

Safeguard for Privileged Passwords 6.6

Release Notes

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These release notes provide information about the Safeguard for Privileged Passwords 6.6 release.

Release options

Safeguard for Privileged Passwords includes two release versions:

- Long Term Support (LTS) release, version 6.0.6
- Feature release, version 6.6

The versions align with Safeguard for Privileged Sessions. For more information, see [Long Term Support \(LTS\) and Feature Releases](#) on page 18.

About this release

Safeguard for Privileged Passwords Version 6.6 is minor feature release with new features, resolved issues, and known issues.

The new features include:

- SSH authorized key management (191569)
- Directory synchronization control (191606)
- Personal password vault (191579)
- Show account availability (191596)

For more details, see:

- [New features](#)
- [Resolved issues](#)
- [Known issues](#)

NOTE: For a full list of key features in Safeguard for Privileged Passwords, see the *Safeguard for Privileged Passwords Administration Guide*.

About the Safeguard product line

The Safeguard for Privileged Passwords 3000 and 2000 Appliances are built specifically for use only with the Safeguard for Privileged Passwords 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 time frame to value.

Safeguard for Privileged Passwords virtual appliances and cloud applications are also available. 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. See [One Identity's Product Support Policies](#) for more information on environment virtualization.

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:

- **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

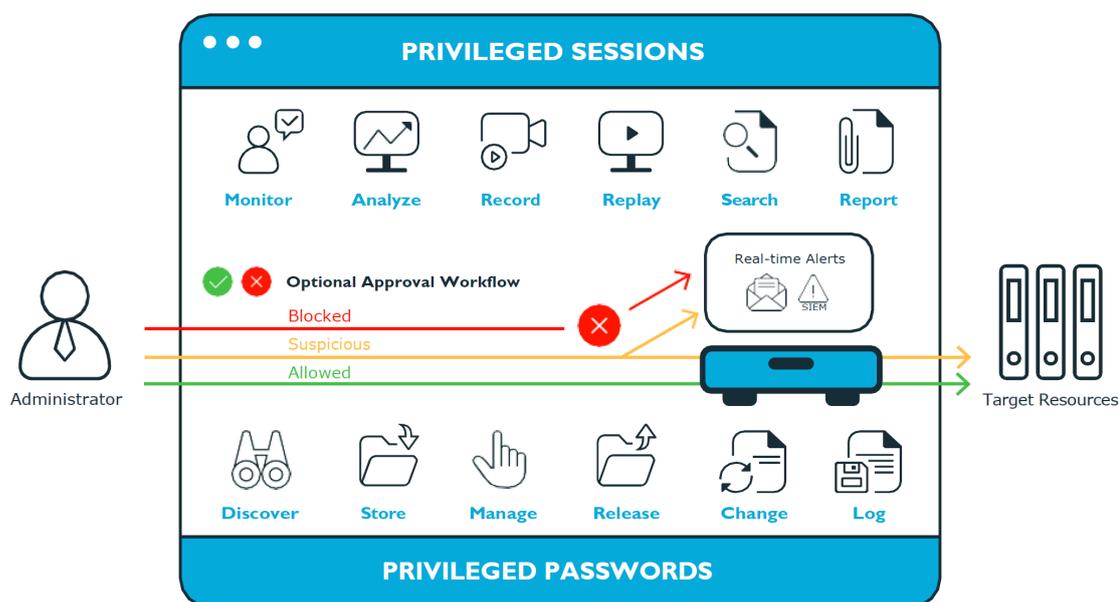
from anywhere and using nearly any device. The result is a solution that secures your enterprise and enables your privileged users with a new level of freedom and functionality.

- **One Identity 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 to integrate 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.

Figure 1: Privileged Sessions and Privileged Passwords



New features

SSH authorized key management (191569)

SSH authorized key management provides a centralized database of SSH keys, key rotation, and identification of unauthorized keys to better maintain company security policy. Existing SSH keys can be uploaded and entrusted to Safeguard for Privileged Passwords. Each managed account can have a single SSH identity key. An SSH key can be requested and configured for A2A (account level scoping) and used for sessions.

- Asset Administrators can:
 - Discover the SSH keys that authorize access to specified privileged accounts to determine if access is properly authorized.
 - Store and protect legitimate SSH key pairs in the vault and have the public key automatically added to a target privileged account. This then enables a Security Policy Administrator to grant access using an SSH key via Safeguard for Privileged Passwords access policy.
 - Similar to the password management features of Safeguard for Privileged Passwords, SSH keys may be changed or rotated based on a profile schedule or access request policy.
- Security Policy Administrators can:
 - Allow users to request to check out an SSH key to log in to an asset via SSH key authentication.
 - Allow users to request a recorded SSH session to an asset using SSH key authentication instead of a password.
- The Safeguard for Privileged Passwords Application to Application (A2A) service can access an SSH key and pass it to an application to access a target host as a privileged account.

Directory synchronization control (191606)

Asset Administrators can run directory synchronization processes by asset and account. User Administrators can run directory synchronization processes for directory users (identity providers) and directory user groups.

When an administrator clicks  **Synchronize Now**, the additions (incremental) sync is run which includes all additions and changes except deletions. This is the faster type of sync. A **Tasks** window displays the progress. The administrator can click  **Details** to see more information or click  **Stop** to cancel the task.

The API can be used to run the deletion (full) sync which includes all deletions, additions, and changes. A deletion (full) sync takes longer (perhaps hours), especially the first time it is run based on your directory setup and the objects included in the API Assets/Synchronize or IdentityProviders/Synchronize task.

Personal password vault (191579)

The personal password vault extends security and credential protection to business users to store and manage passwords. Users must have the **Personal Passwords** permission granted.

