAM-15404</td>
</tr>
<tr>
<td>The specific customer problem was insufficient memory allocated to the VM. The retry idle time has been increased to further decrease the possibility of an ElasticSearch translog corruption. In case of errors, the following configuration values can be used to fine tune the system: pam.reindex.mergeableBatchSize = 1000000 pam.reindex.nonMergeableBatchSize = 500000 pam.reindex.retryIdleMinutes = 180 pam.reindex.idleMillis = 1000</td>
<td>PAM-15402</td>
</tr>
<tr>
<td>Safeguard for Sudo fails when using the SPS Sudo iolog as a log server. When Safeguard for Sudo was configured to use SPS Sudo iolog as a log server, it failed to send logs to the SPS. This was caused by the missing 'log_id' field in a ServerMessage sent as a reply to the initial AcceptMessage. This has been fixed, SPS now fills the log_id field with the SPS session ID.</td>
<td>PAM-15378</td>
</tr>
<tr>
<td>Unnecessary scrollbar on the side of the pane. Removed unnecessary scrollbar.</td>
<td>PAM-15331</td>
</tr>
<tr>
<td>Downloading SNMP MIB files does not work. On the UI of SPS, users can download SNMP MIB files in a .zip file, and instead of the .zip file, it showed an error message. This has been fixed now</td>
<td>PAM-15270</td>
</tr>
</tbody>
</table>
### Resolved Issue

