MyID MFA and PSM

Version 5.0.8

MyID Authentication Server Installation and Configuration Guide

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Conventions used in this document

- Lists:
  - Numbered lists are used to show the steps involved in completing a task when the order is important.
  - Bulleted lists are used when the order is unimportant or to show alternatives.
- **Bold** is used for menu items and for labels.

  For example:
  - Record a valid email address in **'From' email address**.
  - Select **Save** from the **File** menu.
- *Italic* is used for emphasis:

  For example:
  - Copy the file *before* starting the installation.
  - Do *not* remove the files before you have backed them up.
- ***Bold and italic*** hyperlinks are used to identify the titles of other documents.

  For example: "See the ***Release Notes*** for further information."

  Unless otherwise explicitly stated, all referenced documentation is available on the product installation media.
- A `fixed width` font is used where the identification of spaces is important, including filenames, example SQL queries and any entries made directly into configuration files or the database.
- **Notes** are used to provide further information, including any prerequisites or configuration additional to the standard specifications.

  For example:

  Note: This issue only occurs if updating from a previous version.
- Warnings are used to indicate where failure to follow a particular instruction may result in either loss of data or the need to manually configure elements of the system.

  For example:

  Warning: You must take a backup of your database before making any changes to it.

Contents

1 Introduction

MyID Authentication Server is a multi-factor authentication system that provides:

- Token, tokenless, device, and deviceless Multi-Factor Authentication.
- Mobile Push Authentication.
- A NIST 800-63B compliant Password Security Management solution.
- Self-service password reset and unlocking.
- Web Service API and RADIUS interfaces for connectivity.
- Multiple Authentication technologies:
  - Grid Pattern – pattern-based authentication.
  - Phrase – random character authentication.
  - One Time Code – OATH (TOTP) compliant authentication.
  - YubiKey – Yubico YubiKey hardware token support.
  - FIDO2 / Passkey authentication.
  - Google / Microsoft Authenticators (OATH compliant).

Note: MyID MFA and MyID PSM were previously known as Authlogics products. Authlogics is now an Intercede Group company and the products have been rebranded accordingly. The term 'Authlogics' may still appear in certain areas of the product.

1.1 Considerations

1.1.1 System requirements

The supported operating systems for MyID Authentication Server are:

- Windows Server 2022

  Note: The MyID Reporting Dashboard requires the Microsoft KB5023705 update, or the latest Windows Updates, on Windows Server 2022. This is due to a known OS issue listed by Microsoft as:

  ```
  This update addresses an issue that affects the Get-WinEvent cmdlet. It
  fails. The system throws InvalidOperationException
  ```

- Windows Server 2019
- Windows Server 2016

Minimum .NET Framework version: 6

The hardware requirements for MyID Authentication Server are:

	Minimum	Recommended
CPU	Dual Core 1.2 GHz	Quad Core 2.5 GHz
RAM	4Gb RAM	8Gb RAM
Disk	Single Disk	Dual Disk

1.1.2 Rights and permissions

Local administrator rights are required to perform the installation process of the MyID Authentication Server on a Windows Server.

The Directory Configuration Wizard requires either:

- Enterprise Admin rights, *or*:
- Domain Admin rights on the following:
  - The domain of which the Authentication server is a member.
  - Each domain containing user accounts that will be used with MyID.

Once the Directory Configuration Wizard is complete, administrators need to be a member of the MyID Administrators group and have local administration rights on the member server.

1.1.3 Password Breach Databases

Intercede has the following versions of its Password Breach Database:

- Offline Password Breach Database (Min)

  This is the minimum offline database. It is included by default with MyID Authentication Server and contains the top one million breached passwords.

  This is infrequently updated.
- Offline Password Breach Database (Full)

  This is the full offline database. It is a separate download containing over 8 billion breached passwords.

  This is infrequently updated.
- Cloud Password Breach Database

  An Internet hosted database containing over 8 billion breached credentials.

  This is regularly updated.

The Offline Password Breach Database can reduce the reliance on Cloud Password Breach lookups.

If a password is not found in the minimum Offline Password Breach Database, then, unless disabled by policy, the MyID Cloud Password Breach Database is also checked.

The full Offline Password Breach Database containing over 8 billion breached passwords is available as a separate add-on download from:

www.intercede.com/support/downloads

When the full database is installed, it may be possible to disable Cloud Password Breach Database lookups.

Note: The MyID Cloud Password Breach Database is regularly updated, but the Offline Password Breach Database is not. Unless a fully offline solution is required, Intercede recommends leaving Cloud Password Breach Database lookups enabled to ensure that the most recent entries are being checked.

1.1.4 High availability

MyID is designed for multiple deployment sizes, topologies, and configurations.

High availability is achieved by ensuring that there are multiple instances of the user database and the authentication server.

To ensure the user database is highly available, there must be multiple Domain Controllers in each domain. Active Directory automatically replicates the domain information to all Domain Controllers in the domain, including MyID data.

To ensure high availability of the MyID Authentication servers, simply install multiple instances on separate servers that are members of the same AD Forest. Each server uses standard Windows mechanisms to locate and work with the most appropriate Domain Controller, or Domain Controllers and Global Catalogs can be manually specified. Each server can be addressed separately as a Primary/Secondary configuration, for example RADIUS1 and RADIUS2, or they can be clustered through the built-in Windows Network Load Balancing and treated as a single entity.

1.1.5 Database backup and restoration

All user metadata is stored in Active Directory and no data is stored on the local server. When you perform a standard Active Directory backup, all MyID data is automatically backed up along with the Active Directory.

You can recover a by reinstalling MyID MFA and PSM from the ground up – the new installation is re-attached to the existing data in the Active Directory and continues functioning as before. Exceptions to this include any custom changes to the web UI and NPS (RADIUS) policy changes.

1.1.6 Developers

For developer-specific information regarding the Web Services Application Programming Interface (REST), see the ***MyID Authentication Server Developers Guide***.

1.1.7 Language requirements

The MyID Authentication Server is compatible with multi-lingual versions of Windows Server; however, it is only available in English. Product support and documentation are also available only in English.

Elements of the Microsoft Management Console (MMC) are shown in the language of the server, for example **OK** buttons, however, text specific to MyID is in English only.

1.2 Internet connectivity

The MyID Authentication Server requires Internet Access for certain functions. The majority of required connectivity is outbound to the Internet. All URLs are bound to the `authlogics.com` DNS domain for easier management.

You may not require all access, depending on your chosen product functionality.

1.2.1 Mobile Push Authentication

When using Mobile Push authentication for MFA, the MyID Authentication Server requires outbound Internet access to the following destination (depending on the capabilities of the network firewall):

Destination URL:

`https://*.ccp.authlogics.com/api/*`

Host:

`*.ccp.authlogics.com` on port `443`

Note: Devices running the Authlogics Authenticator app also require access to the above URL. While this would normally be available when they are connected to GSM / public networks, they may require explicit access when on corporate Wi-Fi.

1.2.2 Password Breach Database

When using Password Security Management and the MyID Cloud Password Breach Database lookups are enabled, the MyID Authentication Server requires outbound Internet access to the following destination (depending on the capabilities of the network firewall):

Destination URL:

`https://passwordsecurityapi.authlogics.com/api/*`

Host:

`passwordsecurityapi.authlogics.com` on port `443`

Note: Domain Controller Agents do not require direct access to the Internet as they perform lookups using the Authentication Server. However, there is a GPO setting to enable Internet access as a fallback and, if enabled, Internet access is required.

1.2.3 Licensing

Unless an offline license has been provided, the MyID Authentication Server requires outbound Internet access to the following destination (depending on the capabilities of the network firewall):

Destination URL:

`https:// licencing.authlogics.com/api/*`

Host:

`licencing.authlogics.com` on port `443`

Warning: If access to the licensing URL is not available the license may fail, and the Authentication Server may cease to function.

1.2.4 External Access Server (Windows Desktop Agent)

When using the Windows Desktop Agent (optional) configured with an External Access Server, the MyID Authentication Server requires inbound access from the Internet to the External Access Server instance of the Authentication Server on port `14444` (by default):

The External Access Server role is a separate IIS site on the MyID Authentication Server that hosts a limited API set to support the Windows Desktop Agent. It runs on a separate port to the rest of the server.

It is recommended that the Windows Desktop Agents are configured to use port `443` to ensure good connectivity over the Internet. To facilitate this a reverse proxy or port translator should be used to redirect external `443` traffic to the internal port `14444`. Alternatively, the External Access Server IIS instance can be configured within the IIS Manager to use port `443` on a separate IP address.

1.3 Licensing

MyID MFA and PSM solutions are licensed on a per-user basis with each user requiring a license. A license must be installed onto each instance of a MyID Directory. Contact ***sales@intercede.com*** for any licensing enquiries.

To install a MyID license, run the Licence Configuration Wizard within the MyID Authentication Server Management Console.

1.3.1 License functionality

The functionality available in the MyID Authentication Server depends on the types of license that you have installed. All solution features are broken down into two license types:

- Password Security Management (PSM)
- Multi-Factor Authentication (MFA)

A product key or license is issued for each license type.

Note: For detailed information on the license types please refer to the license agreement document embedded within the installation package.

1.3.2 Evaluation license

MyID is available for trial use for an unlimited number of users with a 30-day time-limit. You can request and instantly install an evaluation license through the Licence Configuration Wizard.

1.3.3 Free license

MyID MFA and PSM solutions are available free of charge for up to ten users with no time limit. You can request and instantly install a free license through the Licence Configuration Wizard.

1.4 Change history

Version	Description
IMP2065-01	Reformatted and released with MyID MFA and PSM version 5.0.7. Added information on setting the SSP and IdP to have high-contrast UI for accessibility. Updated information on Grid customization. Added the separation of the Add and Remove Token devices settings. Added information on Authenticator App Cloud Location regions. Added information on multi-lingual support in the SSP.
IMP2065-5.0.8	Released with MFA and PSM version 5.0.8.

2 Design and deployment scenarios

The MyID Authentication Server is an enterprise-class solution scaling from stand-alone single instance installations to highly availability multi-master Active Directory-integrated deployments. A single MyID server can support multiple Active Directory Domains in a single forest and the server can be a member of any domain within the forest. User accounts can be Active Directory user accounts or external accounts which do not have an Active Directory user account.

A variety of authentication tokens can be used with the MyID Authentication Server including SMS/Text message, email, offline OTP (pattern or OATH), Mobile Push, biometrics, FIDO2, Passkey, and YubiKey hardware tokens.

The MyID Authentication Server is designed to integrate with a multitude of remote access solutions and applications. The core of MyID is the Authentication Server, which is an IdP Server and also provides REST APIs and a RADIUS interface. MyID also provides agents for various third-party systems to allow for direct integration; for example, Windows Desktop, Remote Desktop Gateway, and Exchange Servers.

Any remote access concentrator or application that can interact with REST Services or RADIUS can communicate with the MyID Authentication Server. Integration guides and sample code are provided for common deployments to assist with the integration into third-party party systems.

The MyID Authentication server is a Federated Identity Provider (IdP) capable of being used as a replacement for ADFS and supports standard protocols of SAML 2.0 and OpenID Connect.

The MyID Authentication Server is a complete NIST 800-63B compliant password policy and management solution for Active Directory. It can ensure that users are not using known breached or shared passwords in real-time, as well as with retrospective checking and automatic remediation.

The MyID Authentication Server Management console uses Microsoft Management Console technology. Administration rights are granted through roles that are typically mapped to Active Directory groups.

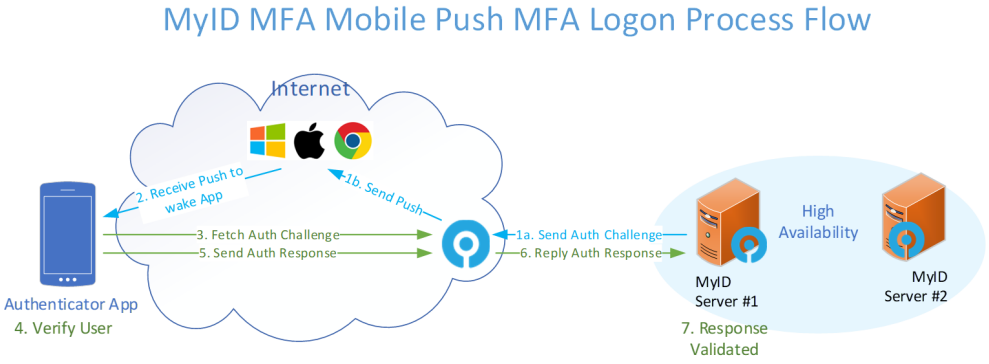
For high-availability deployment scenarios with numerous users, user information can be stored across multiple domains in an Active Directory Forest. Multiple MyID servers can be deployed within an Active Directory Forest for multiple points of presence, or in the same location with built-in Network Load Balancing for full High Availability.

2.1 Mobile push authentication

2.1.1 Overview

MyID Mobile Push MFA is designed to work seamlessly when online or offline, and does not rely on Microsoft, Apple, or Google for timely delivery.

If the user is offline, they can enter a short alpha-numeric OTP generated by the same MyID Authenticator app they use when they are online.



2.1.2 Public Push Networks

App notifications through the Microsoft, Apple, and Google Public Push Networks can be unreliable and they are not a guaranteed delivery service. MyID does not rely on Public Push Networks for core functionality; therefore, no authentication data or sensitive information is contained within the Public Push Networks notification.

If the Public Push Networks are functioning as expected, it creates a better user experience, however, if not then the user can still load the Authenticator App themselves and log in as normal.

2.2 Passwordless MFA

2.2.1 Mobile Push

Mobile Push MFA is most commonly deployed as a passwordless authentication solution; however, it can be used in conjunction with a password if required.

This can be connected to applications through RADIUS, Web API, or various agents including for Windows Desktop Agent.

2.2.2 Passwordless for Windows

The MyID Windows Desktop Agent allows users to log on to Windows without having to enter their Windows password. This form of passwordless logon is achieved by storing the Active Directory Password in a secure password vault that is seamlessly delivered to the Windows desktop on the user's behalf when logging on.

Logging on to Windows in this way ensures compatibility with existing Windows applications that rely on Active Directory credentials. Passwordless logon is disabled by default and can be enabled by setting the **Enable Passwordless Logon** group policy option on the Windows Desktop Agent to remove the Active Directory password for logon.

2.2.3 The MyID Server Password Vault

The MyID Authentication Server uses Active Directory as a database. Therefore, all its data is physically stored on the Domain Controllers, including the Server Password Vault. The password vault is disabled by default and must be explicitly enabled before use.

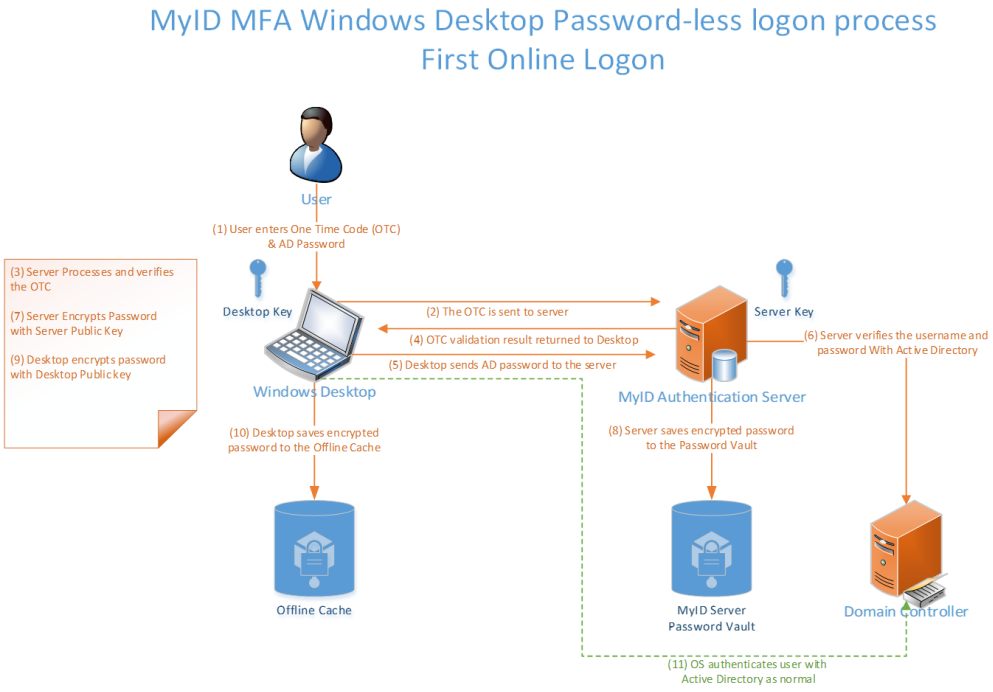
During the MyID Authentication Server installation, a unique certificate is generated with an RSA 2048-bit key pair; this is used to encrypt the password data. This certificate can be replaced at any time by running the Certificate Configuration Wizard on the server, which re-encrypts the data with the new certificate key pair. The MyID Password Vault information can only be decrypted if the certificate's private key is available.

2.2.4 The Windows Desktop Agent

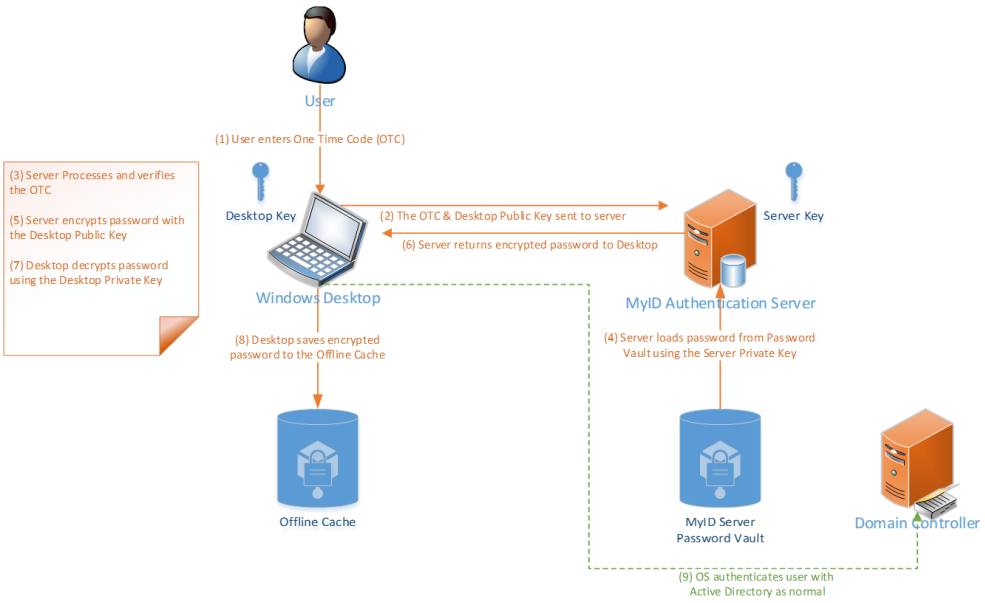
The Windows Desktop Agent is designed to run on a Windows desktop or Windows server machine to provide Multi-Factor Authentication security and Passwordless logons. The agent is fully managed and deployable through Active Directory group policy options for easy and granular administration.

The agent can work in an offline scenario if there is no connection available to the MyID Authentication Server.

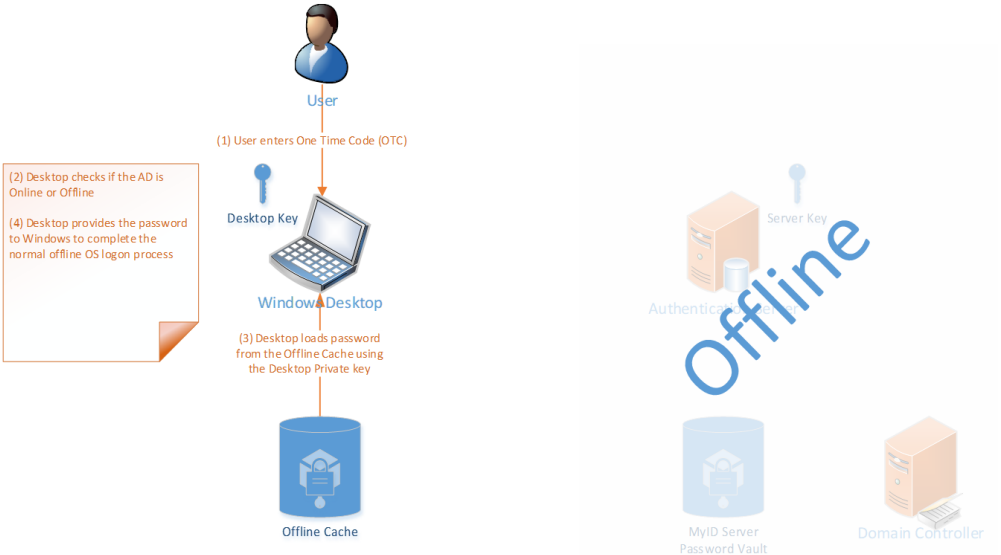
For more information, see the ***Windows Desktop Agent Integration Guide***.



MyID MFA Windows Desktop Password-less logon process
Regular Online Logon



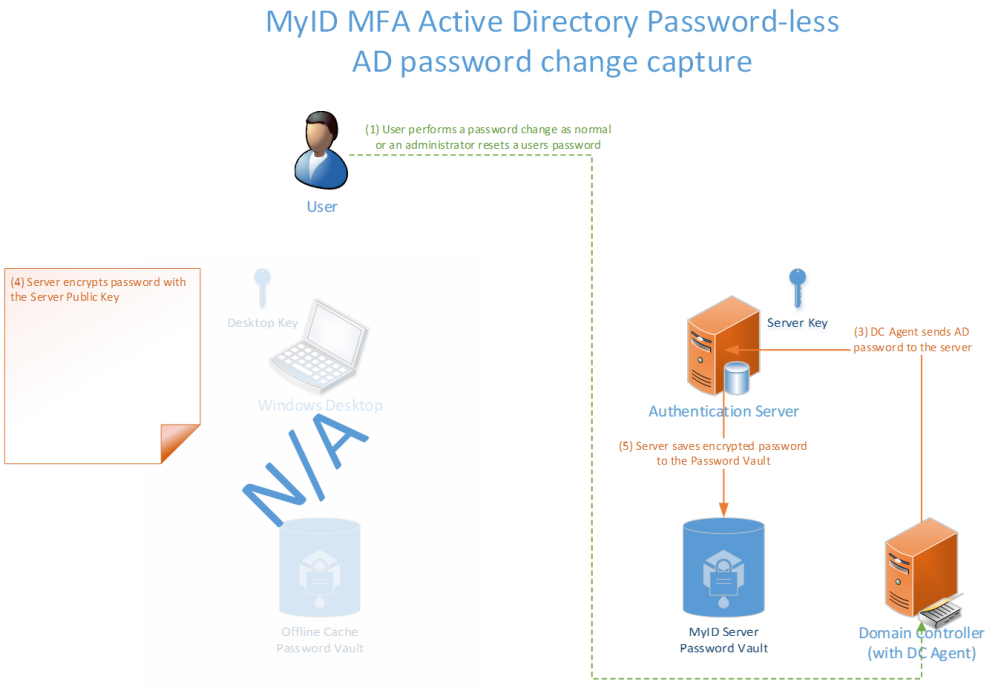
MyID MFA Windows Desktop Password-less logon process
Regular Offline logon



2.2.5 The Domain Controller Agent

The Domain Controller Agent is a lightweight service designed to capture password changes made on the Windows Domain, process them against policy to see if they comply, and store them securely in the MyID Server Password Vault. This ensures that all new passwords comply with the latest NIST SP 800-63B guidance.

The Domain Controller Agent also keeps the Active Directory password database and the MyID Server Password Vault synchronized at all times regardless of which mechanism is used to change or reset an Active Directory password. Administrators can use Domain Controller Agent to ensure that passwords used within the environment are unique and to prevent users from sharing passwords internally.



2.3 Active Directory permissions

The following groups are created in the Windows Domain that is selected when you first run the Directory Configuration Wizard. Members of the Enterprise Admins and Domain Admins group *always* have full access to MyID independently of these groups. This behavior cannot be changed due to the Active Directory security model that means that members of these groups always can take ownership of *any* object and change its permissions.

Group name	Type	Members	Member of	Provides access to
MyID Authentication Server Administrators	Universal Group	The installation user account.	Builtin Administrators.	Full admin access to the MMC and Web Management Portal.
MyID Authentication Server Operators	Universal Group	No members by default.	Not a member of any group.	Limited admin access only through the Web Management Portal.
MyID Authentication Servers	Universal Group	The Authlogics server account.	Builtin Administrators.	Full access to directory info.

If you are upgrading from V4.x Authentication Server deployments, the pre-existing Active Directory groups originally created remain. These Active Directory security groups are:

Group name	Type	Members	Member of	Provides access to
Authlogics Administrators	Universal Group	The installation user account.	Builtin Administrators.	Full admin access to the MMC and Web Management Portal.
Authlogics Operators	Universal Group	No members by default.	Not a member of any group.	Limited admin access only through the Web Management Portal.
Authlogics Servers	Universal Group	The Authlogics server account.	Builtin Administrators.	Full access to directory info.

Note: The Builtin Administrators group has full administrator access to the Domain Controllers and the Active Directory. Unlike the Domain Admins group, the Builtin Administrators group does not have administrator access to any member servers in the domain, as it is a Domain Local security group.

For information regarding granular application of rights within the Active Directory, contact Intercede customer support.

For further information about Active Directory groups and permissions, see:

docs.microsoft.com/en-us/windows-server/identity/ad-ds/plan/security-best-practices/appendix-b--privileged-accounts-and-groups-in-active-directory

2.4 Integration with MyID CMS

MyID CMS can manage MyID Authentication Server user accounts.

The integration is performed through the MyID WebAPI which must be configured prior to use.

MyID CMS must be configured to connect to the MyID Authentication Server through the MFA Broker. This enables MyID CMS to create MyID Authentication Server users, provision MFA technologies, and change various account settings. For more information about the MFA Broker, contact your Intercede account manager.

The MyID Authentication Server can notify MyID CMS when an event occurs, such as a user completes setting up a new MFA device. To facilitate this configuration of MyID CMS, information is required in the MyID Authentication Server.

Note: MyID CMS version 12.9 or higher is required for integration.

2.4.1 Required information

The following information is required complete the integration:

- The MyID CMS Server URL

  For example:

  `https://myid/web.oauth2`

- The MyID CMS Callback URL

  For example:

  `https://myid/MFABroker`

- The MyID CMS Client ID used to authenticate

  For example:

  `myid.notifications`

- The MyID CMS Client Scope used to authenticate

  For example:

  `myid.notifications.basic`

- The MyID CMS Client Secret used to authenticate

  For example:

  `4116e8f9-92e2-48b1-8616-5fb3d130b91d`

See section *6*, *Configuring MyID CMS settings*.

2.4.2 High Availability integration

You only need to configure your MyID CMS settings on *one* MyID Authentication Server and the settings are replicated to all the servers in the Active Directory Forest.

The MyID Authentication Server works on a multi-master High Availability model, not Active-Passive, therefore any MyID Authentication Server is able to update user account details. Due to this, all MyID Authentication Servers must be able to access the **MyID CMS OAuth2 Authentication Service** and **MyID CMS MFA Broker Service** URLs.

MyID CMS can be configured to use any MyID Authentication Server for configuration changes. Specifying more than one server, or using a load balanced address, is recommended.

2.5 Deployment checklist

#	Item	Recommended	Check
1	A Physical or Virtual Machine to Operating System.	A Virtual Machine with 4 CPU cores and 8Gb RAM	
2	A Windows Server 2016 or higher OS on which to install MyID Authentication Server.	Windows Server 2019	
3	Internet Connectivity (HTTPS) from MyID Server for licensing and activation.	Allow the destination of: `https://*.authlogics.com`	
4	An administrative account with rights to install the software and configure the directory service on the Active Directory root domain.	An Enterprise Admin or Domain Admin account	
5	Server downtime authorization to reboot the server post-installation.		
6	Email / SMTP server settings and credentials (if required) to allow the server to send email tokens and provision emails.	Use an Exchange server with integrated authentication.	
7	Plan the DNS name to use in the URL for the Self Service Portal that users use to access their account.	Use: `ssp.<mycompany>.com`	
8	PSM only: Plan the deployment of the password policy. Must apply to all Domain Controllers and MyID Authentication Servers.	Use the policy defaults where possible.	
9	Plan which MFA technology to provision users for.	Grid Pattern Authentication suits most use cases and is the most secure.	
10	Plan if MFA devices are to be used or only deviceless authentication.	Use MFA where high security or compliance is required, otherwise use deviceless for convenience while improving security over passwords.	
11	Plan which MyID agents to deploy or how to integrate with third-party systems.	Use the industry-standard RADIUS for networking equipment and the WebAPI for application integration.	
12	Plan which applications can use SSO / Federation (for example, SAML 2.0, OpenID Connect, or WS-Fed).	Use MyID IdP services or Microsoft ADFS with the MyID ADFS Agent is still supported.	

3 Multi-Factor Authentication technology

As the usage of Information Technology has increased exponentially, the need for security of these systems has increased proportionately. Traditionally, authentication is solely performed by the user providing a valid username and password. This is known as single-factor authentication as the user *knows* all parts of the authentication process. Passwords have been proven to be unsecure, therefore additional authentication factors are now required.

The increase of security provided by multi-factor (typically two-factor) authentication is that users must now both *have something* and *know something* in the authentication process.

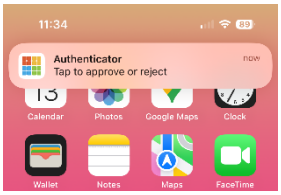
The *something* that they *have* is usually a physical hardware device, like a key fob, that generates a specific unique One Time Pin (OTP). This OTP must also be entered as part of the authentication process.

Although these hardware token devices have improved security significantly, they do have certain limitations and incur a cost overhead in both implementation and on-going maintenance. Furthermore, they typically still need to be used together with a password and therefore do not provide a path towards Passwordless logons.

Intercede provides a multitude of hardware and software-based authentication technologies and delivery mechanisms to suit many scenarios, all while keeping down the logistical overhead of hardware tokens down.

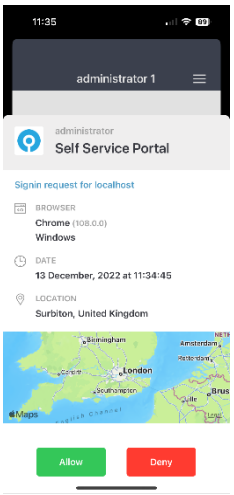
3.1 Mobile Push authentication technology

MyID Mobile Push is designed to simply send a notification to a user's phone to authenticate.



Once the notification is tapped, the MyID Authenticator app loads and the user may be required to authenticate with biometrics. The MyID Authenticator app was previously known as the Authlogics Authenticator app.

The user is presented with information about the logon and can choose to **Allow** or **Deny** the request.



If the user taps **Allow**, then the application they are trying to access completes its logon process.

However, if the user taps **Deny**, they are asked why. The answer is recorded on the MyID Authentication Server. If they stated they did not make this logon request, the server tracks future logon attempts and automatically throttles sending new Push requests to prevent MFA fatigue.

MyID Mobile Push helps to mitigate typical Push vulnerabilities:

- MFA fatigue protection:
  - Requires an initial offline logon for untrusted browser connections.
  - Dynamic throttling for legacy (for example, RADIUS) / non-browser channels when a **Denied** logon is recorded by the user.
- Does not send any OTP or secret information through Apple or Google servers, so it therefore cannot be tampered with in transit.
- The Authlogics App responds to a logon request when open, even if a network Push is not received through Apple or Google, to prevent denial of service attacks or network delays.

3.2 Grid Pattern technology

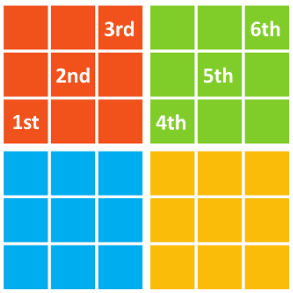
Grid Pattern authentication technology (formerly known as PINgrid) mitigates the security limitations of the traditional OTP tokens by generating a One Time Code derived from a grid of numbers. These grids are specific to each user and change every minute, reflecting different numbers. The additional security of Grid Pattern is that the user *also* needs to *know* a unique pattern to extrapolate an OTP.

To protect against automated brute force attacks, MyID MFA includes **Account Lockout** functionality, where a user's account is locked out either indefinitely or for a pre-configured period when a passcode is entered incorrectly several times. Grid Pattern authentication mitigates even the threats of keylogging, screen scraping and shoulder surfing attacks.

Grid Pattern authentication is available in one, two, and three-factor authentication methodologies. Grids can be views within an app, on a web page, sent via TEXT/SMS or email, or used offline through the MyID Authenticator app in the App Store.

3.2.1 How it works – example

User pattern:



Pattern on a challenge grid:

One Time Code:

```
133125
```

In a 'Prove it!' situation the pattern is used with a challenge grid:

- A One Time Password (OTP) is hidden in the grid.
- Only the person who knows the secret pattern can find the OTP.

Grid Pattern authentication technology is a true One Time Pin authentication solution, as all valid passcodes entered can be used only once, even if the second authentication attempt occurs within the same period from the same device.

Note: Tokens can be sent only using email or SMS by clients that are *online*. No offline delivery is supported.

3.3 Phrase authentication technology

Phrase authentication (formerly known as PINphrase) uses some authentication methods that have become a de facto standard in the banking industry to provide a simple to use but efficient and cost-effective authentication solution.

Phrase authentication is based on a passphrase question and answer system that prompts the user to enter random characters from the answer to a randomly chosen question.

Unlike passwords, the answers to the questions are typically things that the user is unlikely to forget, which reduces helpdesk calls, limits resets, and further cuts costs. Since the user is only ever entering part of the answer, for example letters two, five and second last character, during each login the user is asked to enter different letters, and from different answers, making the response a One Time Code.

The full answer is not revealed during the login, which makes Phrase authentication ideal for both deviceless and Multi-Factor Authentication. Phrase authentication can also be configured to randomly select letters from different questions to further enhance security.

An administrator can configure multiple common questions for things that users generally know an answer for and can then specify how many of the questions a user must provide an answer for. For example, an administrator may set a scenario where the user must provide answers for at least four of the ten supplied questions.

By default, a user is assigned a Codeword – a randomly chosen dictionary word which can be used for first login.

For example, a new user called Bob Jones is enabled and his mobile phone details are recorded. He provides answers to at least six questions from a pool. He chooses the following:

Question	Answer
Place of birth?	`Seattle`
Pet's name?	`Tigger`
Memorable place?	`Springfield`
Mother's maiden name?	`Watson`
Memorable date and time (YYYYMMDDHHMM)	`201101021937`
First school?	`Winchester`

3.3.1 Authentication scenario #1 – deviceless authentication

Bob wants to log on to an Internet banking site. He goes to the website and types in his username. He is then presented with a question from the answered pool. He is asked to enter specific characters from the answer.

```
Please provide the first, third, fourth and the last characters from your memorable place.
```

To authenticate, Bob enters: `S R I D`.

3.3.2 Authentication scenario #2 – multi-factor authentication

This requires a physical device that Bob receives the question and random positions (the soft token) on. Typically, this device is a mobile phone, as the mobile phone number is unique to the user.

Bob wants to log on to an Internet banking site. He goes to the website and types in his username. Once Bob enters his username, the Phrase authentication server detects that the logon process for Bob has started. A challenge is generated and sent as an SMS/Text message to Bob's mobile device as follows:

```
Phrase: Please provide the second, third, fifth, and penultimate characters from your place of birth.
```

To authenticate, Bob enters: `A L S R`.

A key part of MyID Phrase authentication is that both the deviceless and Multi-Factor methods have an identical look and feel to the user. The only difference is where the challenge message is displayed.

In cases where mobile phone reception cannot be guaranteed and instant message retrieval may not always be possible, Phrase authentication can pre-send tokens. Pre-sending tokens ensure that the user always has a token on their device prior to the authentication attempt. As soon as the token is used, the next token is sent to the user's mobile device ready to be used for the next login.

Note: Tokens can be sent only using email or SMS by clients that are *online*. No offline delivery is supported.

3.4 One Time Code technology

MyID One Time Code (formerly known as PINpass) is an OATH RFC compliant two-factor authentication solution which utilizes soft tokens to reduce the costs associated with hardware key fobs. One Time Code OTPs are delivered to mobile phones using SMS text messages or as an email for even more flexibility and cost savings.

One Time Codes give administrators the ability to pre-send one or more OTPs so that the user always has an OTP on their mobile device before logging on. As soon as the last OTP is used, then a new set of OTPs are sent to the user ready for future logon attempts. Alternatively, a One Time Code can be used offline from the MyID Authenticator app in the App Store.

To increase security and convenience, administrators can configure users to provide an Active Directory password or static PIN with the One Time Pin. A static pin can be entered, before, after, or even in the middle of the OTP code making it more difficult for a key logger to differentiate between the OTC code and the user's static PIN.

When a user is configured with a real-time token and attempts to login, they enter their unique login name and One Time Code sends a six-to-eight-digit OTP to their mobile phone using SMS or an email address. The user then enters the OTC along with either their AD password or a static PIN, depending on the configuration.

The login process is similar for a user who is configured with a pre-send token, except that a code is not sent to the user after they enter their username as they already have a code on their phone. Instead, a new code is only sent after they login for use during the next login.

Note: Tokens can be sent only using email or SMS by clients that are *online*. No offline delivery is supported.

3.5 Standard OATH TOTP

MyID MFA supports standard software OATH time-based one-time passwords (TOTPs) through tokens such as the Microsoft and Google Authenticator apps. With this, users are no longer required to download the MyID Authenticator app (previously known as the Authlogics Authenticator app) and can add MyID MFA to their Microsoft and Google Authenticator app profile.

As with the MyID OTC solution, standard OATH authenticators use soft tokens to reduce the costs associated with hardware key fobs. One Time Code OTPs are generated on the mobile phones out-of-band without the need for the mobile device to have signal or sufficient data.

As with other MyID MFA technologies, Standard OATH support extends to offline logins for our MyID Authentication agents.

3.6 YubiKey OTP

If hardware tokens are required, MyID supports YubiKey OTP tokens from Yubico. YubiKey OTP tokens are USB devices that do not have a battery, do not expire, and work with any OS.

To increase security and convenience, administrators can configure users to provide an Active Directory password or static PIN with the YubiKey OTP token. A static pin can be entered, before generating the YubiKey OTP code to ensure that the multi-factor requirements are satisfied as there is something they *have* (the YubiKey token) and something they *know* (the static PIN).

3.7 FIDO Passkeys for the Enterprise

Passkeys are based on the FIDO standard and enable cryptography-based phishing-resistant authentication. By combining high security with a passwordless user experience, Passkeys are revolutionizing the consumer authentication experience.

However, it is difficult for enterprises to gain the benefits Passkey-based authentication brings, as by design they do not enable the level of management and integration enterprises require.

By bringing enterprise managed FIDO passkeys into the MyID MFA product, organizations can now easily FIDO-enable multiple applications and deploy passkeys to end users, enhancing security and improving the user experience.

MyID MFA acts as both a FIDO authentication server and a passkey issuance solution. End users authenticate to MyID MFA with their passkey, and by support for standard federated identity protocols, MyID MFA provides authentication services to multiple applications including cloud, on-premise, and Windows desktop logon.

Note: The FIDO Credential Provider does not work over RDP; the device is not passed through. If you plug a FIDO token in on the client, the token does not show up in the RDP session. FIDO token Web Sign-On and browser authentication over RDP work on Windows Server 2022 but not on Windows Server 2019.

There are multiple types of Passkeys supported by MyID MFA, enabling customers to choose the best balance of security and costs that fits their particular needs:

- Synchronizable Passkeys

  Synchronizable Passkeys use an existing mobile phone to protect the private key used in the authentication process.

  Able to communicate over the FIDO protocol built into multiple devices and web browsers, the phone simply acts as the user's security token and the user accesses the protected private key using fingerprint, face ID or a PIN, delivering secure, passwordless authentication with a simple user experience.

  Synch-able passkeys can be backed up and restored using the mobile operating system's built in mechanisms, for example iCloud. This effectively deals with lost or replacement devices without having to reissue credentials.

- Device Bound Passkeys

  Device Bound Passkeys are useful for organizations that want higher levels of security and control over where passkeys are. MyID MFA also supports device-bound passkeys such as those stored on a USB authenticator, for example YubiKey. Device-bound passkeys never leave the device, resulting in the highest levels of phishing resistance.

  MyID MFA supports the innovative YubiKey Bio device, which enables users to replace a PIN with a simple match of a fingerprint, delivering a seamless authentication experience while maintaining the highest level of security.

3.8 Authentication Technology against Factor type

Technology	Knowledge	Possession	Inherent
Password (NIST)	X		
Grid Authentication	X	X	X
Phrase Authentication	X	X	
One Time Code	X	X	X
Push		X	X
Standard OATH		X	
YubiKey OTP	X	X	
Passkey/FIDO2		X	X

3.9 Automatic MFA determination and SSO assurance levels

MyID MFA allows for users to be provisioned for multiple MFA technologies at once. Applications Logon Technology can be set to **Automatic** MFA; this determines the most appropriate technology that the user is capable of authenticating with.

Coupled to this, MyID MFA also provides Single Sign On (SSO) capabilities across applications. This means that a user can authenticate to one application and is then not required to re-authenticate to other applications.

