

# One Identity Privilege Manager for Unix 6.1

## Release Notes

### July 2019

These release notes provide information about the One Identity Privilege Manager for Unix release.

## About this release

Privilege Manager for Unix protects the full power of root from potential misuse or abuse. With Privilege Manager there is no need to worry about anyone deleting critical files, modifying file permissions or databases, reformatting disks, or doing more subtle damage. Privilege Manager enables you to define a security policy that stipulates who has access to which root functions, as well as when and where they can perform those functions. It controls access to existing programs as well as purpose-built utilities that run common system administration tasks. At the administrator's request, Privilege Manager can protect sensitive data from network monitoring by encrypting the root commands or sessions it controls, including control messages and input keyed by users while running commands through Privilege Manager.

Privilege Manager for Unix 6.1 is a minor release that includes support for Starling Two-Factor Authentication, updated platform support for clients, updated Privileged Shells, and Bash shell support. See [New features](#), [Enhancements](#), and [Deprecated features](#).

# Supported platforms

The following table provides a list of supported platforms for Privilege Manager clients.

**⚠ CAUTION:** In future versions of the product, macOS, HP-UX, AIX, and Solaris will only be supported as Privilege Manager clients. The client and server will continue to be supported on Linux-based platforms. Users are advised to migrate their Privilege Manager policy servers to Linux-based systems.

**Table 1: Unix client: Supported platforms**

Platform	Version	Architecture
Amazon Linux AMI		x86_64
Apple macOS	10.12, 10.13, 10.14	x86_64
CentOS Linux	5, 6, 7, 8	Current Linux architectures: s390, s390x, PPC64, PPC64le, ia64, x86, x86_64, AARCH64
Debian	Current supported releases	x86_64, x86, AARCH64
Fedora Linux	Current supported releases	x86_64, x86, AARCH64
FreeBSD	10.x, 11.x	x32, x64
HP-UX	11.31	PA, IA-64
IBM AIX	7.1, 7.2	Power 4+
OpenSUSE	Current supported releases	x86_64, x86, AARCH64
Oracle Enterprise Linux (OEL)	5, 6, 7, 8	Current Linux architectures: s390, s390x, PPC64, PPC64le, ia64, x86, x86_64, AARCH64
Red Hat Enterprise Linux (RHEL)	5, 6, 7, 8	Current Linux architectures: s390, s390x, PPC64, PPC64le, ia64, x86, x86_64, AARCH64
Solaris	10.x, 11.x	SPARC, x64

Platform	Version	Architecture
SuSE Linux Enterprise Server (SLES)/Workstation	11, 12, 15	Current Linux architectures: s390, s390x, PPC64, PPC64le, ia64, x86, x86_64, AARCH64
Ubuntu	Current supported releases	x86_64, x86, AARCH64

## New features

New features in Privilege Manager for Unix 6.1:

- **Starling Two-Factor Authentication support:** As a user, you can use Starling Two-Factor Authentication when running Privilege Manager for Unix.

See also:

- [Enhancements](#)
- [Deprecated features](#)
- [Resolved issues](#)

## Enhancements

The following is a list of enhancements implemented in Privilege Manager for Unix 6.1.

**Table 2: General enhancements**

Enhancement	Issue ID
<b>Updated platform support for clients:</b> Privilege Manager 6.1 provides additional Linux platform support for ARM processors and FreeBSD. Some older platforms have been deprecated. See <a href="#">Supported platforms</a> for a list of currently supported platforms.	761293
<b>Updated Privilege Shells:</b> Updated privilege shells to the latest release to enable the latest features available.	786367
<b>Bash Shell support:</b> As a privileged user, you can now use Bash as a privilege shell, which allows you to use the Bash Shell to perform your day-to-day duties.	797508

# Deprecated features

Updated platform support:

- Privilege Manager for Unix clients: Some older platforms have been deprecated as they are removed from the mainstream support by the vendor. See [Supported platforms](#) for a list of currently supported platforms.