User benefits include:

- Users can store up to 100 personal passwords, set optional expiration dates, and share passwords.
- Users know at a glance the last time they changed their password.
- Users have a history of personal password changes. This is handy if the user changes the password in the vault but not on the target account or if the user needs to work from a backup.
- A password can be shared by the user with one other user. For example, when a user is not available they can give a coworker access to a password. Access can be revoked or the user that has the password shared can opt out of the share.

With the personal password vault, business user passwords are under the control of the IT and security teams, versus a variety of methods of storing passwords. Benefits of the personal password vault for Security Policy Administrators and User Administrators include:

- An organization sanctioned and controlled tool is used for users to store personal passwords.
- Personal passwords are secured and encrypted. They are stored separately from managed account passwords.
- The personal password vault audits the retrieval and change of passwords so administrators know when users pulled information from the vault.
- Administrators can recover passwords when someone leaves the company. The administrator must change the authentication provider to local, set the password of the user, and then log in and view the personal password vault.
- There is no way to recover the personal password vault of a deleted user.

System users (like the bootstrap admin) cannot create personal accounts.

Show account availability (191596)

When **Show Account Availability** is enabled in the web client, a user can identify if a privileged account is available or not. Accounts display a  warning badge if in use when requesting access and from the favorites list. This is especially useful for help desk staff when handling tickets and for administrators responsible for unlocking directory users and resetting passwords. In the web client, near your user name, click  then **Application Settings**. Click **My Requests** and, under **My Request Options**, toggle **Show Account Request Availability (enabling this may impact performance)** to on .

See also:

- [Resolved issues](#) on page 6

Resolved issues

Issues addressed by this release follow.

Table 1: General resolved issues

Resolved issue	Issue ID
Updated the documentation to place changing the Bootstrap Administrator in the correct step sequence. See the <i>Safeguard for Privileged Passwords Appliance Setup Guide</i> , Completing the appliance setup topic.	236508
Improved directory delete synchronization logic when asset Directory Properties are misconfigured.	233748
<p>Platform Name and Platform Version are available criteria when creating a dynamic tag via Administrative Tools Settings Asset Management Tags. You can specify the platform as follows:</p> <ul style="list-style-type: none">• Platform: This is the broadest search which will return the most results. The value you enter matches if it is found in one or more of the following:<ul style="list-style-type: none">• DisplayName (Platform Name) such as Windows• PlatformType such as MicrosoftAD, Ubuntu, RacfLdap• PlatformFamily such as Windows, Linux, AIX• Platform.Version (Platform Version) such as Server 2016, 10 <p>For example, typing in Other could return these platforms: Windows Other, Other Other, and Other.</p> <ul style="list-style-type: none">• Platform Name: For a more granular search, enter the name of the platform, such as windows. If you enter windows without entering a Platform Version, there may be a match on windows Server 2019, Windows Server 2016, and Windows 10.• Platform Version: Enter the version of the platform, such as Server 2016. For a precise search, enter both the Platform Name and the Platform Version, For example, if you enter the Platform Name as Windows and the Platform Version as Server 2016, then only Windows Server 2016 will be selected.	231860
Added ability to have a network address with an underscore.	231478
Improved data was added to the syslog output, including missing information	229594

Resolved issue	Issue ID
for the authorization events and redundant properties to events using suid/suser to clarify CEF properties.	
eDirectory can be added as an identity provider.	229106
Asset Discovery Rule, Condition dialog, filter by Group option is available.	228867
Error messages are scrollable for full viewing and closing.	228732
Safeguard for Privileged Passwords can look up information for the calling user.	227561
On Administrative Tools Settings Asset Management Tags , the Effective Profile Name was added. Profiles can be inherited. For example, an account can be assigned to a specific profile (Profile Name) or it can inherit the profile from its parent asset (Effective Profile Name). When inherited, Profile Name will be null. Effective Profile Name will always have a value.	224021
For requests, the Comments can contain multiple lines.	216278
Safeguard for Privileged Passwords supports VSphere 6.7.2.	200347
<p>In order to SPS join, the cluster must be locked. If the join attempt fails due to a cluster operation in progress, it means there is already an operation running which has obtained the cluster lock.</p> <p>Using the desktop client, navigate to Settings Cluster Cluster Management to force complete and result in cancellation of the operation. You should never cancel the cluster lock for an SPP unjoin, failover, cluster reset, restore, patch, or IP address update. If a SPP join (enroll) is taking a long time, you may cancel it during the streaming audit data step. If a patch distribution is taking a long time, you may cancel it and upload the patch to the replicas directly. See Unlocking a locked cluster.</p> <p>If the operation in progress is the weekly cluster data consistency operation, the operation can be canceled but the amount of time it takes to cancel can vary. You can view the activity center for the following events which mark the progress and completion of the data consistency operation.</p> <p>SynchronizingDataStartedEvent: Data consistency always starts with this event</p> <p>SynchronizingDataCompletedEvent: Signals the completion of data synchronization</p> <p>SynchronizingAuditLogsStartedEvent: Signals the start of the audit log synchronization</p> <p>SynchronizingAuditLogsCompletedEvent: Signals the completion of audit log synchronization and the completion of the data consistency operation</p>	188700

Resolved issue	Issue ID
The completion events will indicate success or failure. If you choose to cancel, look out for these completion events which will contain details on the cancel.	
The RDP session does not requires sg for session authentication.	188427
For support bundles, you can select Limit included log files to a number of days from Administrative Tools Settings Appliance Support Bundle .	187961

Known issues

The following is a list of issues known to exist at the time of release.