As each application can be configured with its own MFA assurance level, users can authenticate to an application with a lower-level assurance level than another application.

MyID MFA provides conditional SSO where SSO is allowed, provided that the application being accessed has the same or lower assurance level than the application a user originally authenticated to, the user is not required to re-authenticate. If an application has a higher-level of assurance than the original authenticated to, then the user needs to re-authenticate to the application with the higher-level assurance MFA technology.

3.9.1 Hierarchy

This is the MyID MFA automatic logon technology and assurance levels hierarchy:

1. FIDO / Passkey
2. Grid Multi-Factor Authentication
3. Push
4. YubiKey One Time PIN
5. One Time Code
6. Phrase Multi-Factor Authentication
7. Grid Deviceless
8. Phrase Deviceless
9. AD Password (Not applicable to Realm users)

3.10 Federation server

Federation provides the ability to share identity and authentication information between systems in a managed way. By supporting standards-based protocols such as OpenID Connect and SAML, MyID MFA can easily add stronger authentication to a range of applications be they cloud based or on-premises.

By supporting the widest range of authentication options from OTP over SMS, through pass phrases, OTP generation using the MyID Authenticator app, push-notifications, and FIDO passkeys, you can introduce a single means of strong authentication to project multiple applications or mix and match technologies as best fits your security needs and deployment scenario.

Building Identity Provider capabilities into the MFA solution, not only supports federation, but also delivers a unified authentication experience across the entire application suite, including authentication to application, logging on to the windows desktop, accessing the self-service portal and resetting credentials such as passwords. A simplified and consistent authentication process improves the user experiences and reduces the likelihood of a call to the help desk.

3.10.1 ADFS replacement

Microsoft ADFS (Active Directory Federation Services) has been the mainstay of many organizations looking to add secure authentication to multiple applications in a Microsoft-centric environment. With the move to Microsoft Entra based solutions, a number of organizations are finding themselves looking for an alternative that is simpler to deploy and provides support for both cloud and legacy on-premises applications, as well as securing the Windows Desktop logon and Microsoft 365.

The federated Identity Provider (IdP) capabilities MyID MFA delivers provides a modern and easy to alternative to ADFS. By supporting a wide range of authenticators, including FIDO passkeys, and standard protocols such as OpenID Connect and SAML 2.0, MyID MFA is a natural successor to ADFS.

4 Deployment

The following deployment overview walks through the installation process for deploying a MyID Authentication Server.

To deploy a MyID Authentication Server fully, you must:

1. Install the MyID Authentication Server on a Windows Server.
2. Provision users in the MyID Directory.
3. Install the Plug-ins, configure the third-party integrations, or setup RADIUS clients.

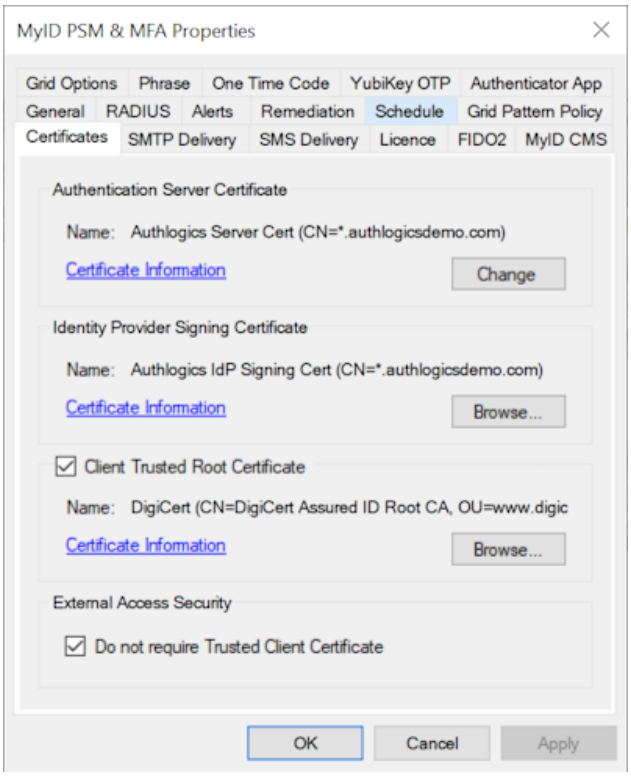
   MyID plug-ins have separate Integration guides which should be followed.
4. Create applications for Federated App support.
5. Optionally, you may choose to deploy additional MyID Authentication Servers to provide High Availability.

4.1 High Availability and certificates

The MyID Authentication Server installer automatically generates a MyID Server Certificate – this is used for encrypting data sorted in the directory. In addition, the installer creates a MyID SSL Certificate that is used by IIS for encrypting web traffic in transit.

Before you install an additional MyID Authentication Server, you must export the MyID Server Certificate from the primary MyID Authentication Server with its private key and import it onto the additional server. Until you do this, the additional Authentication Server cannot access encrypted data stored in the directory.

To verify which certificate is being used on an existing Authentication Server and Identity Provider Signing certificates, check the **Certificates** tab in the MyID Management Console:



For detailed instructions, see section *4.7*, *Certificate export and import*.

4.2 Installing the MyID Authentication Server

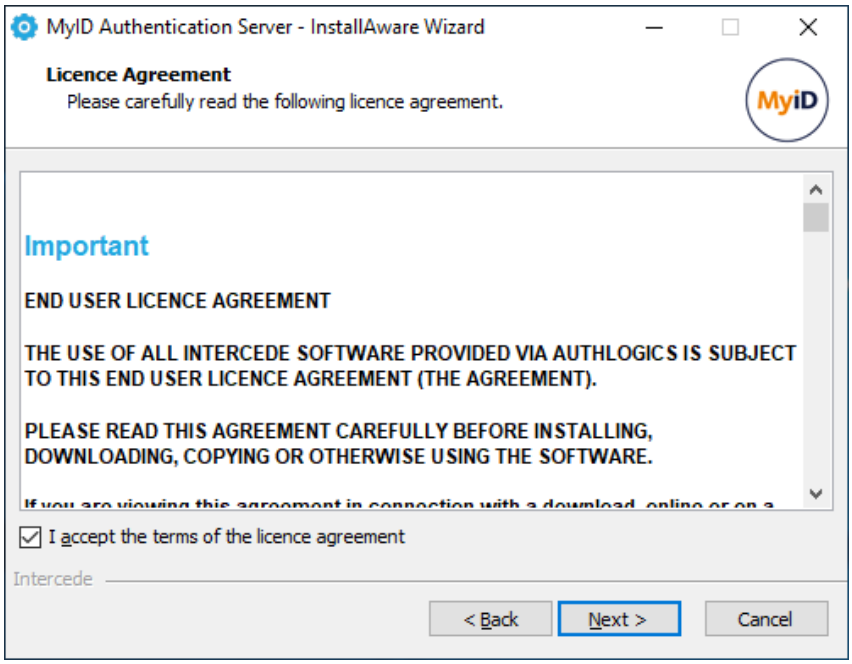
The MyID Authentication Server is responsible for processing logon requests and other core activities. The MyID Authentication Server should be set up before any other MyID MFA or PSM component.

Note: This section of the installation process requires Local Administrator rights on the server. Domain rights are not required at this stage.

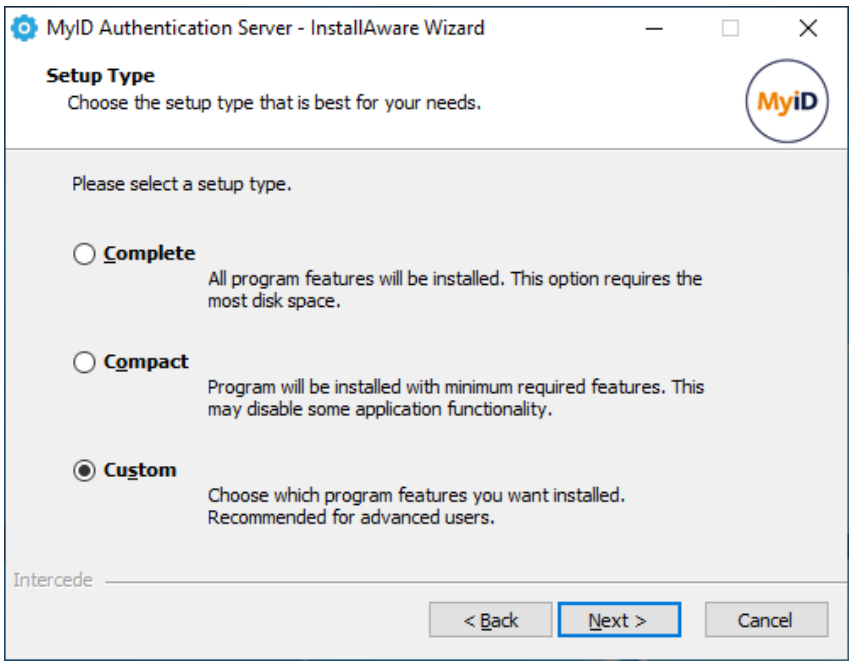
1. To start the MyID Authentication Server installation, run the `MyID Authentication Server xxxxx.exe` installer.
2. Click **Next** to automatically uninstall the previous version.

3. Click **Next**.

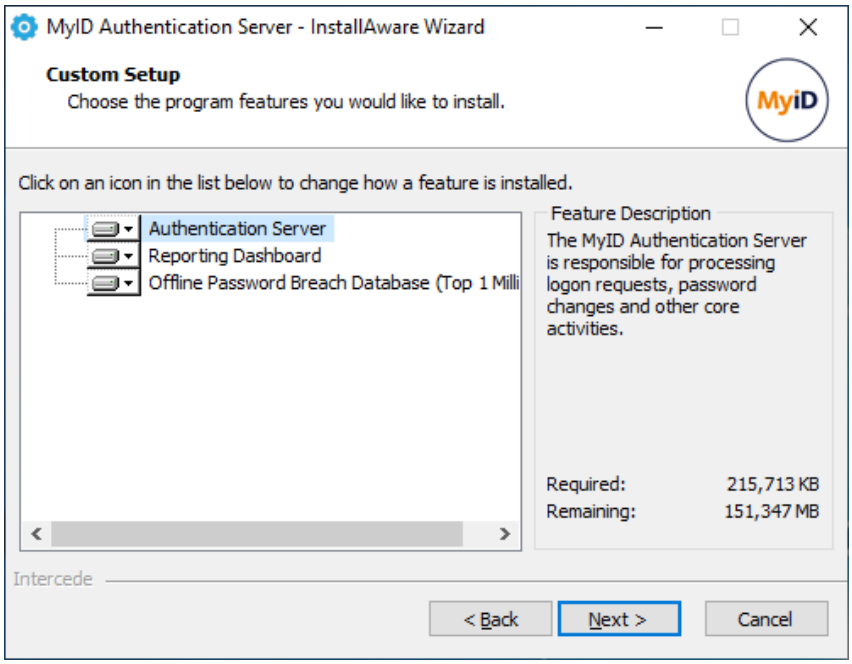
4. Review the license agreement and check the **I accept the terms of the licence agreement** box.



5. Click **Next**.



6. Select the **Custom** setup type, and click **Next**.



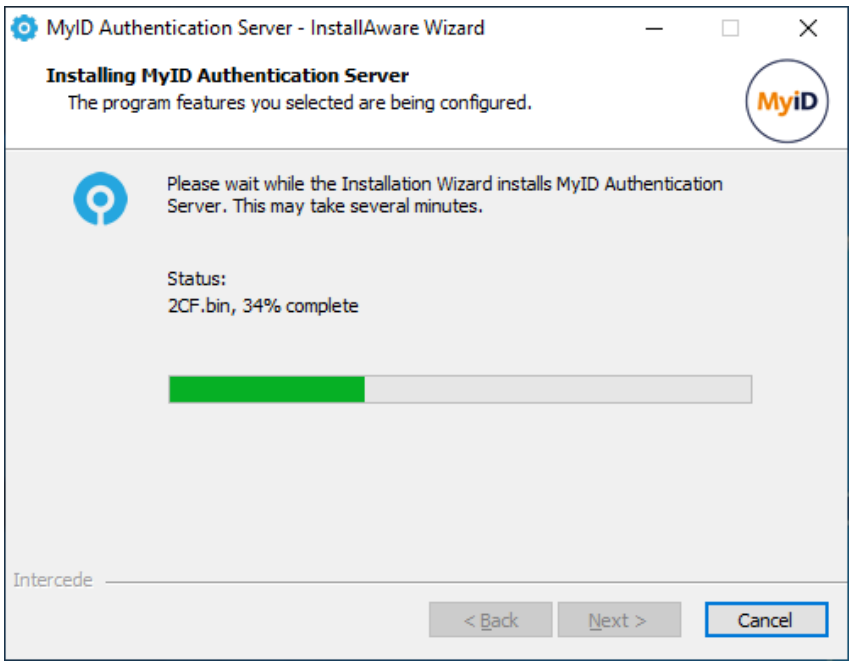
7. Select features to install.

   At minimum, select the **Authentication Server core** and the **Authentication Server Management Console** features for installation.

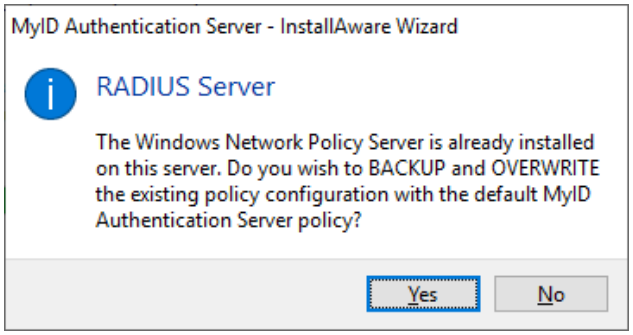
8. Click **Next**.

9. Click **Next**.

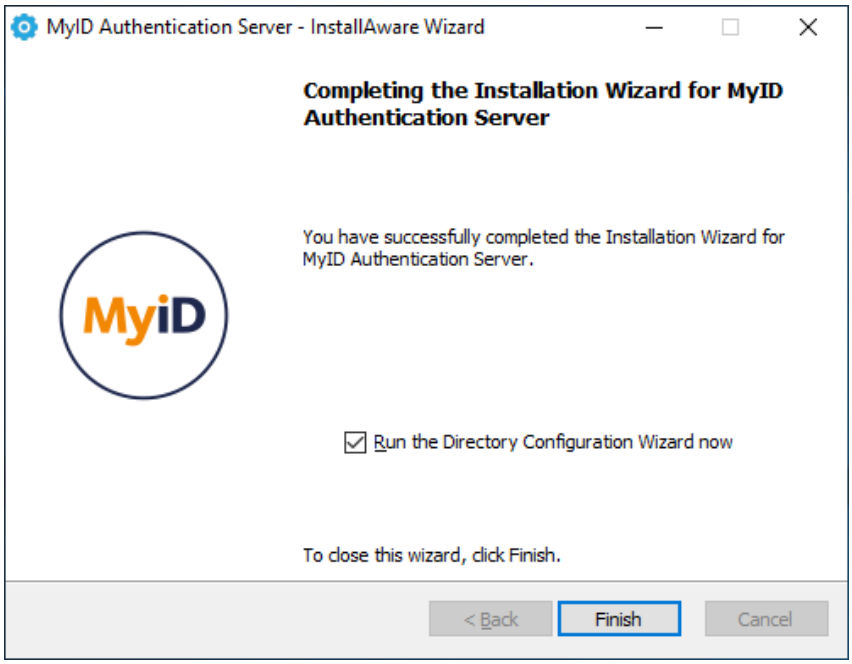
   The installation is being performed.



10. You may be prompted to overwrite the existing NPS policy.



Click **Yes**.

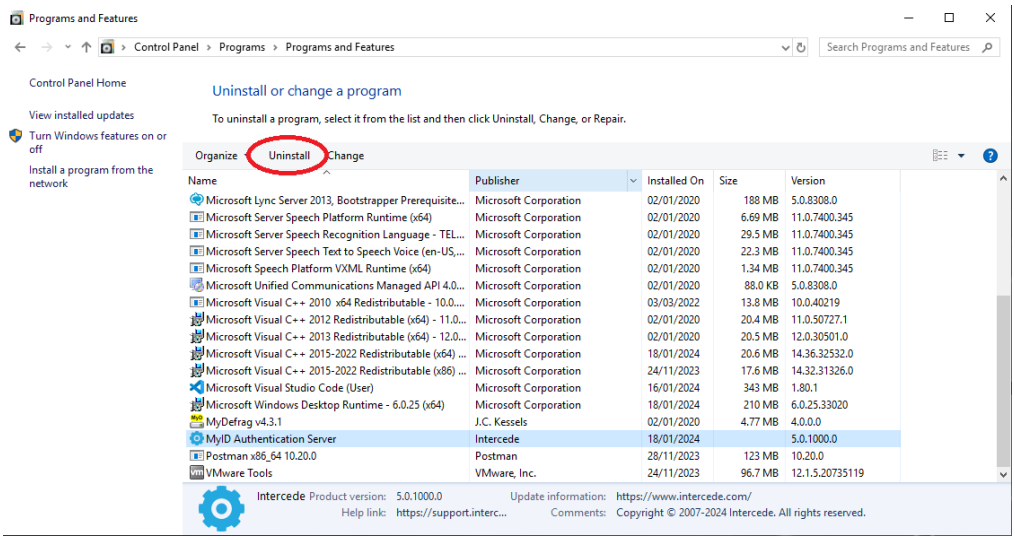


All necessary MyID Authentication Server files have been installed on your server.

11. If you want to set up your directory immediately, select **Run the Directory Configuration Wizard now**.
12. Click **Finish**.

4.3 Uninstalling the MyID Authentication Server

If you no longer require the MyID Authentication Server on a server, you can remove it by performing an uninstall from **Control Panel > Programs > Programs and Features**:



4.3.1 Active Directory metadata

Uninstalling the MyID Authentication Server does *not* remove the metadata from user accounts in the Active Directory. If you want to remove MyID MFA and PSM from your environment completely, delete all user accounts using the MMC before uninstalling. This does *not* delete the user accounts in the Active Directory; it just removes all MyID information from them.

For detailed information about MyID Active Directory metadata, see Authlogics KB207256965:

support.authlogics.com/hc/en-us/articles/207256965

4.4 Updates and upgrades

A product update is a minor new version designed to fix specific known issues in the product and introduce some new features. Updates are typically low risk to deploy and are designed to be a simple in-place update. Updates are released regularly and may be skipped if the changes in the update are not required. Check the `readme.txt` of the update to see the changelog.

Typically, updates can be performed in-place at your convenience allowing for differing versions for MyID Agents and Authentication servers operational within your environment.

For example, if you currently have V5.0.6947.0 deployed, an in-place update of all agents and servers to V5.0.6947.2 can be done sporadically in any order that fits your schedule.

Note: When updating or upgrading servers, you are recommended to perform the action one server at a time to update or upgrade additional servers only once the server you are currently performing update or upgrade action on is completed and fully tested to be operational.

A product upgrade is a major new version that includes fixes but is mainly designed to deliver new features and functionality. Upgrades are not released regularly. Upgrades may require additional planning before they are installed. For more information, see section *4.6*, *Installing an upgrade*. Always review the installation and configuration guide of the new version before upgrading.

4.5 Installing an update

You can use the installation program of an update for a full clean install, or to perform an in-place update of an existing installation.

The installation process is almost identical to performing a new installation. Once installed, you must run the Directory Configuration Wizard for the server to be used after the update.

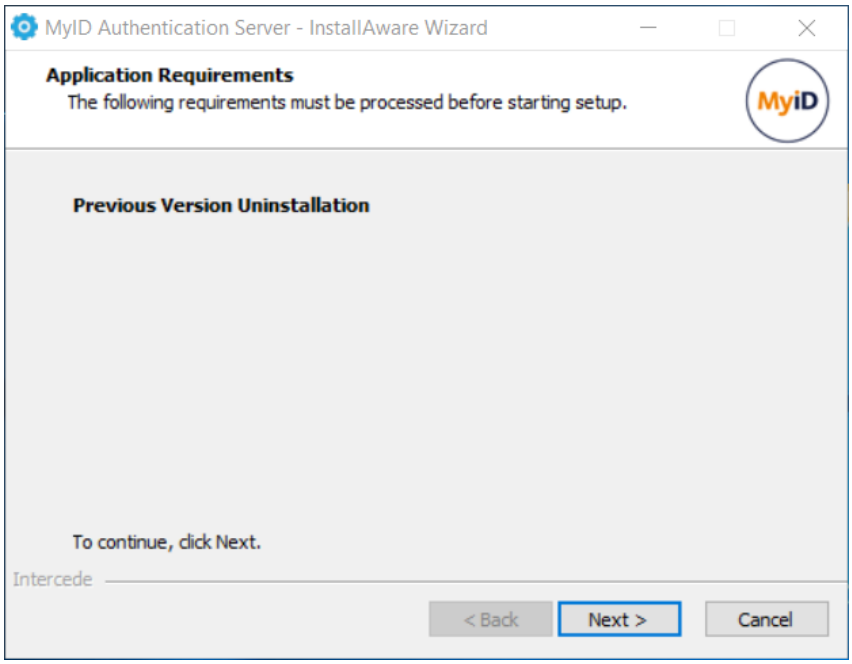
For PSM deployments, you must rerun the Password Security Management wizard after an upgrade.

All directory settings, registry settings, and supported web portal customizations are retained during an update.

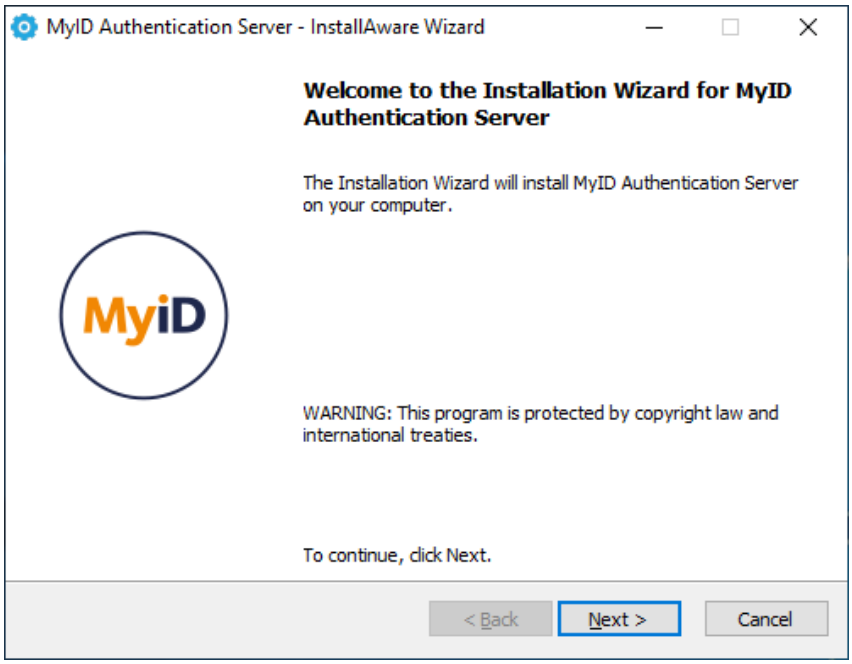
Note: If the latest version of MyID MFA and PSM is an upgrade to your current version, see section *4.5*, *Installing an update*.

To perform an in-place update:

1. To start the MyID Authentication Server installation, run the `MyID Authentication Server xxxxx.exe` installer.

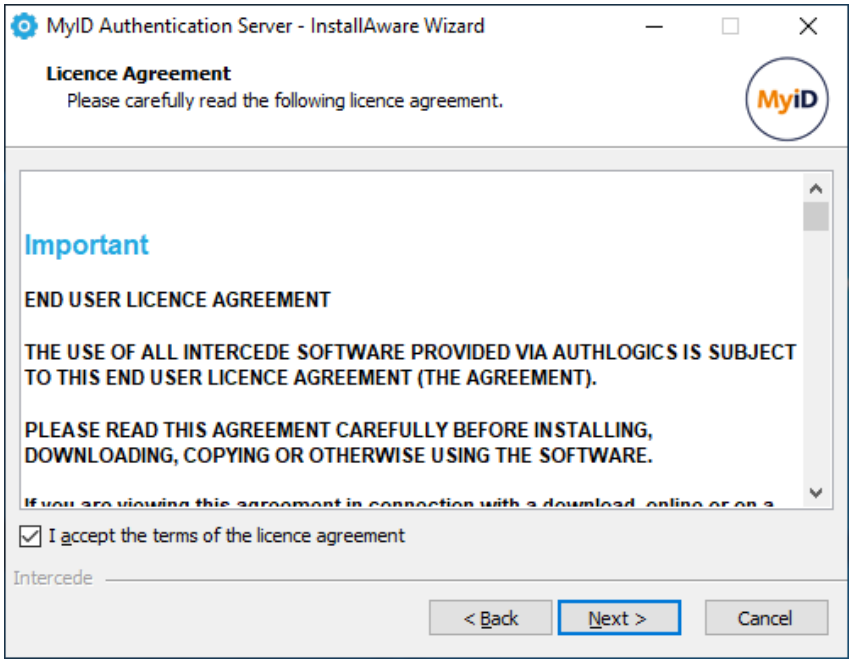


2. Click **Next** to automatically uninstall the previous version.

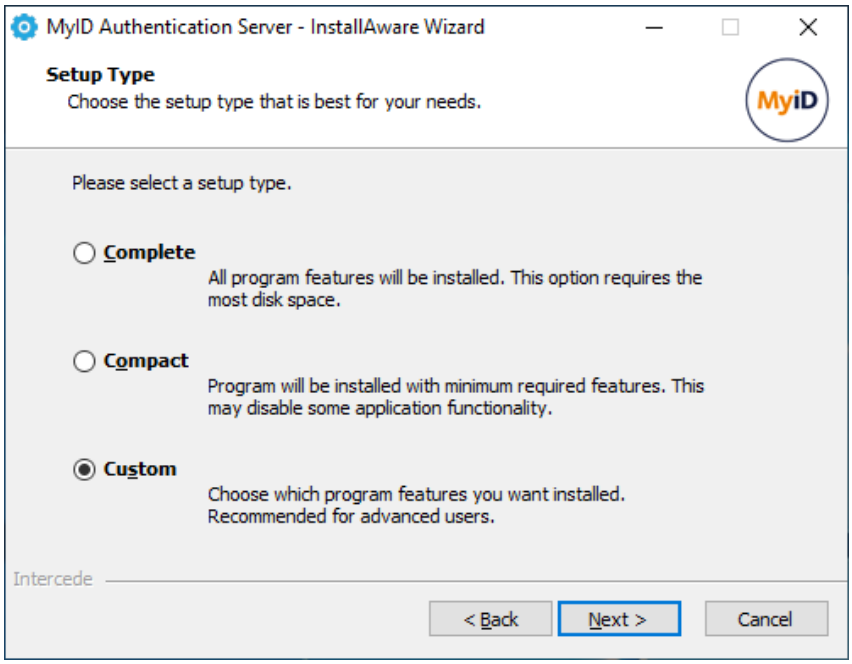


3. Click **Next**.

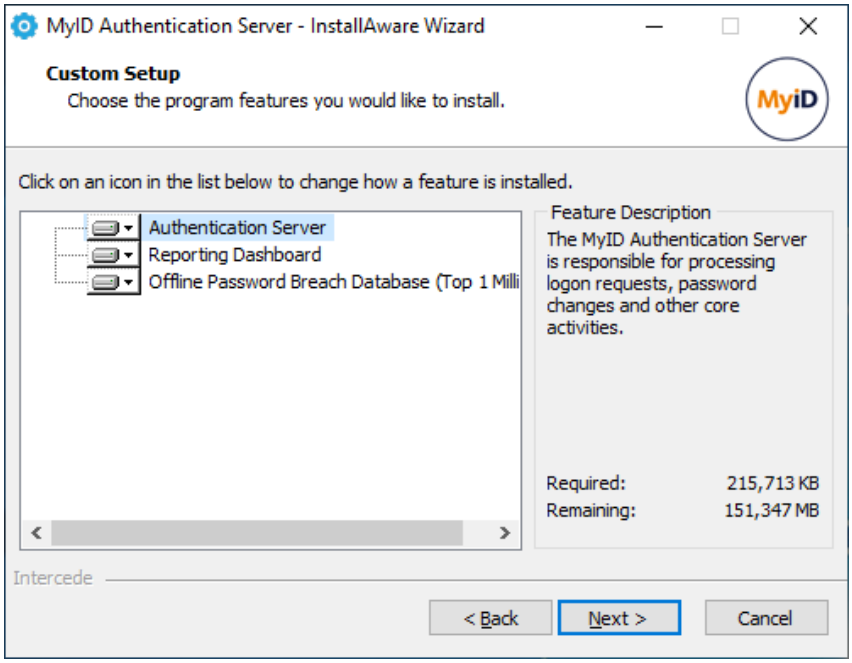
4. Review the license agreement and check the **I accept the terms of the licence agreement** box.



5. Click **Next**.



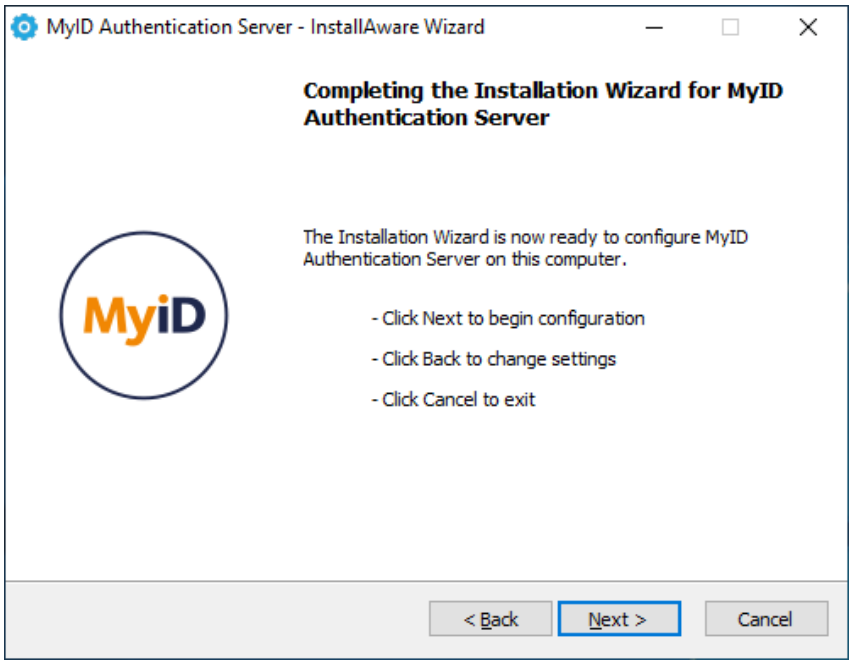
6. Select the **Custom** setup type, and click **Next**.



7. Select features to install.

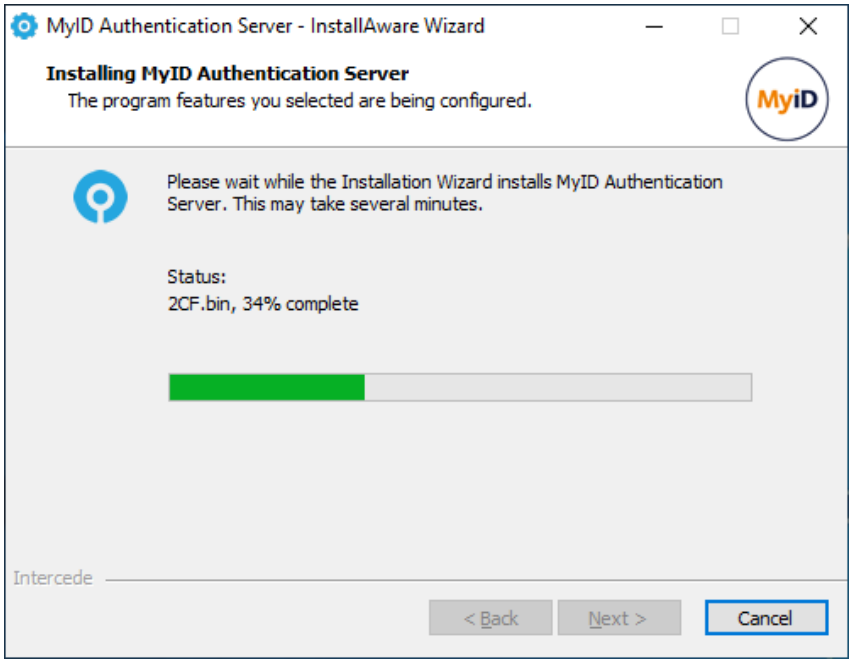
   At minimum, select the **Authentication Server core** and the **Authentication Server Management Console** features for installation.

8. Click **Next**.

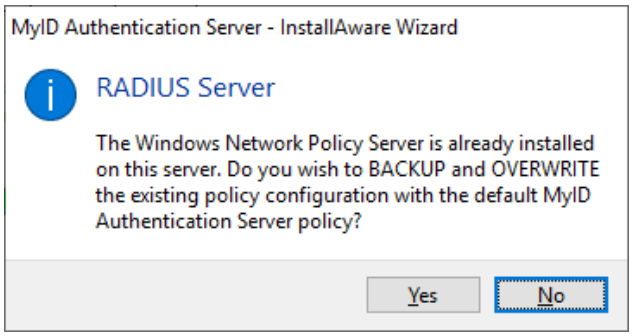


9. Click **Next**.

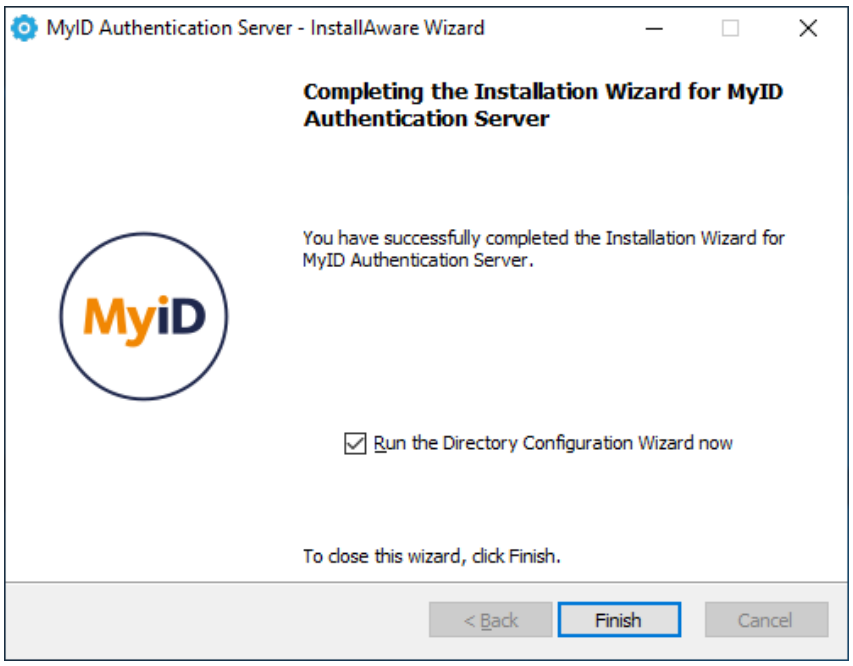
   The installation is being performed.



10. You are prompted to overwrite the existing NPS policy.



Click **No** to preserve your preexisting Network Policy Server policy configurations.



All necessary MyID Authentication Server files have been installed on your server.

11. If you want to set up your directory immediately, select **Run the Directory Configuration Wizard now**.
12. Click **Finish**.

4.6 Installing an upgrade

To perform an Upgrade successfully (for example upgrading V4.1.xxxx.x deployments to V4.2.xxxx.x or V4.2.xxxx.x to V5.0.xxxx.x) without potentially impacting your environment, you must follow a step-by step process.

All MyID agents are designed to be backward compatible – a V5.x agent can communicate with a V4.2 Authentication Server; however, a V4.2 agent cannot communicate with a V5.0 Authentication server. Therefore, before you upgrade Authentication Servers, you must first upgrade the deployed agents.

Agents may have new Group Policy objects so, before deploying the new agent, you may need to push the Group Policy objects accordingly.

Once you have fully upgraded the agents, you can upgrade the Authentication servers.

Fully test each step of the recommended upgrade process before moving on to the next step. The recommended upgrade process is:

1. Push any new MyID MFA and PSM agent Group Policy Objects (GPO) to the servers and workstations where the agents are installed.
   - For more information on the Group Policy Objects relating to the Windows Desktop Agent, see the *Configuring the Windows Desktop Agent* section of the ***Windows Desktop Agent Integration Guide***.
   - For more information on the Group Policy Objects relating to the Domain Controller Agent, see the *Configuring the Domain Controller Agent Policy settings* section of the ***Domain Controller Agent Integration Guide***.
   - For more information on the Group Policy Objects relating to the ADFS Agent, see the *Configuring the MyID ADFS Agent* section of the ***ADFS Agent Integration Guide***.
   - For more information on the Group Policy Objects relating to the Exchange Agent, see the *Configuring the Exchange Agent* section of the ***Exchange Agent Integration Guide***.
2. Upgrade *all* MyID PSM and MFA agents.
   - For information on upgrading the Windows Desktop Agent, see the *Updating the MyID Windows Desktop Agent* section of the ***Windows Desktop Agent Integration Guide***.
   - For information on upgrading the Domain Controller Agent, see the *Installing the MyID Domain Controller Agent* section of the ***Domain Controller Agent Integration Guide***.
   - For information on upgrading the ADFS Agent, see the *Installing the MyID ADFS Agent* section of the ***ADFS Agent Integration Guide***.
   - For information on upgrading the Exchange Agent, see the *Installing the MyID Exchange Agent* section of the ***Exchange Agent Integration Guide***.

   Ensure that the agents are all reading the GPOs that you configured and that they can communicate with the existing Authentication Servers.
3. Manually uninstall all but one Authentication Server.

   You must ensure that you have only *one* Authentication Server remaining in your Active Directory forest.
4. Perform an in-place upgrade on the last remaining Authentication Server.

   Ensure that the Internet Information Server Port bindings are the same as before, and that any NPS clients are not overwritten.

   Performing an in-place upgrade of one Authentication Server has the same steps as performing an in-place update of one Authentication Server; see section *4.5*, *Installing an update*.
5. After performing the in-place upgrade:
   a. Run the Directory Configuration wizard with **Reprocess user data to latest storage version** enabled.

b. Reboot.

c. If you are performing a PSM upgrade, run the Password Security Management wizard.

d. Use the on-server Self Service Portal to test the upgraded server. You are recommended to:

- Test that you can log in with pre-existing MFA users.
- Test that passwords that are valid according to PSM defined policies are accepted.
- Test that passwords that are invalid according to PSM defined policies are rejected.

6. Install the latest Authentication Server version on the Authentication servers that you uninstalled.

   Before installing additional MyID Authentication servers, see section *4.7*, *Certificate export and import*.

   After installing each in-place upgrade, carry out the previous step (performing the in-place upgrade) on each machine.

7. Review the MyID Authentication Server settings.

   Note the new features, and browse the documentation for more information on them.

4.6.1 Upgrading from version 4.2

The MyID Authentication Server 5.0 supports upgrading from version 4.0 and higher. To upgrade from version 3.x, you must first upgrade to version 4.1 (not version 4.2), and then to version 5.0; there is no direct upgrade path.

Important: If the Authlogics Desktop Logon Agent version 4.x is deployed, you *must* upgrade the Windows Desktop Agent to version 5.0 *before* you upgrade the MyID Authentication Server . The Windows Desktop Agent 5.0 is backward compatible with version 4.x Authentication servers. See the ***Windows Desktop Agent Integration Guide*** for further details.

4.6.2 Windows Desktop Agent compatibility

All Windows Desktop Agents are designed to be backward compatible; the latest version of the Desktop Agent works with the previous MyID Authentication Server version. However, the agent may not work with more recent MyID Authentication Server versions.

The following table details the MyID Authentication Server relative to the versions of Windows Desktop Agent supported:

MyID Authentication Server version	Minimum Desktop Agent version
5.0.6946.0 and lower	5.0.6946.0
5.0.6947.0	5.0.6947.0

When a Windows Desktop Agent falls out of compatibility, the agent can no longer communicate with the Authentication Server and therefore continues to operate in offline mode.

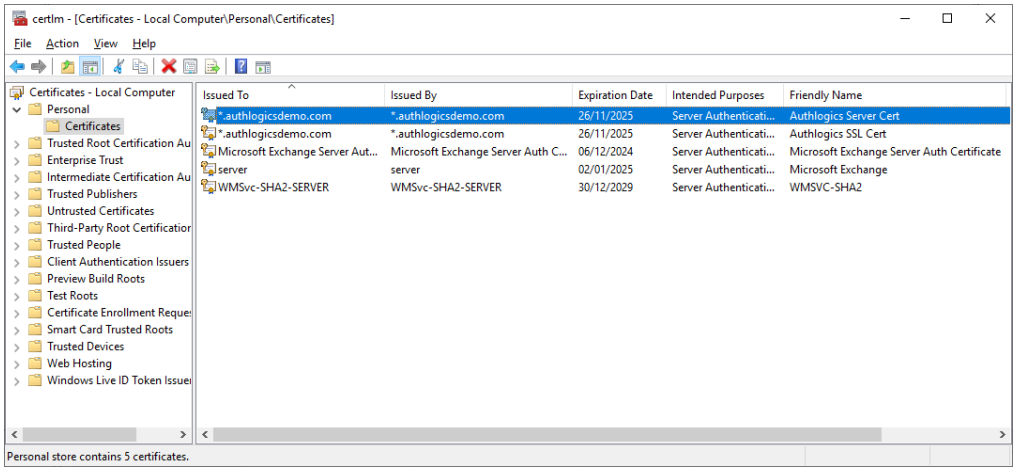
4.7 Certificate export and import

This section details the process of exporting the MyID Authentication Server directory encryption and Identity Provider certificates to a file so it can be imported onto another server where the MyID Authentication Server software will be installed.