## Resolved issues

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

**Table 3: General resolved issues**

Resolved Issue	Issue ID
<b>Reported event times offset</b> Reported event times may be offset if the MCU console server and policy servers are not set to use the same time zones.	0004606
<b>Time restriction interpretation</b> In the profile-based policy, the time restriction specified in the <code>pf_restrictionhours</code> profile variable is interpreted against the local time configured on the policy server that is evaluating the request, rather than the local time on the client host.	0004639
<b>Incompatible linux-ppc64 packages</b> The linux-ppc64 packages now work on modern ppc64 systems.	784390
<b>Retired policy server may re-appear in servers list on client</b> In a policy group with two or more policy servers, if one of the secondary policy servers is not configured, the plugin host may still have a reference to the unconfigured server. The output of the <code>pmpuginloadcheck</code> command may include the unconfigured server.	784399
<code>pmsrvconfig</code> now displays a descriptive error message if there is a syntax error in the policy.	784401
<b>Resource limit support for Linux systems</b> Commands run using <code>pmrun</code> now have their resource limits updated based on the <code>limits.conf</code> file on Linux systems when the <code>pam_limits</code> PAM module is configured.	790157

Resolved Issue	Issue ID
If the user configuring the product has the number of files resource limit set to unlimited, the <code>pmsrvconfig</code> , <code>pmjoin</code> , and <code>pmpugininfo</code> commands will fail or take up to five minutes to complete.	798228
<b>Fix for locale error when running the <code>pmpolicy</code> command</b>	798918
If the <code>LC_CTYPE</code> , <code>LC_ALL</code> , or <code>LANG</code> environment variable was set to an unsupported value, the <code>pmpolicy</code> command would fail.	
<b>SELinux support for Privilege Manager for Unix</b>	799821
Privilege Manager for Unix will now set the SELinux security context to the run user when executing commands when SELinux support is configured using <code>pmjoin</code> .	

## 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 4: General known issues**

Known Issue	Issue ID
<b>AlertRaised events not logged to the eventlog</b>	0004005
AlertRaised events are not logged to the eventlog. However, <code>pmlocald</code> will still terminate the current session if an alert is raised and <code>alertkeyaction</code> is set to <code>reject</code> .	
<b>Handshake failed message</b>	0004336
Improperly configured clients may display a <code>Connection timed out</code> or <code>Handshake failed</code> message. This may be caused by an incorrect <code>pmlocaldOpts</code> setting in the <code>pm.settings</code> file.	
Workaround: This can be resolved by removing the <code>pmlocaldOpts</code> setting and restarting the <code>pmserviced</code> daemon.	

## System requirements

Before installing Privilege Manager 6.1, ensure that your system meets the following minimum hardware and software requirements.

**Table 5: Hardware and software requirements**

Component	Requirements
Operating systems	See <a href="#">Supported platforms</a> to review a list of platforms that support Privilege Manager clients.
Disk space	<p>80 MB of disk space for program binaries and manuals for each architecture.</p> <ul style="list-style-type: none"><li><b>NOTE:</b> At a minimum, you must have 80 MB of free disk space. The directories in which the binaries are installed must have sufficient disk space available on a local disk drive rather than a network drive. Before you install Privilege Manager, ensure that the partitions that will contain <code>/opt/quest</code> have sufficient space available.<ul style="list-style-type: none"><li>Sufficient space for the keystroke logs, application logs, and event logs. The size of this space depends on the number of servers, the number of commands, and the number of policies configured.<ul style="list-style-type: none"><li><b>NOTE:</b> The space can be on a network disk drive rather than a local drive.</li></ul></li></ul></li><li>The server hosting Privilege Manager must be a separate machine dedicated to running the <code>pmmasterd</code> daemon.</li></ul>
SSH software	<p>You must install and configure SSH client and server software on all policy server hosts.</p> <p>You must enable access to SSH as the root user on the policy server hosts during configuration of the policy servers. Both OpenSSH 4.3 (and later) and Tectia SSH 6.4 (and later) are supported.</p>
Processor	Policy Servers: 4 cores
RAM	Policy Servers: 4GB

## Upgrade and compatibility

Privilege Manager for Unix supports a direct upgrade installation from version 6.0. The Privilege Manager software in this release is provided using platform-specific installation packages. For more information on upgrading, see the *One Identity Privilege Manager for Unix Administration Guide*.