<table>
<thead>
<tr>
<th>and the .zip file can be downloaded.</th>
</tr>
</thead>
<tbody>
<tr>
<td>When upgrading SPS, forced shutdown may result in Postgresql upgrade failure.</td>
</tr>
<tr>
<td>When SPS is upgraded, SPS needs to be rebooted. If the reboot happened in a forceful way or the Postgresql service has extreme amount of Write-Ahead-Logging data, it may result in upgrade failure. Forceful shutdown is not supported. This fix is about fixing the upgrade path.</td>
</tr>
<tr>
<td>Starting video playback of audit trails may be slower than expected.</td>
</tr>
<tr>
<td>On the Search User Interface of Safeguard for Privileged Sessions, you can view the recordings of the sessions (audit trails).</td>
</tr>
<tr>
<td>Once you watch an audit trail, the video is cached at the server side.</td>
</tr>
<tr>
<td>Previously, due to a misconfiguration, the cache did not work properly and allowed roughly one video to be stored in the cache, causing delays when video playback is started for audit trails that have already been watched once.</td>
</tr>
<tr>
<td>The cache configuration has been fixed and videos are cached appropriately in order to provide a more fluent playback experience.</td>
</tr>
<tr>
<td>Display detailed information about the SPS-SPP join status.</td>
</tr>
<tr>
<td>Detailed information is displayed about the SPS-SPP join status, for example, the IP address of the connected SPP is displayed.</td>
</tr>
<tr>
<td>Show all information in the error message when joining to SPP failed. Show a short description about the error, and make it possible to view the raw error response.</td>
</tr>
<tr>
<td>A short description of the error is added, and it is possible now to view the raw error response.</td>
</tr>
<tr>
<td>Due to an unexpected side effect of a change in SPS versions 6.10.0 and 6.0.10, the AWS images were accidentally shipped with a hard-coded node ID. This prevented SPS nodes hosted on AWS from being able to join a cluster, and also the backup and the archival of the different nodes might have resulted in overwritten files.</td>
</tr>
<tr>
<td>Amazon images now come with a fixed node ID. The problem was fixed by changing the way the initial node ID was generated. Note that the node ID of existing installations are not changed, because the node ID change drops the node out of a management cluster and makes the previous archives and backups unavailable.</td>
</tr>
<tr>
<td>Only the Amazon deployments were affected, the node ID on any other platforms has always been generated correctly on the first boot.</td>
</tr>
<tr>
<td>The SPP fetcher cannot handle SshKey access requests.</td>
</tr>
<tr>
<td>The SPP fetcher can now handle SshKey access requests.</td>
</tr>
<tr>
<td>Resolved Issue</td>
</tr>
<tr>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>False validation errors in the logs and HTTP responses when there is a GPG public key set for encryption of exported configuration.</td>
</tr>
<tr>
<td>False validation errors have been fixed. If there was a GPG public key set to be used for the encryption of exported configuration, then when certain temporary problems occurred, the system could report invalid configuration in the logs, and the web user interface and the REST API could respond with HTTP 500 Internal Server Error. This could happen even if the configuration had not been modified since the last time it was validated. When this error occurred, the system logs would contain the following message: &quot;nnx.unmarshaller.UnmarshalError: Could not load GPG public key; error: The given public key is invalid; path=Path('gpg_public_key')&quot;, despite the configured GPG public key being valid.</td>
</tr>
<tr>
<td>A connection policy can be deleted while it is referenced in a subchapter and the user gets no feedback if a report fails because of a missing subchapter. If a report contains such a subchapter, a ComposerException is returned. This exception is present in the log, but no failed report is generated. This issue has been fixed by substituting ComposerException with a MissingSubchapter, a subchapter containing the error message, and has been added to the generated report.</td>
</tr>
<tr>
<td>When having an SPS report configuration with a custom report logo that was uploaded in a firmware prior to 6.8.0, report generation that included custom report logo may have failed. SPS can include custom report logo in the report cover page. The custom report logo upload mechanism along with the report configuration UI has changed in the 6.8.0 release. Due to the change in the logo upload mechanism, the report generation for custom report logos that had been uploaded prior to 6.8.0 could fail, because the reporting service did not have permissions to read those logos. This has been fixed and report generation should work with the legacy custom report logos as well.</td>
</tr>
<tr>
<td>Atop service fails to start. Due to a missing step during the appliance upgrade, the internal atop service unit failed to start after SPS had been upgraded to 6.10.0 from a version later than 6.0.8 or 6.7.0. This error has been fixed.</td>
</tr>
<tr>
<td>There are &quot;I need help&quot; buttons which do not work correctly. These &quot;I need help&quot; buttons had a bad url, that is why they returned 404 Not Found error messages. The links have been corrected and now the buttons work properly.</td>
</tr>
<tr>
<td>The 'items-to-include' input field does not have a correct validation.</td>
</tr>
<tr>
<td>Resolved Issue</td>
</tr>
<tr>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>The validation worked with (1,10000), but it was not correct. The correct validation is [1,10000].</td>
</tr>
<tr>
<td>ICA connections could fail, if an application had non-ASCII characters in its title. If an ICA application contained non-ASCII characters in its title, the connection could fail, and the error message &quot;Unable to convert application name to UTF-8&quot; could appear in the system log. The issue has been fixed, now both UTF-8 and UTF-16 encodings are supported.</td>
</tr>
<tr>
<td>The authentication cache needs to be updated only when the authentication is not done from the cache. The authentication cache was updated every time a user was authenticated, therefore, the soft_limit always equaled the hard_limit. This issue has been fixed and now the cache is only updated when the authentication is not done from the cache.</td>
</tr>
<tr>
<td>The encoding settings in the video player did not store the settings by users or browsers. Only one configuration was saved in the local storage. When another user logged in to the SPS, the same configuration was overwritten. Now the encoding settings are stored globally for everyone. The different encoding setting are stored for every user.</td>
</tr>
<tr>
<td>The information pane on the side-sheet covered the action buttons. With this fix, the main part of the side-sheet is scrollable and does not cover the action buttons.</td>
</tr>
<tr>
<td>Opening and closing without further action on the built-in reports side-sheet empties the built-in report list. With this fix, you are free to watch the configuration options, and if there is nothing to change, the original settings are displayed.</td>
</tr>
<tr>
<td>The IP address of the SPP cluster was not visible by default on the cluster page. The IP address of the SPP cluster is now visible by default on the cluster page.</td>
</tr>
<tr>
<td>The button for terminating iolog sessions was visible on the search UI. Termination of the iolog sessions is not supported. Clicking that button caused an error. Iolog session cannot be terminated, the button is removed from the UI on this session type.</td>
</tr>
<tr>
<td>Limited next hop monitoring feature. Next hop monitoring is configured only to a subset of the available interfaces. Although the number of the interfaces increased in the latest hardware</td>
</tr>
<tr>
<td>Resolved Issue</td>
</tr>
<tr>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>configurations, where the new interfaces could be used for management and/or production network traffic, the next hop monitoring feature configuration was not extended accordingly. In this fix, the configuration related user interface elements has been extended to enable full support for these new network interfaces.</td>
</tr>
<tr>
<td>When there is a new report created or an existing one modified, and the user generates a report, the name of the report is not displayed in the Download page search options. With this fix, the elements are properly updated, and you can select the newly modified report.</td>
</tr>
<tr>
<td>SSH connections using Kerberos based gateway authentication failed when initiated via an SPS which was linked with SPP. SSH connections using Kerberos based gateway authentication now work when initiated via an SPS which was linked with SPP, but the identity of users must be provided by an LDAP or AD server which is configured properly on both SPS and SPP. Note that the Identity Provider's Name as configured in SPP must match the Kerberos principal's REALM (case insensitively).</td>
</tr>
<tr>
<td>Users are not allowed to modify the IP addresses on the &quot;Create new subchapter&quot; side-sheet. Users are allowed to modify the IP addresses on the &quot;Create new subchapter&quot; side-sheet.</td>
</tr>
<tr>
<td>Backend validation for 'items-to-include' only checked if the limit for the maximum number of sessions included in the subchapter was an integer. Backend validation now also checks if the set value for 'items-to-include' is within the range of 1 and 10000. Since ElasticSearch can only return 10000 hits at a time by default, a search-based subchapter can contain maximum 10000 sessions, thus this limit was applied here as well.</td>
</tr>
<tr>
<td>All static asserts were cached which caused caching bugs. Cache option is removed from index.html files.</td>
</tr>
<tr>
<td>If the indexer could not parse a query string, REST returned 500 - Internal Error. After this fix, if the indexer returns a parse error, REST returns 400 - InvalidContentQueryInput with the reason: &quot;Invalid search expression in content query&quot;.</td>
</tr>
<tr>
<td>The N/A filed got the same color as the first element of the pie chart. The pie chart now shows the data with different colors.</td>
</tr>
<tr>
<td>Make it possible to customize the error pages for HTTP connections. If there is no customized error page for HTTP connections, make sure that a redesigned page generates the correct HTTP status code and message for the necessary error.</td>
</tr>
</tbody>
</table>
Resolved Issue

error page is displayed by default.