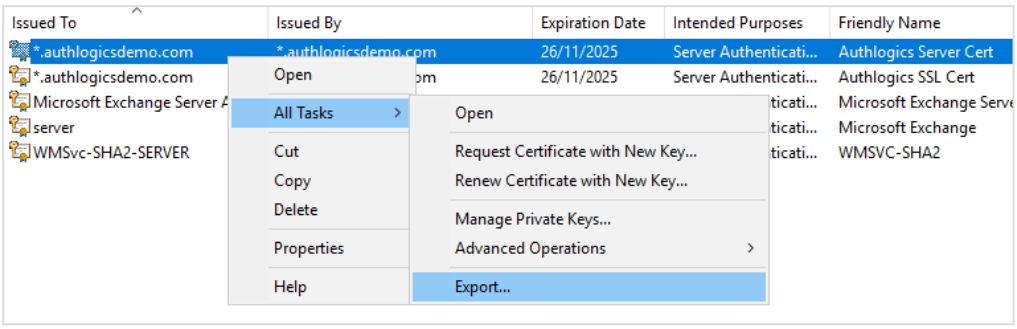
4.7.1 Exporting a certificate from an existing MyID Authentication Server

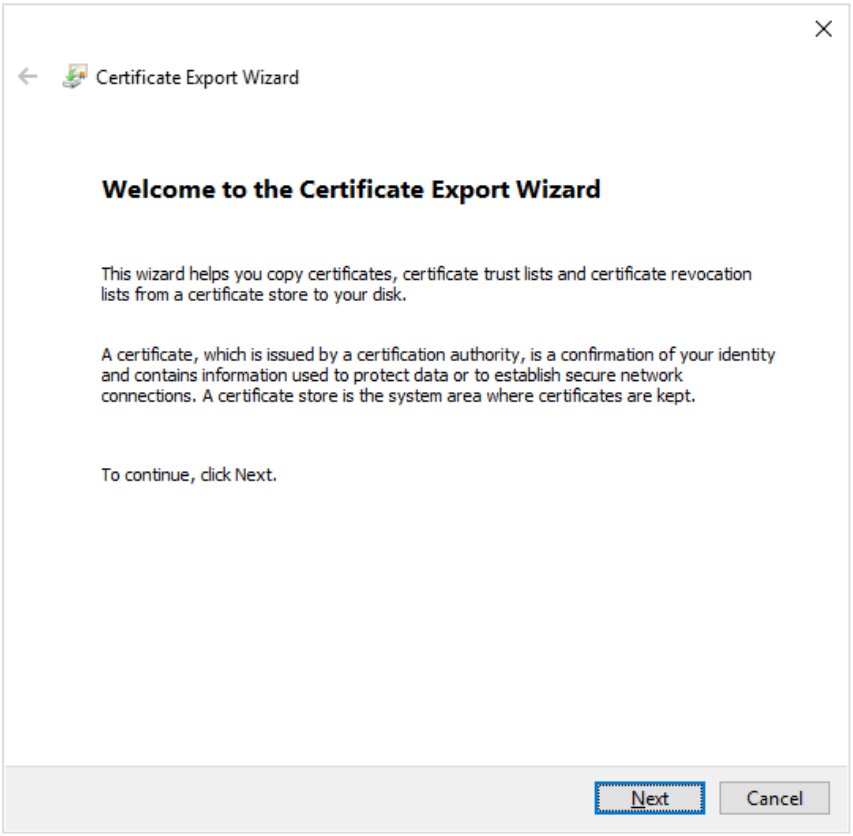
Note: The following documents the process to export the directory encryption certificate; this process must be repeated for the IdP Signing certificate.

1. To start the Certificate MMC, run `certlm.msc`.

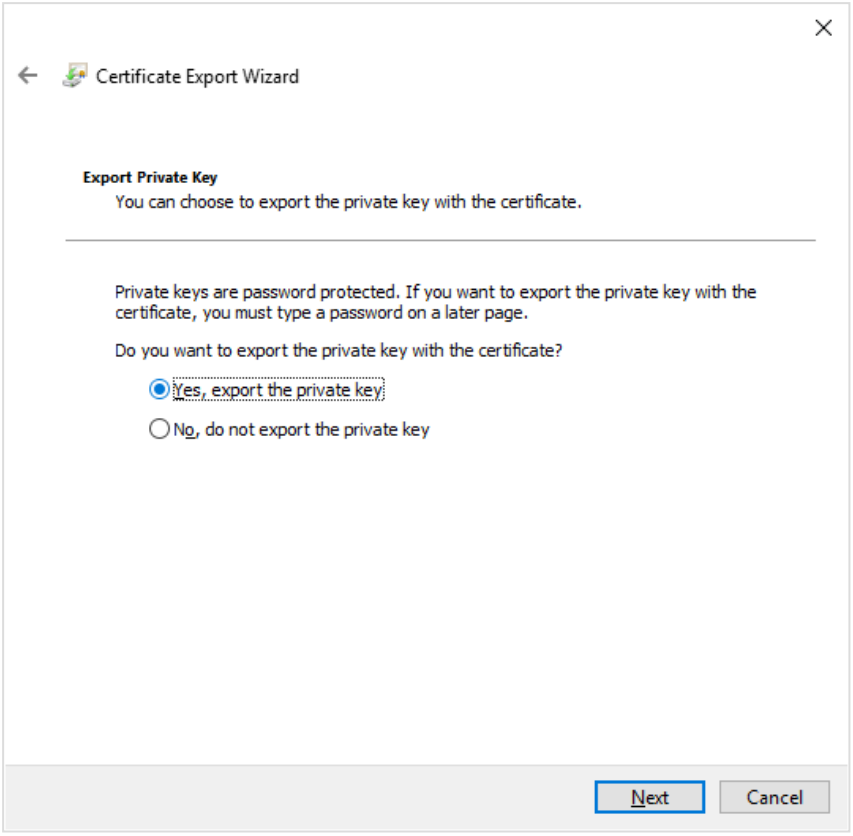


2. Right-click the MyID Server Certificate (or IdP Signing Certificate) being used, and select **All Tasks** > **Export**.

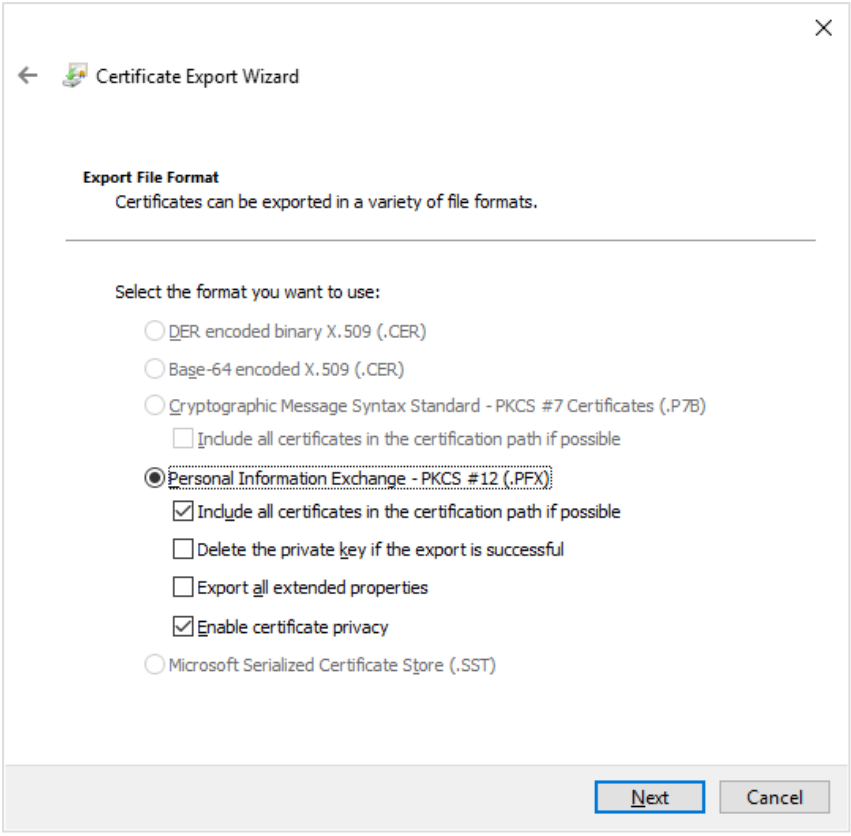




3. Click **Next**.

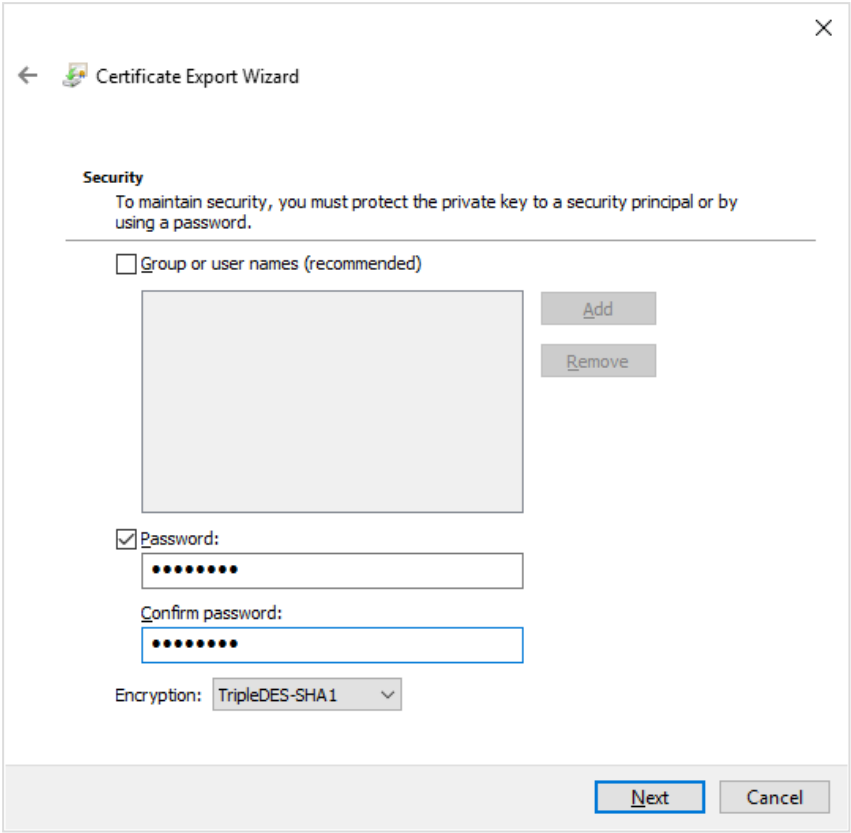

Certificate Export Wizard
Export Private Key
You can choose to export the private key with the certificate.
Private keys are password protected. If you want to export the private key with the certificate, you must type a password on a later page.
Do you want to export the private key with the certificate?
Yes, export the private key
No, do not export the private key
Next
Cancel

4. Select **Yes, export the private key** and click **Next**.



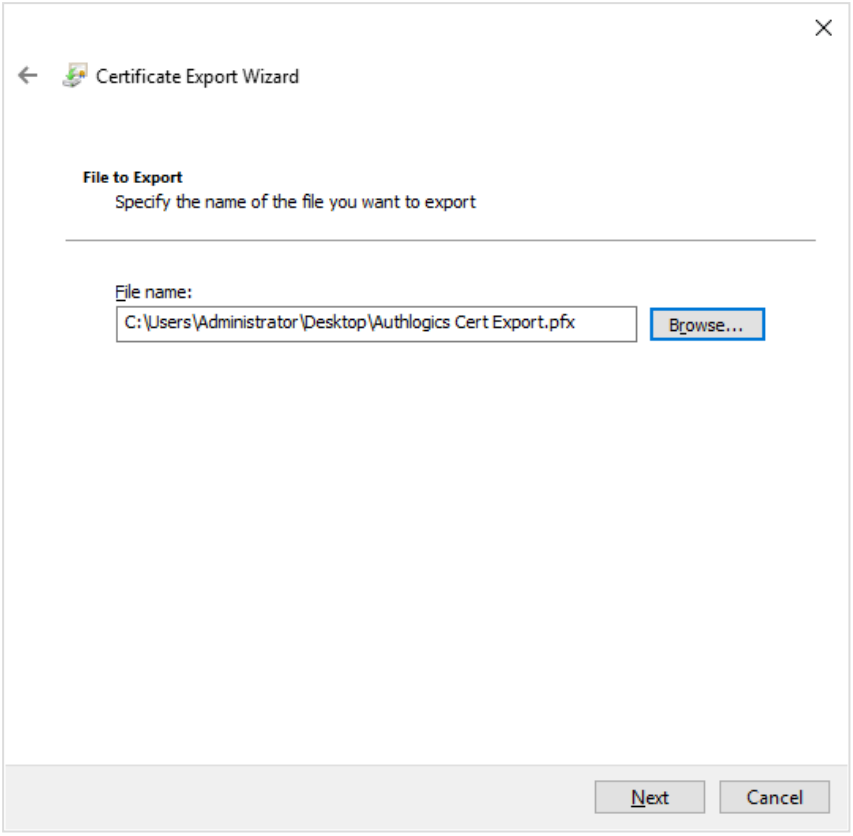
5. Click **Next**.

6. Select **Password** and enter your password twice to confirm.

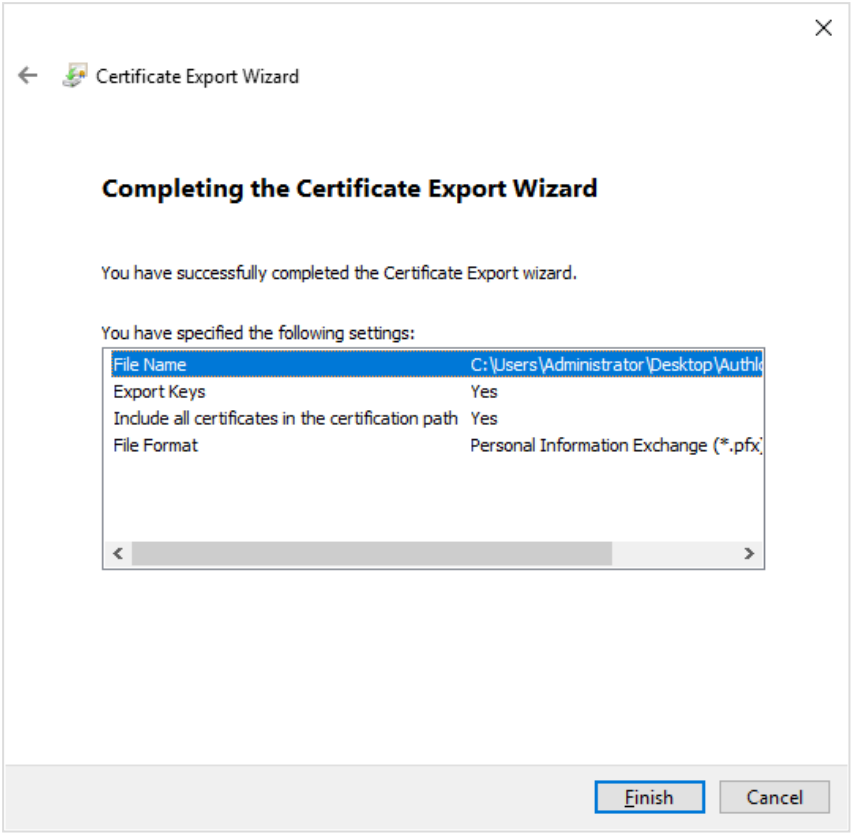


7. Click **Next**.

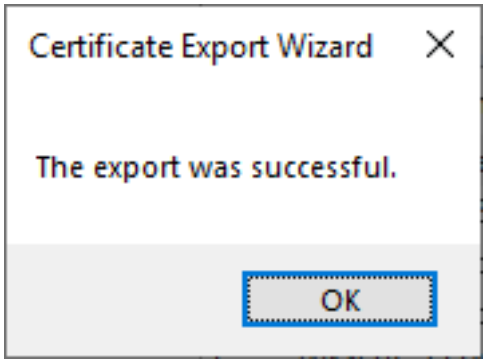
8. Enter allocation and **File name** to export to.



9. Click **Next**.



10. Click **Finish**.



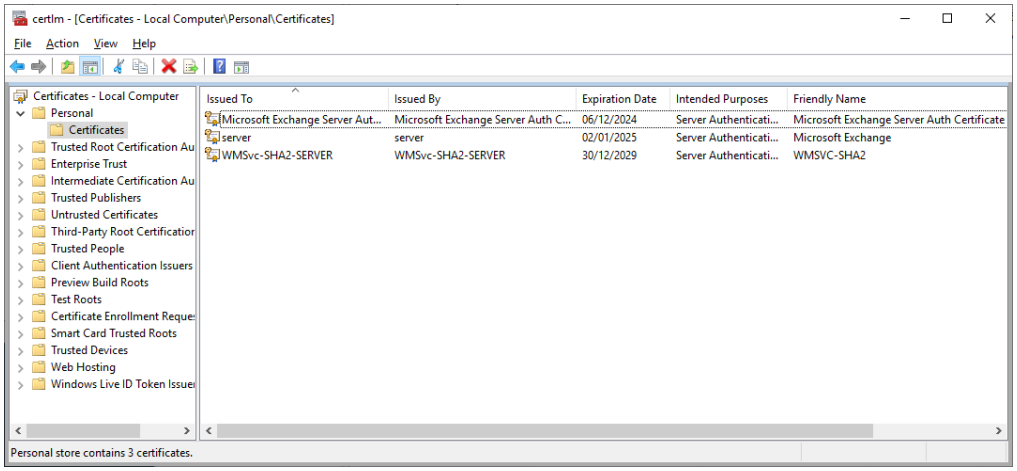
11. Click **OK**.

    The wizard closes.

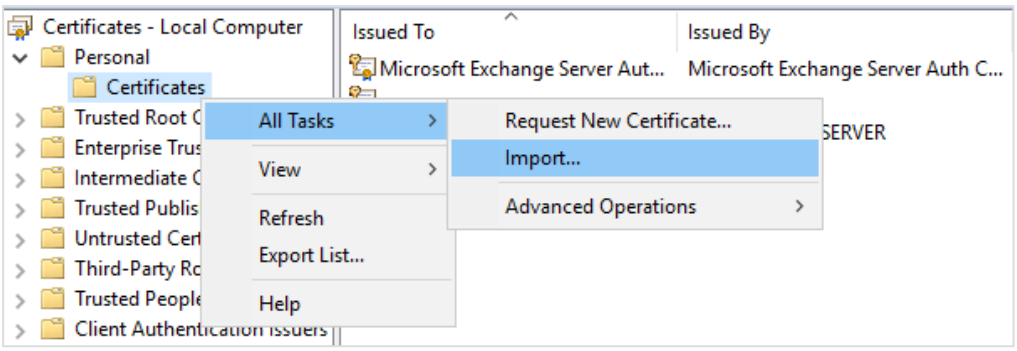
4.7.2 Import a certificate to a new MyID Authentication Server

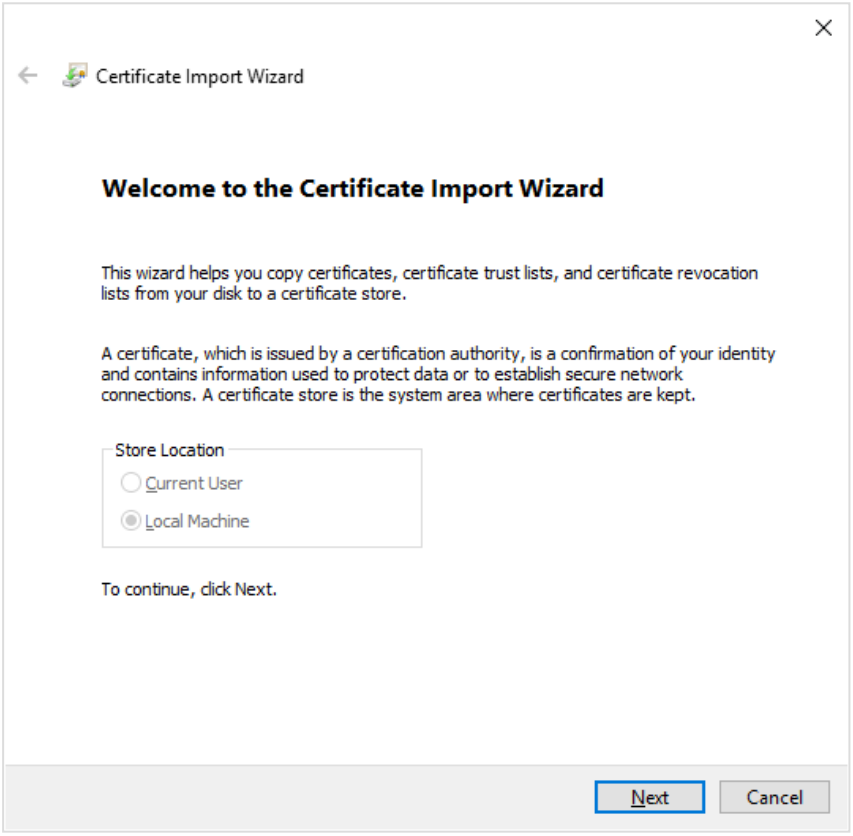
Note: As with the export of the certificates, this process needs to be followed for both the Authenticate Server encryption and IdP Signing certificates.

1. To start the Certificate MMC, run `certlm.msc`.



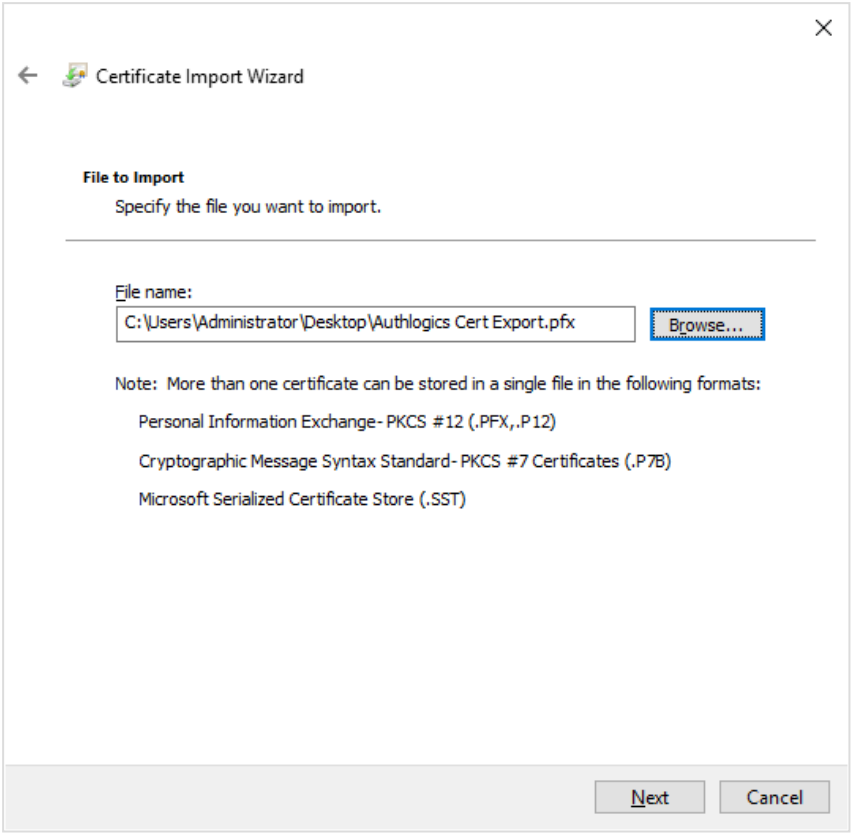
2. Right-click **Certificates in the Personal store**, select **All Tasks** > **Import**.





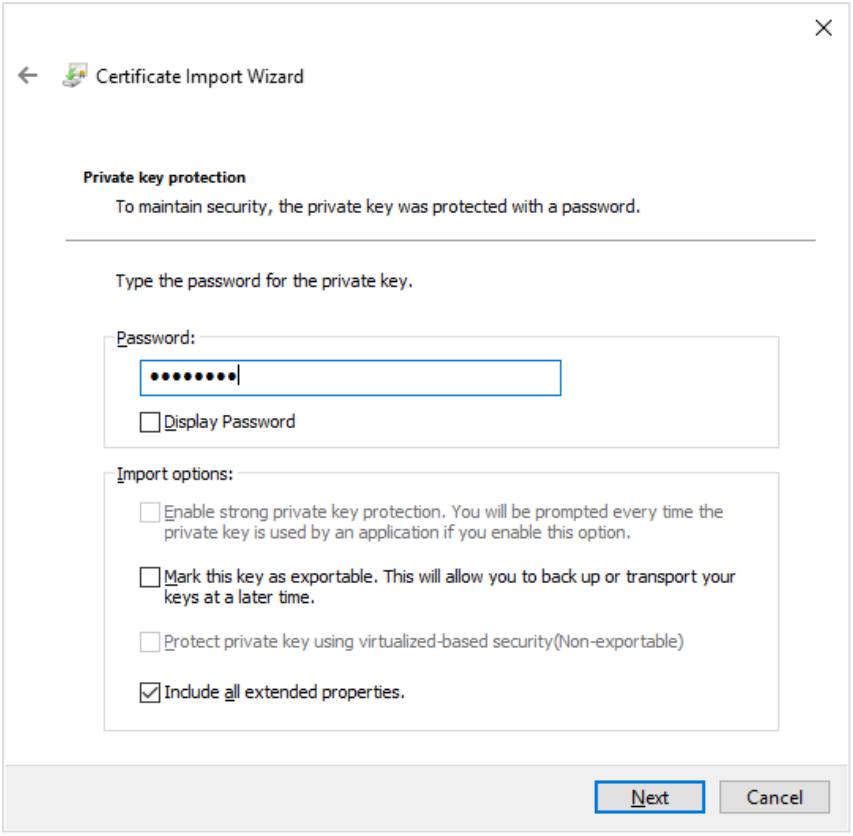
3. Click **Next**.

4. Enter the path to the file you previously exported.

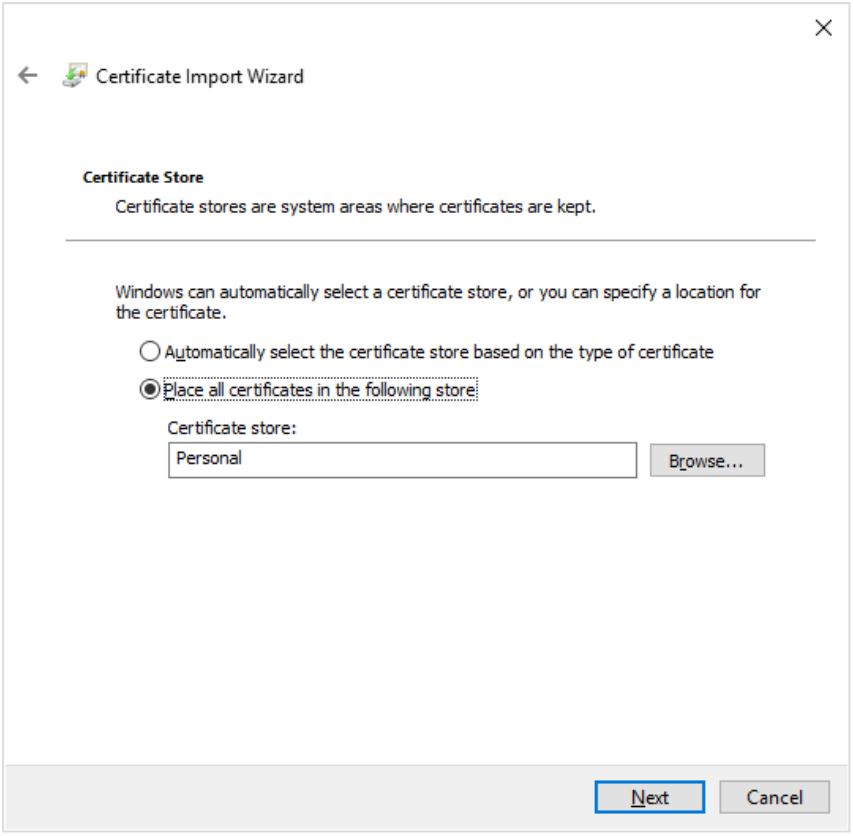


5. Click **Next**.

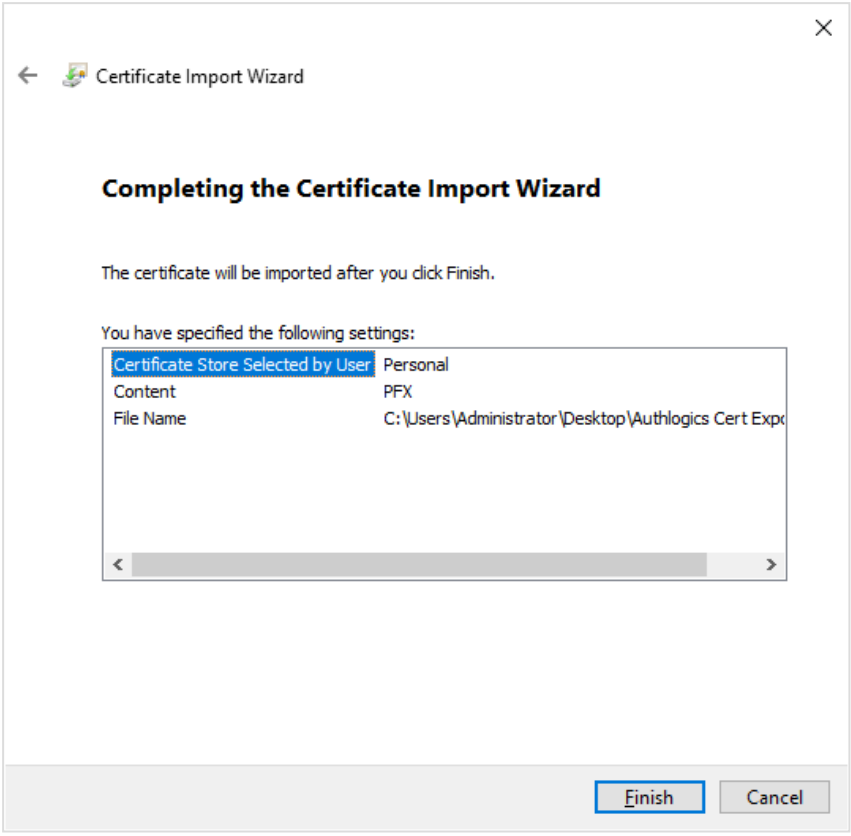
6. Enter the password that you used when exporting the certificate.



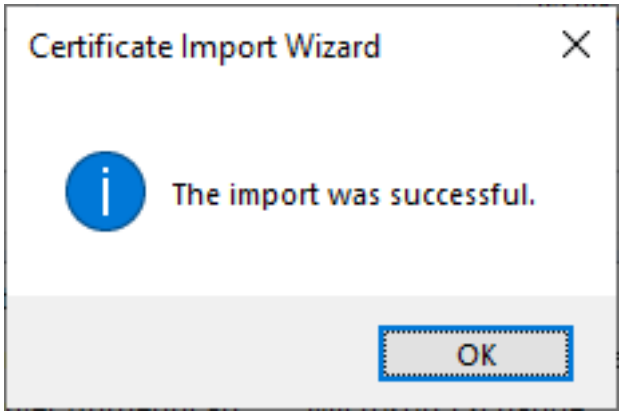
7. Click **Next**.


Certificate Import Wizard
Certificate Store
Certificate stores are system areas where certificates are kept.
Windows can automatically select a certificate store, or you can specify a location for the certificate.
Automatically select the certificate store based on the type of certificate
Place all certificates in the following store
Certificate store:
Personal
Browse...
Next
Cancel

8. Click **Next**.



9. Click **Finish**.



10. Click **OK**.

4.8 MyID Authentication Server Directory configuration

MyID Authentication Server Directory must be configured before you can provision users for Multi-Factor Authentication or password policies created.

4.8.1 Directory Configuration Wizard

This section should be performed on the server running the MyID Authentication Server.

Note: This section of the installation process requires the logged-on user to have Domain Admin rights in the domain containing MyID Users and the domain containing the Authentication Server. Alternatively, an Enterprise Admin account can be used.

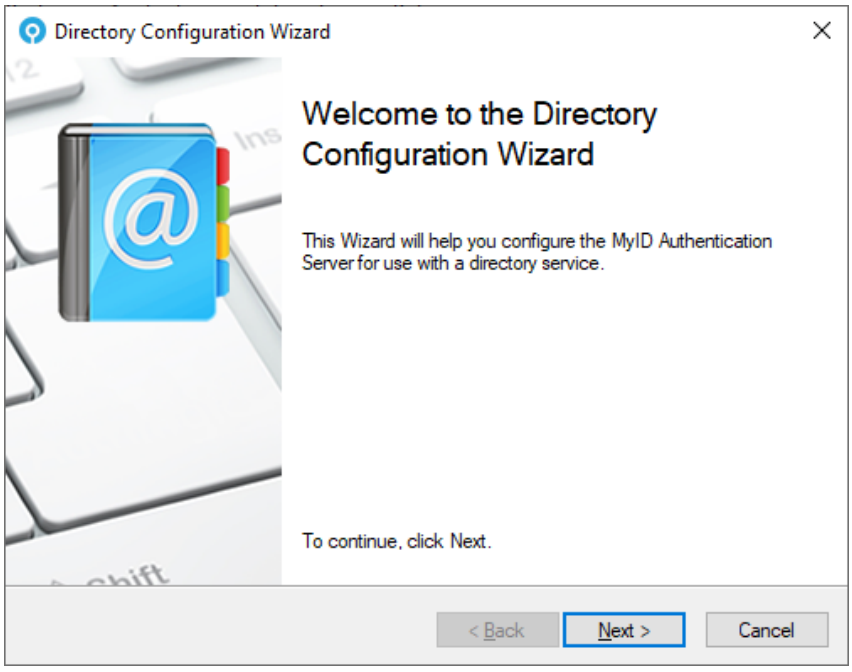
1. Start the MyID Directory Configuration Wizard.

   The MyID Directory Configuration Wizard starts automatically when the MyID Management Console is first loaded. It can also be started from the **Directory Configuration Wizard** action from the **Actions** of the MMC.

   Start the MyID Management Console from the Windows Start menu:

   Start > **All Programs** > **MyID Authentication Server Management Console**

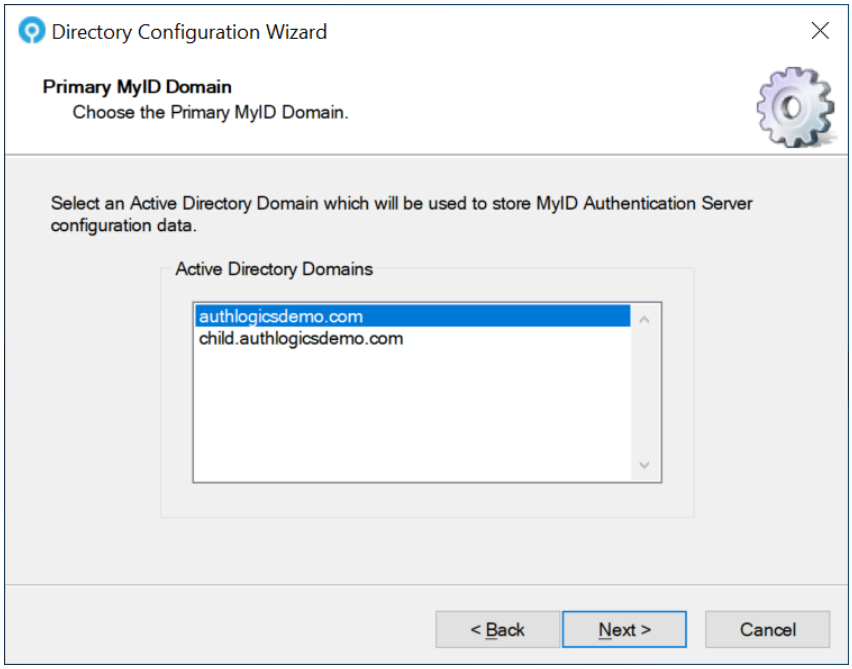
   Note: Ensure that you are logged on with domain administrator account and not a local administrator account.



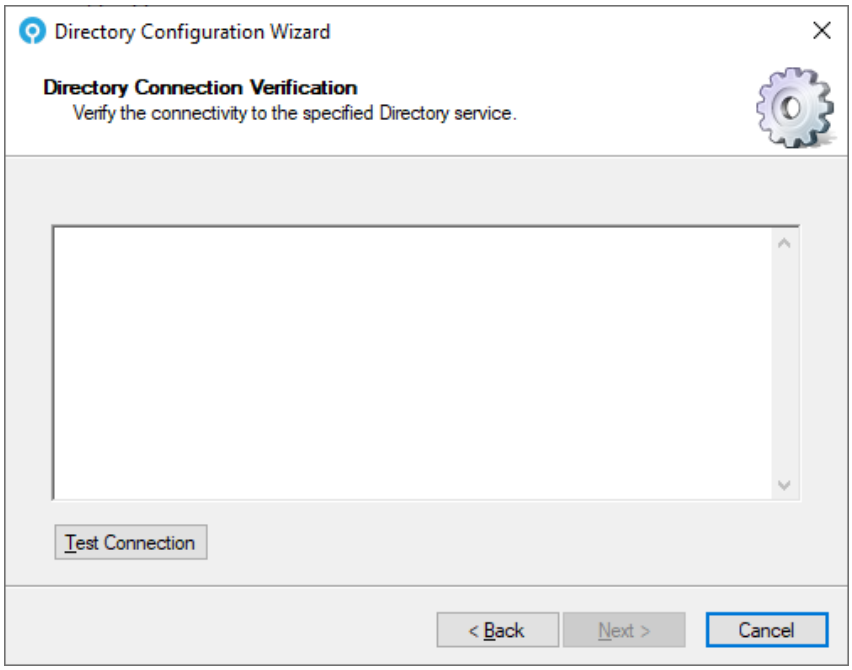
2. Click **Next**.

3. If the Active Directory Forest contains more than one domain and this is the first time the directory is being configured:

   a. Select the Active Directory Domain you want to use to store MyID configuration data.

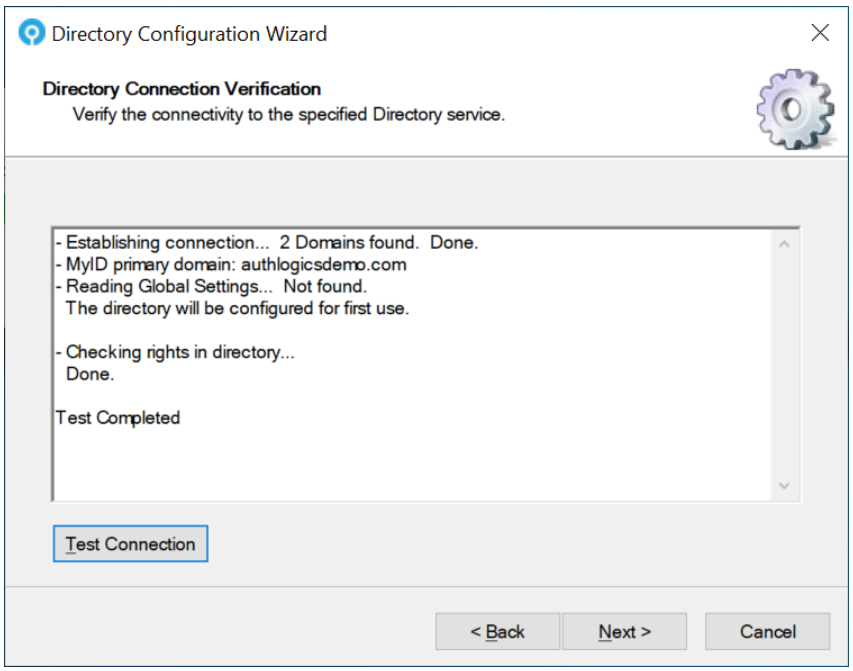


   b. Click **Next**.