One Identity recommends that:

- You upgrade your policy server (Master) systems before agents, and that a policy server is run at the same or higher level than agents.
- All policy server systems and agents are upgraded to the latest version to take advantage of all new features.

- 1 | **NOTE:** The upgrade process will create symbolic links to ensure that your existing paths function correctly.
- 1 | **NOTE:** Use of the Privilege Manager clients (`pmrun` and `pmshe11s`) with a policy server in Sudo policy mode is not supported.

## Product licensing

A newly installed Privilege Manager policy server comes with an evaluation license. For more information about the Privilege Manager licensing options, see *Privilege Manager licensing* in the *One Identity Privilege Manager for Unix Administration guide*.

Although licenses are allocated on a per-agent basis, you install licenses on Privilege Manager policy servers.

- 1 | **NOTE:** No special commands are required to register or license the clients with policy servers. Hosts using the Privilege Manager agents are automatically granted a license once a request is received on the Privilege Manager policy server by means of the `pmrun` command.

### To install a license file

1. Copy the `.xml` license file to the policy server.
2. To install the license, run:

```
# /opt/quest/sbin/pmlicense -l <license_file>
```

This command displays your currently installed license and the details of the new license to be installed.

3. When it asks, "Would you like to install the new license (Y/N) [Y]?", press **Enter**, or type: `Y`
4. If there are other policy servers configured in your policy server group, it forwards the license configuration to the other servers.

See the *One Identity Privilege Manager for Unix Administration Guide* for more information about the syntax and usage of the `pmlicense` command.

## Installation instructions

Privileged Access Suite for Unix offers two editions:

- Standard edition
- Advanced edition

Both editions include:

- One Identity Management Console for Unix, a common management console that provides a consolidated view and centralized point of management for local Unix users and groups.
- Authentication Services, patented technology that enables organizations to extend the security and compliance of Active Directory to Unix, Linux, and Mac platforms and enterprise applications.

In addition:

- The Standard edition licenses you for Privilege Manager for Sudo.
- The Advanced edition licenses you for Privilege Manager for Unix.

One Identity recommends that you follow these steps:

1. Install Authentication Services on one machine, so you can set up your Active Directory forest.
  2. Install One Identity Management Console for Unix, so you can perform all the other installation steps from the management console.
  3. Add and profile hosts using the management console.
  4. Configure the console to use Active Directory.
  5. Deploy client software to remote hosts.
  6. Depending on which Privileged Access Suite for Unix edition you have purchased, deploy either:
    - Privilege Manager for Unix software (that is, Privilege Manager Agent packages)
- OR-
- Privilege Manager for Sudo software (that is, Privilege Manager for Sudo Plugin packages)

See *Install PM Agent on a remote host* in the *One Identity Management Console for Unix Administration Guide* for more information about the installing an agent on a remote host.

Refer to the **Getting Started** tab in the management console for a better understanding of the steps to take to be up and running quickly.

## More resources

Additional information is available from the following:

- Online product documentation: <https://support.oneidentity.com/privilege-manager-for-unix/technical-documents>
- One Identity Privileged Account Management forum: <https://www.quest.com/community/one-identity/unix-access-management/>



# 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.

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

**Table 6: List of Third-Party Contributions**

<b>Component</b>	<b>License or Acknowledgement</b>
APR Apache Runtime 1.4.5	This product includes software developed by the Apache Software Foundation ( <a href="http://www.apache.org">http://www.apache.org</a> ) Version 2.0, January 2004 This component is governed by the <a href="#">Apache License</a>
APR Utilities 2.0	This product includes software developed by the Apache Software Foundation ( <a href="http://www.apache.org">http://www.apache.org</a> ) Version 2.0, January 2004 This component is governed by the <a href="#">Apache License</a>
expat 2.0.1	Copyright (c) 1998, 1999, 2000, Thai Open Source Center Ltd and Clark Cooper Copyright (c) 2001, 2002, 2003, 2004,2005, 2006 Expat maintainers This component is governed by MIT expat 2.0.1
Subversion 1.6.15	This product includes software developed by the Apache Software Foundation ( <a href="http://www.apache.org">http://www.apache.org</a> ) Version 2.0, January 2004 This component is governed by the <a href="#">Apache License</a>
Sudo 1.8.27	Sudo is distributed under an ISC-style license: Copyright (c) 1994-1996, 1998-2019 Todd C. Miller <Todd.Miller@sudo.ws> Some files follow the UCB license: Copyright (c) 1987, 1989, 1990, 1991, 1992, 1993, 1994 The Regent of the University of California. All rights reserved. This component is governed by Sudo 1.8.1
zlib 1.2.5	Copyright (c) 1995-2010 Jean-loup Gailly and Mark Adler This component is governed by Zlib 1.2.5