It is possible now to customize the error pages for HTTP connections. If there is no customized error page for HTTP connections, a new, redesigned error page is displayed by default.

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 2: General known issues

<table>
<thead>
<tr>
<th>Known Issue</th>
</tr>
</thead>
<tbody>
<tr>
<td>In SPS version 6.12.0, users with no decryption keys can access encrypted Sudo iolog sessions and contents.</td>
</tr>
<tr>
<td>TLS version 1.3 is not supported when using the inWebo, Okta or One Identity Starling 2FA plugins. To ensure that TLS 1.2 is used by SPS during negotiation, specify the minimum and maximum TLS version as follows:</td>
</tr>
<tr>
<td>• For the minimum TLS version, select TLS version 1.2.</td>
</tr>
<tr>
<td>• For the maximum TLS version, select TLS version 1.3.</td>
</tr>
<tr>
<td>For more information, see &quot;Verifying certificates with Certificate Authorities using trust stores&quot; in the Administration Guide.</td>
</tr>
<tr>
<td>The accuracy of replaying audit trails in Asian languages (Traditional Chinese, Korean) has been enhanced. Due to this change, when upgrading SPS to version 6.11.0, all your sessions will be reindexed, and while reindexing is in progress, your sessions on the Search interface are incomplete. For this reason, plan your upgrade to SPS 6.11.0 accordingly.</td>
</tr>
<tr>
<td>Report generation may fail if a report subchapter references a connection policy that has been deleted previously.</td>
</tr>
<tr>
<td>SPS can create reports giving detailed information about connections of every connection policy. For this, the user can add connection subchapters in the Report Configuration Wizard, under Reporting &gt; Create &amp; Manage Reports.</td>
</tr>
<tr>
<td>For a successful report generation, the referenced connection policy must exist on the appliance. However, when deleting a connection policy that is referenced as a connection subchapter, the user is not warned that the report subchapter must be removed, otherwise the subsequent report generation will fail.</td>
</tr>
<tr>
<td>This affects scheduled report generation as well.</td>
</tr>
</tbody>
</table>
System requirements

Before installing SPS 6.12.0, 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.

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:
From SPS version 6.10, you do not need to install the Google WebM Video for Microsoft Internet Explorer plugin to replay audit trails in your browser. The supported browsers are Google Chrome, Firefox, Safari, and Internet Explorer 11 (IE11).

SPS support for IE11 will soon be phased out.

SPS version 6.11.0 and previous versions continue to support IE11.

For SPS version 6.9 and earlier versions, 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 following browsers are supported:

- Mozilla Firefox (the latest version)
- Google Chrome
- Microsoft Edge (Microsoft Edge Legacy is not supported)

The browser must support TLS-encrypted HTTPS connections, JavaScript, and cookies. Make sure that both JavaScript and cookies are enabled.

**Supported operating systems**


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

- **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 3: Hardware specifications

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

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.
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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 Sessions 6.12.0

For step-by-step instructions on upgrading to SPS 6.12.0, 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.

⚠️ **CAUTION:**

Starting from 6.10.0, SPS (SPS) has changed to hardened SSL settings. As a result, during TLS session establishment, the following items are not considered secure:

- Private keys and X.509 certificates having RSA or DSA keys shorter than 2048 bits, or ECC keys shorter than 224 bits.
- Certificates (other than Root CA certificates) with signatures that use the SHA-1 or the MD5 hashing algorithm.

With the hardened SSL settings, SPS will not connect to remote systems that are protected with weak certificates.

You cannot upgrade SPS if your configuration contains insecure certificates, keys or certificate chains in any of the following sections:

- SPS web interface
- internal CA certificate
- connection policy TLS settings
- client X.509 credentials for external LDAP, SMTP or Syslog connections
- server X.509 certificates for external SMTP or Splunk servers
- external indexer credentials (only writable over the REST API)
- CA certificates in Trusted CA Lists and Trust Stores

Note that the certificates and keys that are used for signing, timestamping, encryption or decryption are not affected by this change.

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 6.12.0 if you want to keep running on a supported release.


If you have a physical appliance based on MBX hardware

One Identity recommends you to upgrade to SPS6.12.0, if you are not running SPS on Pyramid hardware and any of the following is true:

- 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 SPS6.12.0 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 6.12.0 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.
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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

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d. If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still
operates, and performs whatever part of its purpose remains meaningful.
(For example, a function in a library to compute square roots has a purpose that is
totally 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
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This option is useful when you wish to copy part of the code of the Library into a program
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**Section 4**
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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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If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

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
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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.

e. Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

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**Section 7**

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