Mobile Login Requests (Push Notifications) Registration Method for Multi-Factor Authentication
Use this guide to configure and enroll the SecureAuth Authenticate app on mobile devices to use Push Notifications as a Multi-Factor Authentication registration method.

SecureAuth IdP supports three (3) types of Push options for Multi-Factor Authentication: Push Notification (alert), Push-to-Accept, and Symbol-to-Accept.

The Push Notification alert message is sent directly to the app on a mobile device and includes a one-time passcode (OTP) to use during the Multi-Factor Authentication workflow. Push-to-Accept and Symbol-to-Accept send a login request to the app on a mobile device that prompts the end-user to Accept or Deny access.

To use any of these Push options, the Push Notifications functionality must be enabled in all realms designated to offer the option, and end-users must enroll the Authenticate app on mobile device(s) to receive these notifications before utilizing the Multi-Factor Authentication registration method during login.

When end-user Push Notification requests are submitted, SecureAuth IdP builds a tunnel using Apple APN and Google GCM services to distribute custom messages to the app enrolled on mobile devices.
Prerequisites

1. Download the SecureAuth IdP Mobile OTP App from the Google Play Store or Apple App Store

<table>
<thead>
<tr>
<th>Device</th>
<th>Download URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>iOS</td>
<td><a href="https://itunes.apple.com/us/app/secureauth-otp/id615536686">https://itunes.apple.com/us/app/secureauth-otp/id615536686</a></td>
</tr>
</tbody>
</table>

NOTE: See SecureAuth Compatibility Guide for a list of supported, compatible mobile devices

2. Configure the SecureAuth App Enrollment Realm on which end-users can enroll the app on their device for Push Notification

3. Create a New Realm or access existing realm(s) on the SecureAuth IdP Web Admin on which the Push Notification will be applied (Realm A in the SecureAuth IdP Configuration Steps)

4. (OPTIONAL) Create a New Realm or access an existing realm on the SecureAuth IdP Web Admin that is configured for the Account Management page (help desk) to let an administrator revoke the usage of a device on which the app was enrolled for Push Notifications (Realm B in the SecureAuth IdP Configuration Steps)

5. (OPTIONAL) Create a New Realm or access an existing realm on the SecureAuth IdP Web Admin that is configured for the Self-service Account Update (end-user self service) to enable end-users to self-revoke their device on which the app was enrolled for Push Notifications (Realm C in the SecureAuth IdP Configuration Steps)

6. Configure the following tabs on the Web Admin before configuring Push Notifications (and Account Management Page and Self-service Account Update):

- **Overview** – the description of the realm and SMTP connections must be defined
- **Data** – an enterprise directory must be integrated with SecureAuth IdP
- **Workflow** – the way in which users will access the target must be defined
- **Registration Methods / Multi-Factor Methods** – other Multi-Factor Authentication methods that will be used to access the target (if any) must be defined
- **Post Authentication** – the target resource or post authentication action must be defined (see Realm B and Realm C for specific Post Authentication configurations for Account Management Page and Self-service Account Update)
- **Logs** – the logs that will be enabled or disabled for this realm must be defined

The Registration Methods tab in SecureAuth IdP Version 9.0 has been renamed Multi-Factor Methods as of Version 9.0.1
<table>
<thead>
<tr>
<th>Property</th>
<th>Source</th>
<th>Field</th>
<th>Data Format</th>
<th>Writable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Groups</td>
<td>Default Provider</td>
<td>memberOf</td>
<td></td>
<td></td>
</tr>
<tr>
<td>First Name</td>
<td>Default Provider</td>
<td>givenName</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Last Name</td>
<td>Default Provider</td>
<td>sn</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone 1</td>
<td>Default Provider</td>
<td>telephoneNumber</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone 2</td>
<td>Default Provider</td>
<td>mobile</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone 3</td>
<td>Default Provider</td>
<td>homePhone</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Phone 4</td>
<td>Default Provider</td>
<td>pager</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fingerprints</td>
<td>Default Provider</td>
<td>audio</td>
<td>Plain Binary</td>
<td></td>
</tr>
<tr>
<td>Push Notification Tokens</td>
<td>Default Provider</td>
<td>jpegPhoto</td>
<td>Plain Binary</td>
<td></td>
</tr>
<tr>
<td>OATH Tokens</td>
<td>Default Provider</td>
<td>postalAddress</td>
<td>Plain Binary</td>
<td></td>
</tr>
<tr>
<td>Access Histories</td>
<td>Default Provider</td>
<td>photo</td>
<td>Plain Binary</td>
<td></td>
</tr>
</tbody>
</table>
This step is for LDAP data stores only (AD and others)