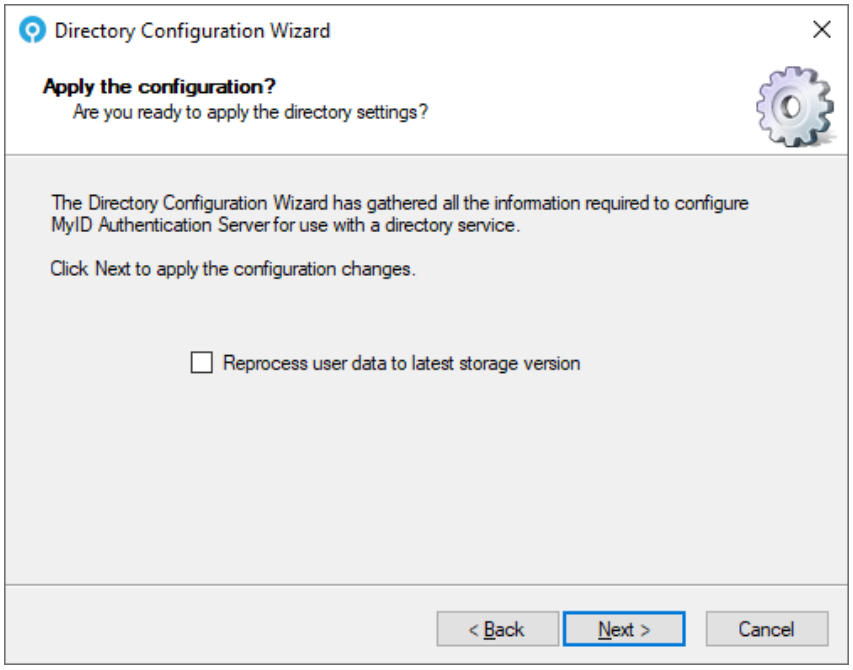


4. Click the Test Connection button.

   This ensures that the MyID Authentication Server can access the specified directory.



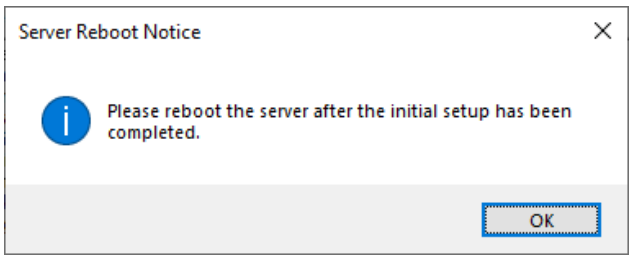
5. If the test is successful and all the necessary information has been collected, click **Next**, otherwise correct the issue, and try again.



6. Click the **Reprocess user data to latest storage version** to upgrade the user information from a version 4 schema to the latest schema. For clean installations or native MyID version 5 deployment, this is not necessary.

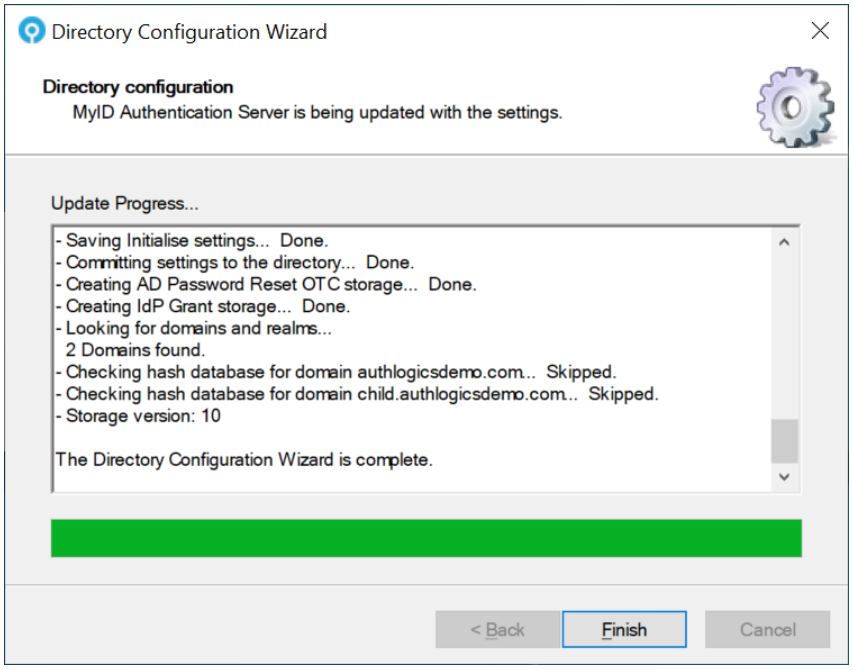
7. Click Next.

   This applies any configuration changes.



8. Click **OK**.

   Important: After configuring the MyID Authentication server for use with Active Directory you *must* reboot the server – if you do not authentication services fail. These failures are reflected in the Windows Events – Application logs.



9. Examine the update progress information for any unexpected errors that may have occurred during the AD configuration.

   This information is also logged in the Windows Application Event Log with Information Event ID 1719.

10. Click **Finish**.

4.8.2 Add users to the MyID Administrators Group

The MyID Directory Configuration wizard automatically adds the currently logged in user account to the MyID Administrators Active Directory security group. User accounts for the administrators of MyID must also be *manually* added to the MyID Administrators Active Directory security group.

4.9 MyID license configuration

The License Configuration Wizard is responsible for adding all license types to the Authentication Server.

Intercede supplies a unique license key for each product (PSM and MFA) specific to each Active Directory. The license key is entered in the Licence Configuration Wizard through the MMC. The license requires product activation, and the server periodically updates Intercede with license usage information - this requires Internet connectivity to `https://licencing.authlogics.com/*` which must be maintained for the server to continue functioning.

In certain circumstances, Intercede may supply an offline license file. These digitally signed license files do not require product activation or any Internet connectivity. You must not modify or tamper with them – if you do, they are rendered inoperable. For more information contact Intercede Support.

4.9.1 Getting a free 10 user license or a 30-day trial license

Intercede provides a free MFA and PSM license for up to ten users. The free license does not include our standard product support and assistance and Intercede provides only email assistance on a best-effort basis. However, access to our knowledge base and community site is freely available, see:

support.authlogics.com

If you require additional users in the future, we can easily upgrade your existing license.

To test the MyID Authentication Server before you buy, you can get a free 30-day trial at any time, and when you decide MyID is for you we can update your license to a full one when you purchase, no reinstall is required.

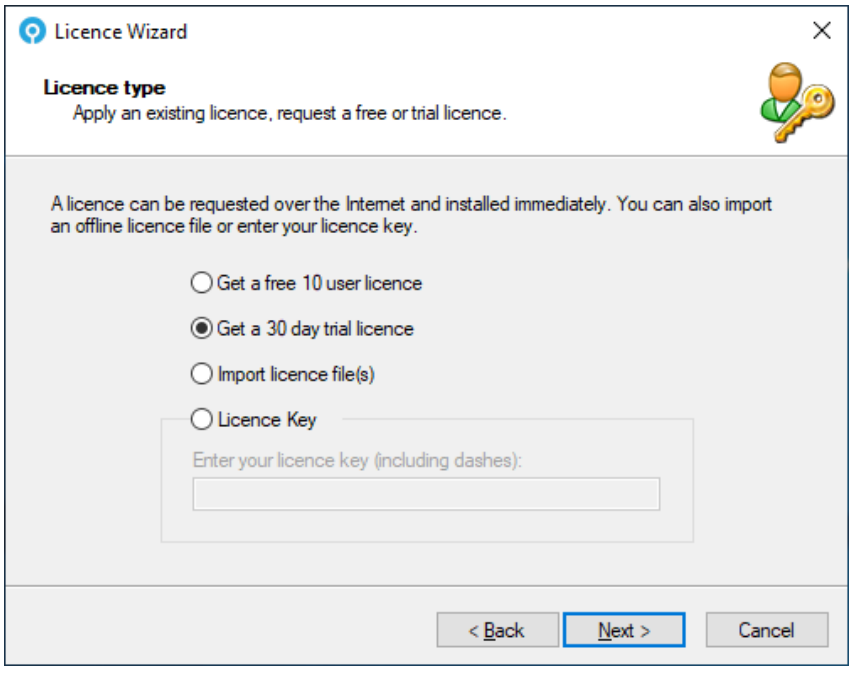
A free or trial license is installed instantly so you can evaluate at your own pace, however, it does require Internet connectivity (HTTPS) to be installed and activated. If Internet connectivity is not available on the authentication server, please contact Intercede Support.

To obtain a license:

1. Start the Licence Wizard.

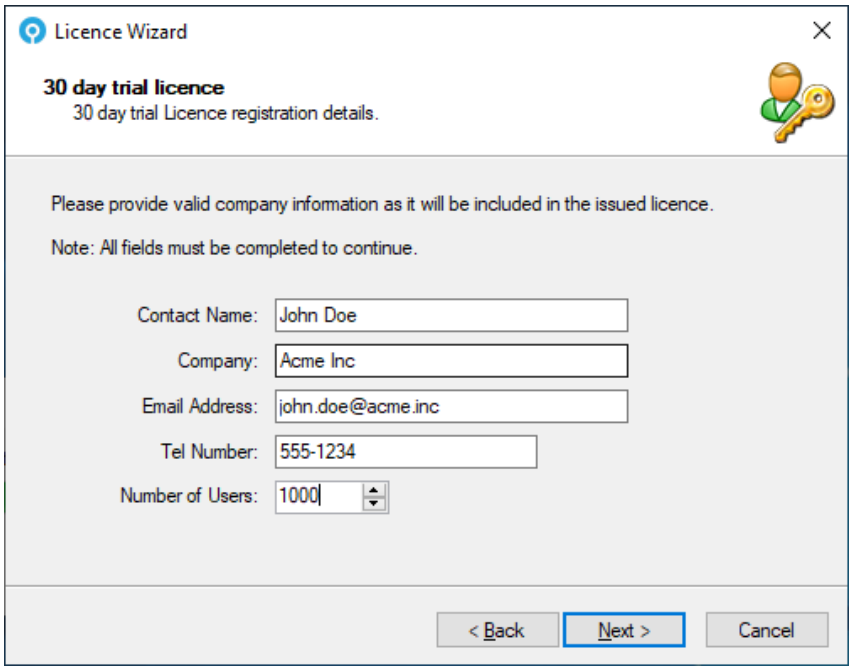
   The Licence Wizard starts automatically when the MyID Management Console is first loaded. You can also start the wizard by clicking **Licence Wizard**, under **Actions** in the MMC.

2. Click **Next**.

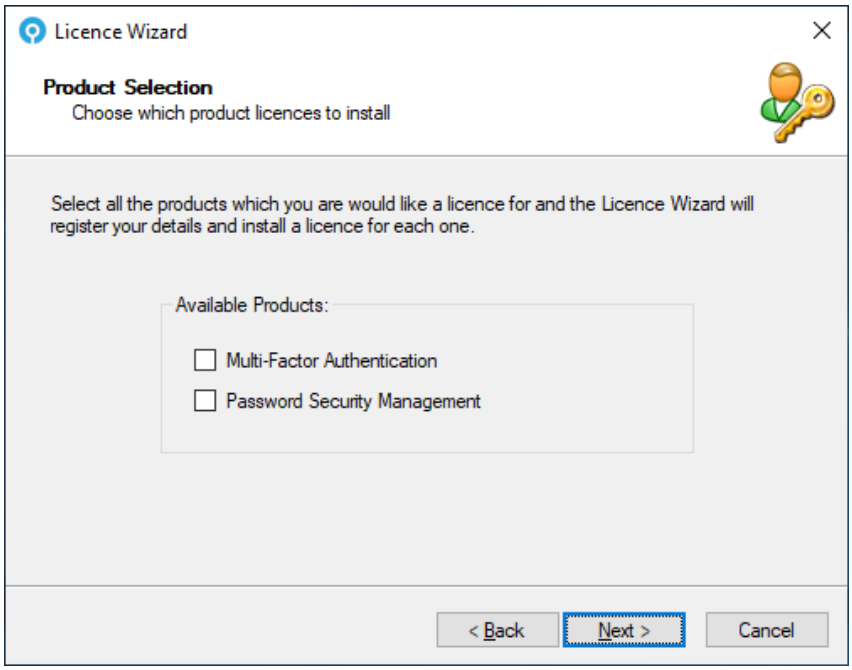


3. Select **Get a free 10 user license** or **Get a 30-day trial license**.
4. Click **Next**.

5. Complete your details.

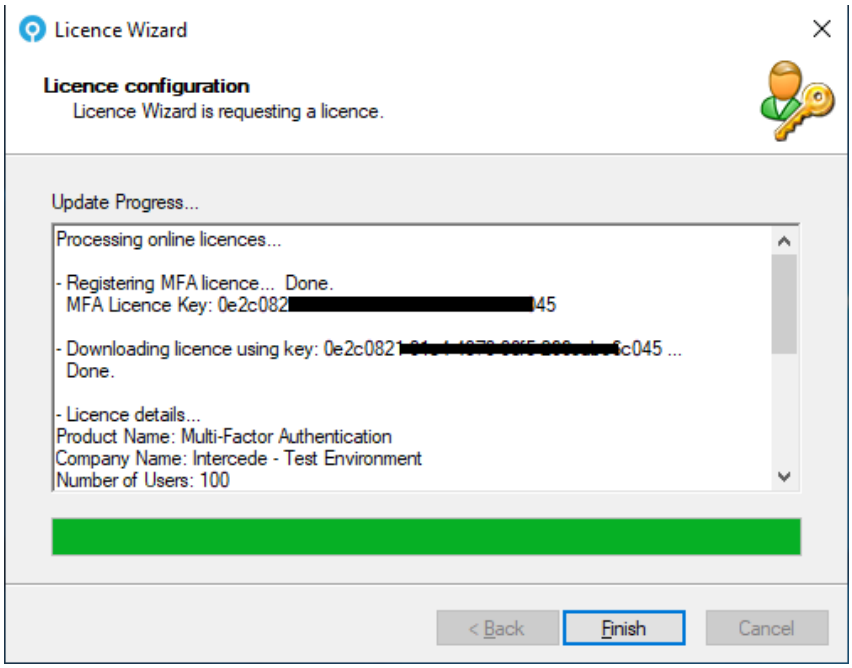


6. Click **Next**.



7. Select the product or products that you would like the licenses for.

8. Click **Next**.



The licenses are requested over the internet and are activated.

9. Click **Finish**.

4.9.2 Importing an offline license file

An offline license file may be issued by Intercede in certain circumstances. Please contact Intercede Support for eligibility. These licenses *do not* require Internet connectivity or activation.

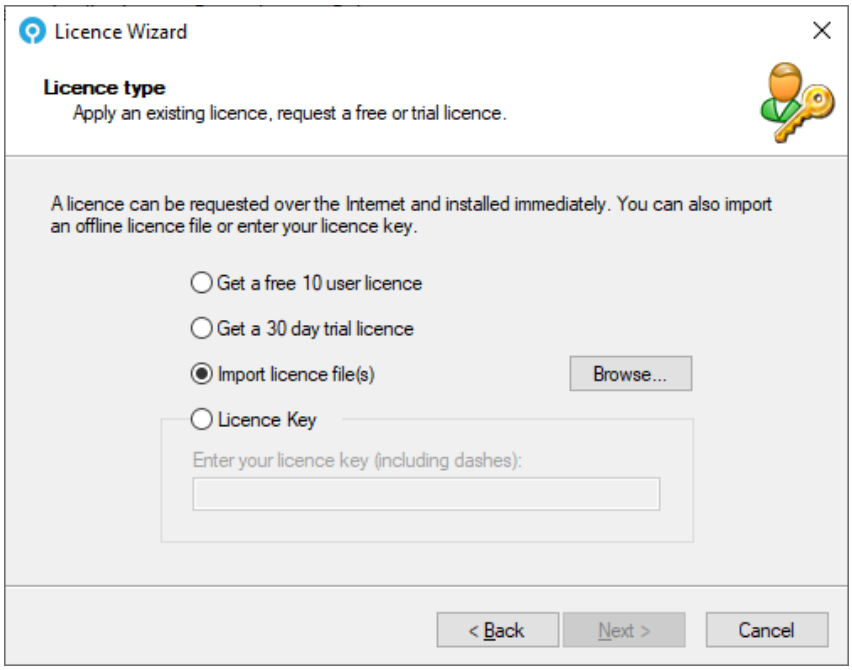
If you have multiple license files, you must add them one at a time. Run the Licence Wizard again to add the second license file.

To import an offline license, you must use the Licence Wizard.

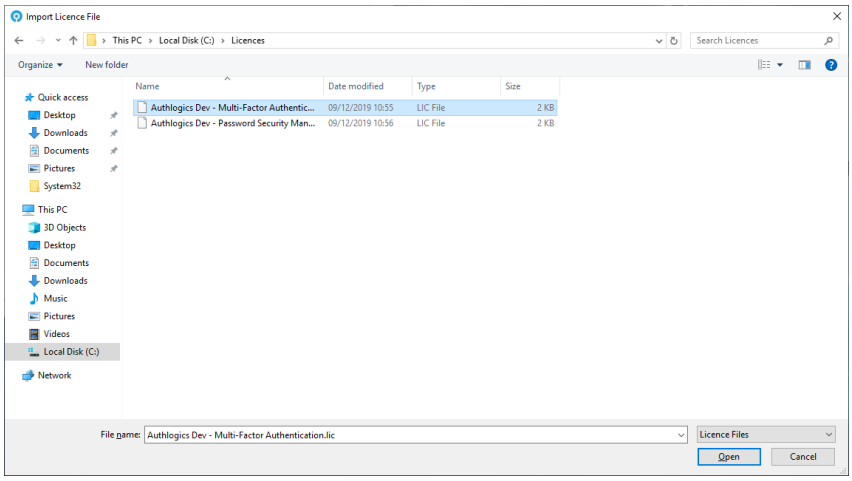
1. Start the Licence Wizard.

   The Licence Wizard starts automatically when the MyID Management Console is first loaded. You can also start the wizard by clicking **Licence Wizard**, under **Actions** in the MMC.

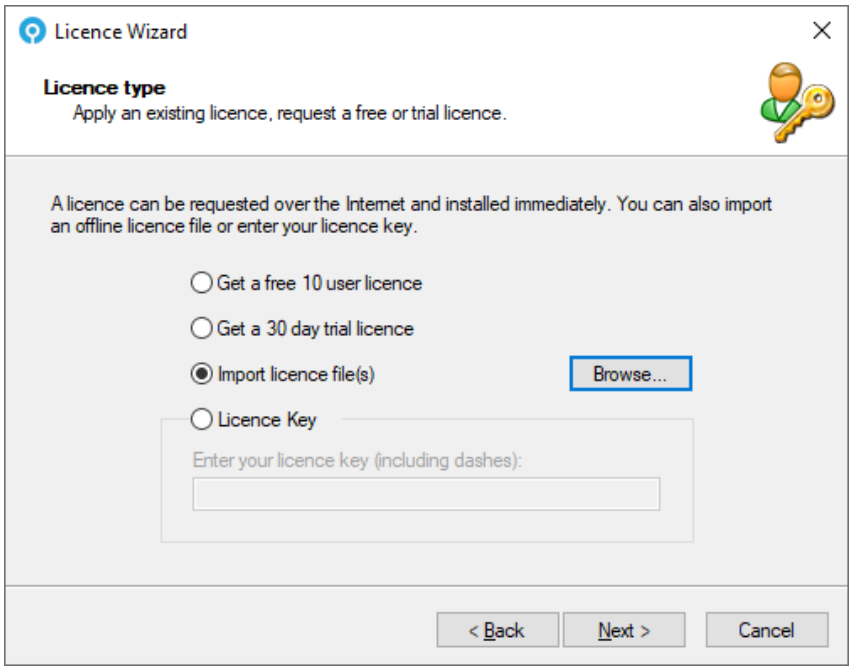
2. Click **Next**.



3. Select **Import licence file(s)**, and click **Browse**.



4. Select one or more of your license files (ending in `.LIC`) and click **Open**.



5. Click **Next**.

   The license or licenses are installed, and activation is skipped.

6. Click **Finish**.

4.9.3 Entering an existing license key

A license key is issued by Intercede at the point of purchase. License keys *do* require Internet connectivity for installation, activation, and ongoing license reporting metrics. No private or confidential information is reported back to Intercede.

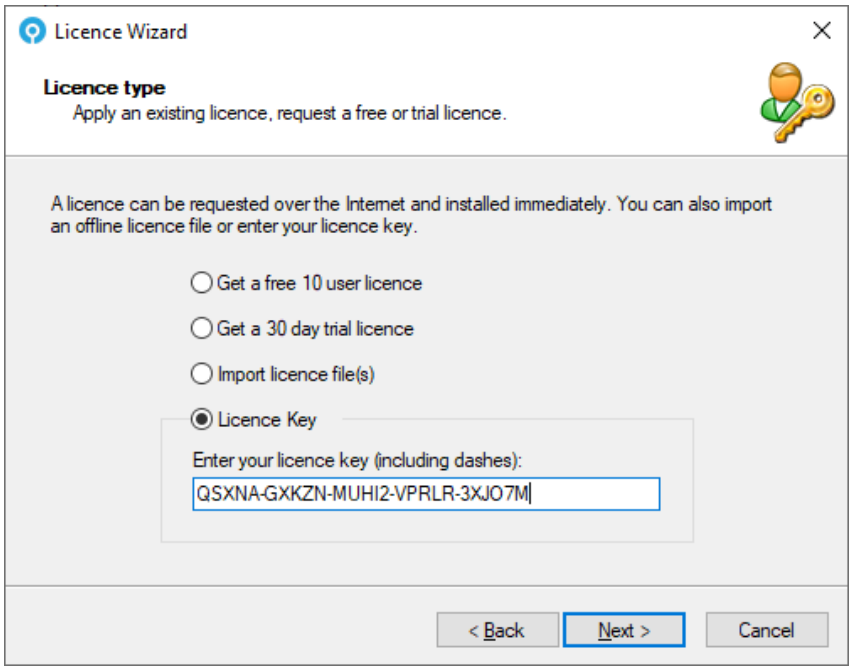
If you have multiple license keys, you must add them one at a time. Run the wizard again to add the second license key.

1. Start the Licence Wizard.

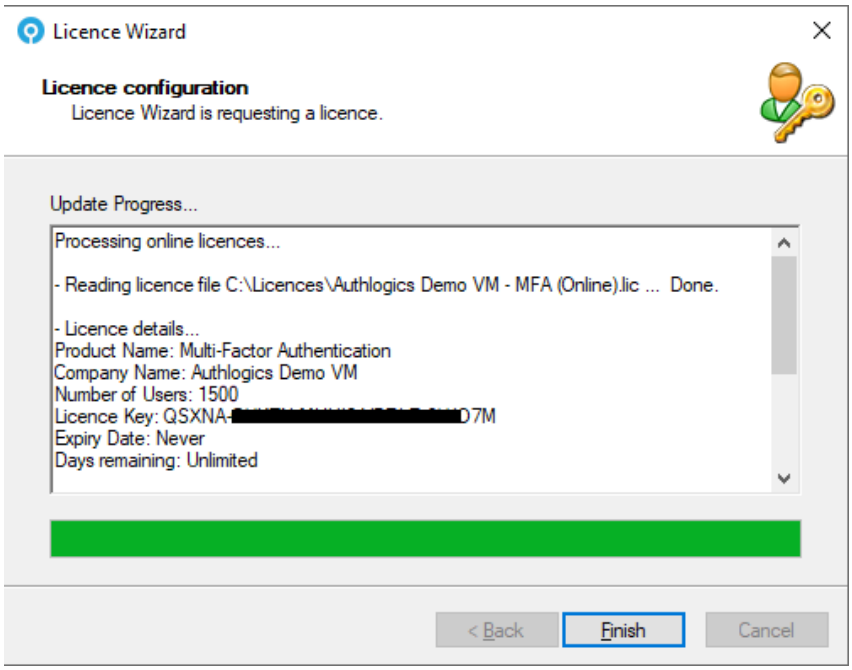
   The Licence Wizard starts automatically when the MyID Management Console is first loaded. You can also start the wizard by clicking **Licence Wizard**, under **Actions** in the MMC.

2. Click **Next**.

3. Select **Licence Key** and enter the license key that Intercede sent you.



4. Click **Next**.



The license is installed and activated.

5. Click **Finish**.

4.10 MyID Password Security Management Wizard

The Password Security Management Wizard (PSM) is responsible for configuring domains in the Active Directory Forest for real-time and retrospective protection against known breached and shared passwords, as well as dormant accounts. This includes:

- Analyzing existing password hashes in AD.
- Setting a remediation protection schedule.
- Setting the account remediation policy.
- Setting the alerting actions and recipients.

Retrospective Protection: The MyID Authentication Server is responsible for doing all retrospective protection, remediation, and alerting work required by the schedule.

Real-Time Protection: The MyID Authentication Server works in conjunction with the MyID Domain Controller Agent (DCA) to provide real-time protection of Active Directory passwords. The Domain Controller Agent intercepts password changes at the Domain Controller as they happen and queries the MyID Authentication Server to check if the password should be accepted.

Note: A PSM Password Policy must be configured, enabled, and applied through Group Policy to the Domain Controllers as well as the MyID Authentication Servers for the policy to take effect. For more information, see section *7.1*, *Configuring the MyID Password Policy settings*.

The MyID Authentication Server requires Internet access to query the MyID Password Breach Database in the Cloud.

A fully offline copy of the MyID Password Breach Database can be installed on the MyID Authentication Server; you can download this from:

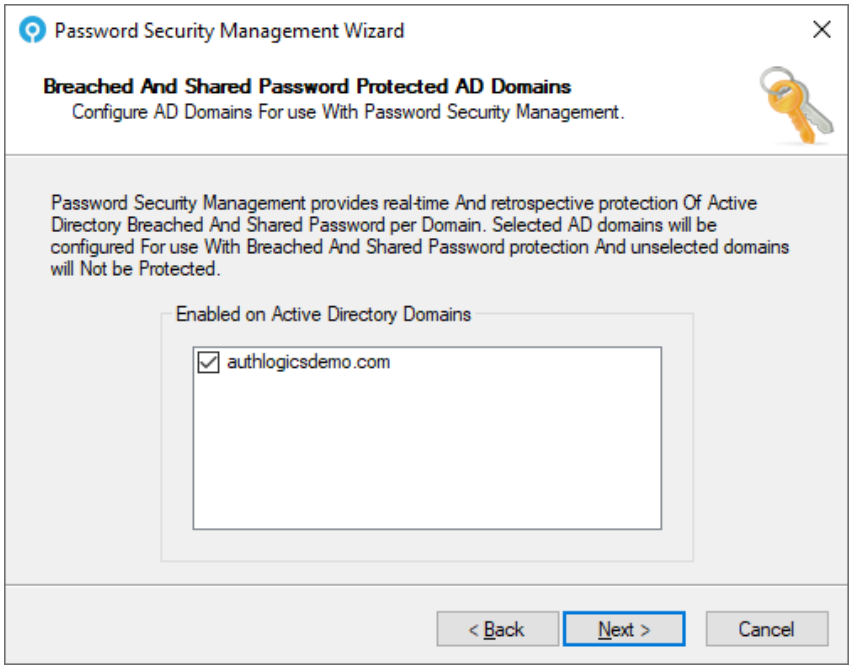
www.intercede.com/support/downloads

4.10.1 Starting the Password Security Management Wizard

1. Start the Password Security Management Wizard.

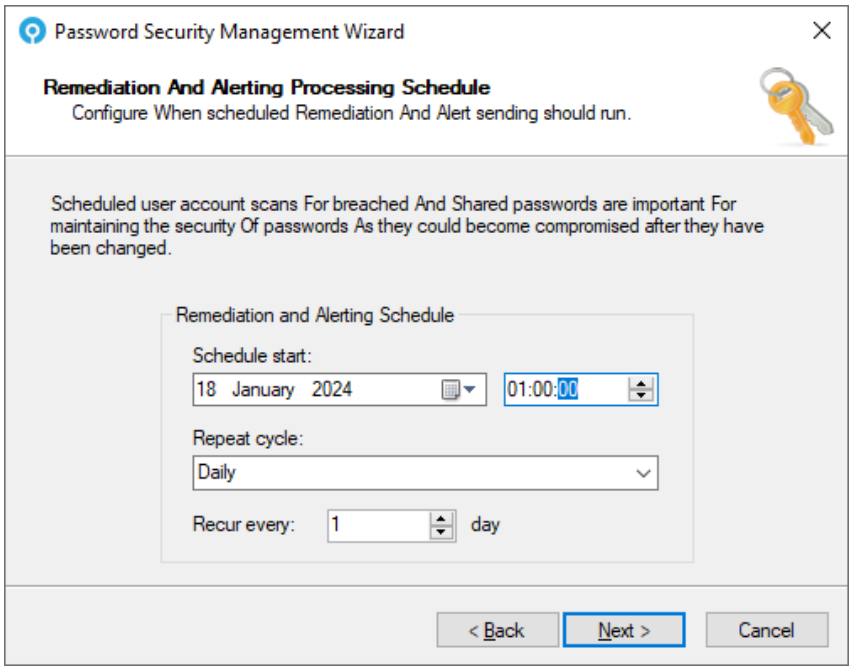
   You can start the Password Security Management Wizard by clicking **Password Security Management Wizard**, under **Actions** in the MMC.

2. Click **Next**.



3. Select the domain or domains that you want to enable MyID PSM password protection on.

4. Click **Next**.



The MyID Authentication Server provides the ability to run Password Security Management remediation and alerting on a scheduled basis.

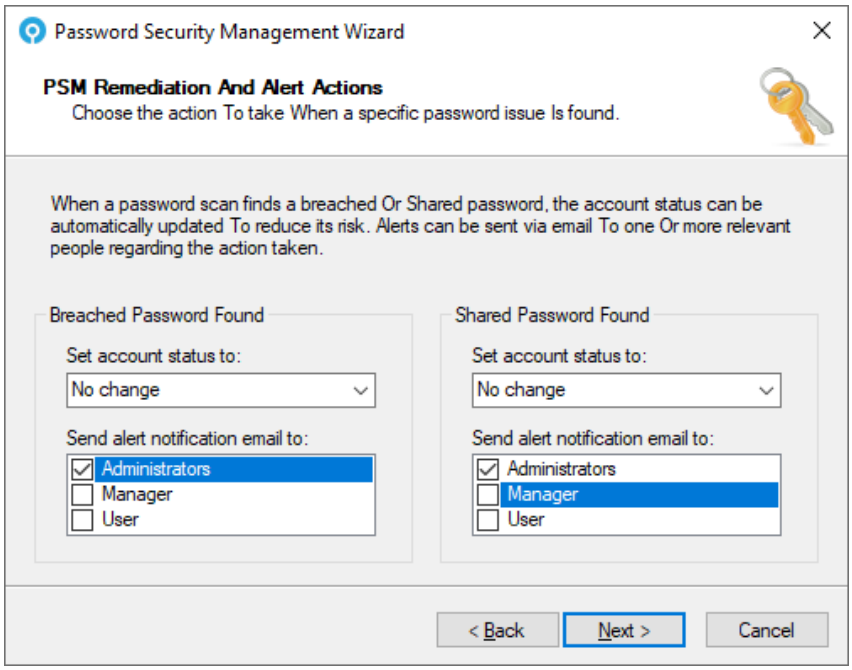
5. Select the **Schedule start** date and time.

   This is when you want to schedule to start.

6. Select the Repeat cycle and recurrence cycle. The available options are:

   - Run Once
   - Hourly
   - Daily
   - Weekly
   - Monthly

7. Click **Next**.



8. Select what you want to happen when breached or shared passwords are found.

   Password Security Management can alert Administrators, Managers or Users for newly detected breached or shared passwords.

   PSM also includes auto-remediation functionality where accounts can be disabled or users can be forced to change their password at next logon for breached or shared passwords.

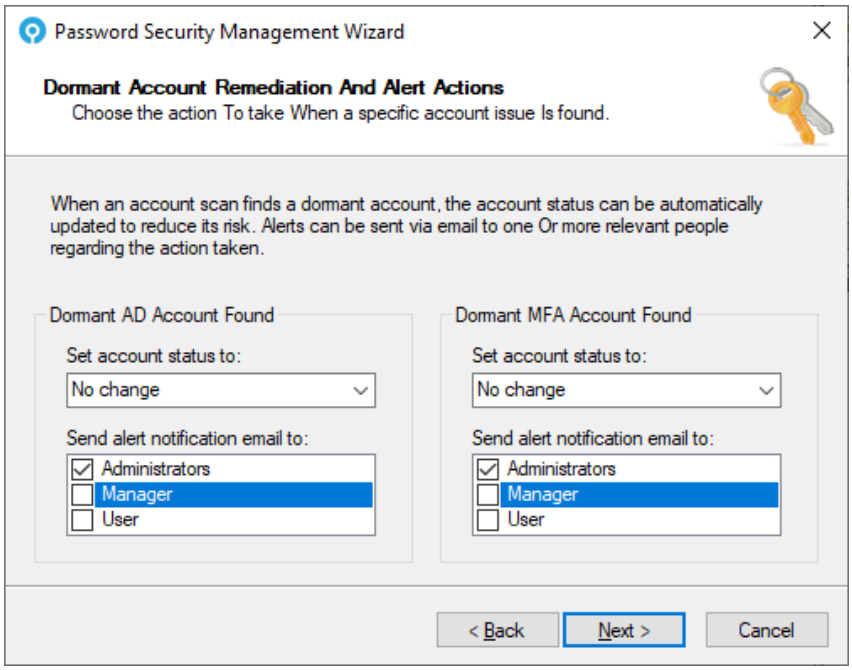
   You must set the account status for detected breached passwords and shared passwords to one of the following:

   - No change.
   - Must change password at next logon.
   - Account is disabled.

   You can also select who receives an alert about the breached or shared password.

   - Administrators.
   - Managers.
   - Users.

9. Click **Next**.



10. Select what happens when dormant Active Directory or MFA accounts are found.

    Password Security Management can alert Administrators, Managers or Users for newly detected dormant Active Directory or MFA accounts.

    PSM also includes auto-remediation functionality that can disable accounts or force users to change their password at their next logon for breached or shared passwords.

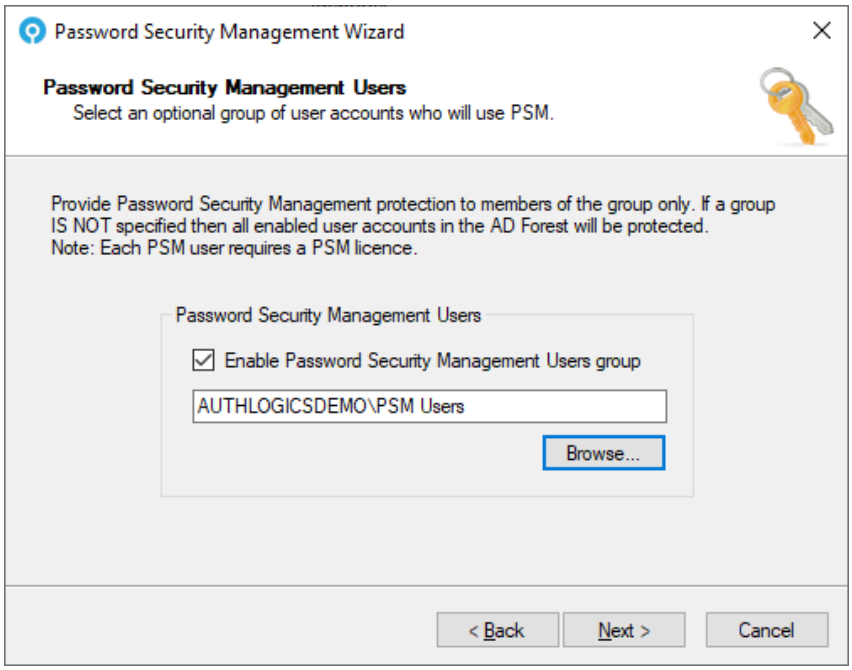
    You must set the account status for detected dormant Active Directory or MFA accounts to one of the following:

    - No change.
    - Must change password at next logon.
    - Account is disabled.

    You can also select who receives an alert about the detected dormant Active Directory or MFA accounts.

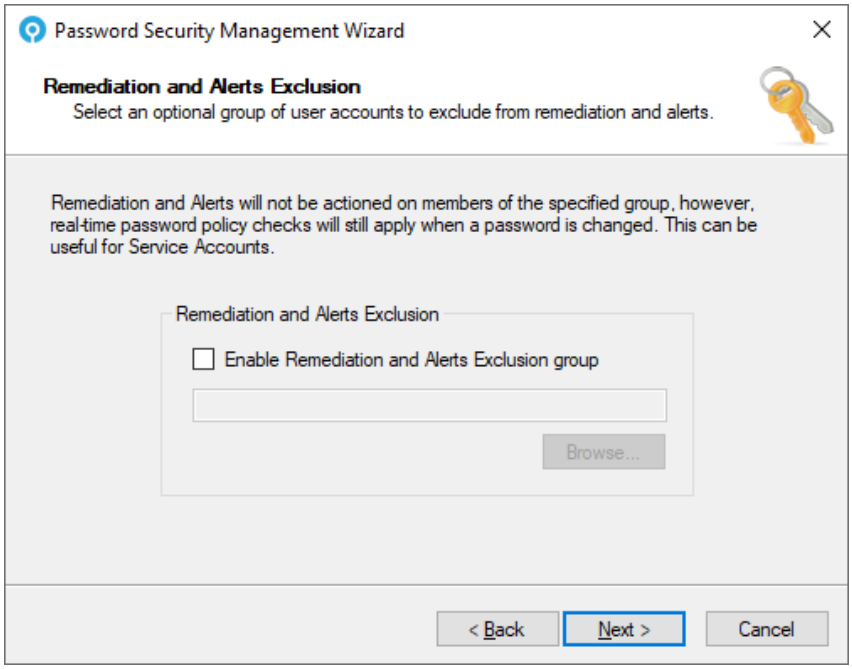
    - Administrators.
    - Managers.
    - Users.

11. Click **Next**.



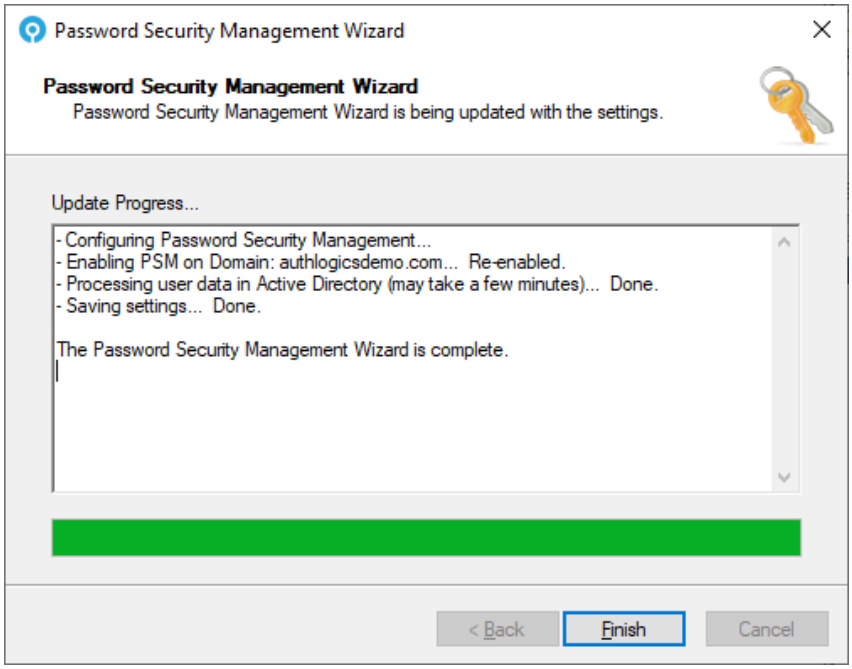
To limit which users can use PSM (and therefore require a license), select **Enable Password Security Management Users group** and then click **Browse** to select an Active Directory Group containing the user accounts to include.

12. Click **Next**.



13. Click **Next**.

    Password Security Management is configured.



14. Click **Finish**.

4.11 YubiKey OTP Configuration Wizard

The YubiKey OTP Configuration Wizard is responsible for managing reprogrammed YubiKey tokens; this means that YubiKey OTPs are processed by the MyID Authentication Server and that access to the Internet-based YubiKey servers is *not* required for validation.

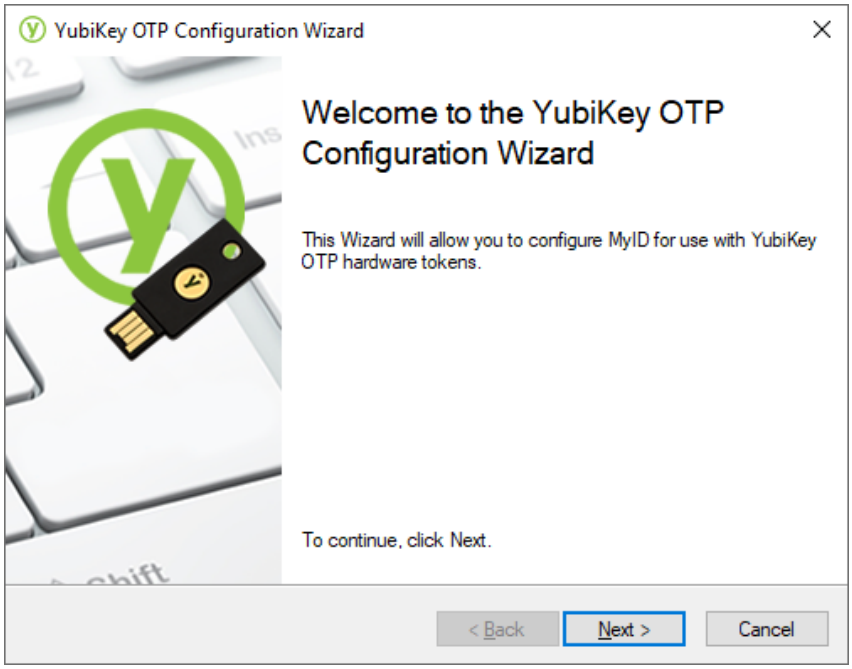
If you want to validate YubiKey OTPs using the Internet-based YubiKey servers for tokens that have not been reprogrammed, the MyID Authentication Server still requires Internet access.