Apache License

Version 2.0, January 2004

<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

**2. Grant of Copyright License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

**3. Grant of Patent License.** Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

**4. Redistribution.** You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

(a) You must give any other recipients of the Work or Derivative Works a copy of this License; and

(b) You must cause any modified files to carry prominent notices stating that You changed the files; and

(c) You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

(d) If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License.

You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

**5. Submission of Contributions.** Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any

separate license agreement you may have executed with Licensor regarding such Contributions.

**6. Trademarks.** This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

**7. Disclaimer of Warranty.** Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

**8. Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

**9. Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

END OF TERMS AND CONDITIONS

**Copyright 2019 One Identity LLC.**

**ALL RIGHTS RESERVED.**

This guide contains proprietary information protected by copyright. The software described in this guide is furnished under a software license or nondisclosure agreement. This software may be used or copied only in accordance with the terms of the applicable agreement. No part of this guide may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording for any purpose other than the purchaser's personal use without the written permission of One Identity LLC .

The information in this document is provided in connection with One Identity products. No license, express or implied, by estoppel or otherwise, to any intellectual property right is granted by this document or in connection with the sale of One Identity LLC products. EXCEPT AS SET FORTH IN THE TERMS AND CONDITIONS AS SPECIFIED IN THE LICENSE AGREEMENT FOR THIS PRODUCT, ONE IDENTITY ASSUMES NO LIABILITY WHATSOEVER AND DISCLAIMS ANY EXPRESS, IMPLIED OR STATUTORY WARRANTY RELATING TO ITS PRODUCTS INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR NON-INFRINGEMENT. IN NO EVENT SHALL ONE IDENTITY BE LIABLE FOR ANY DIRECT, INDIRECT, CONSEQUENTIAL, PUNITIVE, SPECIAL OR INCIDENTAL DAMAGES (INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOSS OF PROFITS, BUSINESS INTERRUPTION OR LOSS OF INFORMATION) ARISING OUT OF THE USE OR INABILITY TO USE THIS DOCUMENT, EVEN IF ONE IDENTITY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES. One Identity makes no representations or warranties with respect to the accuracy or completeness of the contents of this document and reserves the right to make changes to specifications and product descriptions at any time without notice. One Identity does not make any commitment to update the information contained in this document.

If you have any questions regarding your potential use of this material, contact:

One Identity LLC.  
Attn: LEGAL Dept  
4 Polaris Way  
Aliso Viejo, CA 92656

Refer to our Web site (<http://www.OneIdentity.com>) for regional and international office information.



**Patents**

One Identity is proud of our advanced technology. Patents and pending patents may apply to this product. For the most current information about applicable patents for this product, please visit our website at <http://www.OneIdentity.com/legal/patents.aspx>.

**Trademarks**

One Identity and the One Identity logo are trademarks and registered trademarks of One Identity LLC. in the U.S.A. and other countries. For a complete list of One Identity trademarks, please visit our website at [www.OneIdentity.com/legal](http://www.OneIdentity.com/legal). All other trademarks are the property of their respective owners.

**Legend**

-  **WARNING: A WARNING icon highlights a potential risk of bodily injury or property damage, for which industry-standard safety precautions are advised. This icon is often associated with electrical hazards related to hardware.**
-  **CAUTION: A CAUTION icon indicates potential damage to hardware or loss of data if instructions are not followed.**