If using a different directory (e.g. SQL), then the **Property** needs to be configured as a stored procedure in the data store

**NOTE:** For SQL, ASP.net, and Oracle data stores, only the **Plain Binary Data Format** is supported (configured in the Data tab); and for ODBC data stores, Push is *not* supported

1. In the **Membership Connection Settings** section, map a directory field to the **Push Notification Tokens Property**

   In typical AD deployments, the **Data Format** is **Plain Binary** and the **jpegPhoto** directory field is utilized

2. Check **Writable**

   The **Push Notification Tokens** Property can be stored as **Plain Binary** or in **JSON** format, and has distinct requirements for the LDAP directory attribute mapped to the Property based on the **Data Format** selection

   For **Plain Binary**, these requirements must be met for the directory field that contains the Push Notification Token:

   - **Length**: 4096 minimum
   - **Data Type**: Octet string (bytes)
   - **Multi-valued**

   For **JSON**, these requirements must be met for the directory field that contains the Push Notification Token:

   - **Length**: 4096 minimum
   - **Data Type**: DirectoryString
   - **Multi-valued**

Click **Save** once the configurations have been completed and before leaving the **Data** page to avoid losing changes

**Registration Methods / Multi-Factor Methods**
3. In the **Registration Configuration** section, under **Mobile Login Requests (Push Notifications)**, select **Passcode (OTP), Accept / Deny, or Passcode (OTP) + Accept / Deny** from the **Request Type** dropdown

- **Passcode (OTP)**: Enable Push Notifications to enrolled apps on mobile devices
- **Accept / Deny**: Enable Push-to-Accept / Symbol-to-Accept requests to enrolled apps on mobile devices
- **Passcode (OTP) + Accept / Deny**: Enable Push Notifications and Push-to-Accept / Symbol-to-Accept requests to enrolled apps on mobile devices (both options appear on client-side login page)

4. If **Accept / Deny** or **Passcode (OTP) + Accept / Deny** is selected in step 3, then execute steps 'a', 'b', 'c' and 'd'

   a. Select the **Accept Method** for end-users to use when the login request notification appears – User pushes "Accept" button or User pushes displayed symbol

   b. Set the **Login Request Timeout** to determine the number of minutes during which the Push-to-Accept / Symbol-to-Accept request is valid

   c. Set the **Company Name**, which appears on the Push-to-Accept / Symbol-to-Accept request

   d. Set the **Application Name** to a descriptive name / phrase, which appears on the Push-to-Accept / Symbol-to-Accept request

5. Set the **Device Max Count** to -1 if there is no limit to the number of devices that can have the app enrolled for Push Notifications

   To establish a limit, set the maximum number of devices with the app enrolled for Push Notifications

6. If a max count is set, select **Allow to replace** from the **When exceeding max count** dropdown if end users can replace existing devices that have the app enrolled with newer devices

7. If a max count is set and **Allow to replace** is selected in step 6, then select **Created Time** from the **Replace in order by** dropdown to replace the oldest device on which the app was enrolled with the newest one

   Select **Last Access Time** to replace the least recently used device on which the app was enrolled with the newest one
Click **Save** once the configurations have been completed and before leaving the **Registration Methods / Multi-Factor Methods** page to avoid losing changes.

