

One Identity Safeguard for Privileged Sessions 5.9

Release Notes

November 2018

These release notes provide information about the One Identity Safeguard for Privileged Sessions 5.9 release.

About this release

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.

The privileged management software provided with One Identity Safeguard consists of 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.

For details on this release, see [New features](#).



NOTE:

For a full list of key features in One Identity Safeguard for Privileged Sessions, see [Administration Guide](#).

New features

SIEM forwarder

You can now forward the log messages and events related to what happens in the privileged sessions to an external SIEM, such as Splunk or Arcsight, or other third-party systems that enable you to search, analyze, and visualize the forwarded data. SPS can send these events as industry-standard RFC3164 syslog messages, with the data formatted either as JSON or in Common Event Format (CEF).

For more information, see "[Using the universal SIEM forwarder](#)" in the [Administration Guide](#).

Authenticate HTTP/HTTPS connections on the SPS gateway

SPS now provides a way to authenticate non-transparent HTTP/HTTPS connections on SPS to local and external backends (LDAP, Microsoft Active Directory, RADIUS). The client must support proxy authentication.

For more information, see "[Creating a new HTTP authentication policy](#)" in the [Administration Guide](#).

Performance improvements in indexing graphical sessions

To make the text displayed in graphical sessions (for example, RDP) SPS uses optical character recognition. The way this is done has been greatly optimized. Depending on the exact scenario and the contents of the session, this can significantly decrease the time required to index the audit trails.

Gapminder algorithm

The *gapminder algorithm* is able to detect scripted sessions based on the time gaps between the sessions that belong to a given account. When the time gaps between sessions have typical, repeating values, then that suggests unnatural periodic behavior.

Using GSSAPI in SSH connections

You can now use an Authentication Policy with GSSAPI and a Usermapping Policy in SSH connections. When an SSH Connection Policy uses an Authentication Policy with GSSAPI, and a Usermapping Policy, then SPS stores the user principal as the **Gateway username**, and the username used on the target as the **Server username**.

Note that this change has the following side effect: when using an Authentication Policy with GSSAPI, earlier versions of SPS used the `client-username@REALM` username to authenticate on the target server. Starting with version 5.9.0, it uses the `client-username` as username. Configure your servers accordingly, or [configure a Usermapping Policy for your SSH connections in SPS](#).

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 1: Hardware specifications

Product	Redundant PSU	Processor	Memory	Capacity	RAID	IPMI
SPS T-1	No	Intel(R) Xeon(R) X3430 @ 2.40GHz	2 x 4 GB	2 x 1 TB	Software RAID	Yes
SPS T-4	Yes	Intel(R) Xeon(R) E3-1275V2 @ 3.50GHz	2 x 4 GB	4 x 2 TB	LSI MegaRAID SAS 9271-4i SGL	Yes
SPS T-10	Yes	2 x Intel(R) Xeon (R) E5-2630V2 @ 2.6GHz	8 x 4 GB	13 x 1 TB	LSI 2208 (1GB cache)	Yes

The SPS T-10 appliance 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.

Resolved issues

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

Table 2: Resolved issues in version 5.9.0a

Resolved Issue	Issue ID
Citrix ICA proxy generates lots of core files In certain cases, the standalone ICA proxy generated lots of core files. This has been corrected.	PAM-7877
Extreme memory usage in indexing very large terminal SSH sessions When indexing the SSH sessions that have the terminal set to unusually large, the indexer could consume the memory. This has been corrected.	PAM-7821

Table 3: General resolved issues

Resolved Issue	Issue ID
Filtering gateway groups does not work for RDP Channel Policies It is possible to restrict the usage of different protocol channels based on the group memberships of the gateway user in Channel Policies. This filtering was broken for RDP sessions and if a group restriction was specified, that channel was blocked for all users. The problem did not affect other protocols, nor the 5.0.x branch. The problem has been fixed and this restriction is now correctly applied.	PAM-7597
Upgrading the external-indexer on CentOS 7 loses the configuration The location of the configuration file was changed in the latest version of the external indexer, but the old configuration file was not transferred to the new location during the upgrade. As a result, the indexer started with an empty configuration. This has been fixed and the configuration file is now moved to the new location during the upgrade process.	PAM-7559
Changing the configuration via REST API breaks plugin configuration access If the configuration of the appliance was changed using the REST API, plugins that read their configuration from the configuration XML file directly (such as the Okta plugin) stopped working due to permission errors. This has been fixed.	PAM-7460