Known issue	Issue ID
When importing an SSH key that has already been manually configured for an account on an asset, it is recommended that you first verify that the key has been correctly configured before importing the key. For example, you can run an SSH client program to check that the private key can be used to login to the asset: <code>ssh -i <privatekeyfile> -l <accountname> <assetIp></code> . Refer to the OpenSSH server documentation for the target platform for more details on how to configure an authorized key.	233180
SPP supports RSA key lengths of 1024, 2048, 4096, and 8192-bit. Larger key sizes take longer to generate. In particular, a key size of 8192-bits may take several minutes.	231535
Deleting an SSH key from an account using the <code>AssetAccounts/{id}/SshKey</code> API will not remove the authorized key from the account's authorized keys file on the asset, so the public key may be discovered by a subsequent Discovery operation. It is recommended to set the access request policy to change the key after it is released. To do this, navigate to Administrative Tools Entitlements Access Request Policies (create or edit a policy). On the Access Config tab, select Change SSH Key after check-in . For details, see the <i>Safeguard for Privileged Passwords Administration Guide, Access Config tab</i> . A future release will address SSH key deletion.	230584
Suspend/Restore of a PAN-OS account does not Suspend/Restore SSH Key authentication.	230555

System requirements and versions

Safeguard for Privileged Passwords has several graphical user interfaces that allow you to manage access requests, approvals, and reviews for your managed accounts and systems:

- The Windows desktop client consists of an end-user view and administrator view. The fully featured desktop client exposes all of the functionality of Safeguard based on the role of the authenticated user.
- The web client is functionally similar to the desktop client end-user view and useful for requestors, reviewers, and approvers. Many administration functions are available as well.
- The web management console displays whenever you connect to the virtual appliance and is used for first time configuration. 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. See [One Identity's Product Support Policies](#) for more information on environment virtualization.

Ensure that your system meets the minimum hardware and software requirements for these clients.

If a Safeguard Sessions Appliance is joined to Safeguard for Privileged Passwords, session recording is handled via Safeguard for Privileged Session. The join is initiated from Safeguard for Privileged Sessions. For details about the join steps and issue resolution, see the [One Identity Safeguard for Privileged Sessions Administration Guide](#).

Bandwidth

It is recommended that connection, including overhead, is faster than 10 megabits per second inter-site bandwidth with a one-way latency of less than 500 milliseconds. If you are using traffic shaping, you must allow sufficient bandwidth and priority to port 655 UDP/TCP in the shaping profile. These numbers are offered as a guideline only in that other factors could require additional network tuning. These factors include but are not limited to: jitter, packet loss, response time, usage, and network saturation. If there are any further questions, please check with your Network Administration team.

Desktop client system requirements

The desktop client is a native Windows application suitable for use on end-user machines. You install the desktop client by means of an MSI package that you can download from the appliance web client portal. You do not need administrator privileges to install Safeguard for Privileged Passwords.

NOTE: PuTTY is used to launch the SSH client for SSH session requests and is included in the install. The desktop client looks for any user-installed PuTTY in the following locations:

- Any reference to putty in the PATH environment variable
- c:/Program Files/Putty
- c:/Program Files(x86)/Putty
- c:/Putty

If PuTTY is not found, the desktop client uses the version of PuTTY that it installed at:

<user-home-dir>/AppData/Local/Safeguard/putty.

If the user later installs PuTTY in any of the locations above, the desktop client uses that version which ensures the user has the latest version of PuTTY.

Table 2: Desktop client requirements

Component	Requirements
Technology	Microsoft .NET Framework 4.6 (or later)
Windows platforms	<p>64-bit editions of:</p> <ul style="list-style-type: none"> • Windows 7 • Windows 8.1 • Windows 10 • Windows Server 2008 R2 • Windows Server 2012 • Windows Server 2012 R2 • Windows Server 2016 <p>If the appliance setting, TLS 1.2 Only is enabled, (Administrative Tools Settings Appliance Appliance Information), ensure the desktop client also has TLS 1.2 enabled. If the client has an earlier version of TLS enabled, you will be locked out of the client and will not be able to connect to Safeguard for Privileged Passwords.</p> <p>Considerations:</p> <ul style="list-style-type: none"> • Internet Explorer security must be set to use TLS 1.0 or higher. Ensure the proper "Use TLS" setting is enabled on the Advanced tab of the Internet Options dialog (In Internet Explorer, go to Tools Internet Options Advanced tab). • To use FIDO2 two-factor authentication, you will need a web browser that supports the WebAuthn standard.
Desktop Player	See <i>One Identity Safeguard for Privileged Sessions [version] Safeguard Desktop Player User Guide</i> available at: One Identity Safeguard for Privileged Sessions - Technical Documentation, User Guide .

Web client system requirements

Table 3: Web requirements

Component	Requirements
Web browsers	<p>Desktop browsers:</p> <ul style="list-style-type: none">• Apple Safari 13.1 for desktop (or later)• Google Chrome 80 (or later)• Microsoft Edge 80 (or later)• Mozilla Firefox 69 (or later)• Microsoft Internet Explorer 11 (Newer features may not work with Internet Explorer. You are encouraged to upgrade to a browser that can support all functionality.) <p>Mobile device browsers:</p> <ul style="list-style-type: none">• Apple iOS 13 (or later)• Google Chrome on Android version 80 (or later)

Web management console system requirements

Table 4: Web kiosk requirements

Component	Requirements
Web management console	<p>Desktop browsers:</p> <ul style="list-style-type: none">• Apple Safari 13.1 for desktop (or later)• Google Chrome 80 (or later)• Microsoft Edge 80 (or later)• Mozilla Firefox 69 (or later)• Microsoft Internet Explorer 11 (Newer features may not work with Internet Explorer. You are encouraged to upgrade to a browser that can support all functionality.)

Platforms and versions follow.

- You must license the VM with a Microsoft Windows license. We recommend using either the MAK or KMS method. Specific questions about licensing should be directed to your Sales Representative.

- Supported hypervisors:
 - Microsoft Hyper-V (VHDX) version 8 or higher
 - VMware vSphere with vSphere Hypervisor (ESXi) versions 6.5 or higher
 - VMware Workstation version 13 or higher
- Minimum resources: 4 CPUs, 10GB RAM, and a 500GB disk. The virtual appliances default deploy does not provide adequate resources. Ensure these minimum resources are met.