**Realm B**

These are *optional* configuration steps to enable administrator (help desk) revocation of devices on which the app is enrolled for Push Notifications.

This realm must be set up for the **Account Management** page post authentication action.

Refer to **Account Management (Help Desk) Page Configuration Guide** for more information.

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**Data**

1. Follow steps 1-2 in the **Data** configuration steps of **Realm A**.

   The directory attribute used for Push Notification Tokens (e.g. `jpegPhoto`) *must be the same* across all SecureAuth IdP realms utilizing Push Notifications / Push-to-Accept or Symbol-to-Accept Login Requests to ensure consistency.

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**Post Authentication**

2. In the **Post Authentication** section, select **Account Management** from the **Authenticated User Redirect** dropdown.

Click **Save** once the configurations have been completed and before leaving the **Post Authentication** page to avoid losing changes.
3. Click **Configure help desk page** to enable or disable help desk functions.
<table>
<thead>
<tr>
<th>SecureAuth Field</th>
<th>Display Type</th>
<th>Datastore Fieldname</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td>Show Enabled</td>
<td>givenName</td>
<td>First Name</td>
</tr>
<tr>
<td>Last Name:</td>
<td>Show Enabled</td>
<td>sn</td>
<td>Last Name</td>
</tr>
<tr>
<td>Phone 1:</td>
<td>Show Enabled</td>
<td>telephoneNumber</td>
<td>Phone 1</td>
</tr>
<tr>
<td>Phone 2:</td>
<td>Show Enabled</td>
<td>mobile</td>
<td>Phone 2</td>
</tr>
<tr>
<td>Phone 3:</td>
<td>Show Enabled</td>
<td>homePhone</td>
<td>Phone 3</td>
</tr>
<tr>
<td>Phone 4:</td>
<td>Show Enabled</td>
<td>pager</td>
<td>Phone 4</td>
</tr>
<tr>
<td>Email 1:</td>
<td>Show Enabled</td>
<td>mail</td>
<td>Email 1</td>
</tr>
<tr>
<td>Email 2:</td>
<td>Show Enabled</td>
<td>wwwHomePage</td>
<td>Email 2</td>
</tr>
<tr>
<td>Email 3:</td>
<td>Show Enabled</td>
<td>physicalDeliveryOfficeName</td>
<td>Email 3</td>
</tr>
<tr>
<td>Email 4:</td>
<td>Show Enabled</td>
<td>facsimileTelephoneNumber</td>
<td>Email 4</td>
</tr>
</tbody>
</table>

| OATH Seed:             | Hide         | description                   |                      |
| Digital Fingerprint:   | Show Enabled | audio                         | Digital Fingerprint  |
| Push Notification Devices: | Show Enabled | jpegPhoto                     | Push notification devices (uncheck to remove) |
| OATH OTP Devices:      | Hide         | postalAddress                 |                     |
| Password React:        | Hide         |                              |                     |
| Unlock User:           | Hide         |                              |                     |
| Enable/Disable User:   | Hide         |                              |                     |
| Delete User:           | Hide         |                              |                     |
4. Select **Show Enabled** from the **Push Notification Devices** dropdown to show this function on the help desk page and enable administrative revocation of devices with the app enrolled for Push Notifications.

Help Desk Page Push Notification Enrolled Device(s) Revocation

Digital Fingerprints (Uncheck to revoke)
- Windows 7 - Chrome 46.0.2490: 11/23/2015 10:45:20 AM

Push notification devices (uncheck to remove)

- Update - Reset

- Data was updated successfully.

**Click Save** once the configurations have been completed and before leaving the **Help Desk** page to avoid losing changes.

**Realm C**

These are optional configuration steps to enable end-user self-service revocation of devices that have the app enrolled for Push Notifications.

This realm must be set up for the **Self-service Account Update** post authentication action.