Resolved Issue	Issue ID
<p>Certificate chains are not supported in LDAP/AD</p> <p>Starting with version 5.7 certificate chains could not be used to verify TLS sessions for LDAP and AD connections, the only option was to upload a root CA certificate that signed the AD/LDAP server's certificate directly. This has been fixed and certificate chains are now fully supported again.</p>	PAM-7244
<p>Audit database cleanup does not work for sessions with failed authentication</p> <p>Sessions with failed authentication were never deleted up from the audit database, regardless of the cleanup settings. This is now fixed and such sessions are also properly removed according to the configured policies.</p>	PAM-7151
<p>Statistics charts are not updated on the Search interface</p> <p>The charts displayed on the Search interface were not updated after they were displayed the first time, even if the user refined the query. This is fixed and the charts are now properly updated after every user interaction.</p>	PAM-7091
<p>Improved handling of DNS hostname resolution failures in SSH connections</p> <p>If the appliance could not resolve a DNS hostname during the establishment of SSH connections, the connection was denied without any error message in the logs that would have helped the troubleshooting process. The logs now show information about this fact.</p>	PAM-7085
<p>Startup failure after upgrade with large number of content-based alerts</p> <p>If the audit database contains a huge number of content-based alerts, the upgrade could fail in a way that prevents the system from starting up correctly. Such databases are now handled correctly.</p>	PAM-7014
<p>Custom NTP settings are not applied</p> <p>Starting with version 5.7, the NTP server settings were not applied and the appliances always tried to sync with ntp.ubuntu.com. This has been fixed and the NTP settings are applied properly again.</p>	PAM-6985
<p>Parenthesis '(')' not usable in LDAP settings in samaccount name and user dn</p> <p>If any parentheses were used in these settings for LDAP servers, the connections failed. This is now corrected and such settings are now handled properly.</p>	PAM-6930
<p>Memory leak in RDP proxy</p> <p>Memory was leaked when domainless NLA, banner, or AA plugin was used in an RDP connection. This has been corrected.</p>	PAM-6824
<p>One Identity Safeguard for Privileged Passwords credential store plugin is case sensitive</p> <p>Even though Active Directory user and domain names are not case sensitive, the credential store plugin for SPP was. This is fixed and all user and domain names</p>	PAM-6701

Resolved Issue	Issue ID
can be used now in both upper- and lowercase form.	
<p data-bbox="201 353 986 380">Rotate and include Elasticsearch logs into the debug bundle</p> <p data-bbox="201 405 1265 533">Logs of the Elasticsearch instance running on the appliance were neither rotated nor included in the support bundle. This could cause the firmware to fill up, and also made troubleshooting much harder. These logs are now both rotated and included in the bundle.</p>	PAM-6648
<p data-bbox="201 560 1225 620">Large number of connections while displaying a banner in RDP could result in crash</p> <p data-bbox="201 645 1225 770">If a banner was displayed at the beginning of RDP connections and there was a high level of activity on the appliance it could result in the disruption of the service due to internal out of memory errors. Such a configuration is now handled correctly.</p>	PAM-6348
<p data-bbox="201 797 1289 857">HA replacement fails, because 5LTS firmware created smaller disk on T1, than 4 LTS</p> <p data-bbox="201 882 1289 1008">HA replacement failed, because 5LTS firmware created smaller disk on T1, than 4 LTS. As a result, procedure described in the official HA node replacement guide could not be completed, because the data cannot sync to the new HA node, which is newly installed and not upgraded from 4LTS.</p>	PAM-6174
<p data-bbox="201 1034 1278 1095">Window titles are included in the baselines for the command analysis algorithm of Safeguard for Privileged Analytics</p> <p data-bbox="201 1120 1278 1245">For users that routinely performed both RDP and SSH sessions, the window titles displayed in the RDP sessions were also used to build a baseline for the SSH command algorithm. This is now fixed and only the real commands are used for the command baselines.</p>	PAM-6089
<p data-bbox="201 1272 1286 1332">No error message displayed if screenshot generation is requested on the Search interface without the proper private keys</p> <p data-bbox="201 1357 1286 1482">If the audit trail files are encrypted, it is only possible to generate screenshots on the Search interface if the required private keys are uploaded into the keystore of the user. The lack of the key was not handled well on the Search interface, and we did not display an error message or any notification about this.</p>	PAM-4770
<p data-bbox="201 1509 1062 1536">Detailed analytics information is missing from the search results</p> <p data-bbox="201 1561 1251 1650">When analytics functionality is turned on, in some rare cases the detailed analytics information is missing from the search results, both on the Search UI and from the REST response, too.</p>	PAM-4525