Supported platforms

Safeguard for Privileged Passwords supports a variety of platforms, including custom platforms.

Safeguard for Privileged Passwords tested platforms

The following table lists the platforms and versions that have been tested for Safeguard for Privileged Passwords (SPP). Additional assets may be added to Safeguard for Privileged Passwords. If you do not see a particular platform listed when adding an asset, use the **Other**, **Other Managed**, or **Other Linux** selection on the **Management** tab of the **Asset** dialog.

eDirectory is not supported but can be added as an identity provider.

SPP joined to SPS: Sessions platforms

When Safeguard for Privileged Passwords (SPP) is joined with a Safeguard for Privileged Sessions (SPS) appliance, platforms are supported that use one of these protocols:

- SPP 2.8 or lower: RDP, SSH
- SPP 2.9 or higher: RDP, SSH, or Telnet

Some platforms may support more than one protocol. For example, a Linux (or Linux variation) platform supports both SSH and Telnet protocols.

Table 5: Supported platforms: Assets that can be managed

Platform Name	Platform Version	Architecture (all versions unless noted)	Supports SPP	Supports SPS
ACF2 - Mainframe	r14, r15	zSeries	True	True
ACF2 - Mainframe LDAP	r14, r15	zSeries	True	False

Platform Name	Platform Version	Architecture (all versions unless noted)	Supports SPP	Supports SPS
Active Directory			True	False
AIX	6.1, 7.1, 7.2	PPC	True	True
Amazon Linux	2	x86_64	True	True
Amazon Web Services	1		True	False
CentOS Linux	6 7 8	(ver 6) x86, x86_64 (ver 7) x86_64 (ver 8) x86_64	True	True
Cisco ASA	7.x, 8.x, 9.X		True	True
Cisco IOS	12.X, 15.X, 16.X		True	True
Debian GNU/Linux	6, 7, 8, 9,10	MIPS, PPC, x86, x86_64, zSeries	True	True
Dell iDRAC	7, 8, 9		True	True
ESXi (VSphere)	5.5, 6.0, 6.5, 6.7x		True	False
F5 Big-IP	12.1.2, 13.0, 14.0, 15.0		True	True
Fedora	21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32	x86, x86_64	True	True
Fortinet FortiOS	5.2, 5.6, 6.0, 6.2		True	True
FreeBSD	10.4, 11.1, 11.2, 12.0	x86, x86_64	True	True
HP iLO	2, 3, 4, 5	x86	True	True
HP iLO MP	2, 3	IA-64	True	True
HP-UX	11iv2 (B.11.23), 11iv3 (B.11.31)	IA-64, PA-RISC	True	True
IBM i	7.1, 7.2, 7.3, 7.4	PPC	True	True
Junos - Juniper Networks	12, 13, 14, 15, 16, 17, 18, 19		True	True

Platform Name	Platform Version	Architecture (all versions unless noted)	Supports SPP	Supports SPS
macOS	10.9, 10.10, 10.11, 10.12, 10.13, 10.14, 10.15	x86_64	True	True
MongoDB	3.4, 3.6, 4.0, 4.2		True	False
MySQL	5.6, 5.7, 8.0		True	False
OpenLDAP	2.4		True	False
Oracle	11g Release 2, 12c Release 1 12c Release 2 18c 19c		True	False
Oracle Linux (OL)	6, 7, 8	(ver 6) x86, x86_64 (ver 7 and 8) x86_64	True	True
Other			False	False
Other Linux			True	True
Other Managed			True	False
PAN-OS	6.0, 7.0, 8.0, 8.1, 9.0		True	True
PostgreSQL	9.6, 10, 10.2, 10.3, 10.4, 10.5, 11, 12		True	False
RACF - Mainframe	z/OS V2.1 Security Server, z/OS V2.2 Security Server z/OS V2.3 Security Server	zSeries	True	True
RACF - RACF - Mainframe LDAP	z/OS V2.1 Security Server, z/OS V2.2 Security Server z/OS V2.3 Security Server	zSeries	True	False
Red Hat Enterprise Linux (RHEL)	6, 7, 8	(ver 6) PPC, x86, x86_64, zSeries (ver 7 and 8) PPC, x86_64, zSeries	True	True

Platform Name	Platform Version	Architecture (all versions unless noted)	Supports SPP	Supports SPS
SAP HANA	2.0	Other	True	False
SAP Netweaver Application Server	7.3, 7.4, 7.5		True	False
Solaris	10, 11	(ver 10) SPARC, x86, x86_64 (ver 11) SPARC, x86_64	True	True
SonicOS	5.9, 6.2, 6.4, 6.5		True	False
SonicWALL SMA or CMS	11.3.0		True	False
SQL Server	2012, 2014, 2016, 2017		True	False
SUSE Linux Enterprise Server (SLES)	11, 12, 15	(ver 11) IA-64, PPC, x86, x86_64, zSeries, (ver 12 and 15) PPC, x86_64, zSeries	True	True
Sybase (Adaptive Server Enterprise)	15.7, 16, 17		True	False
Top Secret - Mainframe LDAP	r14, r15, r16	zSeries	True	False
Top Secret - Mainframe	r14, r15, r16	zSeries	True	True
Ubuntu	14.04 LTS, 15.04, 15.10, 16.04 LTS, 16.10, 17.04, 17.10, 18.04 LTS, 18.10, 19.04 19.10, 20.4	ver 14.04 to ver 19.04) x86, x86_64 (ver 19.10 and 20.4) x86_64	True	True
Windows	Vista, 7, 8, 8.1, 10 Enterprise (including LTSC and IoT)		True	True

Platform Name	Platform Version	Architecture (all versions unless noted)	Supports SPP	Supports SPS
	Server 2008, Server 2008 R2, Server 2012, Server 2012 R2, Server 2016, Server 2019			
Windows (SSH)	7, 8, 8.1, 10 Server 2008 R2, 2012, 2012 R2, 2016, 2019 Windows SSH Other		True	True

Table 6: Supported platforms: Directories that can be searched

Platform Name	Platform Version
Microsoft Active Directory	Windows 2008+ DFL/FFL
OpenLDAP	2.4

For all supported platforms, it is assumed that you are applying the latest updates. For unpatched versions of supported platforms, Support will investigate and assist on a case-by-case basis but it may be necessary for you to upgrade the platform or use SPP's custom platform feature.

