One Identity Starling Two-Factor RADIUS Agent 6.0

Administrator Guide

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Trademarks

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.

Starling Two-Factor RADIUS Agent Administrator Guide
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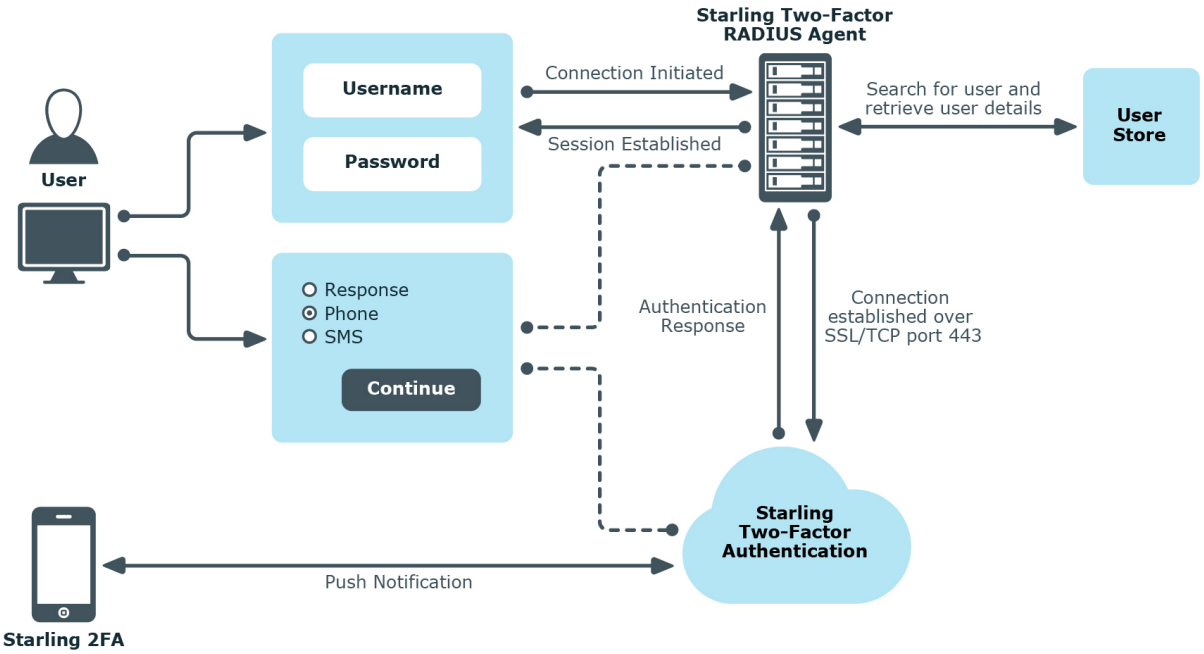
Overview

One Identity Starling Two-Factor RADIUS Agent provides a RADIUS-compatible solution for two-factor authentication (one-time password authentication) through Software as a Service. Starling Two-Factor RADIUS Agent can be used on SaaS and on-premise applications that use RADIUS protocol for authentication.

Network diagram



If you have an application that can be configured to use RADIUS, you can use Starling Two-Factor RADIUS Agent as a Software as a Service for two-factor authentication. Starling Two-Factor RADIUS Agent forwards the authentication requests from the customer application to Starling Two-Factor Authentication. Starling Two-Factor Authentication

validates the requests and responds to the applications with an appropriate authentication response. (Access-Accept, Access-Reject, or Access-Challenge).

Prerequisites

The following are the prerequisites for installing Starling Two-Factor RADIUS Agent:

- Microsoft .NET Framework 4.6.1 or later
- Starling Two-Factor Authentication subscription
- A valid phone number and email id is configured for the user

Running the installer

To run the installer:

- Double-click the installer and follow the instructions on the installer screens and complete the installation.

NOTE: After the installation is complete, configure Starling Two-Factor RADIUS Agent settings. For details, see Starling Two-Factor RADIUS Agent configuration.

Starling Two-Factor RADIUS Agent configuration

You can configure Starling Two-Factor RADIUS Agent for two-factor authentication by setting the required parameters in **Starling Two-Factor RADIUS Agent Configuration** window. The configuration window allows you to configure the RADIUS Agent sever details, your Starling Two-Factor Authentication subscription details, push notification details, user repository details and the client details. These details are required to carry out two-factor authentication.