Table 4: Safeguard Desktop Player resolved issues

Resolved Issue	Issue ID
Follow mode in RDP does not work if a session contains multiple channels Follow mode in RDP did not work if a session contained multiple channels, for example, a Drawing and an rdpdr-printer channel. This has been corrected, now the Safeguard Desktop Player application automatically selects the channel which contains all the necessary information is needed to follow the session.	PAM-6817
Application freezes if the downloaded .zat file is incomplete The Safeguard Desktop Player application remained in loading phase if the end of the file record was missing from the audit trail being loaded. This has been corrected, the application now handles such errors properly.	PAM-6566
File association is not working After installing the Safeguard Desktop Player application, the SRS and ZAT filetypes were not associated to the application. This has been corrected.	PAM-6437
The application fails to start The Safeguard Desktop Player application failed to start on systems using a new Intel HD Graphics driver (Version: 23.20.16.4973), displaying the following error message: "Unhandled exception at 0x00007FFF90E5BB6B (ig9icd64.dll) in player.exe: 0xC0000005: Access violation reading location 0xFFFFFFFFFFFFFFFF. occurred" This has been corrected, now the application starts properly.	PAM-5489
Configuration files are inaccessible after a system-wide installation After a system-wide install, if the user selected the 'Run Safeguard Desktop Player now' option in the installer, the application started with root permissions, and wrote configuration files into the users home directory. Now this is not possible, as there is no option to launch the application from the installer on system-wide installations.	PAM-4523

System requirements

Before installing SPS 5.9, ensure that your system meets the following minimum hardware and software requirements.

Supported web browsers and operating systems

Supported browsers: the current version of Mozilla Firefox and Google Chrome, Microsoft Edge, 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.

⚠ CAUTION:

Since the official [support of Internet Explorer 9 and 10 ended in January, 2016](#), they are not supported in SPS version 4 F3 and later.

⚠ CAUTION:

Even though the 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 Search \(classic\)](#) and [Safeguard Desktop Player User Guide](#).

ℹ NOTE:

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

ℹ NOTE:

The minimum recommended screen resolution for viewing 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 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 6, CentOS 6, or newer. The Safeguard Desktop Player application will probably run on other distributions as well that have at least libc6 version 2.12 installed.

Installing the Safeguard Desktop Player application requires about 120MB 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.

Supported virtual environments for evaluating One Identity Safeguard for Privileged Sessions

To evaluate One Identity Safeguard for Privileged Sessions as a virtual appliance, you can download and install the latest SPS ISO file into a virtual machine. The following virtual environments are supported for evaluation:

- Kernel-based Virtual Machine (KVM)
- Microsoft Hyper-V
- VMware
- vSphere (VMware ESX)

SPS may work in other virtual environments like VirtualBox as well, although these are officially not supported. You can obtain an evaluation license and the ISO file using your [support portal](#) account.

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 Sessions 5 F9

For step-by-step instructions on upgrading to SPS 5 F9, see [Upgrade Guide](#).

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 5 F1 or 5 F2), you have 2 months to upgrade to version 5 F9 if you want to keep running on a supported release.

For a full description of stable and feature releases, open the [SPS product page on the Support Portal](#) and navigate to **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 SPS 5 F9, 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 SPS 5 F9 if you are running SPS on Pyramid hardware:

⚠ CAUTION:

Physical SPS appliances based on Pyramid hardware are not supported in 5 F1 and later feature releases. Do not upgrade to 5 F1 or later on a Pyramid-based hardware. The last supported release for this hardware is 5 LTS, which is a long-term supported release.

If you have purchased SPS before August, 2014 and have not received a replacement hardware since then, you have Pyramid hardware, so do not upgrade to SPS 5 F1 or later. If you have purchased SPS after August 2014, you can upgrade to 5 F1.

If you do not know the type of your hardware or when it was purchased, complete the following steps:

1. Login to SPS.
2. Navigate to **Basic Settings > Troubleshooting > Create support bundle**, click **Create support bundle**, and save the file.
3. Open a ticket at <https://support.oneidentity.com/create-service-request/>.
4. Upload the file you downloaded from SPS in Step 1.
5. We will check the type of your hardware and notify you.

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 5 F9 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 the One Identity 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 or other inquiries, visit <https://www.oneidentity.com/company/contact-us.aspx> or call +1-800-306-9329.

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:

- Submit and manage a Service Request
- View Knowledge Base articles
- Sign up for product notifications
- Download software and technical documentation
- View how-to-videos at www.YouTube.com/OneIdentity
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product

Third-party contributions

This appendix includes the open source licenses and attributions applicable to One Identity Safeguard for Privileged Sessions.

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Version 2, June 1991

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Legend

-  **WARNING: A WARNING icon indicates a potential for property damage, personal injury, or death.**
-  **CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.**
-  **IMPORTANT, NOTE, TIP, MOBILE, or VIDEO: An information icon indicates supporting information.**