Custom platforms

The following example platform scripts are available:

- Custom HTTP
- Linux SSH
- Telnet
- TN3270 transports are available

For more information, see the *Safeguard for Privileged Passwords Administration Guide*, Custom Platforms and Creating a custom platform script.

Sample custom platform scripts and command details are available at the following links available from the [Safeguard Custom Platform Home](#) wiki on GitHub:

- Command-Reference:
<https://github.com/OneIdentity/SafeguardCustomPlatform/wiki/Command-Reference>
- Writing a custom platform script:
<https://github.com/OneIdentity/SafeguardCustomPlatform/wiki/WritingACustomPlatformScript>
- Example platform scripts are available at this location:

<https://github.com/OneIdentity/SafeguardCustomPlatform/tree/master/SampleScripts>

⚠ CAUTION: Example scripts are provided for information only. Updates, error checking, and testing are required before using them in production. Safeguard for Privileged Passwords checks to ensure the values match the type of the property that include a string, boolean, integer, or password (which is called secret in the API scripts). Safeguard for Privileged Passwords cannot check the validity or system impact of values entered for custom platforms.

License: hardware, virtual, expiration

Safeguard for Privileged Passwords is made up of a core set of features, such as the UI and Web Services layers, and a number of modules.

Hardware appliance

The Safeguard for Privileged Passwords 3000 Appliance and 2000 Appliance ship with the following module which requires a valid license to enable functionality:

- Privileged Passwords

You must install a valid license for each Safeguard for Privileged Passwords module to operate. More specifically, if any module is installed, Safeguard for Privileged Passwords will show a license state of **Licensed** and is operational. However, depending on which models are licensed, you will see limited functionality. That is, even though you will be able to configure access requests:

- If a Privileged Passwords module license is not installed, you will not be able to request a password release.

Virtual appliance licensing

You must license the virtual appliance with a Microsoft Windows license. We recommend using either the MAK or KMS method. Specific questions about licensing should be directed to your Sales Representative.

Privileged sessions is available via a join to Safeguard for Privileged Sessions.

The virtual appliance will not function unless the operating system is properly licensed.

As a Safeguard for Privileged Passwords user, if you get an "appliance is unlicensed" notification, contact your Appliance Administrator.

Long Term Support (LTS) and Feature Releases

Releases use the following version designations:

- Long Term Support (LTS) Releases: The first digit identifies the release and the second is a zero (for example, 6.0 LTS).
- Maintenance LTS Releases: A third digit is added followed by LTS (for example, 6.0.6 LTS).
- Feature Releases: The Feature Releases version numbers are two digits (for example, 6.6).

Customers choose between two lanes for receiving releases: Long Term Support (LTS) Release or Feature Release. See the following table for details.

Table 7: Comparison of Long Term Support (LTS) Release and Feature Release

	Long Term Support (LTS) Release	Feature Release
Release frequency	<p>Frequency: Typically, every 2 years</p> <p>Scope: Includes new features, resolved issues and security updates</p> <p>Versioning: The first digit identifies the LTS and the second digit is a 0 (for example, 6.0 LTS, 7.0 LTS, and so on).</p>	<p>Frequency: Typically, every 3 months</p> <p>Scope: Includes the latest features, resolved issues, and other updates, such as security patches for the OS</p> <p>Versioning: The first digit identifies the LTS and the second digit is a number identifying the Feature Release (for example, 6.6, 6.7, and so on).</p>
Maintenance Release	<p>Frequency: Typically, every 3 months during full support</p> <p>Scope: Includes critical resolved issues</p> <p>Versioning: A third digit designates the maintenance LTS Release (for example, 6.0.6 LTS).</p>	<p>Frequency: Only for highly critical issues</p> <p>Scope: Includes highly critical resolved issues</p> <p>Versioning: A third digit designates the maintenance Feature Release (for example, 6.6.1).</p>
Support	Support extends typically 3 years after the original publication date or until the next LTS is published (whichever date is later).	Support extends typically 6 months after the original publication date or until the next feature or LTS Release is published (whichever date is later).

Release details can be found at [Product Life Cycle](#).

CAUTION: Downgrading from the latest Feature Release, even to an LTS release, voids support for SPP.

One Identity strongly recommends always installing the latest revision of the release path you use (Long Term Support path or Feature Release path).

Moving between LTS and Feature Release versions

You can move from an LTS version (for example, 6.0.7 LTS) to the same feature version (6.7) and then patch to a later feature version. After that, you can patch from the minimum version for the patch, typically N-3. If you move from an LTS version to a feature version, you will receive a warning like the following which informs you that you will only be able to apply a Feature Release until the next LTS Release:

Warning: You are patching to a Feature Release from an LTS Release. If you apply this update, you will not be able to upgrade to a non-Feature Release until the next LTS major release version is available. See the Administration Guide for details.

You cannot move from a Feature Release to LTS Release. For example, you cannot move from 6.7 to 6.0.7 LTS. You have to keep upgrading with each new Feature Release until the next LTS Release version is published. For this example, you would wait until 7.0 LTS is available.

Patching

You can only patch from a major version. For example, if you have version 6.6 and want to patch to 7.7, you must patch to 7.0 LTS and then apply 7.7.