RADIUS Agent and Starling Two-Factor Authentication configuration

You can configure the RADIUS Agent server details and your Starling Two-Factor Authentication subscription details in the **Configuration** tab.

Configuring RADIUS Agent server

To configure RADIUS Agent server:

1. Click the **Configuration** tab.
2. In the **RADIUS Agent** section, provide the following details:
    - **IP address**: IP address of RADIUS Agent server, which will be validating the authentication requests. The field lists all the IP addresses (ipv4 addresses) on the server and displays the first server in the list. You can select the IP that you want to use for authentication.
    - **Port number**: The port number, which RADIUS Agent will be using to receive authentication requests. The default port is 1812. You must manually configure the firewall exceptions to allow Starling Two-Factor RADIUS Agent traffic on the selected port.

Configuring Starling Two-Factor Authentication

To configure Starling Two-Factor Authentication:

1. Click the **Configuration** tab.
2. In the **Starling Two-Factor Authentication** section, provide the following details:
    - **Subscription key**: The subscription key obtained from Starling Two-Factor Authentication Dashboard.
    - **Message**: The push notification messages that has to be displayed on Starling 2FA app.
    - **Timeout (seconds)**: The duration for which the push notification messages received on Starling 2FA app is valid.

User repository configuration

You can configure the user repository details in the **User repository** tab depending on the option used for storing user data. The user data can be stored either in Active Directory or in a CSV file.

NOTE: Currently, Starling Two-Factor RADIUS Agent supports data stored in Active Directory (LDAP) and CSV files.

Configuring user repository for Active Directory

To configure the repository for data stored in Active Directory:

1. Click the **User repository** tab and select **Use Active Directory**.
2. Provide the following parameters:
    - **Domain name**: Domain name of the Active Directory.
    - **User name**: Name of the account used for querying the Active Directory.

        NOTE: The user account must have read-only permission to query the Active Directory.
    - **Password**: Password of the account used for querying the Active Directory.
    - **Base DN**: Point from where the server searches for users. You must specify the root container to search the users in the format

cn=users,dc=domain,dc=com, where **cn** is Common Name and **dc** is Domain Component. If Base DN is not specified, the entire directory is searched to locate the users.

- **Use SSL**: Option to enable LDAP over SSL for communicating with Active Directory server.
- **Advanced**: Option to modify the Active Directory attribute mapping. You can update the **AD attribute** fields in the **Active Directory Advanced Settings** window as per the requirement. In the window, you can map **Name**, **E-mail** and **Phone Number** to the attributes in Active Directory. The username entered in the client application will be validated against the **Name** attribute during two-factor authentication. By default, **Name** is mapped to **samAccountName** attribute in Active Directory.

NOTE: If the domain name, user name or password is invalid, an error message is displayed when you click **OK** or **Apply**.

Configuring user repository for CSV file

To configure the repository for data stored in CSV file:

1. Click the **User repository** tab and select **Use CSV file**.
2. Provide the path of the .csv file.

   NOTE: The order of the attributes in the CSV file must be UserName,PhoneNumber,EmailAddress.

Client configuration

You can configure the RADIUS clients by providing the client details in the **Client settings** tab. You can add, remove or update IP address, subnet mask and shared secret of clients in the **Client settings** tab.

Adding clients

To add client details:

1. Click the **Client settings** tab.
2. Click **Add** and provide the following details:
   - **IP address**: IP address or the range of IP addresses from which Starling Two-Factor RADIUS Agent accepts authentication requests.
     For example,

- 192.168.70.9: In this case, Starling Two-Factor RADIUS Agent allows authentication requests only from this IP address.
- 192.168.70.0: In this case, Starling Two-Factor RADIUS Agent allows authentication requests from any IP address on the 192.168.70.0 subnet (Subnet mask 255.255.255.0 must be specified).

- **Subnet mask**: This is an optional field. If you want to specify a range of IP addresses, you have to enter the subnet mask.

  NOTE: If an invalid IP address or subnet mask is configured, authentication requests do not reach Starling Two-Factor RADIUS Agent server and you cannot access the required resources.

- **Shared secret**: The key that the RADIUS client uses when attempting to establish a connection with the Starling Two-Factor RADIUS Agent. The client and Starling Two-Factor RADIUS Agent must have the same shared secret. The shared secret helps to maintain the security between Starling Two-Factor RADIUS Agent server and the RADIUS client.