Refer to **Self-service Account Update page configuration** for more information.
1. Follow steps 1-2 in the **Data** configuration steps of **Realm A**

   The directory attribute used for Push Notification Tokens (e.g. jpegPhoto) *must be the same* across all SecureAuth IdP realms utilizing Push Notifications / Push-to-Accept or Symbol-to-Accept Login Requests to ensure consistency.

2. Select **Self Service Account Update** from the **Authenticated User Redirect** dropdown in the **Post Authentication** tab in the Web Admin.

   Click **Save** once the configurations have been completed and before leaving the **Post Authentication** page to avoid losing changes.

3. Click **Configure self service page** to enable or disable self-service functions.
<table>
<thead>
<tr>
<th>SecureAuth Field</th>
<th>Display Type</th>
<th>Datastore Fieldname</th>
<th>Label</th>
</tr>
</thead>
<tbody>
<tr>
<td>First Name:</td>
<td>Show Enabled</td>
<td>givenName</td>
<td>First Name</td>
</tr>
<tr>
<td>Last Name:</td>
<td>Show Enabled</td>
<td>sn</td>
<td>Last Name</td>
</tr>
<tr>
<td>Phone 1:</td>
<td>Show Enabled</td>
<td>telephoneNumber</td>
<td>Phone 1</td>
</tr>
<tr>
<td>Phone 2:</td>
<td>Show Enabled</td>
<td>mobile</td>
<td>Phone 2</td>
</tr>
<tr>
<td>Phone 3:</td>
<td>Show Enabled</td>
<td>homePhone</td>
<td>Phone 3</td>
</tr>
<tr>
<td>Phone 4:</td>
<td>Show Enabled</td>
<td>pager</td>
<td>Phone 4</td>
</tr>
<tr>
<td>Email 1:</td>
<td>Show Enabled</td>
<td>mail</td>
<td>Email 1</td>
</tr>
<tr>
<td>Email 2:</td>
<td>Show Enabled</td>
<td>wwwHomePage</td>
<td>Email 2</td>
</tr>
<tr>
<td>Email 3:</td>
<td>Show Enabled</td>
<td>physicalDeliveryOfficeName</td>
<td>Email 3</td>
</tr>
<tr>
<td>Email 4:</td>
<td>Show Enabled</td>
<td>facsimileTelephoneNumber</td>
<td>Email 4</td>
</tr>
<tr>
<td>OATH Seed:</td>
<td>Hide</td>
<td>description</td>
<td></td>
</tr>
<tr>
<td>Digital Fingerprint:</td>
<td>Show Enabled</td>
<td>audio</td>
<td>Digital Fingerprints (Uncheck to revoke)</td>
</tr>
<tr>
<td>Push Notification Device:</td>
<td>Show Enabled</td>
<td>jpegPhoto</td>
<td>Push notification devices (uncheck to remove)</td>
</tr>
<tr>
<td>OATH OTP Devices:</td>
<td>Hide</td>
<td>postalAddress</td>
<td></td>
</tr>
<tr>
<td>Password React:</td>
<td>Hide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unlock User:</td>
<td>Hide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enable/Disable User:</td>
<td>Hide</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delete User:</td>
<td>Hide</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4. Select **Show Enabled** from the **Push Notification Devices** dropdown to show this function on the help desk page and enable self-revocation of devices on which the app is enrolled for Push Notifications

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**Self-service Page Push Notification Enrolled Device(s) Revocation**

**Digital Fingerprints (Uncheck to revoke)**
- Windows 7 - Chrome 46.0.2490: 11/23/2015 10:45:20 AM

**Push notification devices (uncheck to remove)**

[Update] [Reset]

[Data was updated successfully]

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Click **Save** once the configurations have been completed and before leaving the **Self-service** page to avoid losing changes

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**End-user Experience**

End-users must enroll the app on their mobile devices (**Authenticate App**) in the **Multi-Factor App Enrollment Realm** to use Push Notification and / or Push-to-Accept / Symbol-to-Accept as Multi-Factor Authentication methods
NOTE: Workflows for Authenticate App versions 5.0 and 4.x differ due to architectural changes in the app.