An LTS major version of Safeguard for Privileged Passwords (SPP) will work with the same LTS major version of Safeguard for Privileged Sessions (SPS). For the best experience, it is recommended you keep both their SPP and SPS in sync on the latest and supported version.

Appliance specifications

The Safeguard for Privileged Passwords Appliance is built specifically for use only with the Safeguard for Privileged Passwords privileged management 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.

The following two tables list the Safeguard for Privileged Passwords 3000 Appliance and 2000 Appliance specifications and power requirements.

Table 8: 3000 Appliance: Feature specifications

3000 Appliance	Feature / Specification
Processor	Intel Xeon E3-1275v6 3.8 GHz
# of Processors	1

3000 Appliance	Feature / Specification
# of Cores per Processor	4 cores (8 threads)
L2/L3 Cache	8MB L3 Cache
Chipset	Intel C236 Chipset
DIMMs	Unbuffered ECC UDIMM DDR4 2400MHz
RAM	32 GB
Internal HD Controller	LSI MegaRAID SAS 9361-4i Single
Disk Hard Drive	4 x Seagate 7E2000 2TB SAS 512E
Availability	TPM 2.0, EEC Memory, Redundant PSU
I/O Slots	x16 PCIe 3.0, x8 PCIe 3.0
RAID	RAID10
NIC/LOM	4 port - dual GbE LAN with Intel i210-AT
Power Supplies	Redundant, 700W, Auto Ranging (100v~240V), ACPI compatible
Fans	1 Supermicro SNK-P0046P and 2 Micron 16GB 2666MHz 2R ECC Unb Z01B Dual Label
Chassis	1U Rack
Dimensions (HxWxD)	43 x 437.0 x 597.0 (mm) 1.7 x 17.2 x 23.5 (in)
Weight	Max: 37 lbs (16.78 Kg)

Table 9: 2000 Appliance: Feature specifications

2000 Appliance	Feature / Specification
Processor	Intel Xeon E3-1275v5 3.60 GHz
# of Processors	1
# of Cores per Processor	4
L2/L3 Cache	4 x 256KB L2, 8MB L3 SmartCache
Chipset	Intel C236 Chipset
DIMMs	DDR4-2400 ECC Unbuffered DIMMs
RAM	32GB

2000 Appliance	Feature / Specification
Internal HD Controller	LSI MegaRAID SAS 9391-4i 12Gbps SAS3
Disk	4 x Seagate EC2.5 1TB SAS 512e
Availability	TPM 2.0, EEC Memory, Redundant PSU
I/O Slots	x16 PCIe 3.0, x8 PCIe 3.0
RAID	RAID10
NIC/LOM	3 x Intel i210-AT GbE
Power Supplies	Redundant, 700W, Auto Ranging (100v~240V), ACPI compatible
Fans	4 x 40mm Counter-rotating, Non-hot-swappable
Chassis	1U Rack
Dimensions (HxWxD)	43 x 437.0 x 597.0 (mm) 1.7 x 17.2 x 23.5 (in)
Weight	Max: 46 lbs (20.9 Kg)
Miscellaneous	FIPS Compliant Chassis

Table 10: 3000 Appliance and 2000 Appliance: Power requirements

Input Voltage	100-240 Vac
Frequency	50-60Hz
Power Consumption (Watts)	170.9
BTU	583

Safeguard for Privileged Passwords is also available as a virtual appliance and from the cloud. For details see:

- [Using the virtual appliance and web management console](#)
- [Using the cloud](#)

Appliance LCD and controls

The front panel of the Safeguard for Privileged Passwords 3000 Appliance and 2000 Appliance contain the following controls for powering on, powering off, and scrolling through the LCD display.

- ✓ Green check mark button: Use the **Green check mark** button to start the appliance. Press the **Green check mark** button for NO more than one second to power on the appliance.
 - CAUTION:** Once the Safeguard for Privileged Passwords Appliance is booted, DO NOT press and hold the Green check mark button. Holding this button for four or more seconds will cold reset the power of the appliance and may result in damage.
- Red X button: Use the **Red X** button to shut down the appliance. Press and hold the **Red X** button for four seconds until the LCD displays POWER OFF.
 - CAUTION:** Once the Safeguard for Privileged Passwords Appliance is booted, DO NOT press and hold the Red X button for more than 13 seconds. This will hard power off the appliance and may result in damage.
- Down, up, left, and right arrow buttons: When the appliance is running, the LCD home screen displays: Safeguard for Privileged Passwords <version number>. Use the arrow buttons to scroll through the following details:
 - Serial: <appliance serial number>
 - X0: <appliance IP address>
 - MGMT: <management IP address>
 - MGMT MAC: <media access control address>
 - IPMI: <IP address for IPMI>

Table 11: Appliance LCD and controls

Control	Description
Green check mark button	Use the Green check mark button to start the appliance. Press the Green check mark button for NO MORE THAN one second to power on the appliance. <ul style="list-style-type: none"> CAUTION: Once the Safeguard for Privileged Passwords Appliance is booted, DO NOT press and hold the Green check mark button. Holding this button for four or more seconds will cold reset the power of the appliance and may result in damage.
Red X button	Use the Red X button to shut down the appliance. Press and hold the Red X button for four seconds until the LCD displays POWER OFF. <ul style="list-style-type: none"> CAUTION: Once the Safeguard for Privileged Passwords Appliance is booted, DO NOT press and hold the Red X button for more than 13 seconds. This will hard power off the appliance and may result in damage.
Down, up, left,	When the appliance is running, the LCD home screen displays:

Control	Description
and right arrow buttons	<ul style="list-style-type: none"> • Safeguard for Privileged Passwords <version number> <p>Use the arrow buttons to scroll through the following details:</p> <ul style="list-style-type: none"> • Serial: <appliance serial number> • X0: <appliance IP address> • • MGMT: <management IP address> • MGMT MAC: <media access control address> • IPMI: <IP address for IPMI>

Product licensing

The Safeguard for Privileged Passwords 3000 Appliance and 2000 Appliance ship with the following modules, each requiring a valid license to enable functionality:

- One Identity Safeguard for Safeguard for Privileged Passwords (SPP)
- One Identity Safeguard for Privileged Sessions (SPS)
SPS is a separate product. To update the SPS license, see the *Safeguard for Privileged Sessions Administration Guide*, [Updating the SPS license](#).