For information on how to reprogram YubiKey tokens and create a YubiKey Personalization CSV file, see the *Configuring YubiKey devices* section of the ***YubiKey Reprogramming Guide***.

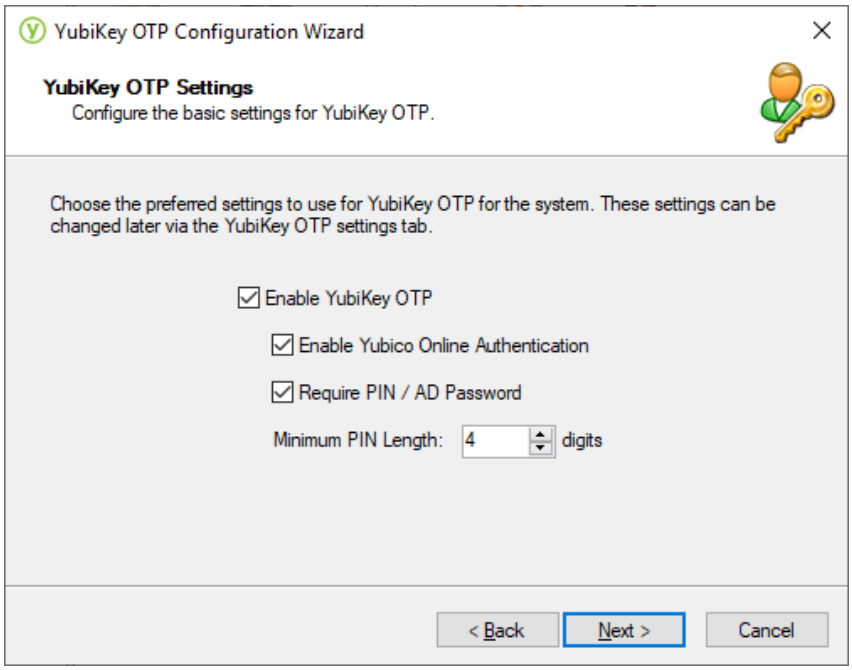
4.11.1 Starting the YubiKey OTP Configuration Wizard

1. Start the YubiKey OTP Configuration Wizard.

   You can start the YubiKey OTP Configuration Wizard by clicking **YubiKey OTP Configuration Wizard**, under **Actions** in the MMC.



2. Click **Next**.



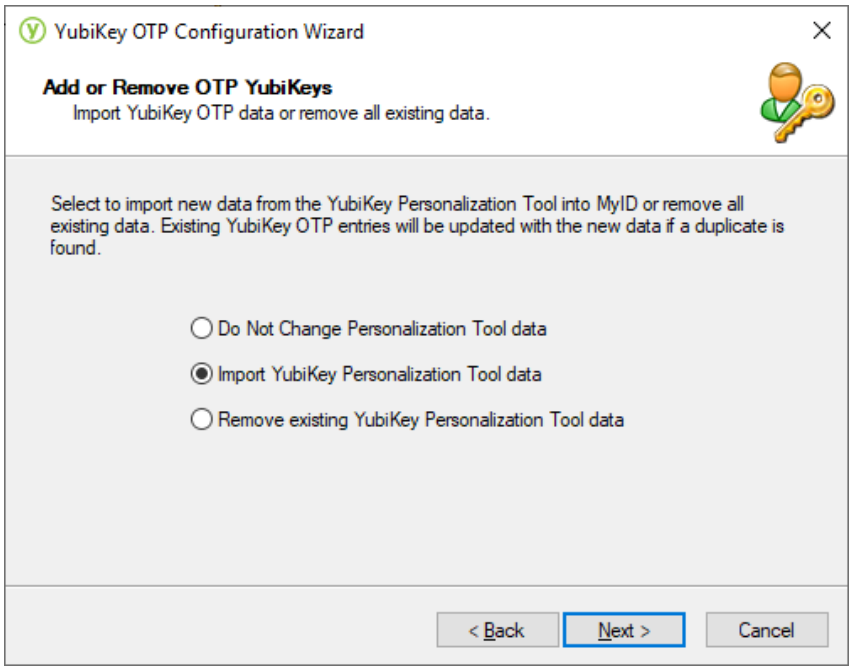
3. Configure YubiKey OTP options.

   Select **Enable Yubico Online Authentication** to send YubiKey OTPs to Yubico's servers to verify the validity of the YubiKey token.

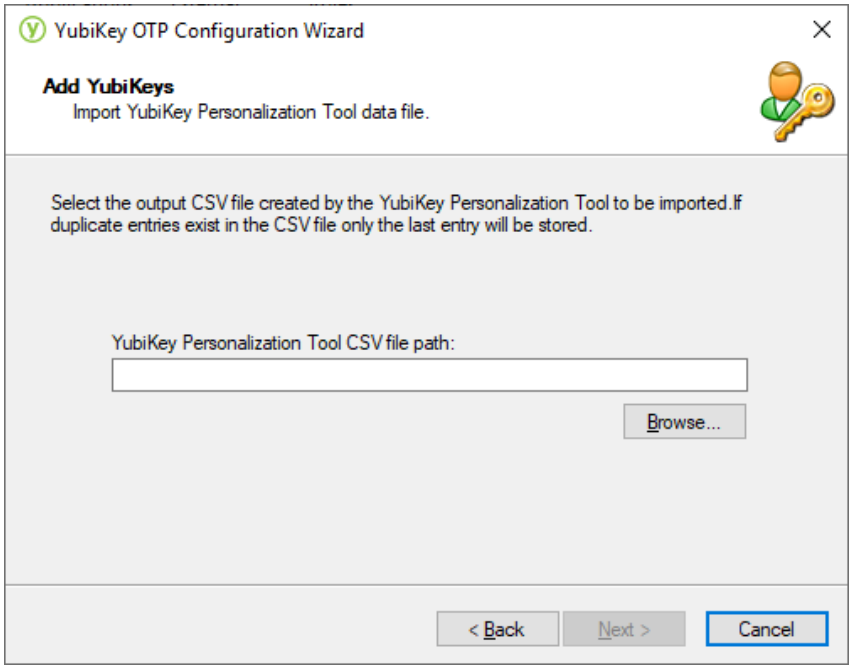
   Choose if you want the user to require knowledge as well as the YubiKey when logging in. Knowledge adds a factor to the authentication. For the knowledge, the user's Active Directory password can be used instead of a PIN, or the user can select a PIN. Alternatively, a PIN can be automatically generated, or not required at all for OTP-only validation. To require knowledge, select the **Require PIN / AD Password** option.

   If you have enabled knowledge, choose the **Minimum PIN Length**.

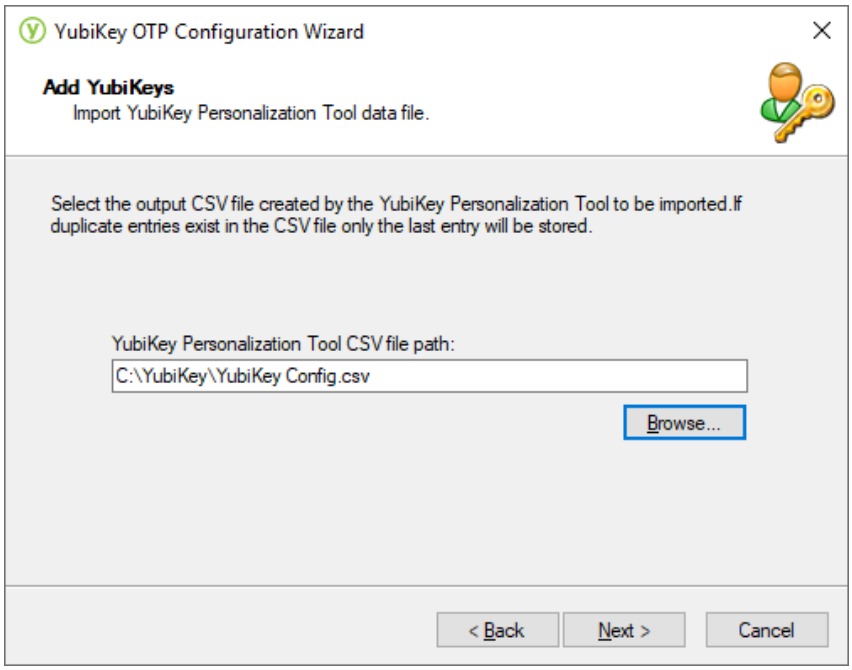
4. Click **Next**.



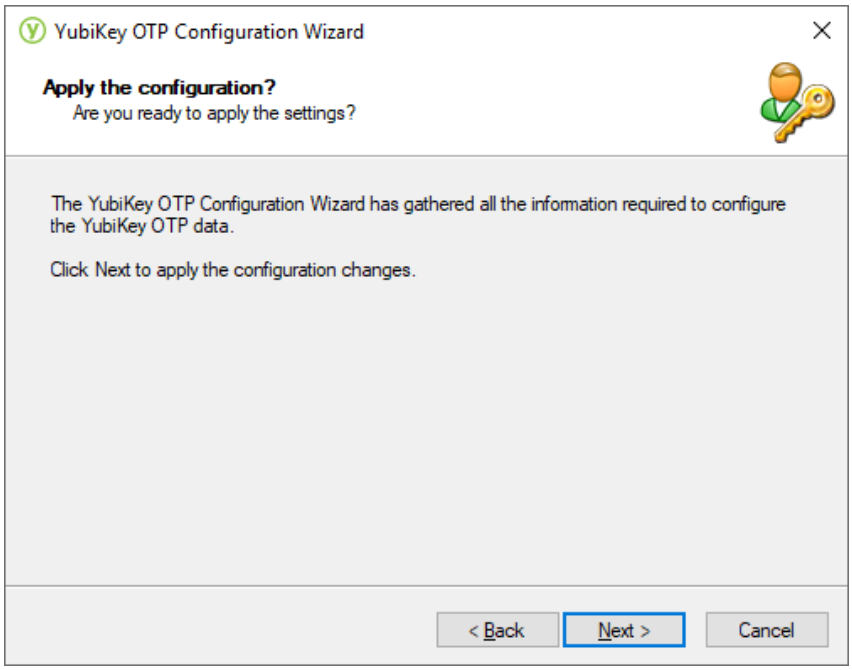
5. Select **Import YubiKey Personalization Tool data**.
6. Click **Next**.



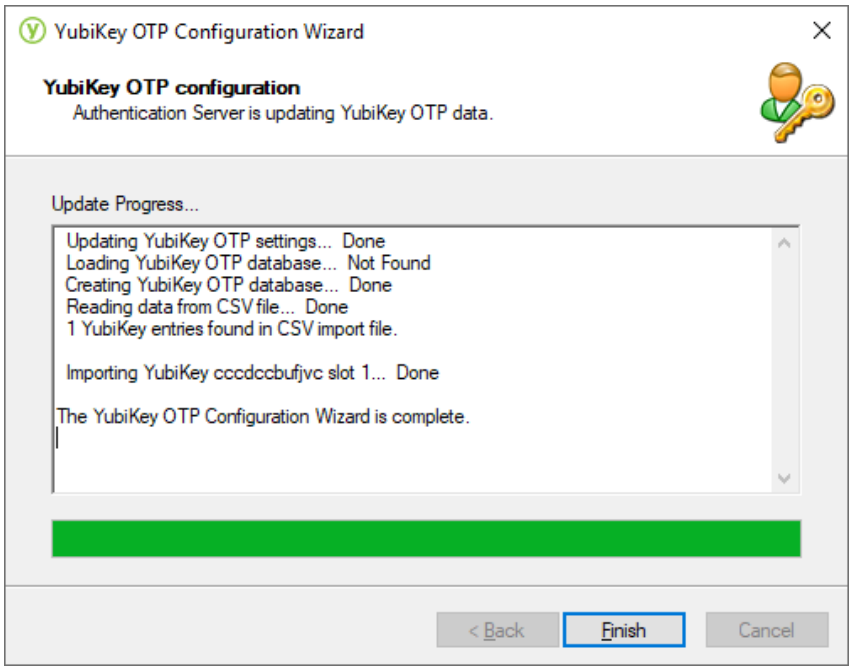
7. Click **Browse** and select the YubiKey Personalization Tool generated CSV file.



8. Click **Next**.



9. Click **Next**.

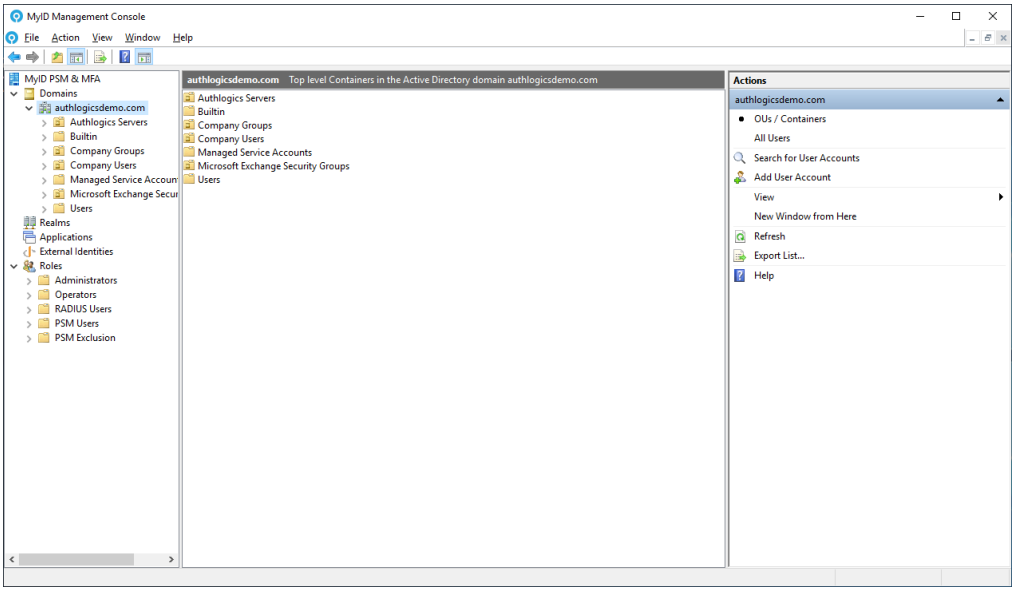


The configuration is applied and the YubiKey database is imported.

10. Click **Finish**.

5 Administering the MyID Authentication Server

The MyID Management Console provides administrators with the ability to configure MyID settings and administer users. Functionality and options may differ depending on the product license installed.



The MyID Management Console provides Administrators with the ability to manage the following:

- Directory Configuration
- MyID Global Settings
- MyID Users in Domains or Realms
- Applications
- External Identities
- User Roles

5.1 MyID Management Console views

The MyID Management Console displays both the MFA and PSM users.

 PSM only users.

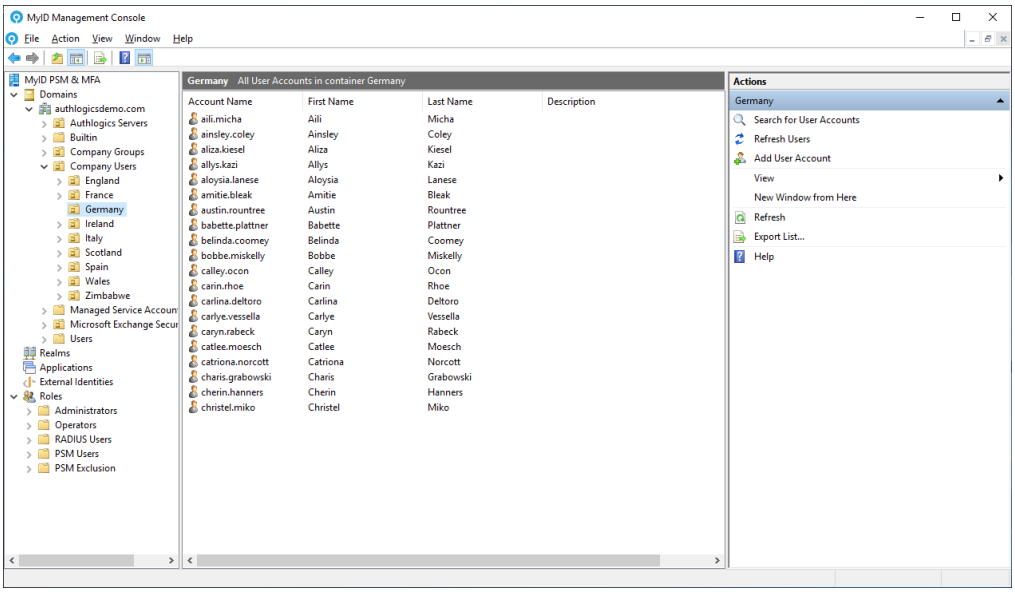
 MFA only users.

The MyID Management Console is suited to small deployments and also scales to very large Active Directory environments. This is achieved by utilizing the **OUs / Containers** and the **All Users** view for Active Directory Domains, and a Realms view for External users.

The Active Directory view can be chosen by selecting the domain and toggling between the two options.

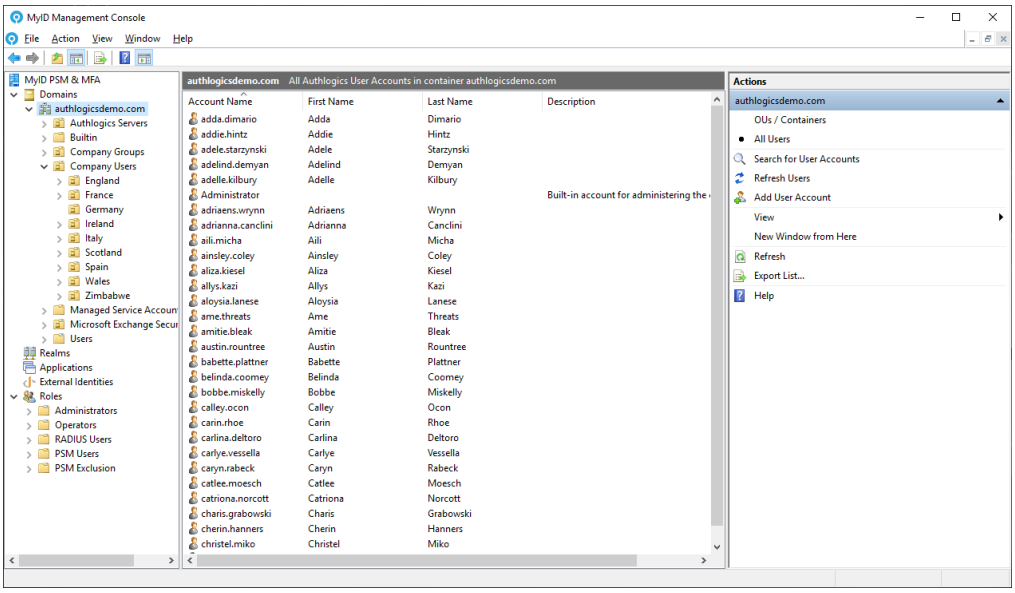
5.1.1 OUs / Containers view

The OUs / Containers view is the default view that allows the Active Directory OU structure to be traversed. You can search for user accounts from the domain level or an OU or Container. All users in an OU tree can be found for by searching for the wildcard “*”.



5.1.2 All Users view

The **All Users** view is a single view that lists all users for the entire domain. Since all users are loaded for the domain at once this view may be slower to load on large domains.

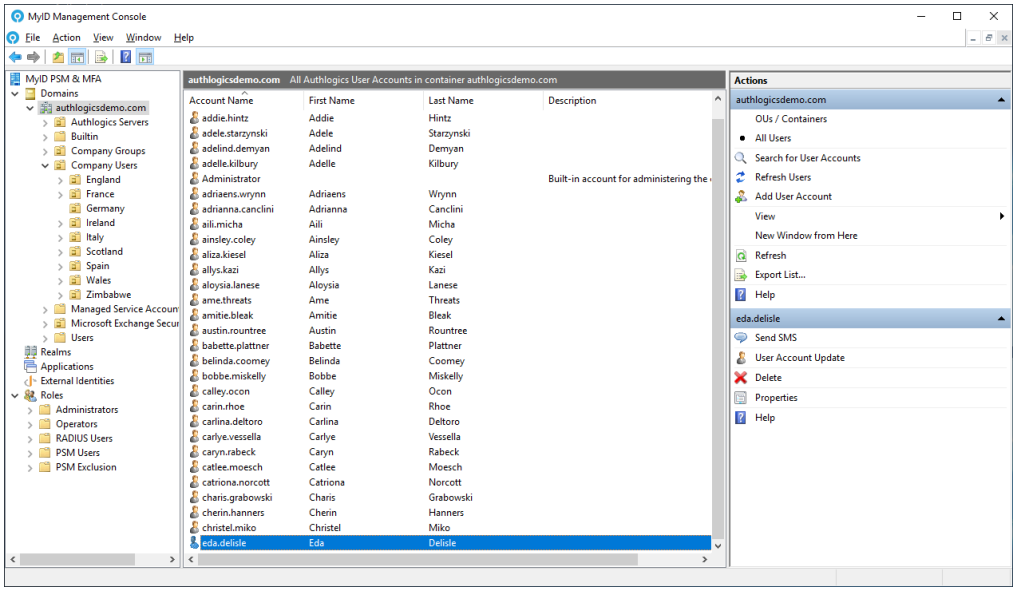


5.1.3 Updating PSM users

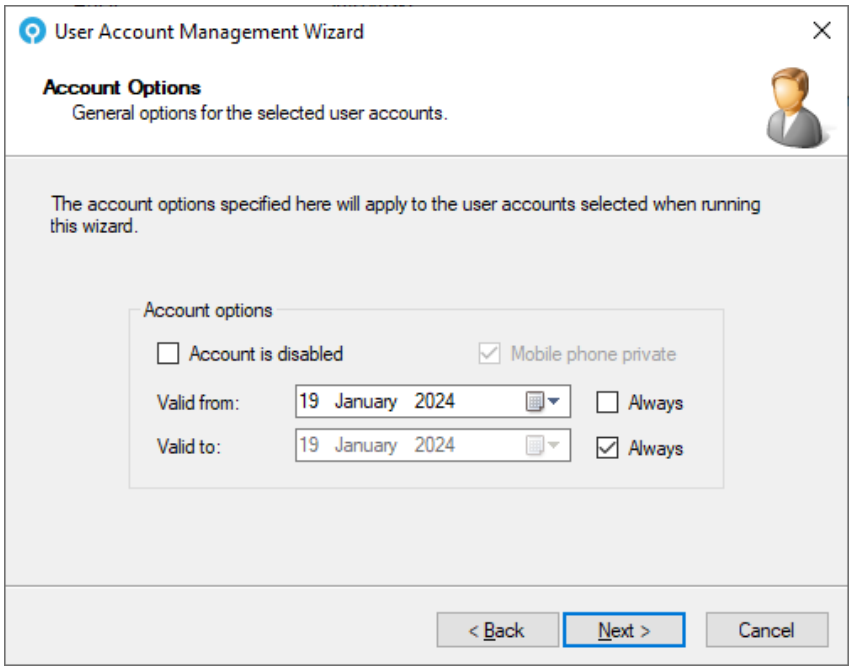
PSM users are automatically added to the MyID Management Console when the user interacts with MyID using either an Active Directory password change or a Self-service portal login. These users can be made into MFA users (provided a valid MFA license exists) by running the **User Account Update** user action.

1. Start the User Account Update Wizard.

   You can start the User Account Update Wizard for a user from the MMC by clicking on a user and then clicking **User Account Update**, under their username in **Actions**.



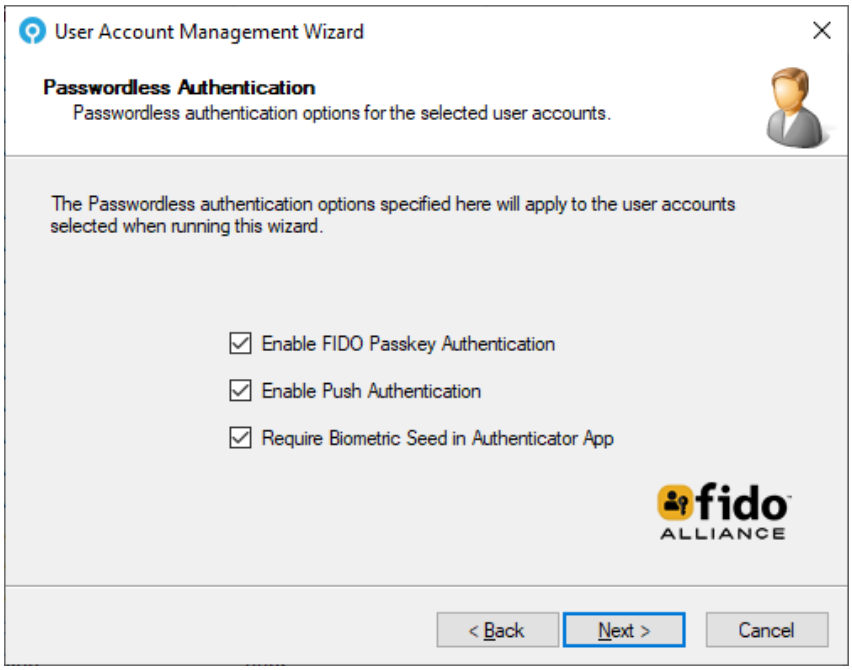
2. Click **Next**.



3. Set the **Account options**.

   Account options determine the user's initial state. You can give accounts start and end validity dates and create them as disabled accounts for later use. You can also specify the mobile phone privacy setting.

4. Click **Next**.



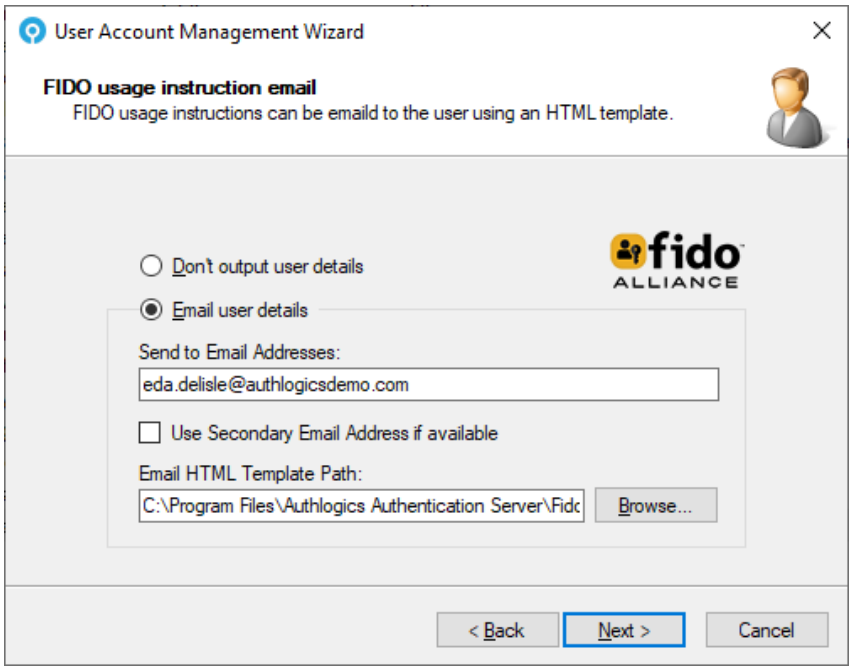
Choose if you want to:

- **Enable FIDO Passkey Authentication**.
- **Enable Push Authentication**.
- **Require Biometric Seed in Authenticator App**.

This option makes the user required to provide valid biometrics when accessing the Authenticator App.

5. Click **Next**.

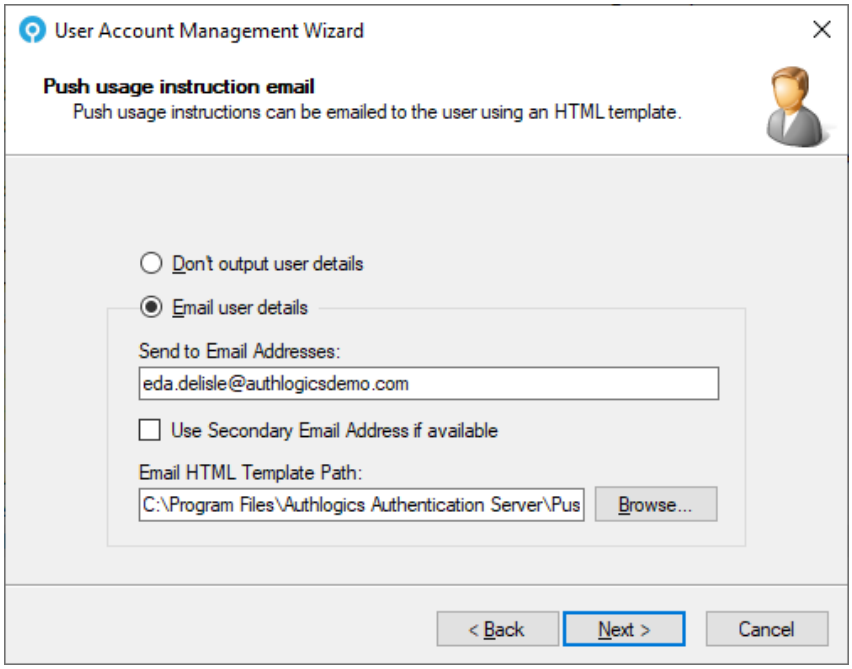
6. If you chose to **Enable FIDO Passkey Authentication** for this user, the FIDO instruction letter can be emailed to the user.



If a secondary email address is configured, the email can be sent to the alternate address.

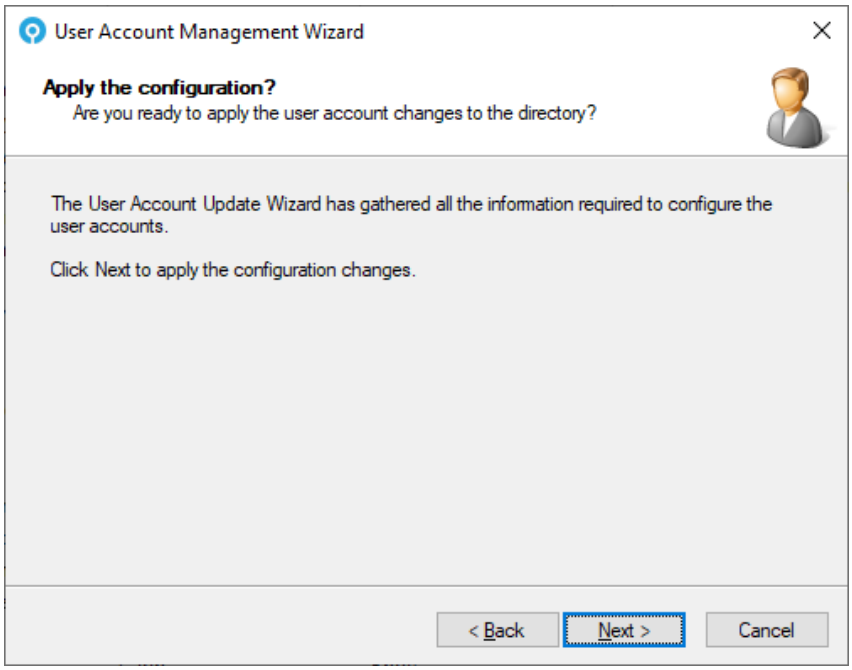
7. Click **Next**.

8. If you chose to **Enable Push Authentication** for this user, a PUSH instruction letter can be emailed to the user.



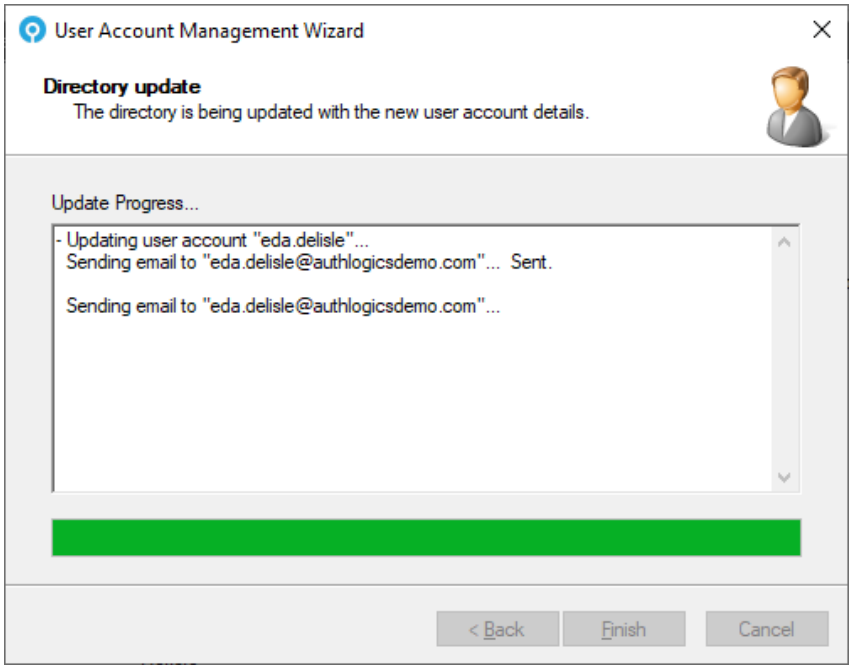
If a secondary email address is configured, the email can be sent to the alternate address.

9. Click **Next**.



10. Click **Next**.

    This applies the configuration changes.



    The user account is updated.

11. Click **Finish**.

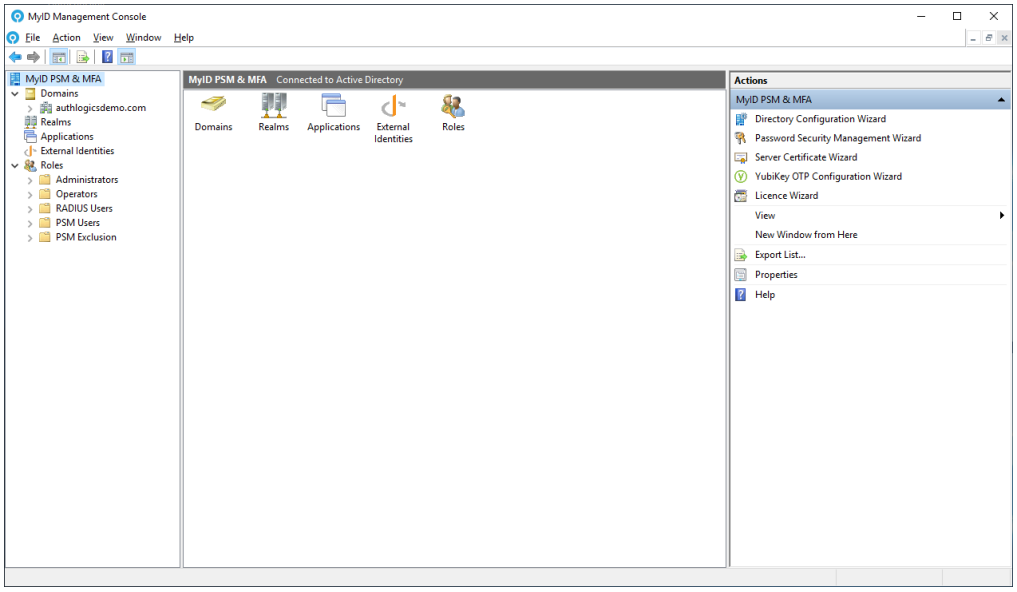
5.2 Global settings walkthrough

The MyID global settings are a group of directory configuration options that apply to *all* MyID servers in the forest; they are not per-user settings.

To access the global settings:

1. In the MyID Management Console, highlight the high-level **MyID** node. The name of this node includes the product name of the installed licenses.

   For example, it may be called **MyID PSM & MFA**.



2. Click **Properties**, in the **Actions** pane.

   This opens the global MyID Properties dialog.

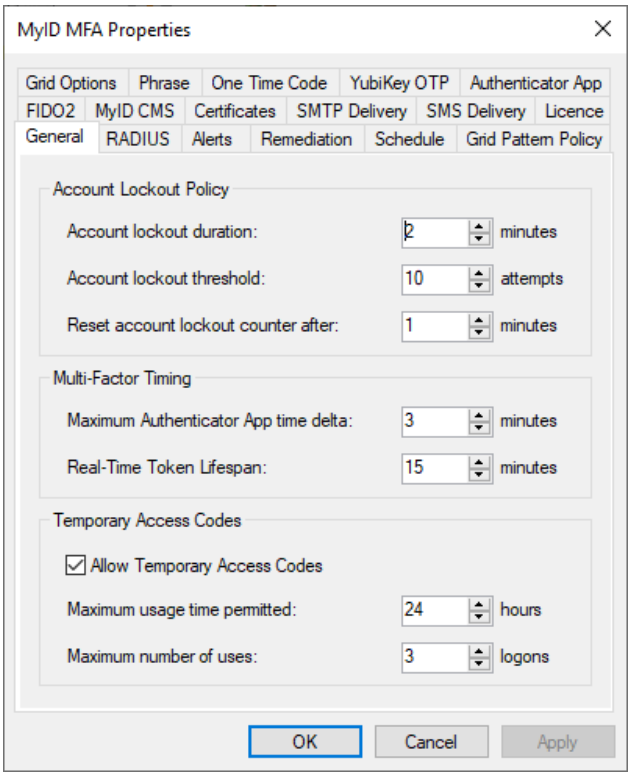
You can access the following tabs in the Properties dialog:

- General tab
- RADIUS tab
- Alerts tab
- Remediation tab
- Schedule tab
- SMTP Delivery tab
- SMS Delivery tab
- Licence tab
- Authenticator App tab
- Certificates tab
- Grid Pattern Policy tab
- Grid Options tab
- Phrase tab

- One Time Code tab
- YubiKey OTP tab
- FIDO2 tab
- MyID CMS tab

5.2.1 General tab

The General tab contains the **Account Lockout Policy**, **Multi-Factor Factor Timing**, and **Temporary Access** options.



The **Account Lockout Policy** settings take effect when a user logs on incorrectly after the amount of invalid logon attempts specified in the **Account lockout threshold** setting within the lockout counter period. The lockout counter period is set the **Reset lockout counter after** setting. Accounts that are attempted to be logged onto in an invalid manner that many times are locked out for the **Account lockout duration**.

Allowed soft token time delta allows you to configure how many minutes difference are allowed between the clock of a two-factor device compared to the clock of the MyID server.

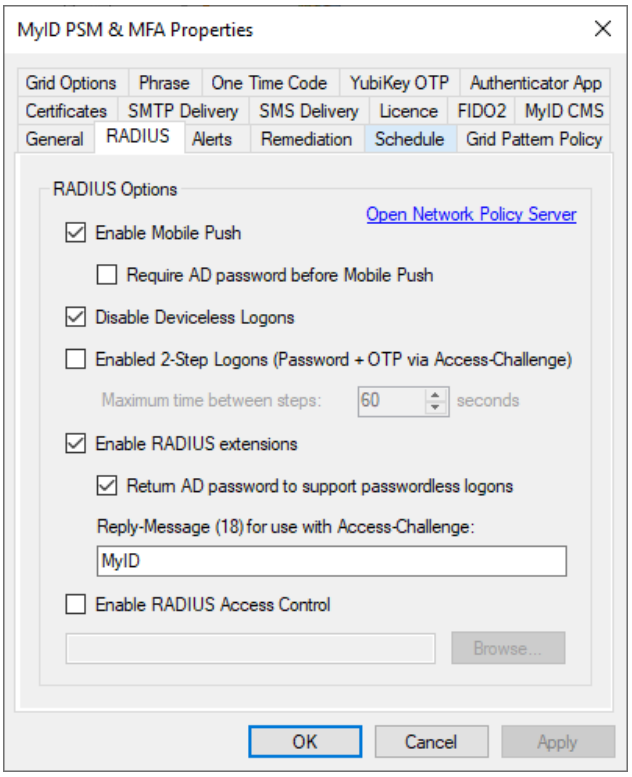
Real-time Token Lifespan allows you to configure how many minutes after being provided that a Real-Time token can be used for before it expires. After this period has exceeded, the token can no longer be used.

Temporary access codes are a feature that allows a user to log in with a temporary PIN or password in an emergency or as a first usage code. The user is provided with a PIN or password and the usage of the password is limited by time, or by the number of uses. Unlike a standard password, the temporary access code or password is self-managed and expires automatically.

The default time limit for temporary access code is 24 hours and three logons. Once these limits are reached, or the user logs on using Multi-Factor Authentication and the temporary access requirements have ended, the user's temporary access is automatically removed.

5.2.2 RADIUS tab

The RADIUS tab allows you to configure RADIUS options that are not available within Microsoft NPS.



MyID RADIUS supports Mobile Push authentication over RADIUS; this can be enabled or disabled as required.

If you want a Push to be sent after a password has been successfully verified only, **Enable Require AD password Before Mobile Push**. This is performed in a single RADIUS request. When disabled, a Push is sent to the user with only a username being received over RADIUS.

If you enable the **Disable Deviceless Logons** option, users are prevented from using Grid Pattern and Phrase OTPs generated in deviceless mode and are forced to use a two-factor generated OTP for RADIUS connections.