Refer to the sample images for the version of the app installed – **v5.0** or **v4.x** – for the specified type of Push Notification.

In **SecureAuth IdP v9.0.2+**, when the end-user is presented the page of Multi-Factor Authentication methods from which to choose, the Multi-Factor Authentication method that was last selected and used in a successful login attempt persists as the default method for the next login in each device / browser.

### Passcode (OTP) Request Type (Push Notification)

1. When logging on a SecureAuth IdP realm in which the Passcode (OTP) Push Notification login request type is enabled, the **Push Notification** choice appears in the Multi-Factor Authentication methods list.

2. Select **Send passcode** and click **Submit**.

3. A passcode Push Notification is delivered to the app on the enrolled device, displayed on the home screen, with the OTP.
Passcode Push Notification Image Example (v5.0)

Passcode Push Notification Image Example (v4.x)
SecureAuth now
Your one time password is 1039,
Dorothy Ota.
slide to view
1. When logging on a SecureAuth IdP realm in which the Accept / Deny Push Notification login request type is enabled, the **Push-to-Accept** choice appears in the Multi-Factor Authentication methods list.

2. Select **Send login request** and click **Submit**.

3. A Push-to-Accept request is delivered to the enrolled app on the device, ready for the end-user's approval or denial response on the app.

   If the end-user does not respond to the request within the configured time period:

   - "The request has expired" message appears on the app.
   - "The login request is no longer valid" message appears on the realm page along with the link "Please click here to use an alternate verification method".
Push-to-Accept Images Example (v5.0)

When the notification is sent to the app...

If the app is closed

4a. Swipe down on the login request notification

5a. Tap Accept to obtain secure access to the realm

If the app is open

4b. Tap Accept to obtain secure access to the realm
Login request. Tap to see request in app.
Login request. Tap to see request in app.

Accept

Deny
Login request from:

SecureAuth Corporation
SecureAuthApp
jsmith
192.162.2.73

批准此请求

拒绝此请求

Push-to-Accept Images Example (v4.x)
4. Tap (or swipe) to access the **Accept** and **Deny** options on the next screen.
5. Tap **Accept** to obtain secure access to the realm.
6. The application alerts the end-user that the Multi-Factor Authentication method has been accepted.

The expiration message appears if an **Accept** or **Deny** action is not taken within the configured time period.
SecureAuth now
Login request. Tap to see request in app.
slide to view
Login Request

SA QA
User SelfService

Admin55
11:00:08 at 11/24/2015
Login Request

Accepted!
Close
Login Request

The request has expired
1. When logging on a SecureAuth IdP realm in which the Accept / Deny Push Notification login request type is enabled, the **Symbol-to-Accept** choice appears in the Multi-Factor Authentication methods list.

2. Select **Send login request** and click **Submit**
3. A symbol is presented on the next page, and the login request is simultaneously delivered to the enrolled app on the mobile device, ready for the end-user's approval or denial response on the app.

If the end-user does not respond to the request within the configured time period:

- "The request has expired" message appears on the app.
- "The login request is no longer valid" message appears on the realm page along with the link "Please click here to use an alternate verification method".
Symbol-to-Accept Image Example (v5.0)

When the notification is sent to the app...

Login Request

Login request from:

Work Portal

Realm 43

jsmith

192.169.9.73

DENY THIS REQUEST

4. Tap the matching symbol to obtain secure access to the realm
<table>
<thead>
<tr>
<th>Related Documentation</th>
</tr>
</thead>
<tbody>
<tr>
<td>SecureAuth Authenticate App for Android and iOS</td>
</tr>
<tr>
<td>Multi-Factor App Enrollment (QR Code) Realm Configuration Guide</td>
</tr>
<tr>
<td>Multi-Factor App Enrollment (URL) Realm Configuration Guide</td>
</tr>
<tr>
<td>Time-based Passcodes (OATH) Registration Method for 2-Factor Authentication</td>
</tr>
</tbody>
</table>