To add a Safeguard for Privileged Passwords module license

The first time you log in to the Safeguard for Privileged Passwords desktop client as the Appliance Administrator, it prompts you to add a license. In addition, you can add additional Safeguard for Privileged Passwords module licenses.

1. Navigate to **Administrative Tools | Settings | Appliance | Licensing** in the desktop client.
2. Click **+**.
3. **Browse** to select the license file.
Once you add a license, Safeguard for Privileged Passwords displays the current license information and additional links that allow you to update the license.
4. To add another module license, click **Add Another License** from the **Success** dialog.

NOTE: To avoid disruptions in the use of Safeguard for Privileged Passwords, the Appliance Administrator must configure the SMTP server, and define email templates for the *License Expired* and the *License Expiring Soon* event types. This ensures you will be notified of an approaching expiration date.

Update and installation instructions

The Safeguard for Privileged Passwords 3000 and 2000 Appliances are built specifically for use only with the Safeguard for Privileged Passwords privileged management software, which is pre-installed and ready for immediate use on the hardened appliances.

Safeguard for Privileged Passwords virtual appliances and cloud applications are also available.

To set up a new deployment: 3000 Appliance, 2000 Appliance, Virtual Machine, or Cloud

If this is a new physical appliance, virtual machine, or cloud deployment, see the *Safeguard for Privileged Passwords Appliance Setup Guide*. The guide is also included in the package with a physical appliance.

To update an existing physical appliance or virtual appliance with this patch

It is the responsibility of the Appliance Administrator to upgrade Safeguard for Privileged Passwords by installing an update file (patch). Consider the following:

- **Minimum patch version:** 6.0.0.12276. If you are running an earlier version of the Safeguard for Privileged Passwords Appliance, you must upgrade to this version before applying the 6.6 patch.
- **Clustered environment:** See the [Patching cluster members](#) section in the *Safeguard for Privileged Passwords Administration Guide* for instructions on how to deploy a patch so all appliances in the cluster are on the same version.
- During initial installation and when applying a patch, make sure the desktop client file is the one supplied with the appliance version. If the versions are not compatible, errors may occur. For more information, see [To install the desktop client](#) on page 25.

Prepare to install a patch

1. Backup your appliance before you install a patch. Once you install a patch, you cannot uninstall it. See the *Safeguard for Privileged Passwords Administration Guide*, [Backup and restore](#) topic.
2. Download the latest physical appliance patch or virtual appliance patch from the One Identity Support Portal:
<https://support.oneidentity.com/one-identity-safeguard-for-privileged-passwords/download-new-releases>

To install the hardware patch

1. As an Appliance Administrator, log in to the Safeguard for Privileged Passwords desktop client.
2. From the **Home** page, select **⌘ Administrative Tools**.

3. Select **Settings | Appliance | Updates**.

The current appliance and client versions are displayed.

4. Click **Upload a File** and browse to select the update file you downloaded from the One Identity support web site.

NOTE: When you select a file, Safeguard for Privileged Passwords uploads it to the server, but does not install it.

5. Once the file has successfully uploaded, click **Install Now**.

To install the virtual machine patch

1. Make adequate resources available. The virtual appliances default deploy does not provide adequate resources. The minimum resources required are: 4 CPUs, 10GB RAM, and a 500GB disk. Without adequate disk space, the patch will fail and you will need to expand disk space then re-upload the patch.

2. Go to the web management console and click  **Setup** and follow the wizard.

To install the desktop client

Be sure to update the desktop client when you apply a new patch. The version of the appliance and desktop client must be compatible.

To define and enforce security policy for your enterprise, install the Windows desktop client application, which gives you access to the Administrative Tools. You install the Windows desktop client by means of an .msi package that can be downloaded from the appliance web client portal. You do not need administrator privileges to install the desktop client.

NOTE: PuTTY is used to launch the SSH client for SSH session requests and is included in the install. The desktop client looks for any user-installed PuTTY in the following locations:

- Any reference to putty in the PATH environment variable
- c:/Program Files/Putty
- c:/Program Files(x86)/Putty
- c:/Putty

If PuTTY is not found, the desktop client uses the version of PuTTY that it installed at:

<user-home-dir>/AppData/Local/Safeguard/putty.

If the user later installs PuTTY in any of the locations above, the desktop client uses that version which ensures the user has the latest version of PuTTY.

Installing the Safeguard for Privileged Passwords desktop client application

1. To download the Safeguard for Privileged Passwords desktop client Windows installer .msi file, open a browser and navigate to:

<https://<Appliance IP>/Safeguard.msi>

Save the **Safeguard.msi** file in a location of your choice.

2. Run the MSI package.

3. Select **Next** in the **Welcome** dialog.
4. Accept the **End-User License Agreement** and select **Next**.
5. Select **Install** to begin the installation.
6. Select **Finish** to exit the desktop client setup wizard.
7. Check your desktop resolution. The desktop client works the best at a resolution of 1024 x 768 or greater.

Installing the Desktop Player

⚠ CAUTION: If the Desktop Player is not installed and a user tries to play back a session from the Activity Center, a message like the following will display: No Desktop Player. The Safeguard Desktop Player is not installed. Would you like to install it now? The user will need to click **Yes** to go to the download page to install the player following step 2 below.