A two-step logon process can be configured using the RADIUS Access-Challenge attribute by setting the **Enable 2-Step Logons** option.

In the first step, the user validates their username and Active Directory password; if they are successful an Access-Challenge is returned to the RADIUS client. In the second step, the user validates their username and an OTP; if they are successful, an Access-Accept is returned to the RADIUS client.

Step 1: If the Active Directory password is valid, then the Access-Challenge is returned, which tells the RADIUS client to request an OTP. If the Active Directory password is invalid, then an Access-Reject is returned.

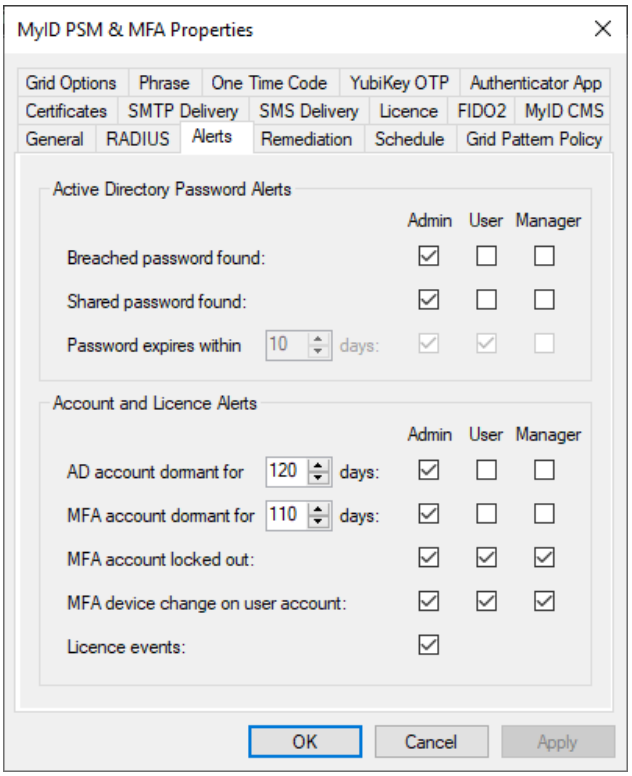
Step 2: If the OTP is received within the allowed time (60 seconds by default) and it is valid, an Access-Accept is returned. If the OTP is invalid another Access-Challenge is returned to prompt the RADIUS client to request a new OTP. An Access-Reject is returned for any OTP received after the allowed time.

You can enable RADIUS extensions to send additional metadata about the user to the RADIUS client. Additionally, the user's password can be returned to the RADIUS client to support Single Sign-On (for example, on Citrix Access Gateways). The password is returned as clear text over RADIUS, however, it is encrypted in transit using the RADIUS shared secret. Returning the password requires the MyID Password Vault to be enabled on the Active Directory tab.

An optional RADIUS access control group can be configured on this tab, or through the Roles section of the MMC UI. This provides a level of access control over which users are allowed to use RADIUS authentication. Users who are not a member of the specified group fail the RADIUS logon request.

5.2.3 Alerts tab

The Alerts tab allows you to configure multiple alerting options based on the type of event and the recipient.



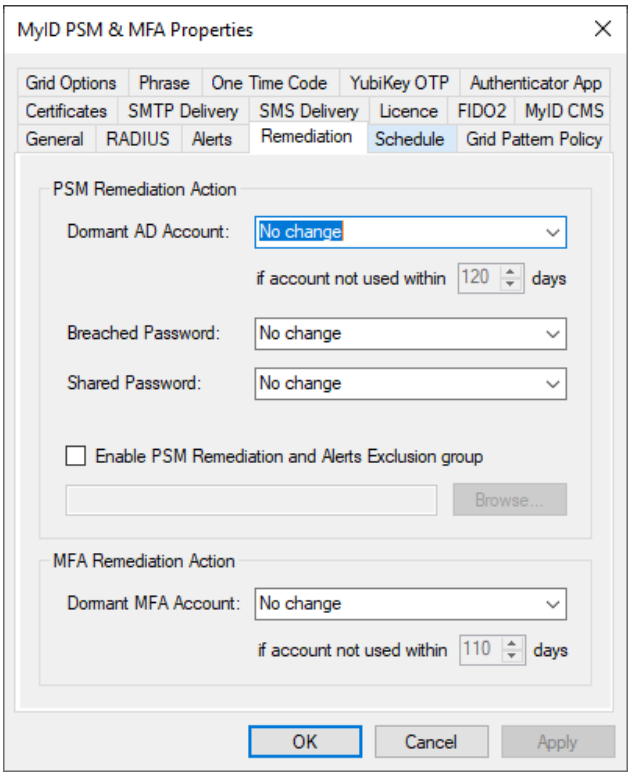
Note: Alerts are sent through SMTP and cannot be configured unless an SMTP server is configured first. The options available are dependent on what license types are installed and which PSM policies are configured.

Administrators receive a summary email instead of individual emails for each user whenever possible. Administrator emails are sent to the email address of all the accounts in the Authlogics Administrators role, if any.

If **Manager** is selected, an alert is sent to the email address of the user account specified as the **Manager** for the user account within Active Directory. If no manager has been specified, then the alert is not sent.

5.2.4 Remediation tab

The Remediation tab allows you to configure an automatic resolution based on the type of condition found.



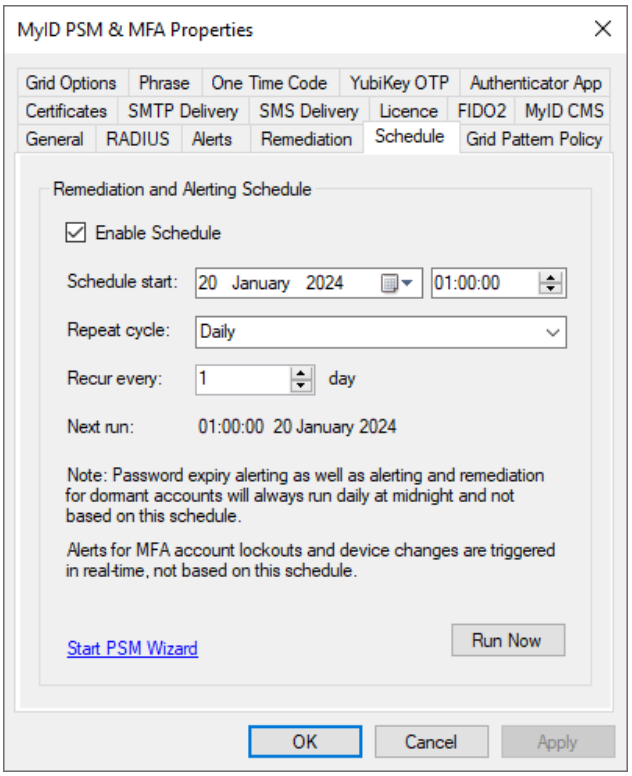
Remediation provides an automated way to fix common user account issues to prevent security breaches. Automating these fixes is important as they are time-sensitive and often overlooked by manual processes.

If an account is found that has a breached or shared password, or is dormant, then the account can be set to:

- **No change** – the default. You are initially recommended to leave this and analyze the administrator alerts before you enable remediation to allow you to assess the impact of enabling it.
- **Must change at next logon** – once you have analyzed the impact of remediation, you are recommended to set this for accounts with breached or shared passwords.
- **Account is disabled** – once you have analyzed the impact of remediation, you are recommended to set this for dormant accounts and dormant MFA accounts.

5.2.5 Schedule tab

The Schedule tab allows you to configure when breached and shared password remediation and alerting takes place.



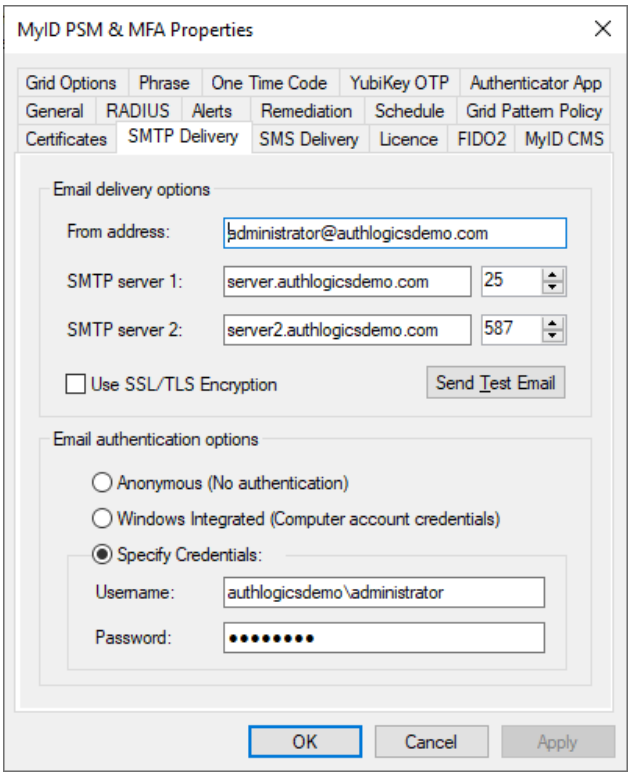
It is recommended to run the schedule daily and out of hours; however, this can be customized as required. The processing work is only performed on the primary MyID Server.

To run a check as soon as possible without waiting for the schedule click **Run Now**. This will begin the process within the next 15 minutes.

Note: Password expiry alerting and alerting and remediation for dormant accounts always runs daily at midnight and not based on this schedule. Also, alerts for MFA account lockouts and device changes are triggered in real-time, not based on this schedule.

5.2.6 SMTP Delivery tab

When you provision users using the MyID Management Console, they can be sent an email with details of how to access the Self Service Portal, their initial pattern, PINs, and other necessary logon information. Alerts are also sent to administrators using email. The SMTP Delivery tab allows administrators to set the SMTP host and port for the email server for email message delivery.



The **From address** setting specifies the email address that delivered mail is received from.

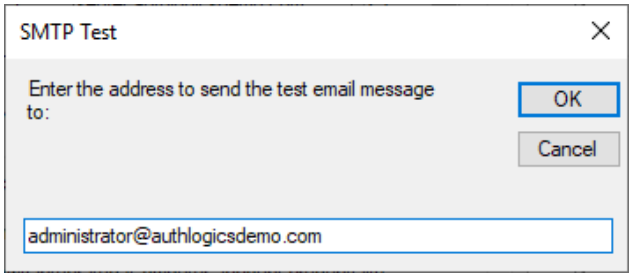
Note: Ensure that the **From** address can deliver emails to users through any anti-spam filters.

A primary SMTP must be specified to send an email. A secondary SMTP may be specified for redundancy purposes. The secondary server is only used if the sending fails when using the primary server. Enter the **SMTP server 1** and **SMTP server 2** DNS names or IP addresses and corresponding port numbers. If the servers require an encrypted connection, enable the **Use SSL/TLS Encryption** option.

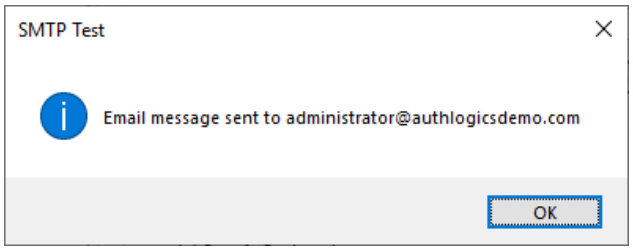
If your email server requires authentication, select either **Use default Integrated credentials** or **Specify Credentials** and provide a username and password of an account with credentials to authenticate to the email server. These credentials are stored with 256bit AES asymmetric encryption.

To ensure that the SMTP details are valid:

1. Click **Send Test Email**.
2. Enter a test email.



3. Click **OK**.

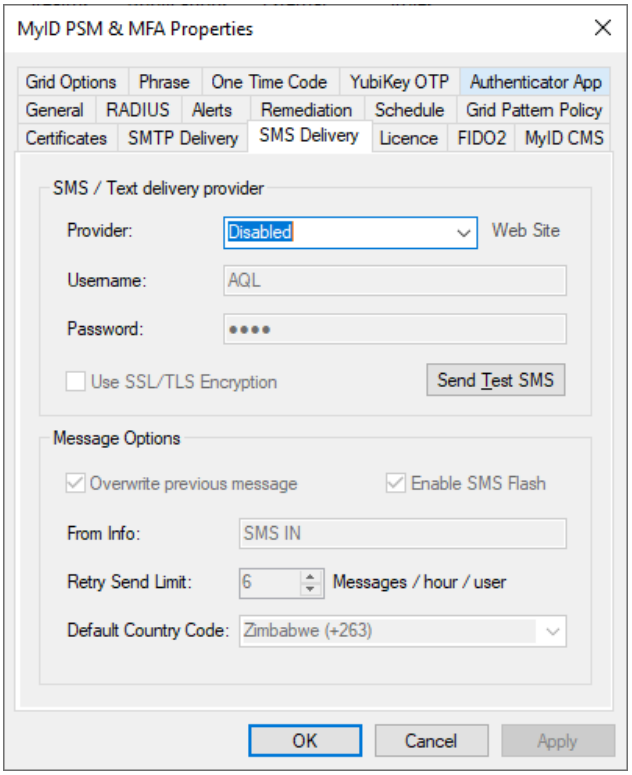


A confirmation that the message has been sent is displayed is the send was successful; if the test email is not sent correctly, an error stating the SMTP issue is displayed.

5.2.7 SMS Delivery tab

The SMS Delivery tab allows administrators to set the SMS/Text delivery providers for SMS/Text message delivery and the **Message options**. MyID can use SMS messages for delivery of two-factor tokens to mobile devices that do not have soft-tokens.

The administrator can also send notification or broadcast messages to one or many users through the MMC by right-clicking an account and selecting the **Send SMS** option.

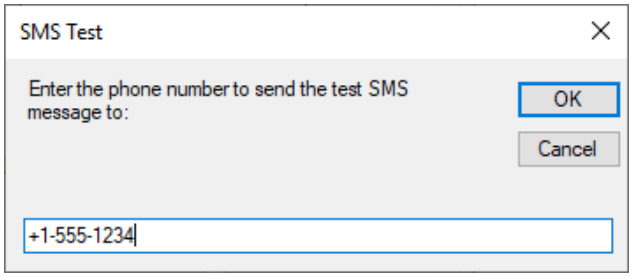


The **Provider** list is preconfigured with some commonly used Internet-based SMS providers from around the globe. If you do not have an account with an SMS provider, you can choose one from the list and click the **Web site** link; this takes you to the provider's sign up page where you typically sign up for a free trial account.

Select your SMS provider and enter the **Username** and **Password** details for it.

To ensure that the SMS provider credentials are valid:

1. Click **Send Test SMS**.
2. Enter a test mobile number.



3. Click **OK**.

   If you receive a text message on the specified mobile device, then the provider details are correct.

Some providers allow SMS messages from the same source to overwrite previous SMS messages. To allow this, enable **Select Overwrite previous message**. For SMS messages to be delivered as a Flash SMS, select **Enable SMS Flash**.

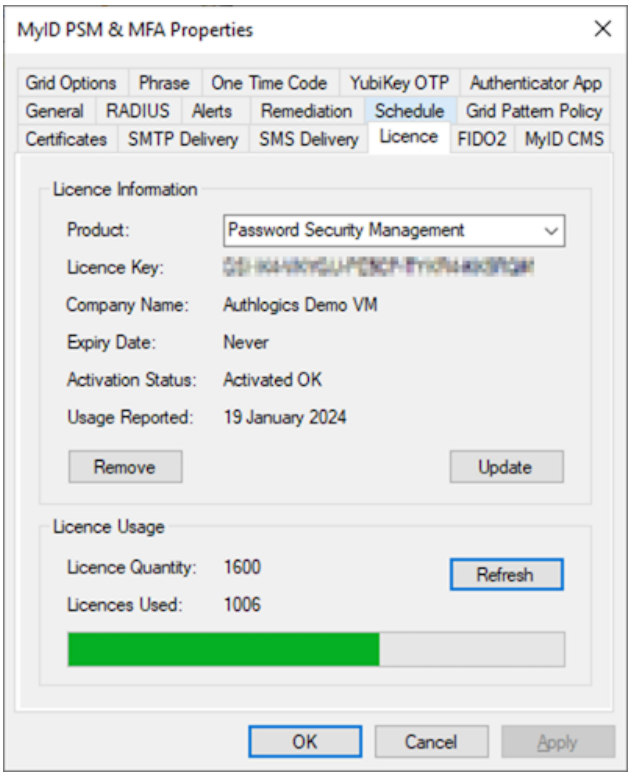
The **From Info** setting specifies the number that all messages appear to be delivered from.

The **Retry Send Limit** setting prevents more than the specified number of text messages to be delivered to a specific user per hour.

The **Default Country Code** prefixes mobile phone numbers with the selected dialing code for all mobile numbers that do not have an international dialing code.

5.2.8 Licence tab

The Licence tab displays the loaded license information.



Details of the selected license are displayed for your information, including the number of licenses supported and the dates during which they are valid. Details of your Multi-Factor Authentication and Password Security Management licenses can be viewed and modified by selecting the **Product** from the drop-down list.

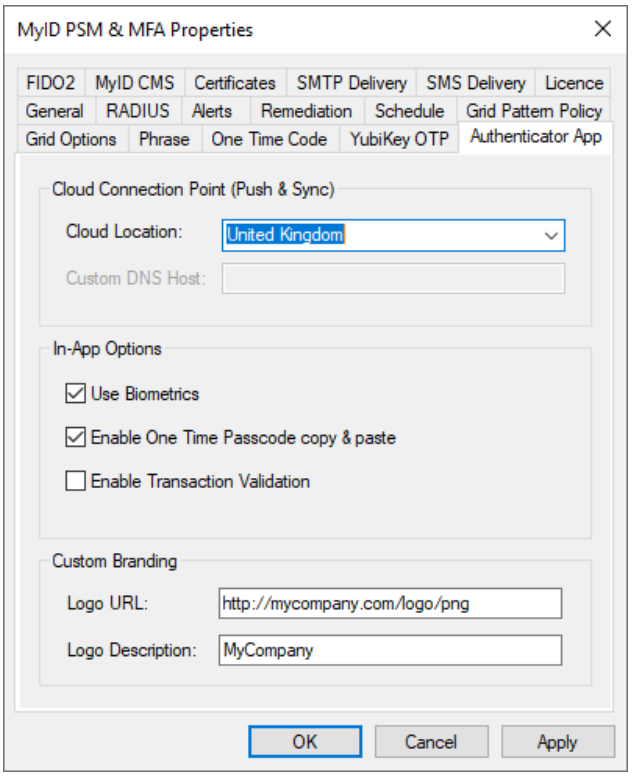
You can remove licenses by selecting the **Product** that the license is for, and clicking the **Remove** button. If you have removed a license, the Remove button is replaced by the **Add** button. If you click the **Add** button, the Licence Configuration Wizard starts.

The license is automatically refreshed periodically but *must* be updated at least every 60 days. If your license details change, for example if you renew your subscription or purchase more user license, or you want to manually update the usage reporting, click the **Update** button to get the latest license version from Intercede.

The number of used licenses is updated periodically; however, you can update it as needed by clicking the **Refresh** button.

5.2.9 Authenticator App tab

The Authenticator App tab allows you to customize the appearance and functionality of the MyID Authenticator app that is installed on mobile devices from popular App Stores.



To allow the Authenticator App to perform an online pairing and Mobile Push authentication, select a **Cloud Location** region. Once you have registered a mobile device, you cannot change this value unless you remove all devices.

Note: The **Cloud Location** option replaces the **Enable Online Device access** option. On a clean installation, or during an upgrade from an installation with **Enable Online Device access** enabled, the **Cloud Location** is set to **United Kingdom**. During an upgrade from an installation with **Enable Online Device access** disabled, the **Cloud Location** is set to **None**.

To host your own instance of the web service and to set your own URL, contact Intercede customer support.

The in-app Authenticator App options can also be customized. Once these are set, they cannot be changed by the user.

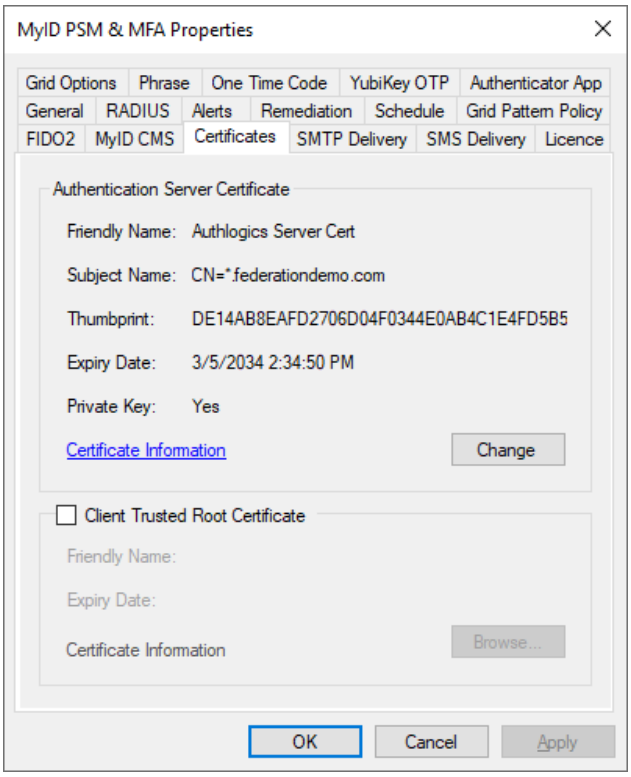
To show a custom logo at the top of the Authenticator App, enter a public URL to a graphic file that the mobile device can access. When provisioned, the Authenticator App accesses the URL and downloads and stores the graphic within the Authenticator App. The graphic should be a 900 x 210 transparent PNG image. For accessibility purposes. You are recommended to enter a description for the logo. This may just be the company name.

5.2.10 Certificates tab

The Certificates tab allows you to change the MyID Server signing certificate. This certificate is used to secure the MyID data stored in Active Directory and the Server Password Vault.

By default, the installation program generates a self-signed certificate.

This is *not* the certificate used by IIS for HTTPS (SSL) connections to the server.



The Authentication Server Certificate contains the public and private keys used to carry out asymmetric encryption and decryption of the stored data. An instance of the certificate, along with its private key, must be installed on each MyID Server in the Windows Computer certificate store. If the private key is not available, the Authentication Server cannot operate.

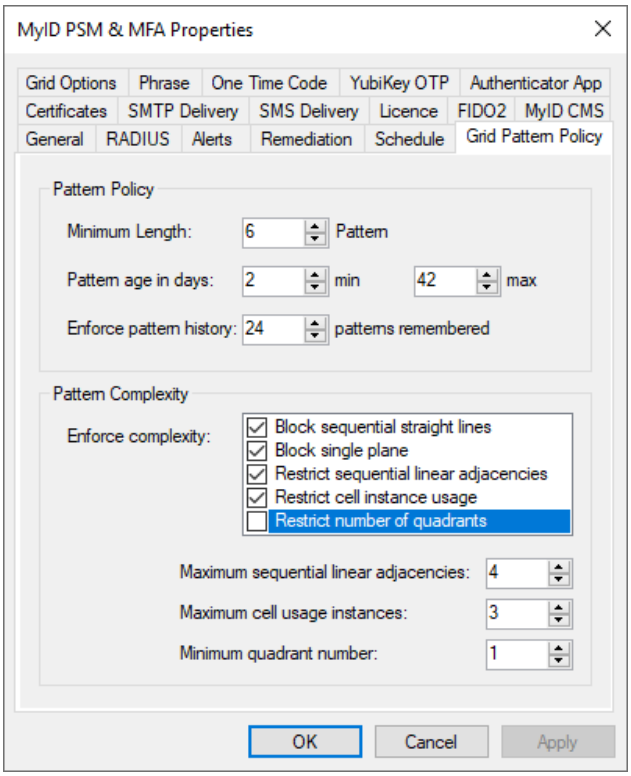
Warning: If the private key is lost it is not possible to recover the MyID data stored in Active Directory.

If you are using the Windows Desktop Agent, you can select a MyID Server Certificate Trusted Root certificate. If there is an enterprise CA available, you can specify a CA root certificate. This requires that all MyID Desktop Agent machines have a certificate installed on them that was issued from the specified root. If such a certificate is unavailable, some of the agent's features are not available, for example, offline and passwordless logons. If a MyID Server Certificate Trusted Root certificate is not configured, the default Self Signed Certificates are used.

All Windows Desktop Agents connecting to the MyID Authentication Server using the External Access Server role must have a trusted certificate installed on it so that it can be validated by the MyID Authentication Server.

5.2.11 Grid Pattern Policy tab

This tab configures the pattern policy and complexity settings.



The **Minimum length** setting determines the least number of characters allowed for a pattern. The larger the number, the more secure the patterns are, but the more complex they are for users to manage.

The minimum and maximum **Pattern age in days**, prevents users from excessive changes of patterns within a short period and forces users to change their pattern regularly.

By enabling **Enforce pattern history**, an administrator can prevent users from re-using previously used patterns. Specify how many previous patterns are remembered.

Enforcing complexity ensures that users do not choose simple patterns that could be easily guessed. Administrators can enforce the following complexity checks:

- Block sequential straight lines.

  Blocks the use of a straight line in any direction in a contiguous chain and sequence.

- Block single plane.

  Blocks the usability to select all positions in a pattern that are on the same plane in any orientation, regardless of spacing or sequence. This includes straight lines.

- Restrict sequential linear adjacencies.

  Restricts the maximum number of allowed positions that are sequential and in a straight line before a gap and change of direction is required.

- Restrict cell instance usage.

  Restricts the number of times the same cell can be selected when choosing a pattern. For example, if the **Maximum cell usage instances** is two then a maximum of two cells, within the selected pattern, can be re-used.

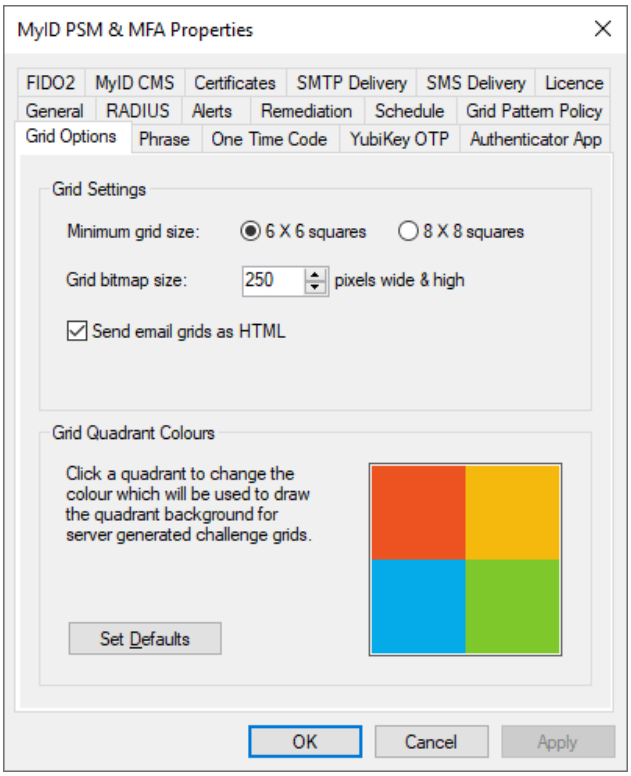
- Restrict number of quadrants.

  Restricts the minimum number of quadrants a chosen pattern must use.

  For example, if the **Minimum quadrant number** is two, then a pattern must use at least two of the four quadrants. While this encourages a user to choose a pattern that is well spread out, it also limits the number of possible pattern combinations available.

5.2.12 Grid Options tab

This tab configures generic and visual elements of MyID Grid authentication.



The **Minimum grid size** defines the smallest size grids that users can have.

If you are using the MyID Authentication Server for deviceless logons through an API, you can use the **Grid bitmap size** option to specify the default dimensions of the PNG image that is displayed on the client to suit the location you are displaying the image.

Note: The **Grid bitmap size** option is relevant only if you are using an API call to get the grid; for example, using `GetPinGridToken`. If you are instead using the MyID Authentication Server for deviceless logons through the IdP, the IdP manages the rendering size of the grid to ensure that it fits well within the overall layout of the page, overriding any user-defined bitmap size.

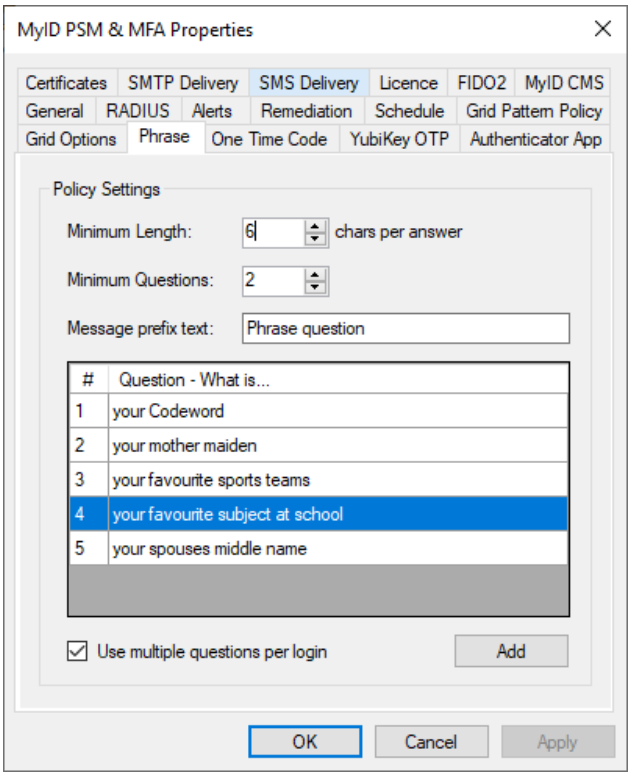
You can also customize the grid colors used to display the squares in each quadrant of the grid.

When challenge grids are delivered using email, the **Send email grids as HTML** option defines whether challenge grids are generated in plain text or as HTML.

To return the **Grid Quadrant Colours** to the default colors, click the **Set Defaults** button.

5.2.13 Phrase tab

This tab configures the standard Phrase policy settings.



The **Minimum Length** sets the minimum number of characters that a user must enter for each answer.

The **Minimum Questions** setting allows an administrator to specify the minimum number of questions that a user must answer to be fully provisioned for phrase authentication. Phrase authentication allows administrators to create multiple questions and allow a user to select a subset of those questions to answer.

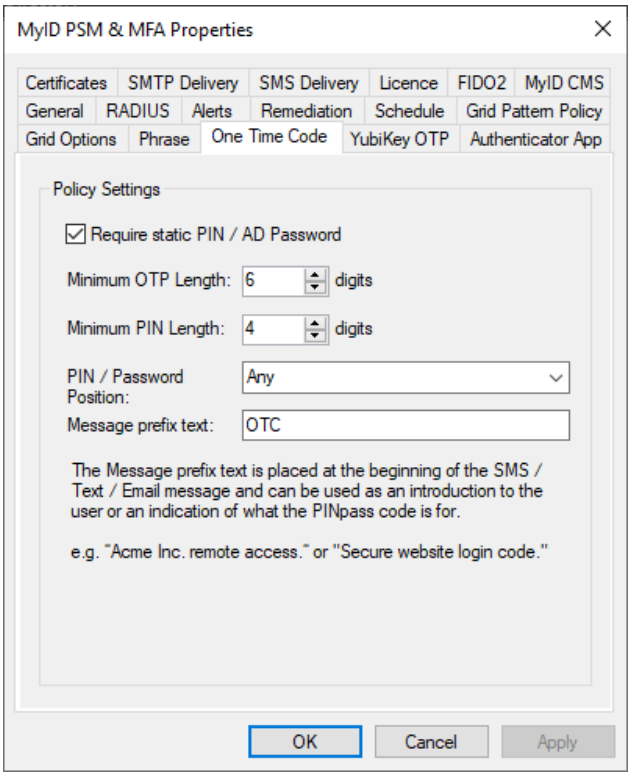
The **Message prefix text** precedes all Phrase challenges which are sent to mobile devices.

By default, the only question is `your Codeword`; this is to cater for auto-provisioning where a user is provided with a random dictionary word to get them started. It is not recommended to change the first challenge question. To modify and add new Phrase challenge questions, click **Add**.

Enable the **Use multiple questions per login** option to make Phrase randomly ask for letters from answers to multiple questions instead of picking random letters from a single answer. This option can increase security but may make it harder for users to login.

5.2.14 One Time Code tab

This tab configures the standard One Time Code policy settings.



One Time Code (OTC) can be used as a single or Multi-Factor Authentication solution. To enforce two-factor authentication with OTC, enable the **Require PIN / AD Password** option; if this option is enabled, the user must enter a PIN code or Password along with a One Time PIN (OTP) when authenticating. This option is typically disabled when OTC is only being used to validate OTPs and static data such as passwords are being verified elsewhere, or not at all.

The **Minimum OTP Length** option sets the minimum number of digits allowed in an OTP code generated. The actual number of digits is set on a per-user basis but cannot be lower than this number.

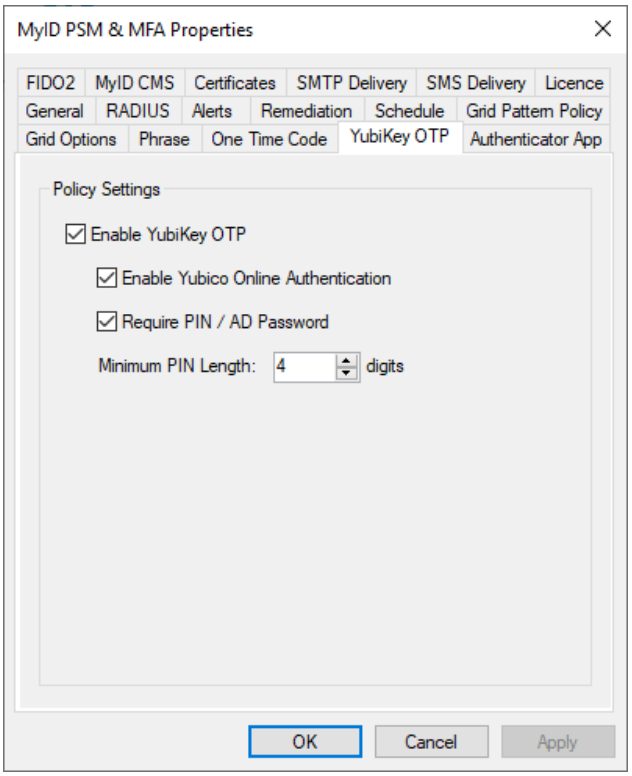
The **Minimum PIN Length** option allows an administrator to specify the minimum number of digits in a user's static PIN code. This length is ignored when using Active Directory passwords in place of a PIN code.

The **PIN / Password position** option dictates where users must enter the static PIN / Password in relation to the OTP. The default setting is `Any`.

The **Message prefix text** that precedes all OTC token challenges.

5.2.15 YubiKey OTP tab

This tab configures the YubiKey One Time PIN policy settings.



MyID MFA supports both programmed and native (non-reprogrammed) YubiKey devices. In order to validate non-reprogrammed YubiKey devices, the MyID Server requires access to the Yubico servers hosted in the cloud. **Enable Yubico Online Authentication** to pass non-reprogrammed YubiKey OTPs to the Yubico servers in the cloud.

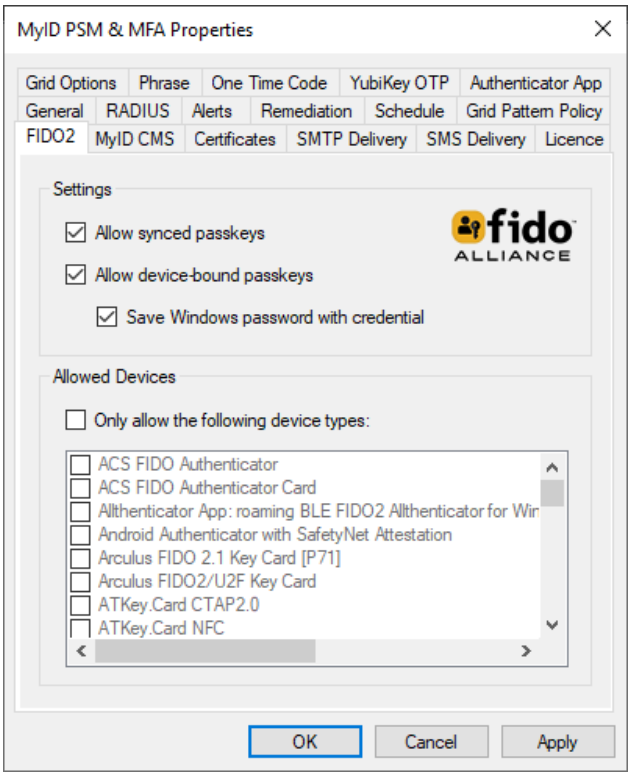
YubiKey OTPs can be used as a single or Multi-Factor Authentication solution. To enforce two-factor authentication with your YubiKey OTP, enable the **Require PIN / AD Password** option; when this is enabled, the user must enter a PIN code or Password along with their YubiKey One Time PIN (OTP) when authenticating. This option is typically disabled when OTC is only being used to validate OTPs and static data such as a password is being verified elsewhere, or not at all.

The **Minimum PIN Length** option allows an administrator to specify the minimum number of digits in a user's static PIN code. This length is ignored when using Active Directory passwords in place of a PIN code.

The **PIN / Password position** option dictates where users must enter the static PIN / Password in relation to the OTP. The default setting is `Any`.

5.2.16 FIDO2 tab

This tab configures the FIDO2 Passkey settings.



MyID MFA supports both FIDO2 synced and device-bound passkeys. Users need to be provisioned and enabled for FIDO2 support individually.

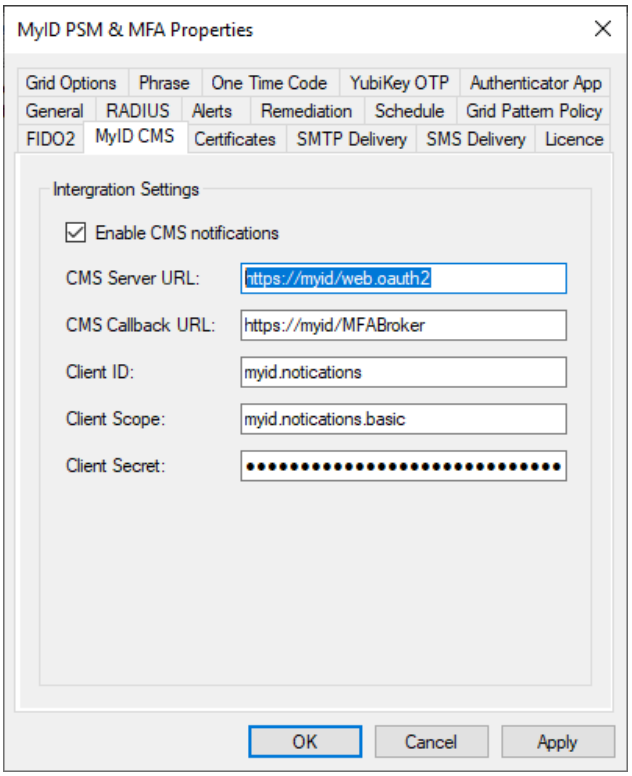
Enable the **Allow synced passkeys** option to enable support for synced passkeys. Synced passkeys are typically installed on mobile devices.

Enable the **Allow device-bound passkeys** option to enable support for device-bound passkeys. Device-bound passkeys are typically separate hardware tokens such as those provided by Yubico.

Enable the **Save Windows password with credential** option to bind the user's Active Directory password with the user's FIDO credential for passwordless login. This password is not stored with the MyID MFA password vault.

5.2.17 MyID CMS tab

This tab configures the MyID CMS settings to allow for integration between the MyID MFA/PSM Server and the MyID CMS Server.



You require the following information to complete the configuration:

- **CMS Server URL** – the MyID CMS OAuth2 Authentication Service URL.

  For example:

  `https://myid/web.oauth2`

- **CMS Callback URL** – the MyID CMS MFA Broker Service URL.

  For example:

  `https://myid/MFABroker`

- **Client ID** – the MyID CMS Client ID used to authenticate.

  For example:

  `myid.notifications`

- **Client Scope** – the MyID CMS Client Scope used to authenticate.

  For example:

  `myid.notifications.basic`

- **Client Secret** – the MyID CMS Client Secret used to authenticate.