Removing clients

To remove a client:

- On the **Client settings** tab, select the client IP address or subnet mask and click **Remove**.

Updating clients

To update client details:

1. On the **Client settings** tab, select the client and click **Update**.
2. Update the required details and click **OK**.

Configuring Starling Two-Factor RADIUS Agent in client application

To configure Starling Two-Factor RADIUS Agent in client application:

1. Launch the client application.
2. Configure Starling Two-Factor RADIUS Agent authenticator into your application by providing the following values:
    - RADIUS server IP address
    - Port number
    - Shared secret key

For more details regarding integration, see the client product documentation.

Logging into the client application

To log into the client application, you can use OTP or push notifications for two-factor authentication. The following are the scenarios that you will come across while generating OTP or push notifications.

NOTE: When you are logging into the client application for the first time, you will receive an SMS to install Starling 2FA app during two-factor authentication, if:

- you have not installed Starling 2FA app **and**
- the **Installation instructions** option in Starling Two-Factor Authentication Dashboard is enabled.

OTP through SMS

To generate OTP through SMS:

1. On the client application, enter **SMS** in the token response field and click **Enter**. You will receive an SMS.
2. Enter the OTP received through SMS, in the token response field of the client application and click **Enter** to log in.

OTP through phone call

To generate OTP through phone call:

1. On the client application, enter **Phone** in the token response field and click **Enter**. You will receive a phone call.
2. Enter the OTP received from the phone call, in the token response field of the client application and click **Enter** to log in.

OTP through Starling 2FA app

To generate OTP through Starling 2FA app:

- If you are a new user:
    1. On the client application, leave the token response field empty and click **Enter**.
        a. If you have installed Starling 2FA app, then your token will be added to Starling 2FA app.
        b. If you have not installed Starling 2FA app, install the app and register your phone number (Install the app either from the SMS you have received or from the app store). Your token will be added to Starling 2FA app.
    2. Enter the OTP from the token in Starling 2FA app, in the token response field and click **Enter** to log in.
- If you are an existing user:
    - Enter the OTP from the token in Starling 2FA app, in the token response field and click **Enter** to log in.

NOTE: Starling 2FA app can be used for two-factor authentication on Android, iOS and Chrome.

Push notifications in Starling 2FA app

To use push notifications:

NOTE: To use push notifications you must install Starling 2FA app and register your phone number.

1. If you have not installed Starling 2FA app, install the app from the app store.
2. On the client application, enter **Push** in the token response field and click **Enter**. Your token will be added to Starling 2FA app.
3. Open Starling 2FA app and go to **OneTouch** menu.
4. Approve the request in the **Pending** tab to log in to the client application.

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Diagnostic logging

To troubleshoot issues that may occur during authentication with Starling Two-Factor RADIUS Agent, you need to enable diagnostic logging for Starling Two-Factor RADIUS Agent. By default, diagnostic logging is disabled. After enabling or disabling diagnostic logging, you must restart Starling Two-Factor RADIUS Agent service.

Enabling diagnostic logging

To enable diagnostic logging for Starling Two-Factor RADIUS Agent:

1. On a computer where Starling Two-Factor RADIUS Agent is installed, go to the **Starling Two-Factor RADIUS Agent** folder in the installation directory. Normally, the path to the folder is **%ProgramFiles%\One Identity\Starling Two-Factor RADIUS Agent**.
2. Make the following changes to the **StarlingTwoFactor.RadiusAgent.Service.exe.config** file in the **Starling Two-Factor RADIUS Agent** folder:

- In the **<log4net debug="false">** entry, set the value to **"true": <log4net debug="true">**
- In the **<level value="ERROR" />** entry, set the value to **"DEBUG": <level value="DEBUG" />**

You can find the log file **RadiusAgent.log** in the Logs folder in the installation directory. Normally, the path to the log file is **%ProgramFiles%\ One Identity\Starling Two-Factor RADIUS Agent\Logs**.

Disabling diagnostic logging

To disable diagnostic logging for Starling Two-Factor RADIUS Agent:

- Set the following values in the **StarlingTwoFactor.RadiusAgent.Service.exe.config** file:
  - **<log4net debug="false">**
  - **<level value="ERROR" />**

About us

Contacting us

For sales or other inquiries, visit www.quest.com/company/contact-us.aspx or call +1 949 754-8000.

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 Quest Support Portal at https://support.quest.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
- Engage in community discussions
- Chat with support engineers online
- View services to assist you with your product