1. Once the Safeguard for Privileged Passwords installation is complete, go to the Windows **Start** menu, **Safeguard** folder, and click **Download Safeguard Player** to be taken to the [One Identity Safeguard for Privileged Sessions - Download Software](#) web page.
2. Follow the *Install Safeguard Desktop Player* section of the player user guide found here:
 - a. Go to [One Identity Safeguard for Privileged Sessions - Technical Documentation](#).
 - b. Scroll to **User Guide** and click *One Identity Safeguard for Privileged Sessions [version] Safeguard Desktop Player User Guide*.
3. For Safeguard Desktop player version 1.8.6 and later, ensure your signed web certificate has a Subject Alternative Name (SAN) that includes each IP address of each of your cluster members. If the settings are not correct, the Safeguard Desktop Player will generate a certificate warning like the following when replaying sessions: Unable to verify SSL certificate. To resolve this issue, import the appropriate certificates including the root CA.

New Desktop Player versions

When you have installed a version of the Safeguard Desktop Player application, you will need to uninstall the previous version to upgrade to a newer player version.

Verify successful installation

You can verify that the correct version has been successfully installed from the Safeguard for Privileged Passwords desktop client or the LCD on the Safeguard for Privileged Passwords Appliance.

To verify the uploaded patch was installed

1. Log in to the Safeguard for Privileged Passwords desktop client as an Operations Administrator or an Appliance Administrator.
2. Select ✕ **Administrative Tools**.
3. Select **Settings | Appliance | Appliance Information**.
4. Verify the correct appliance version is displayed in the appliance properties pane.

In addition, when the appliance is running, the LCD home screen on the front panel of the appliance displays **Safeguard for Privileged Passwords** <version number>. Therefore, you can verify the correct appliance version is running from there, as well.

More resources

Additional information is available from the following:

- Online product documentation: <https://support.oneidentity.com/one-identity-safeguard-for-privileged-passwords/technical-documents>
- One Identity Communities: <https://www.quest.com/community/one-identity/>
- Knowledge Base: <https://support.oneidentity.com/one-identity-safeguard-for-privileged-passwords/kb>

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. It supports simultaneous operation with multilingual data. 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).

The release is localized to the following languages: Arabic (Saudi Arabia), Chinese (Traditional), Dutch, French, German, Italian, Japanese, Korean, Russian, Spanish.

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:

- 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 components

This product contains third-party components (listed below). Copies of component licenses may be found at <https://www.oneidentity.com/legal/license-agreements.aspx>. Source code for components marked with an asterisk (*) is available at <http://opensource.quest.com>.

Table 12: List of third-party components

Component	License or acknowledgement
@angular/animations 7.2.15	Copyright (c) 2010-2019 Google LLC License Text - MIT N/A
@angular/cdk 7.3.7	Copyright (c) 2019 Google LLC. License Text - MIT N/A
@angular/common 7.2.15	Copyright (c) 2015 Cameron Spear The MIT License (MIT)
@angular/compiler 7.2.15	Copyright (c) 2010-2019 Google LLC. http://angular.io/license The MIT License
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@angular/material 7.3.7	Copyright (c) 2010-2019 Google LLC. http://angular.io/license License Text - MIT N/A
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@types/humanize-duration 3.18.0	Copyright (c) 2010-2019 Google LLC.

Component	License or acknowledgement
@types/jquery 3.3.31	<p data-bbox="906 264 1235 291">http://angular.io/license</p> <p data-bbox="906 313 1120 340">The MIT License</p> <p data-bbox="906 367 1353 430">Copyright Notice - @types/jquery 3.3.31</p> <p data-bbox="906 452 1394 819">Leonard Thieu, Boris Yankov, Christian Hoffmeister, Steve Fenton, Diullei Gomes, Tass Iliopoulos, Jason Swearingen, Sean Hill, Guus Goossens, Kelly Summerlin, Basarat Ali Syed, Nicholas Wolverson, Derek Cicerone, Andrew Gaspar, Seikichi Kondo, Benjamin Jackman, Poul Sorensen, Josh Strobl, John Reilly, Dick van den Brink, Thomas Schulz, Terry Mun</p> <p data-bbox="906 842 1114 869">License MIT 1.0</p>
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ANTLR 3.5.0.2	<p data-bbox="906 1330 1378 1393">Copyright © 2012 Terence Parr and Sam Harwell.</p> <p data-bbox="906 1415 1161 1442">All rights reserved.</p> <p data-bbox="906 1464 1378 1527">The component is governed by <i>BSD ANTRL 4</i> license.</p>
Antlr.Unofficial 3.4.1	<p data-bbox="906 1545 1343 1608">Copyright 2009-2014 The Apache Software Foundation</p> <p data-bbox="906 1630 1369 1693">This component is governed by the Apache 2.0 License.</p> <p data-bbox="906 1715 1257 1742">Version 2.0, January 2004</p> <p data-bbox="906 1765 1353 1792">http://www.apache.org/licenses/</p>
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Base58Check 0.2.0	Copyright 2015 adamcaudill. Public domain.
billboard.js 1.8.1	Copyright (c) 2017 ~ present NAVER Corp. MIT N/A
BouncyCastle 1.8.4 BouncyCastle.Crypto.dll 1.8.1	Copyright © 2000-2017 The Legion of the Bouncy Castle Inc.

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CassandraCSharpDriver 3.11.0	<p>Copyright © 2015 DataStax Inc.</p> <p>This component is governed by the Apache 2.0 License.</p> <p>Version 2.0, January 2004</p> <p>http://www.apache.org/licenses/</p>
Castle.Core 4.3.1	<p>Copyright 2004-2017 Castle Project - http://www.castleproject.org/</p> <p>This component is governed by the Apache 2.0 License.</p> <p>Version 2.0, January 2004</p> <p>http://www.apache.org/licenses/</p>
Cfa533Rs232Driver 0.9.23	<p>Copyright © 2017 petrsm</p> <p>This component is governed by the <i>MIT Cfa533Rs232Driver</i> license.</p>
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