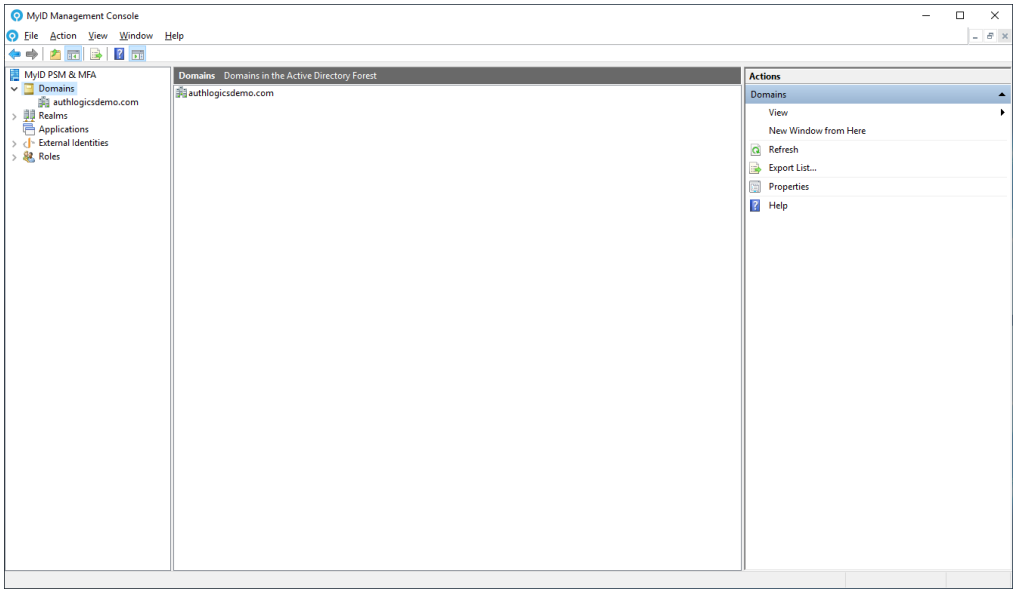
  For example:

  `4116e8f9-92e2-48b1-8616-5fb3d130b91d`

5.3 Domain settings

The MyID Domain settings are a set of domain specific configuration options that apply to all MyID servers in the forest and are not per-user settings. To access the domain settings:

1. In the MyID Management Console, highlight the **Domains** node.
2. Click **Properties**, in the **Actions** pane.

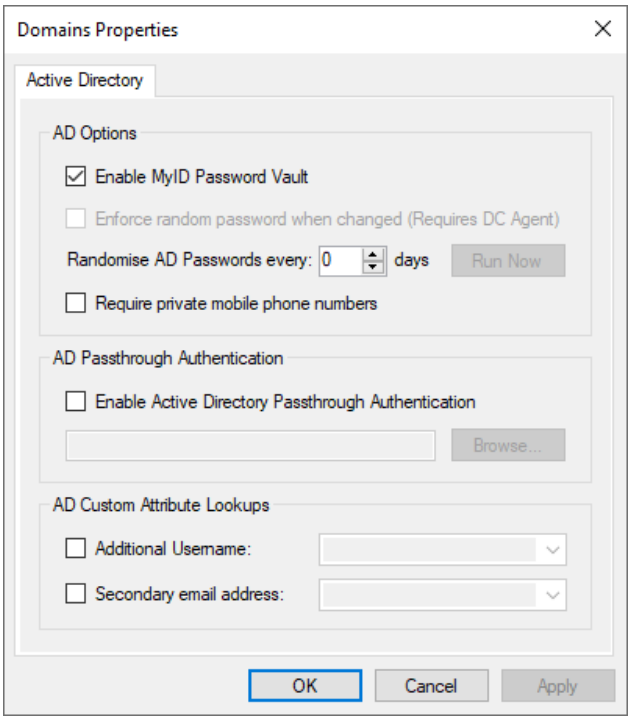


The Domain Properties dialog opens.

See section *5.3.1*, *Domain Properties dialog* for details.

5.3.1 Domain Properties dialog

The Domain Properties dialog allows administrators to control various Active Directory specific options.



The MyID Password Vault is a secure storage location protected with AES 256-bit asymmetric encryption with certificates. The password vault stores user passwords to allow for Passwordless logons to Windows and other applications. This feature can be used in conjunction with the Windows Desktop Agent with Passwordless logons enabled. The Password Vault is disabled by default and must be explicitly enabled.

Randomise AD Password enables the MyID Server to automatically manage user passwords by setting them to a highly secure random value regularly. The random passwords are kept secure because the users never know what they are, and they constantly change. This feature must only be used in conjunction with MyID Agents which support Passwordless logons such as the Windows Desktop Agent with Passwordless logons enabled.

To enable this feature, specify how many days until the passwords must be randomly changed. If you set it to `0`, the feature is disabled. You can also enable **Enforce random AD Password** when changed, which prevents a user's password from being reset/changed to a non-random password. If it is not enforced, the password reset is allowed, and the new password can be used until the next randomization schedule. The block is done directly at the Domain Controller by the Domain Controller Agent which must be installed separately on all Domain Controllers.

To force password randomization of all accounts, click **Run Now**. This causes the Password Policy Agent to run the password randomization task within the next 15 minutes.

To ensure that all user mobile phone numbers are kept private, enable **Require private mobile phone numbers**. This setting ensures that mobile numbers are encrypted instead of using the clear text default mobile phone Active Directory field.

AD Passthrough Authentication allows logon attempts to be passed directly to Active Directory for logon processing if a user has not been provisioned for MFA. AD Passthrough Authentication is only permitted for user accounts that are a member of a specified AD group and is disabled by default. To enable AD Passthrough Authentication,

1. Enable the **Enable Active Directory Passthrough Authentication** option.
2. Click **Browse**.
3. Select the Active Directory group that contains the user accounts which are permitted to use AD Passthrough Authentication.

AD Custom Attribute Lookups enables MyID to use custom LDAP attributes on a user account when looking up a user account name or secondary email address.

The **Additional Username** option may be useful to locate a user account using an employee number instead of an Active Directory account name. If the employee number is stored in **extensionAttribute1** in Active Directory, you can configure MyID to also look in the specified attribute. The custom field is used as a secondary addition to the standard Username or UPN, if an account match is found using the standard **Username**, the custom LDAP field is not searched.

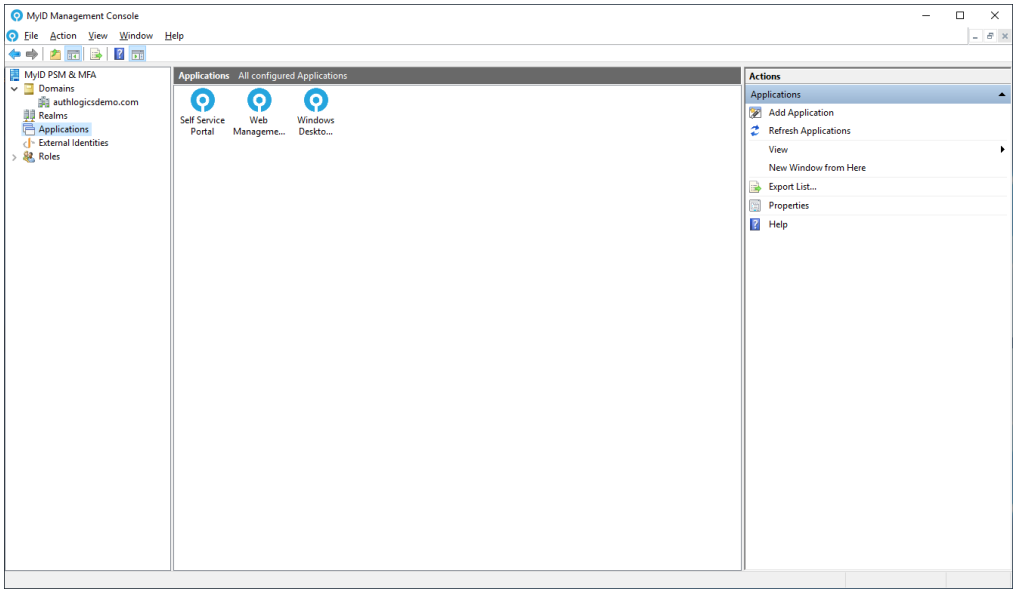
The **Secondary email address** option can be used to locate a secondary email address for a user account. The secondary email address can be used in the authentication provisioning wizards for sending welcome emails to.

To enable a custom attribute lookup, enable **Additional Username** or **Secondary email address**, and select an LDAP attribute from the list that MyID should search.

5.4 Applications

Applications are all IdP published services and websites that require authentication. MyID includes three preconfigured applications: the Self Service Portal, the Web Admin Portal, and the Windows Desktop agent service. To access the applications settings:

1. In the MyID Management Console, highlight the **Applications** node.
2. Click **Properties**, in the **Actions** pane.



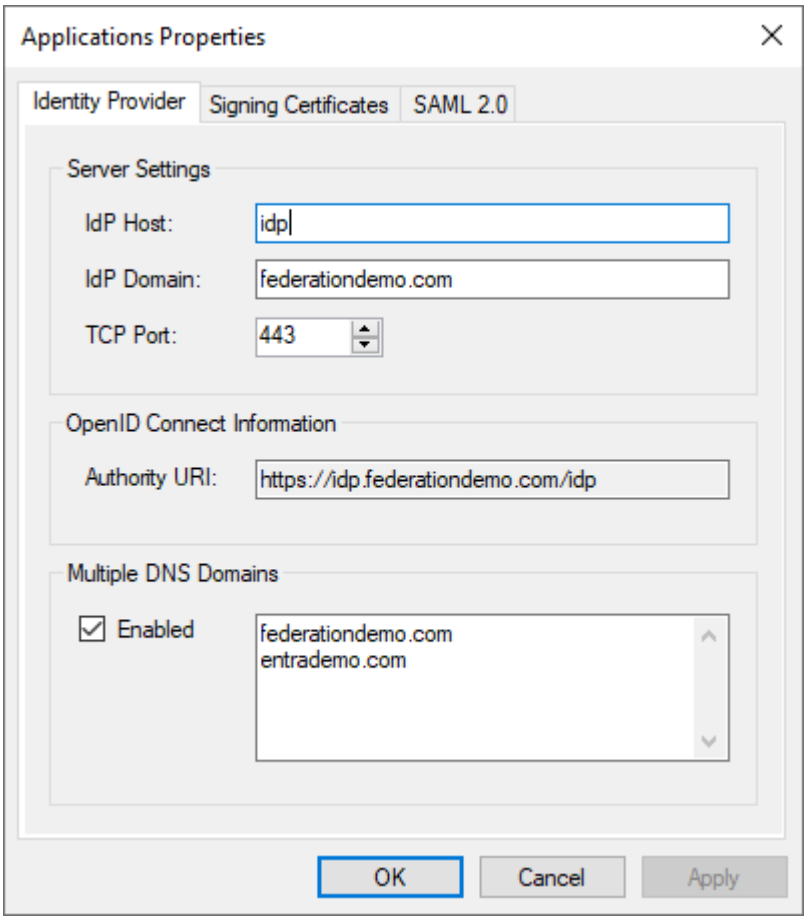
You can access the following properties dialogs:

- Applications Properties
- Self Service Portal Properties
- Web Management Portal Properties
- Windows Desktop Agent Properties
- SAML 2.0 application properties

5.4.1 Applications Properties

The Applications Properties dialog allows administrators to control the Identity Provider (IdP) server options. These properties apply to all MyID IdP servers in the forest and are not per-user settings.

5.4.1.1 Identity Provider tab



The **IdP Host** is the DNS name of the MyID Authentication Server (or servers).

The **IdP Domain** is the domain name of the MyID Authentication Server.

The **IdP Host** and **IdP Domain** are combined to create the DNS Fully Qualified Domain Name (FQDN) for accessing the MyID Authentication Server from web based clients.

While the DNS FQDN must resolve to the IP address of the MyID Authentication Server, it does not have to be the actual name of the MyID Authentication Server. If you have multiple authentication servers for high availability, you must set the **IdP Host** and **IdP Domain** to create a virtual name that either resolves to all authentication servers, or to a network load balancer virtual IP address.

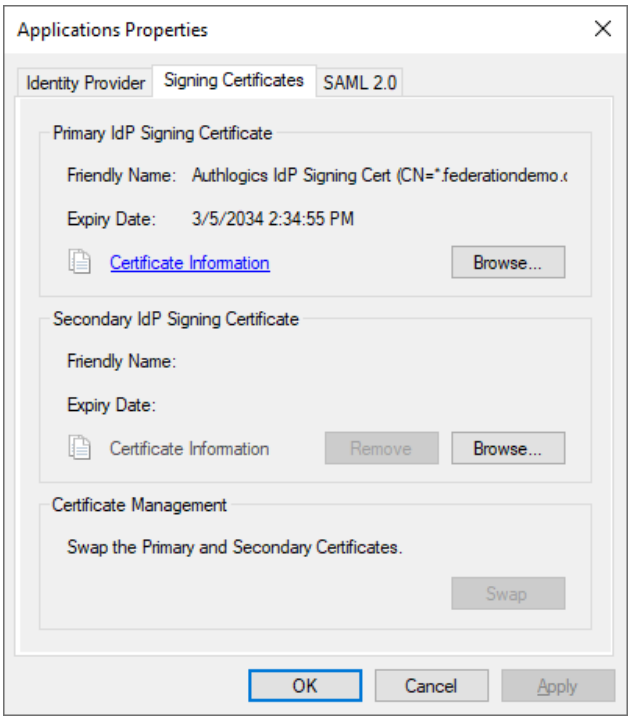
The MyID Authentication Server operates on the HTTPs protocol and is bound to the port specified within the **TCP Port** option. By default, the **TCP Port** is `14443`; however, you are recommended to use port `443` with a matching trusted SSL certificate. You must configure the certificate and TCP binding separately on each authentication server in your IIS.

In the **OpenID Connect Information** section, the **Authority URI** is dynamically built based on the **IdP Host**, **IdP Domain**, and **TCP Port** settings.

If the same IdP is used with multiple DNS domains, for example if there are multiple DNS domain names associated with a Microsoft Azure tenant, you must enable **Multiple DNS Domains**, and list the domains.

If you are using only one domain, you are not required to add it to the list.

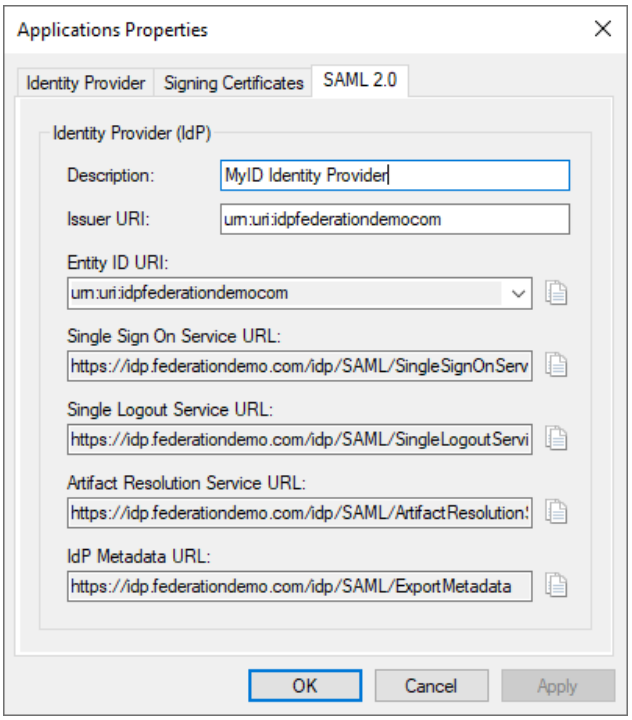
5.4.1.2 Signing Certificates tab



You must have at least one IdP signing certificate. You can configure a Secondary IdP Signing Certificate with a different expiry date to the Primary IdP Signing Certificate to allow for certificate rollover without service interruption.

IdP signing certificates do not have to be publicly trusted as they are not SSL certs; they are shared with application service providers during app setup.

5.4.1.3 SAML 2.0 tab



On the **SAML 2.0** tab, you can enter a **Description** for your MyID IdP Server.

The **Issuer Uri** must be a unique value. By default it is configured in the following format:

`urn:uri:<server-host><server-domain-with-no-dots>`

Where:

- `<server-host>` is the IdP Host.
- `<server-domain-with-no-dots>` is the IdP Domain without dots.

For information on setting the IdP Host and IdP Domain, see section *5.4.1.1*, *Identity Provider tab*.

If you have configured multiple domains, multiple **Entity ID URI** values are dynamically created; you can view these in the drop-down list. For each domain, a unique Issuer URI is created in the following format:

`urn:uri:{server-host}{server-domain-with-no-dots}:{mult-domain-name-with-no-dots}`

Where:

- `<server-host>` is the IdP Host.
- `<server-domain-with-no-dots>` is the IdP Domain without dots.
- `<mult-domain-name-with-no-dots>` is a domain from your Multiple DNS Domains list.

For information on setting the IdP Host, IdP Domain, and multiple DNS domains, see section *5.4.1.1*, *Identity Provider tab*.

The URLs to access the Single Sign On Service, Single Logout Service, Artifact Resolution Service, and the IdP Metadata are displayed for your information. You can click the button next to each URL to copy it to your clipboard.

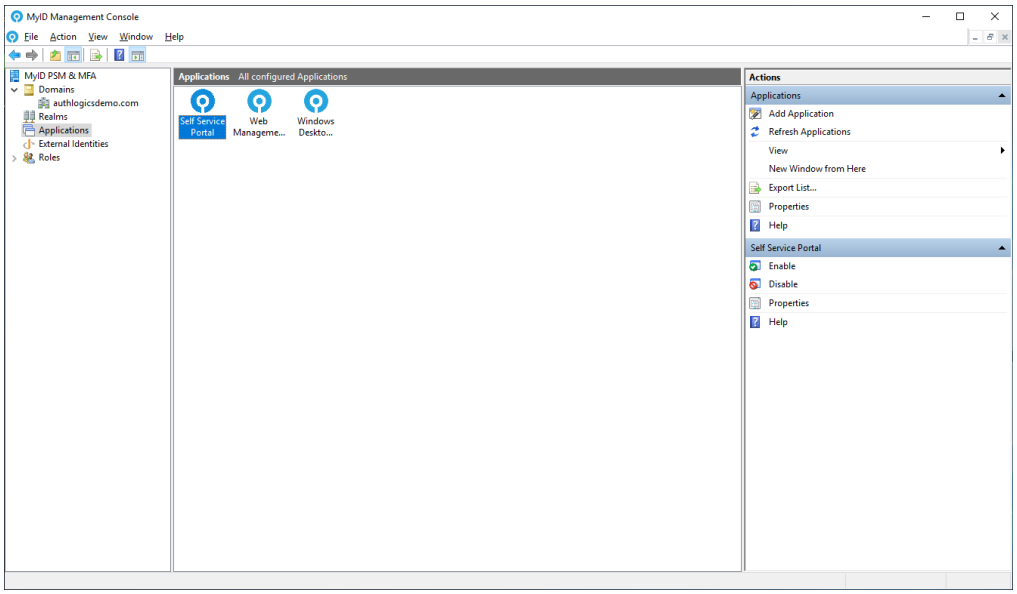
5.4.2 Self Service Portal Properties

The Self Service Portals properties dialog contains the customization options for the Self Service Portal. The MyID Authentication Server includes a user Self Service Portal where users can perform various common administrative tasks themselves such as register a new MFA device, change their Grid pattern, Phrase answers, static YubiKey and OTC PINs and reset their Active Directory password and update their mobile/cellular phone number. The Web Management Portal provides basic administration and operational capabilities suited to helpdesk personnel.

The portal is designed to be compatible with desktop and mobile browsers.

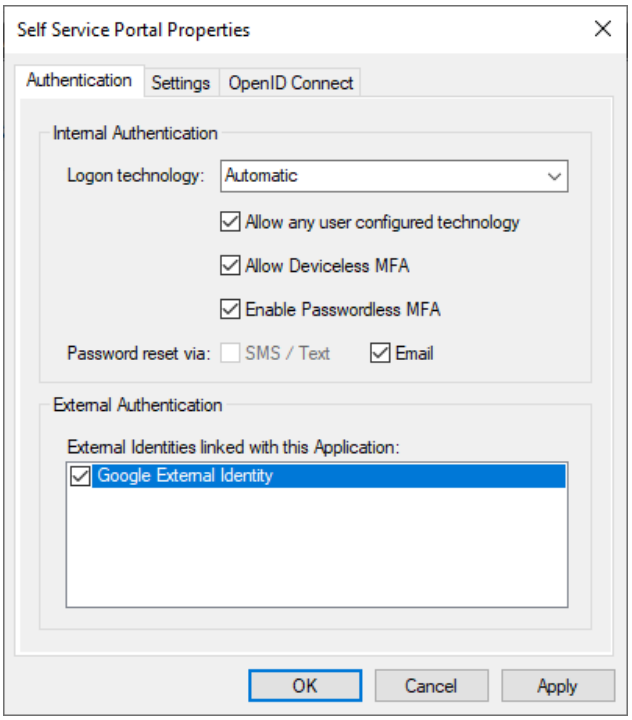
To access the Self Service Portal application properties:

1. In the MyID Management Console, enter the **Applications** node.
2. Highlight the **Self Service Portal**.



3. Click **Properties**, in the **Actions** pane.

5.4.2.1 Authentication tab



You can specify the logon technology users must use to authenticate to the portal. The available options are:

- **Disabled**
- **Automatic** (MFA only)
- **Push**
- **Grid**
- **Phrase**
- **One Time Code**
- **Passkey**
- **YubiKey OTP**
- **Password** (Active Directory password)
- **Windows Authentication** (pass-through authentication)
- **Certificate**

When an MFA license is installed, the default logon option for the portals is **Automatic** (MFA only). If only a PSM license is installed, the options are limited to **Password** and **Windows Authentication**, with **Password** being the default logon option.

Automatic determines the most appropriate MFA technology for a user to authenticate with. If a user is enabled for multiple MFA technologies, the application chooses the highest security MFA technology based on in-built hierarchy.

If you enable the **Allow any user configured technology** option, users are allowed to authenticate using any MFA technology for which they are provisioned. If this option is not selected, the user must enter valid authentication credentials shown by the application only. Other MFA technology credentials that a user may be provisioned for do not work and they must provide the credentials display of the Self Service logon page.

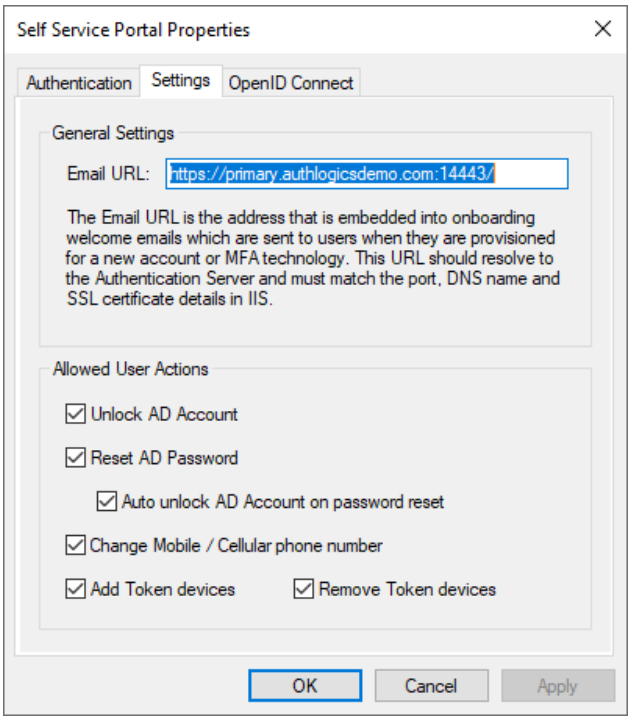
Grid and Phrase authentication technologies both support Deviceless authentication, enable the **Allow Deviceless MFA** option to enable this support. If this is not enabled, then MFA is always required.

If you enable **Allow Passwordless MFA**, that enables passwordless logins. When disabled, users are required to enter a valid Active Directory password as well as their MFA credentials.

When only a PSM license is installed, the Self Service Portal can still issue One Time Codes using SMS/Text or Email for Active Directory Password reset purposes. To use this feature, the logon type must be set to **Password** and either **SMS/ Text** or **Email** must be checked.

The External Identities linked with this application allow users to authenticate to the website or service using a preconfigured external identity provider; for information on adding an external identity, see section *5.6*, *Adding External Identities*.

5.4.2.2 Settings tab



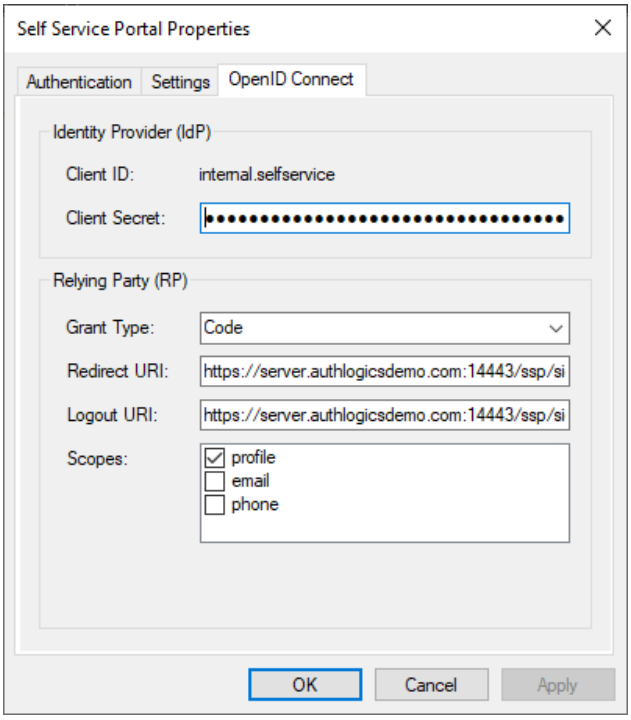
The **Email URL** must be an accessible and resolvable web-based address that provides users access to the Self Service Portal hosted on the Authentication Server. The default HTTPS port (SSL) for the SSP is TCP:`14443`, although additional ports can be configured within IIS. A reverse proxy or SSL VPN device may be used to provide connectivity to the portal if required.

Administrators can enable or disable the user's ability to perform the following actions though the Self Service Portal (depending on the installed product license):

- **Unlock AD Account** – Allows users to unlock their Active Directory Account.
- **Reset AD Password** – Allows users to reset their Active Directory Password.
  - **Auto unlock AD Account on password reset** – Auto unlocks the user's Active Directory Account when their password is reset.
- **Change Mobile / Cellular phone number** – Allows users to change their mobile/cellular phone number.
- **Add Token devices** – Allows users to add token devices.
- **Remove Token devices** – Allows users to remove token devices.

5.4.2.3 OpenID Connect tab

The OpenID Connect tab details the IdP Server and Relying Party trust settings.



Through this, you can specify the Self Service Portal's **Grant Type**, **Redirect** and **Logout URIs** and the scope for the relying party trust.

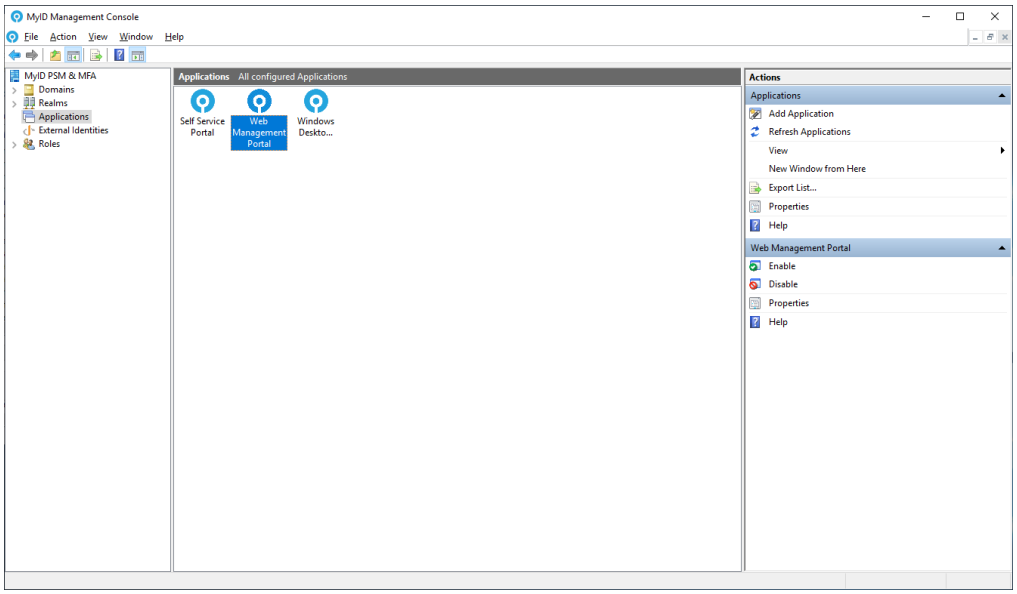
5.4.3 Web Management Portal Properties

The Web Management Portal application properties contain the customization options for the Web Management Portal. The MyID Authentication Server includes a user Web Management Portal where administrators and web operators can perform basic administration and operational capabilities suited to helpdesk personnel.

The portal is designed to be compatible with desktop and mobile browsers.

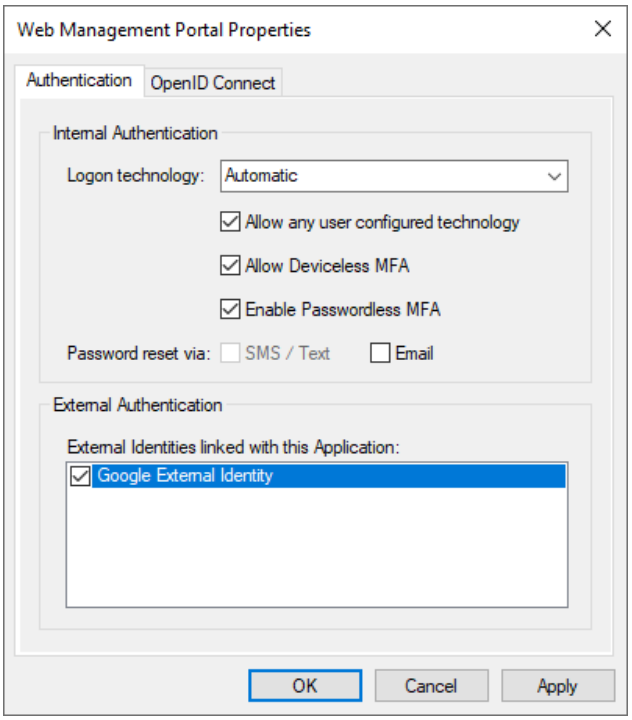
To access the Web Management Portal application properties:

1. In the MyID Management Console, enter the **Applications** node.
2. Highlight the **Web Management Portal**.



3. Click **Properties**, in the **Actions** pane.

5.4.3.1 Authentication tab



You can specify the logon technology users must use to authenticate to the portal. The available options are:

- **Disabled**
- **Automatic** (MFA only)
- **Push**
- **Grid**
- **Phrase**
- **One Time Code**
- **Passkey**
- **YubiKey OTP**
- **Password** (Active Directory password)
- **Windows Authentication** (pass-through authentication)
- **Certificate**

When an MFA license is installed, the default logon option for the portals is **Automatic** (MFA only). If only a PSM license is installed, the options are limited to **Password** and **Windows Authentication**, with **Password** being the default logon option.

Automatic determines the most appropriate MFA technology for a user to authenticate with. If a user is enabled for multiple MFA technologies, the application chooses the highest security MFA technology based on in-built hierarchy.

If you enable the **Allow any user configured technology** option, users are allowed to authenticate using any MFA technology for which they are provisioned. If this option is not selected, the user must enter valid authentication credentials shown by the application only. Other MFA technology credentials that a user may be provisioned for do not work and they must provide the credentials display of the Self Service logon page.

Grid and Phrase authentication technologies both support Deviceless authentication, enable the **Allow Deviceless MFA** option to enable this support. If this is not enabled, then MFA is always required.

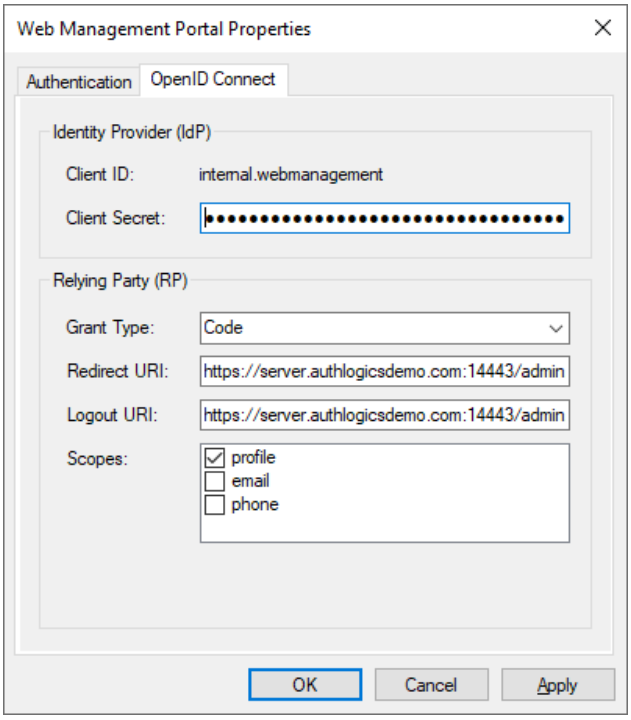
If you enable **Allow Passwordless MFA**, that enables passwordless logins. When disabled, users are required to enter a valid Active Directory password as well as their MFA credentials.

When only a PSM license is installed, the Self Service Portal can still issue One Time Codes using SMS/Text or Email for Active Directory Password reset purposes. To use this feature, the logon type must be set to **Password** and either **SMS/ Text** or **Email** must be checked.

The External Identities linked with this application allows users to authenticate to the website or service using a preconfigured external identity provider; for information on adding an external identity, see section *5.6*, *Adding External Identities*.

5.4.3.2 OpenID Connect tab

The OpenID Connect tab details the IdP Server and Relying Party trust settings.



Through this, you can specify the Web Management Portal's **Grant Type**, **Redirect** and **Logout URIs** and the scope for the relying party trust.

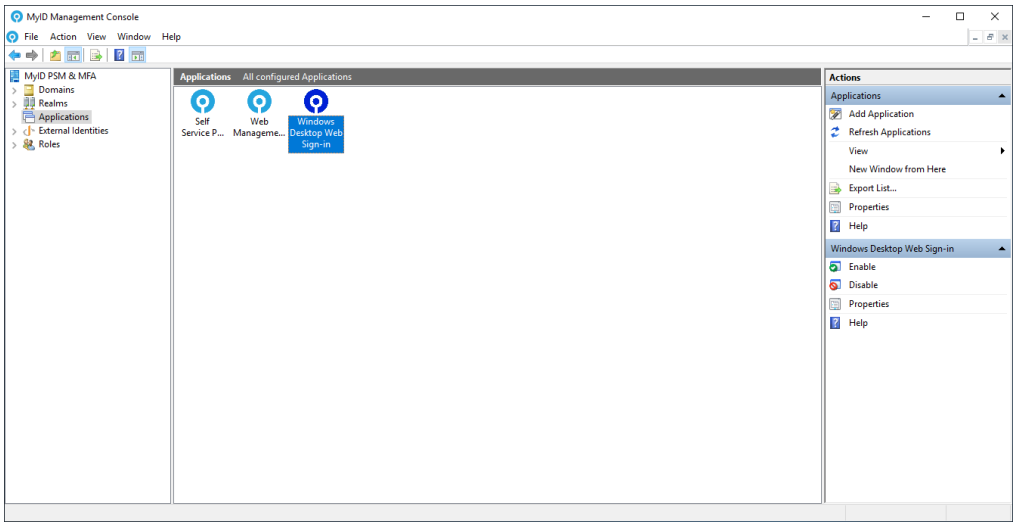
5.4.4 Windows Desktop Agent Properties

The MFA Windows Desktop Agent tabs contain the customization options for the MyID MFA Windows Desktop Agent.

The portal is designed to be compatible with desktop and mobile browsers.

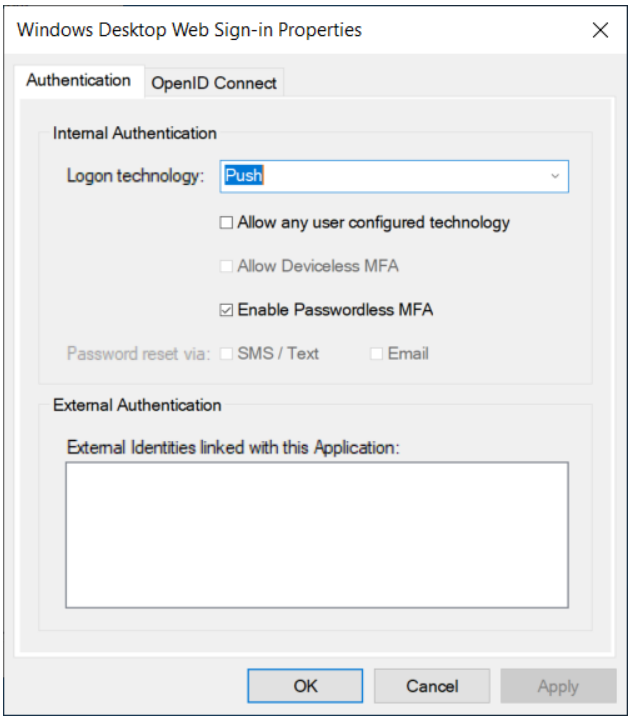
To access the Windows Desktop Agent application properties:

1. In the MyID Management Console, enter the **Applications** node.
2. Highlight the **Windows Desktop Web Sign-in**.



3. Click **Properties**, in the **Actions** pane.

5.4.4.1 Authentication tab



You can specify the logon technology users must use to authenticate to the portal. The available options are:

- **Disabled**
- **Automatic** (MFA only)
- **Push**
- **Grid**
- **Phrase**
- **One Time Code**
- **Passkey**
- **YubiKey OTP**
- **Password** (Active Directory password)
- **Windows Authentication** (pass-through authentication)
- **Certificate**

When an MFA license is installed, the default logon option for the portals is **Automatic** (MFA only). If only a PSM license is installed, the options are limited to **Password** and **Windows Authentication**, with **Password** being the default logon option.

Automatic determines the most appropriate MFA technology for a user to authenticate with. If a user is enabled for multiple MFA technologies, the application chooses the highest security MFA technology based on in-built hierarchy.

If you enable the **Allow any user configured technology** option, users are allowed to authenticate using any MFA technology for which they are provisioned. If this option is not selected, the user must enter valid authentication credentials shown by the application only. Other MFA technology credentials that a user may be provisioned for do not work and they must provide the credentials display of the Self Service logon page.

Grid and Phrase authentication technologies both support Deviceless authentication, enable the **Allow Deviceless MFA** option to enable this support. If this is not enabled, then MFA is always required.

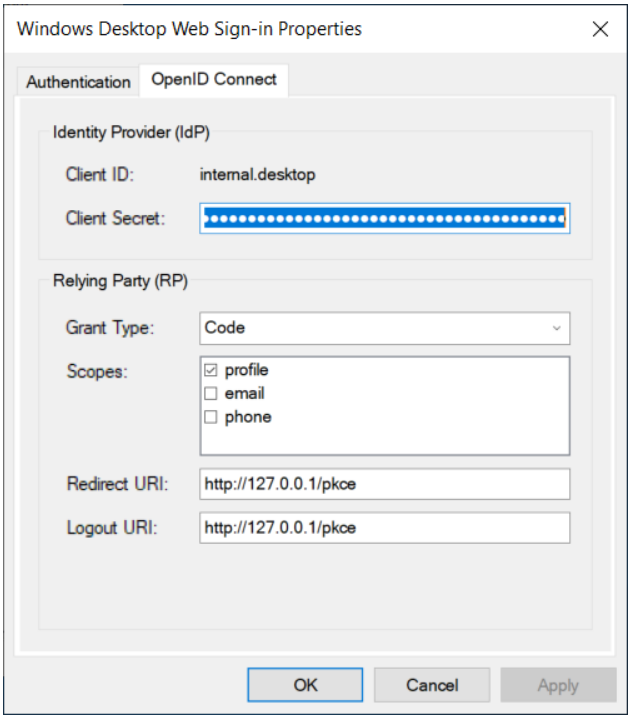
If you enable **Allow Passwordless MFA**, that enables passwordless logins. When disabled, users are required to enter a valid Active Directory password as well as their MFA credentials.

When only a PSM license is installed, the Self Service Portal can still issue One Time Codes using SMS/Text or Email for Active Directory Password reset purposes. To use this feature, the logon type must be set to **Password** and either **SMS/ Text** or **Email** must be checked.

The **External Identities linked with this application** option allows users to authenticate to the website or service using a preconfigured external identity provider; for information on adding an external identity, see section *5.6*, *Adding External Identities*.

5.4.4.2 OpenID Connect tab

The OpenID Connect tab details the IdP Server and Relying Party trust settings.

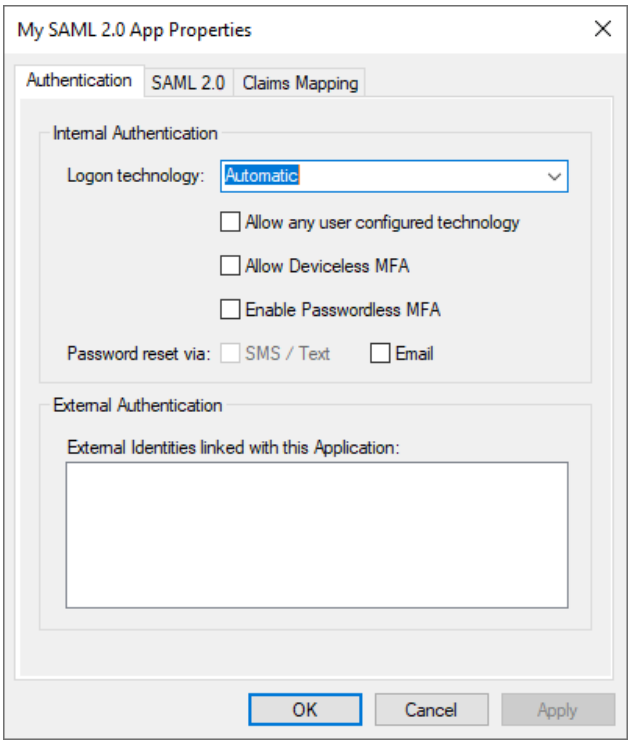


Through this, you can specify the Windows Desktop Agent's **Grant Type**, **Redirect** and **Logout URIs** and the scope for the relying party trust.

