



One Identity Safeguard for Privileged Sessions 5.9

Duo Multi-Factor Authentication - Overview

Copyright 2018 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. All other trademarks are the property of their respective owners.

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.

Contents

Introduction	4
How SPS and Duo MFA work together	6
Technical requirements	8
Learn more	10
About us	11
Contacting us	11
Technical support resources	11

Introduction

This document describes how you can use the services of [Duo](#) to authenticate the sessions of your privileged users with One Identity Safeguard for Privileged Sessions (SPS).

One Identity Safeguard for Privileged Sessions:

One Identity Safeguard for Privileged Sessions (SPS) controls privileged access to remote IT systems, records activities in searchable, movie-like audit trails, and prevents malicious actions. SPS is a quickly deployable enterprise device, 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 forensic investigations.

SPS acts as a central authentication gateway, enforcing strong authentication before users access sensitive IT assets. SPS can integrate with remote user directories to resolve the group memberships of users who access nonpublic information. Credentials for accessing information systems can be retrieved transparently from SPS's local credential store or a third-party password management system. This method protects the confidentiality of passwords as users can never access them. When used together with Duo (or another multi-factor authentication provider), SPS directs all connections to the authentication tool, and upon successful authentication, it permits the user to access the information system.

Integrating Duo with SPS:

SPS can interact with your Duo account and can automatically request strong multi-factor authentication for your privileged users who are accessing the servers and services protected by PSM. When used together with Duo, SPS directs all connections to the Duo tool, and upon successful authentication, it permits the user to access the information system.

The integration adds an additional security layer to the gateway authentication performed on SPS. If the Duo Mobile app is installed on the user's device (smartphone, notebook, smartwatch, and so on), the user can generate a one-time password on the device. This will be used for the authentication to the One Identity platform. This way, the device turns into a two-factor authentication token for the user. The one-time password is changed after every authentication and is generated using dynamic keys.

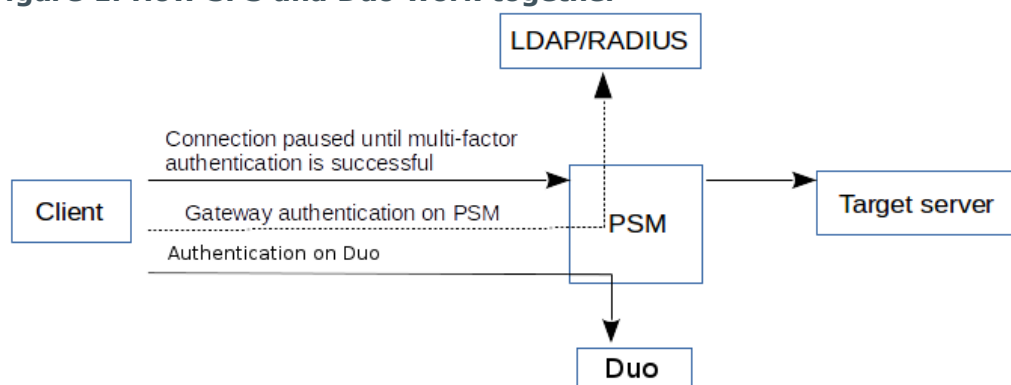
Meet compliance requirements

ISO 27001, ISO 27018, SOC 2, and other regulations and industry standards include authentication-related requirements, for example, multi-factor authentication (MFA) for accessing production systems, and the logging of all administrative sessions. In addition to other requirements, using SPS and Duo helps you comply with the following requirements:

- PCI DSS 8.3: Secure all individual non-console administrative access and all remote access to the cardholder data environment (CDE) using multi-factor authentication.
- PART 500.12 Multi-Factor Authentication: Covered entities are required to apply multi-factor authentication for:
 - Each individual accessing the covered entity's internal systems.
 - Authorized access to database servers that allow access to nonpublic information.
 - Third parties accessing nonpublic information.
- NIST 800-53 IA-2, Identification and Authentication, network access to privileged accounts: The information system implements multi-factor authentication for network access to privileged accounts.

How SPS and Duo MFA work together

Figure 1: How SPS and Duo work together



1. A user attempts to log in to a protected server.

2. Gateway authentication on SPS

SPS receives the connection request and authenticates the user. SPS can authenticate the user to a number of external user directories, for example, LDAP, Microsoft Active Directory, or RADIUS. This authentication is the first factor.

3. Outband authentication on Duo

If gateway authentication is successful, SPS connects the Duo server to check which authentication factors are available for the user. Then SPS requests the second authentication factor from the user.

- For OTP-like authentication factors, SPS requests the one-time password (OTP) from the user, and sends it to the Duo server for verification.
- For the Duo push notification factor, SPS asks the Duo server to check if the user successfully authenticated on the Duo server.

4. If multi-factor authentication is successful, the user can start working, while SPS records the user's activities. (Optionally, SPS can retrieve credentials from a local or

external credential store or password vault, and perform authentication on the server with credentials that are not known to the user.)

Technical requirements

In order to successfully connect SPS with Duo, you need the following components.

In Duo:

- A valid Duo subscription that permits multi-factor authentication.
- Your users must be enrolled in Duo and their access must be activated.
- The users must install the Duo Mobile app.

In SPS:

- A One Identity Safeguard for Privileged Sessions appliance (virtual or physical), at least version 5 F1.
- A copy of the SPS Duo plugin. This plugin is an Authentication and Authorization (AA) plugin customized to work with the Duo multi-factor authentication service.
- SPS must be able to access the Internet (at least the API services). Since Duo is a cloud-based service provider, SPS must be able to access its web services to authorize the user.

The connection also requires the `ikey`, `skey`, and `host` parameters:

1. Log on to the [Duo Admin Panel](#) interface and navigate to **Applications**.
 2. Click **Protect an Application** and locate **Web SDK** in the applications list.
 3. Click **Protect this Application** to get your **integration key** (`ikey`), **secret key**, (`skey`), and **API hostname** (`host`). For details, see [Getting Started with Duo Security](#).
- Depending on the factor you use to authenticate your users, your users might need Internet access on their cellphones.
 - SPS supports Authentication and Authorization plugins in the RDP, SSH, and Telnet protocols.
 - In RDP, using an **AA plugin** together with Network Level Authentication in a Connection Policy has the same limitations as using Network Level Authentication without domain membership. For details, see "[Network Level Authentication without domain membership](#)" in the [Administration Guide](#).

- In RDP, using an **AA plugin** requires TLS-encrypted RDP connections. For details, see "[Enabling TLS-encryption for RDP connections](#)" in the [Administration Guide](#).

Availability and support of the plugin

The SPS Duo plugin is available as-is, free of charge to every SPS customer from the [Plugin Page](#). In case you need any customizations or additional features, [contact professionalservices@balabit.com](mailto:professionalservices@balabit.com).

You can use the plugin on SPS 5 F5 and later. If you need to use the plugin on SPS 5 LTS, [contact professionalservices@balabit.com](mailto:professionalservices@balabit.com).

Learn more

To find out more about SPS, visit the [One Identity page](#).

For a detailed tutorial about how to connect your Duo account with SPS, see [Duo Multi-Factor Authentication - Tutorial](#).

If you need help in connecting your Duo account with One Identity Safeguard for Privileged Sessions, [contact our Sales Team](#) or [contact professionalservices@balabit.com](mailto:professionalservices@balabit.com).

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