5.4.5 SAML 2.0 application properties

The applications properties dialog of a SAML 2.0 application allows administrators to control the SAML 2.0 application. For more information on adding a SAML 2.0 application, see section *5.5.2*, *Creating a SAML 2.0 application*.

5.4.5.1 Authentication tab



You can specify the logon technology users must use to authenticate to the portal. The available options are:

- **Disabled**
- **Automatic** (MFA only)
- **Push**
- **Grid**
- **Phrase**
- **One Time Code**
- **Passkey**
- **YubiKey OTP**
- **Password** (Active Directory password)
- **Windows Authentication** (pass-through authentication)
- **Certificate**

When an MFA license is installed, the default logon option for the portals is **Automatic** (MFA only). If only a PSM license is installed, the options are limited to **Password** and **Windows Authentication**, with **Password** being the default logon option.

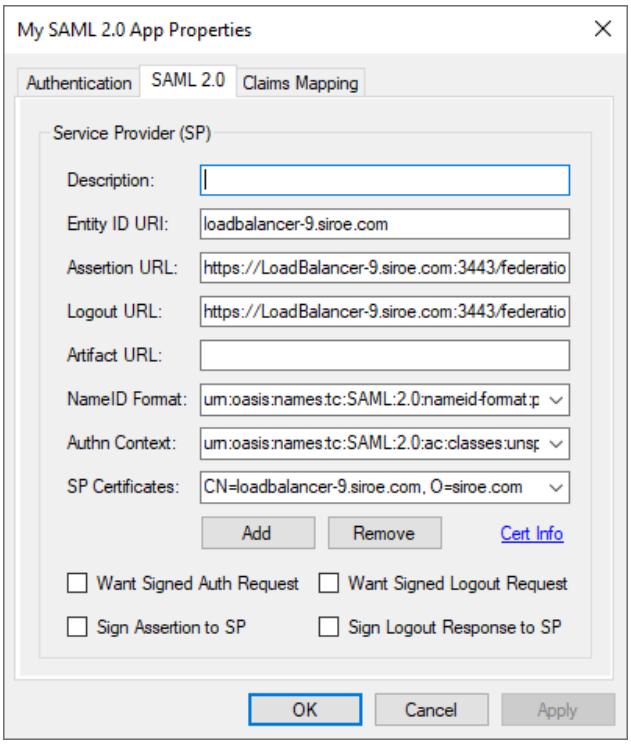
Automatic determines the most appropriate MFA technology for a user to authenticate with. If a user is enabled for multiple MFA technologies, the application chooses the highest security MFA technology based on in-built hierarchy.

If you enable the **Allow any user configured technology** option, users are allowed to authenticate using any MFA technology for which they are provisioned. If this option is not selected, the user must enter valid authentication credentials shown by the application only. Other MFA technology credentials that a user may be provisioned for do not work and they must provide the credentials display of the Self Service logon page.

Grid and Phrase authentication technologies both support Deviceless authentication, enable the **Allow Deviceless MFA** option to enable this support. If this is not enabled, then MFA is always required.

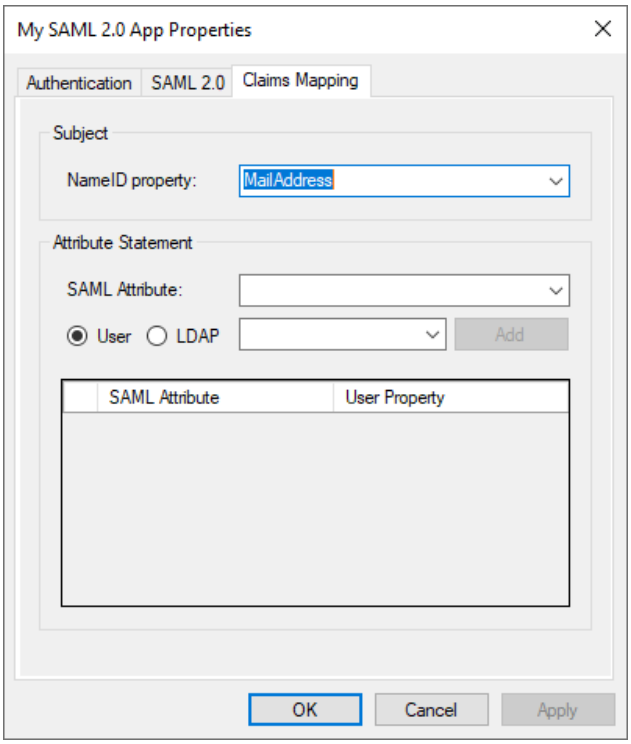
If you enable **Allow Passwordless MFA**, that enables passwordless logins. When disabled, users are required to enter a valid Active Directory password as well as their MFA credentials.

5.4.5.2 SAML 2.0 tab



The SAML 2.0 tab allows you to change the SAML settings of the application after you have created the application. The options are the same as when you create the application, except that you cannot import a metadata file; see section *5.5.2*, *Creating a SAML 2.0 application* for details. of these options.

5.4.5.3 Claims Mapping tab

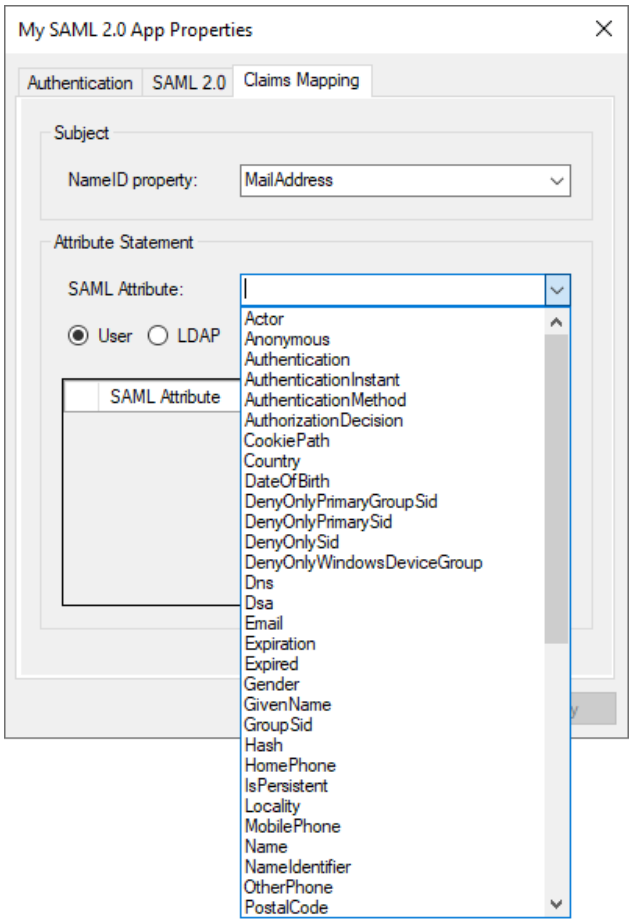


The **NameID** is mapped during the application creation.

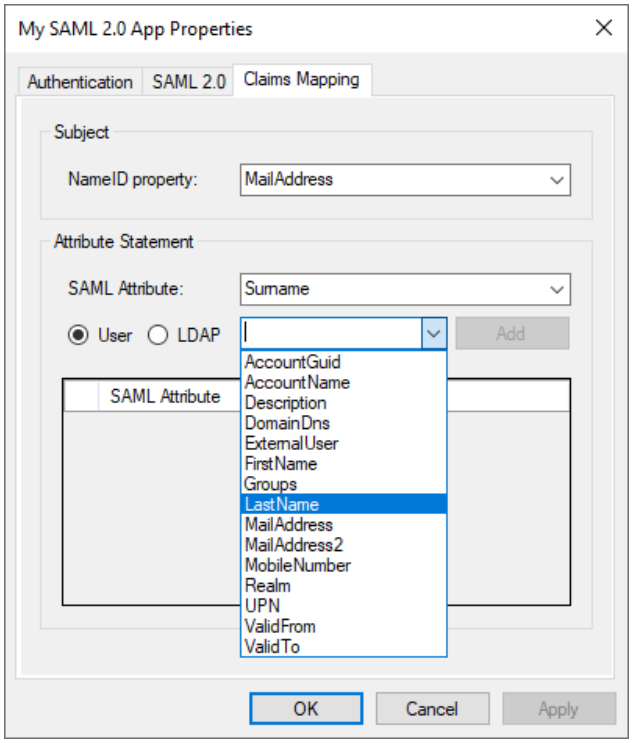
You can add any other claims required by the application on this tab.

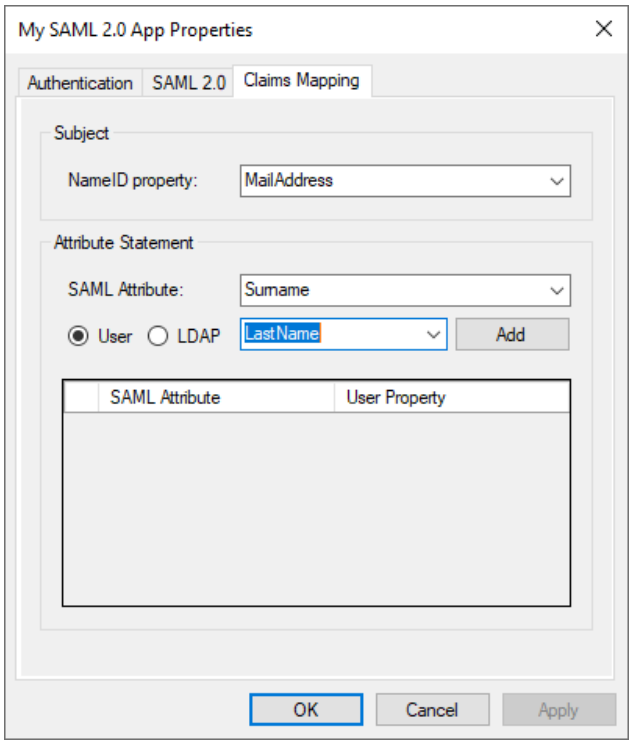
To add a claims sample mapping:

1. Select a **SAML Attribute** from the list or type in a value for a custom SAML attribute.



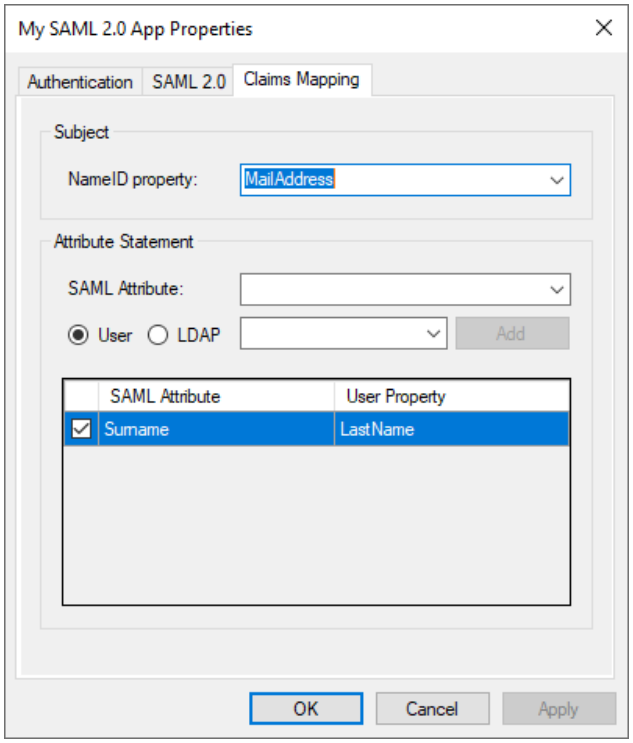
2. Select either a user property or an LDAP field to which you want to map the attribute.





3. Click **Add**.

   The mapping configuration is now complete and is visible in the list.



You can add multiple claim mappings to a single application.

To disable a mapping, deselect it in the list.

To test the IdP SAML configuration, you can use the following demo site:

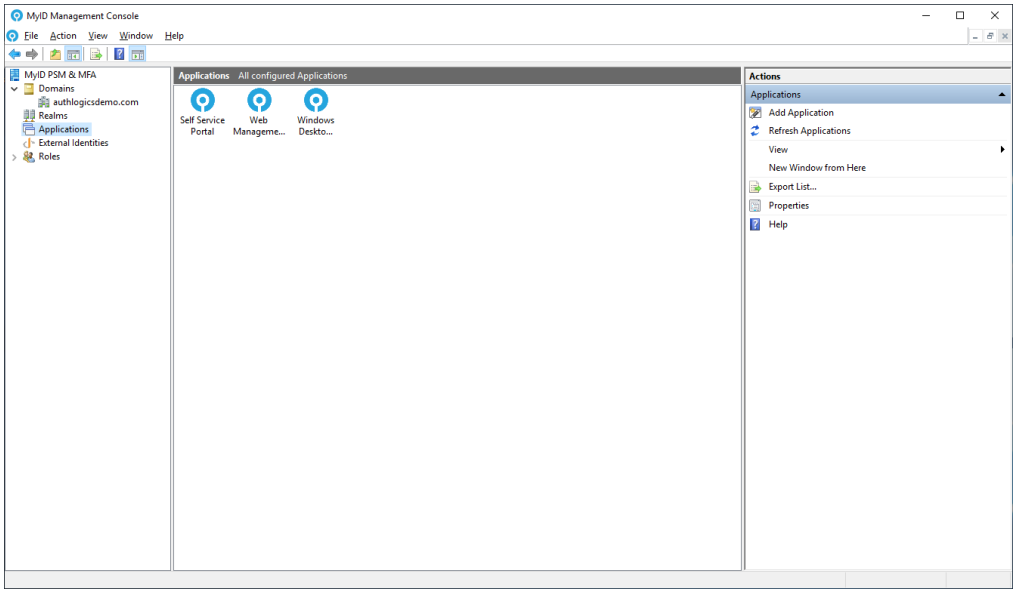
sptest.iamshowcase.com

The site displays the information received through SAML attributes. The site does not support testing of SAML signing.

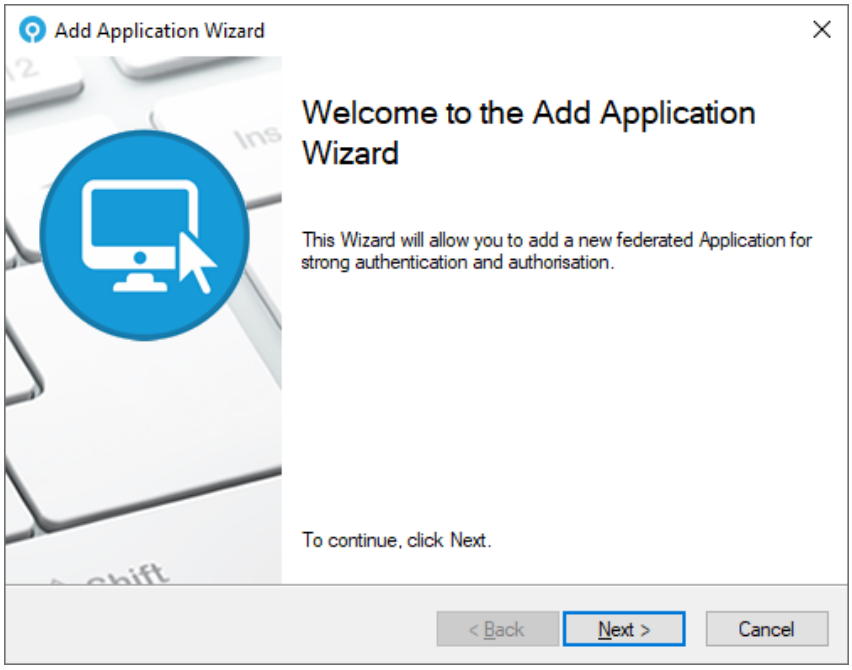
5.5 Adding new applications

Additional websites and services can be added to the IdP Applications. To add a new application:

1. In the MyID Management Console, highlight the **Applications** node.



2. Click **Add Application**, in the **Actions** pane.



3. Click **Next**.
4. Select the **App Type**, provide a descriptive **Name** for the application, and set the application to be **Enabled**.

MyID Applications support applications of type:

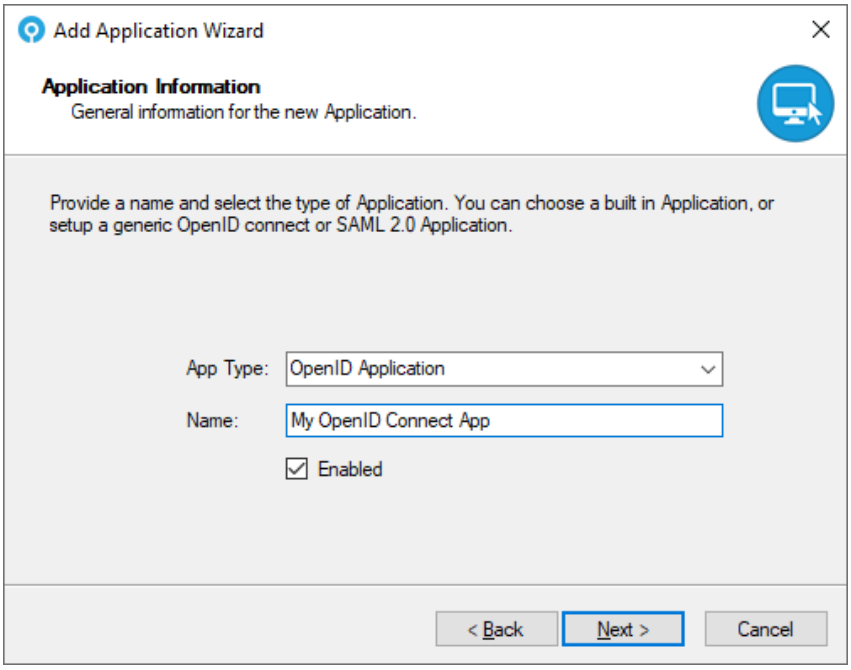
- OpenID Applications

  See section *5.5.1*, *Creating an OpenID Connect application*.
- SAML 2.0 Applications

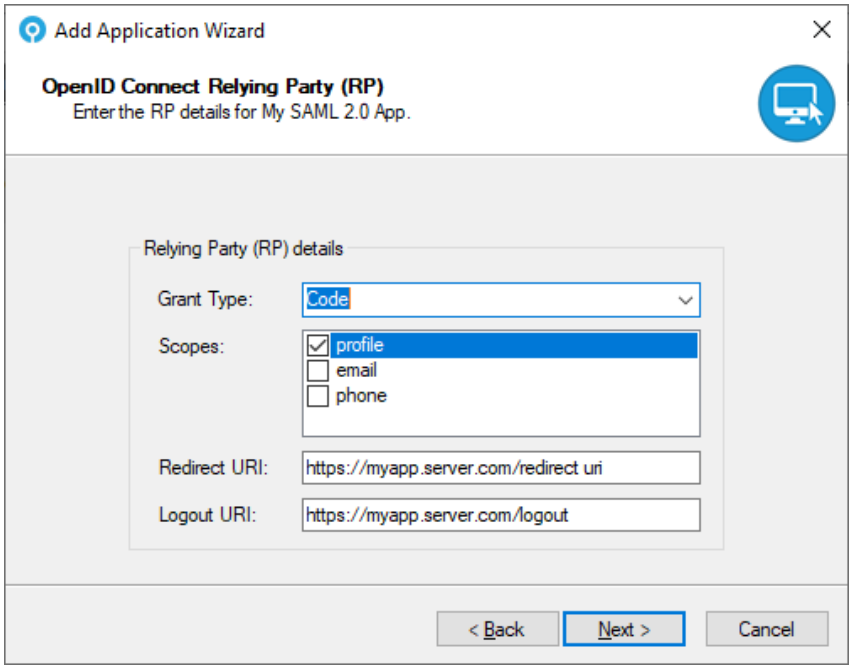
  See section *5.5.2*, *Creating a SAML 2.0 application*.
- MyID CMS
- Microsoft 365

Follow the relevant instructions for the type of application that you want to add.

5.5.1 Creating an OpenID Connect application

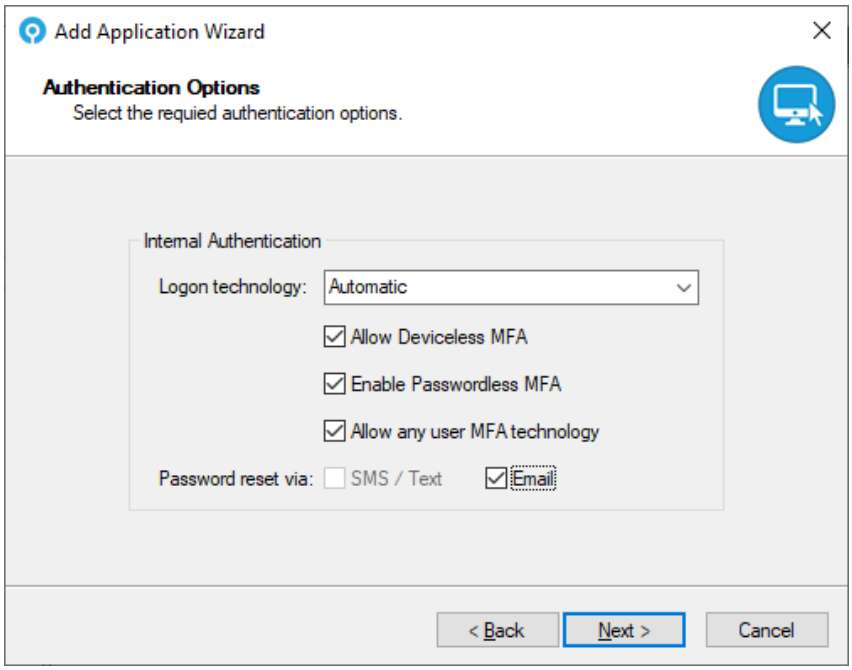


1. Click **Next**.



2. Enter the Relying Party trust details.

3. Click **Next**.



4. You can specify the logon technology users must use to authenticate. The available options are:
   - **Disabled**
   - **Automatic** (MFA only)
   - **Push**
   - **Grid**
   - **Phrase**
   - **One Time Code**
   - **Passkey**
   - **YubiKey OTP**
   - **Password** (Active Directory password)
   - **Windows Authentication** (pass-through authentication)
   - **Certificate**

When an MFA license is installed, the default logon option is **Automatic** (MFA only). If only a PSM license is installed, the options are limited to **Password** and **Windows Authentication**, with **Password** being the default logon option.

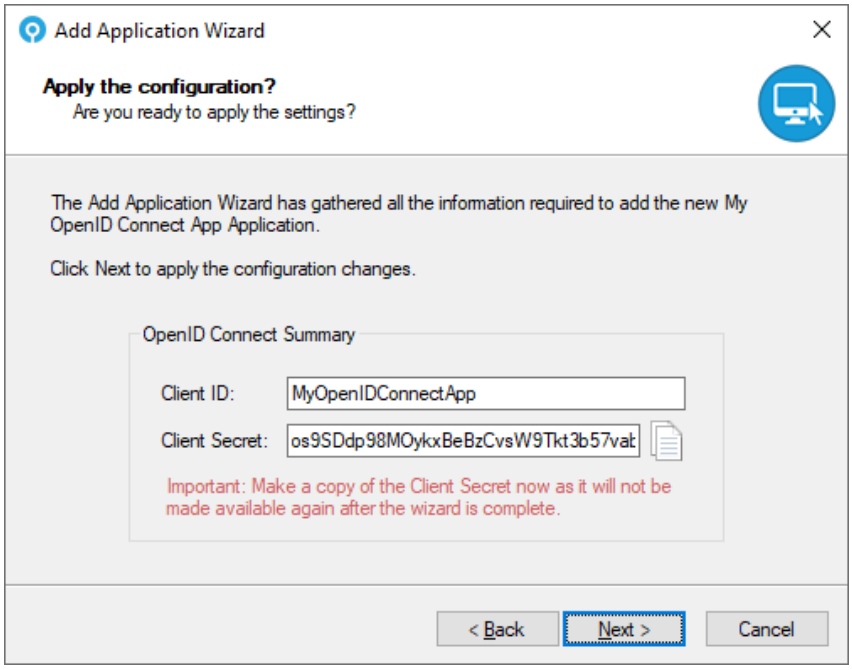
Automatic determines the most appropriate MFA technology for a user to authenticate with. If a user is enabled for multiple MFA technologies, the application chooses the highest security MFA technology based on in-built hierarchy.

If you enable the **Allow any user MFA technology** option, users are allowed to authenticate using any MFA technology for which they are provisioned. If this option is not selected, the user must enter valid authentication credentials shown by the application only. Other MFA technology credentials that a user may be provisioned for do not work and they must provide the credentials display of the Self Service logon page.

Grid and Phrase authentication technologies both support Deviceless authentication, enable the **Allow Deviceless MFA** option to enable this support. If this is not enabled, then MFA is always required.

If you enable **Allow Passwordless MFA**, that enables passwordless logins. When disabled, users are required to enter a valid Active Directory password as well as their MFA credentials.

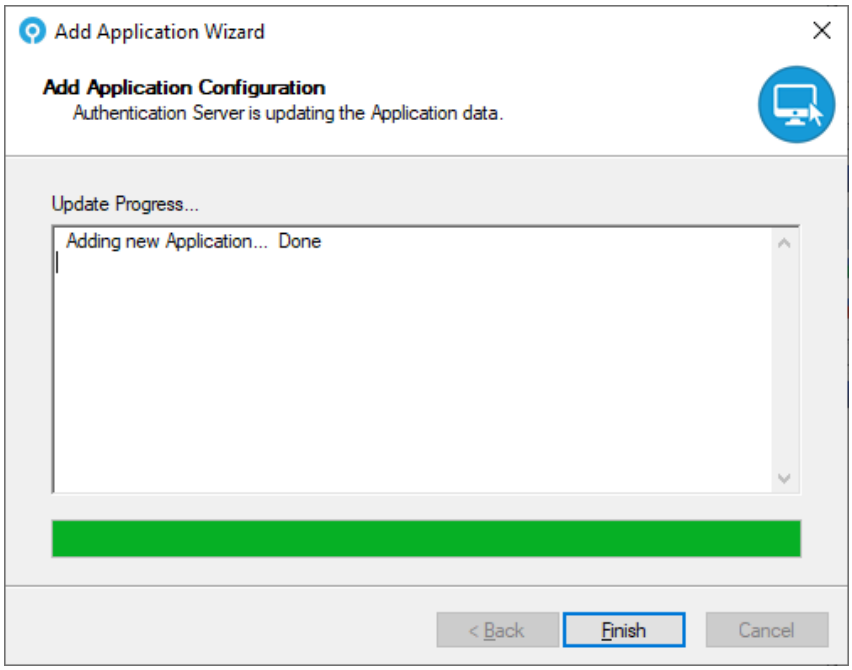
5. Click **Next**.



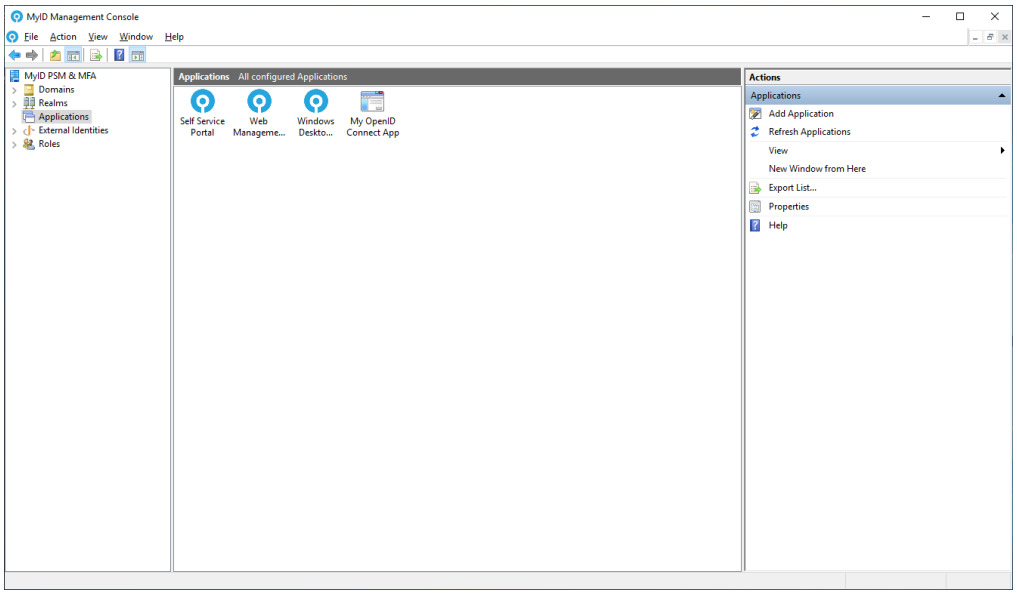
6. Make a copy of the OpenID Connect client secret for integration with the calling application.

   This is necessary for later authentication.

7. Click **Next**.

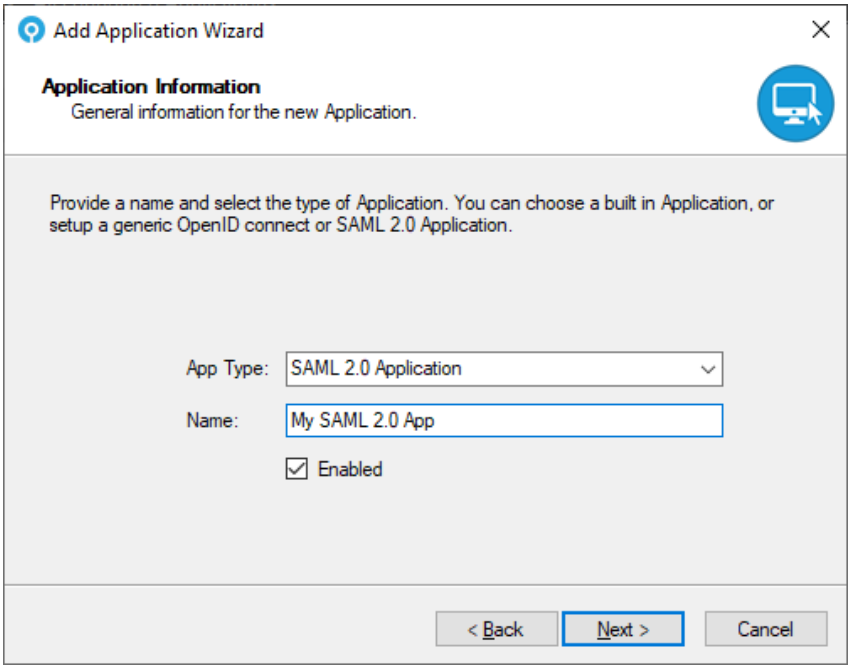


8. Click **Finish**.

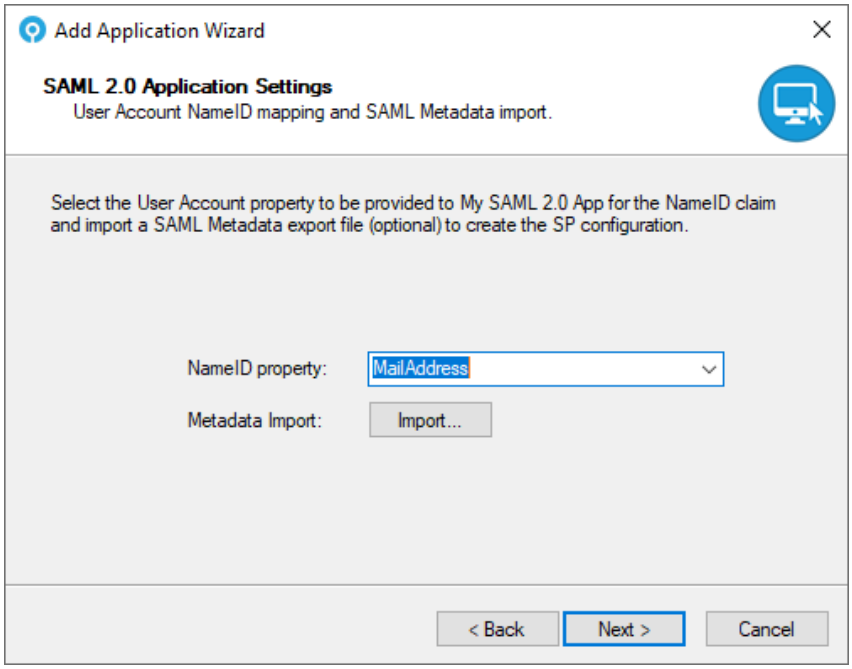


Your application has now been configured.

5.5.2 Creating a SAML 2.0 application



1. Click **Next**.



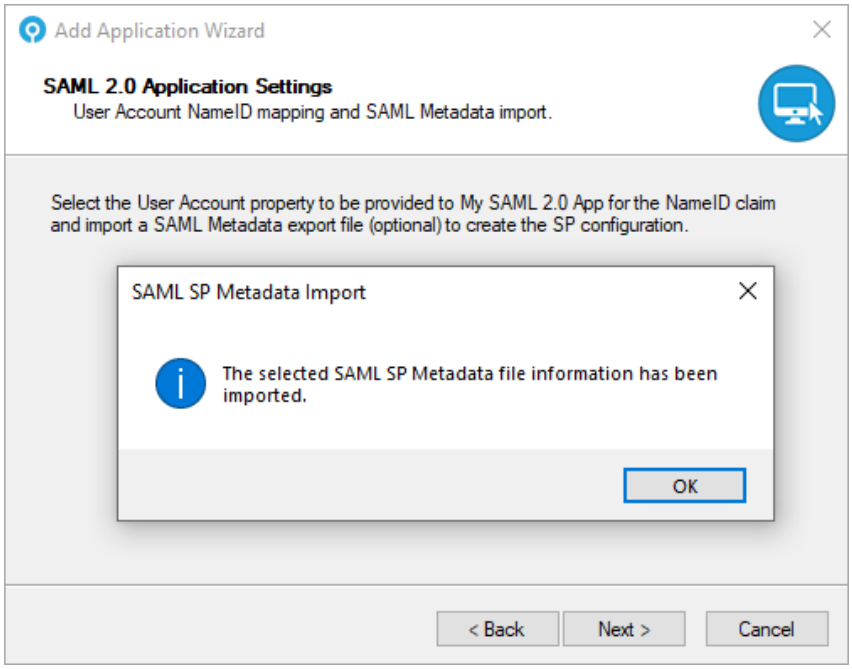
2. Select the user property that contains the information required by the SAML 2.0 application for the **NameID** property.

   The **NameID** is normally the main claim that the SAML 2.0 application uses for identifying the user; this is normally an email address or account name.

3. If you have a metadata export file from the application:

a. Click **Import** to import the metadata.

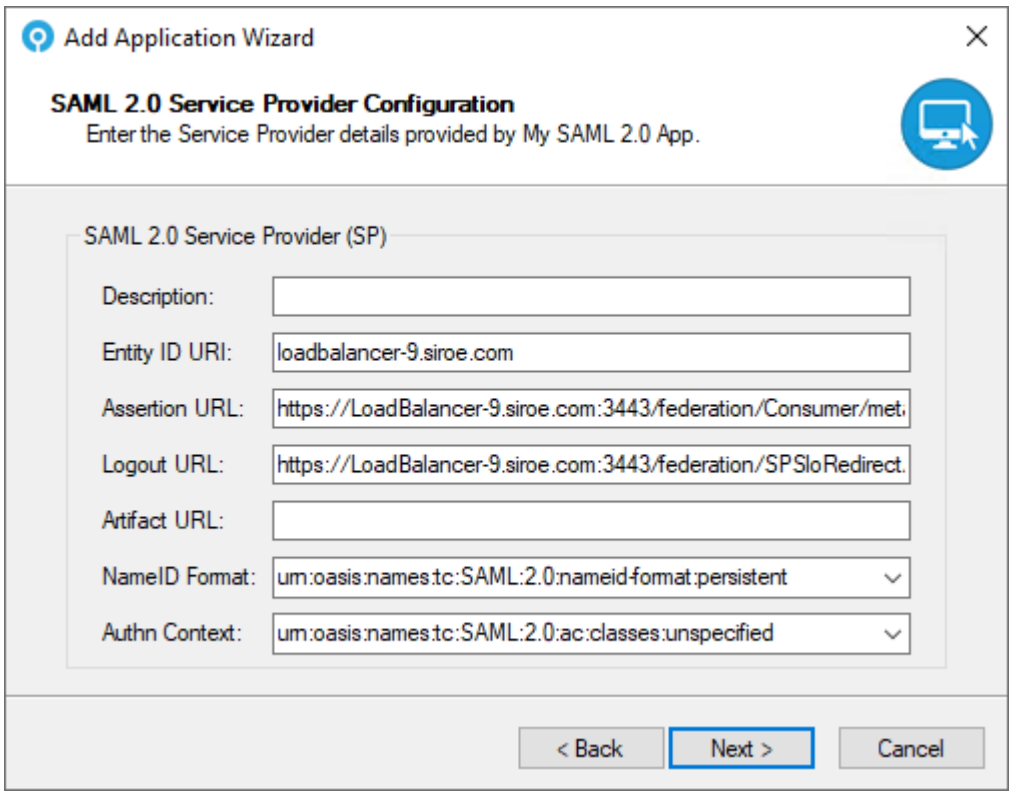
This can save configuration time, as metadata files contain valuable configuration data about an Application, including signing certificate information.



b. Click **OK**.

The application metadata is imported. This populates some fields throughout the rest of the wizard.

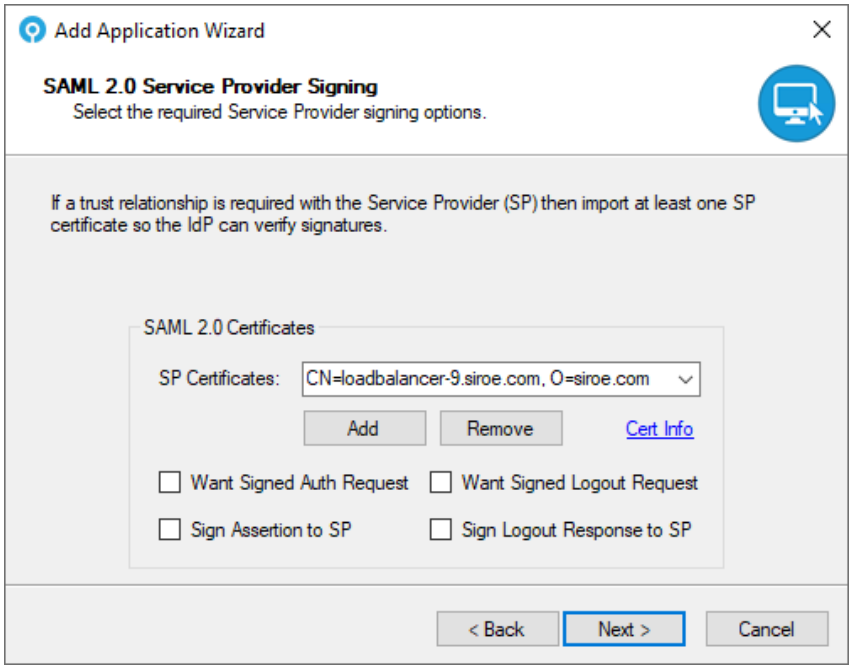
4. Click **Next**.



5. Enter the settings for the application using the instructions from the vendor of your application.

   You may not be required to provide information for every field.

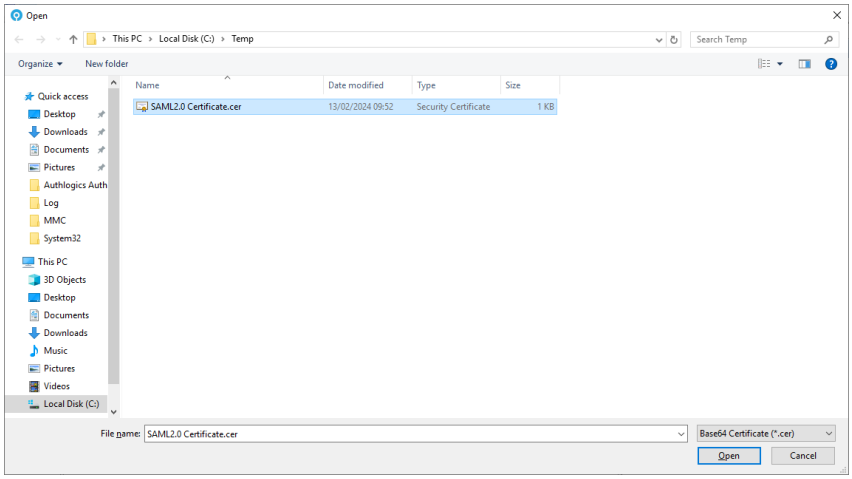
6. Click **Next**.



7. If required, choose the SAML 2.0 signing certificate.

Your Application Service Provider should provide one or more signing certificates, which may be included in the metadata export. You can import and remove certificates as required:

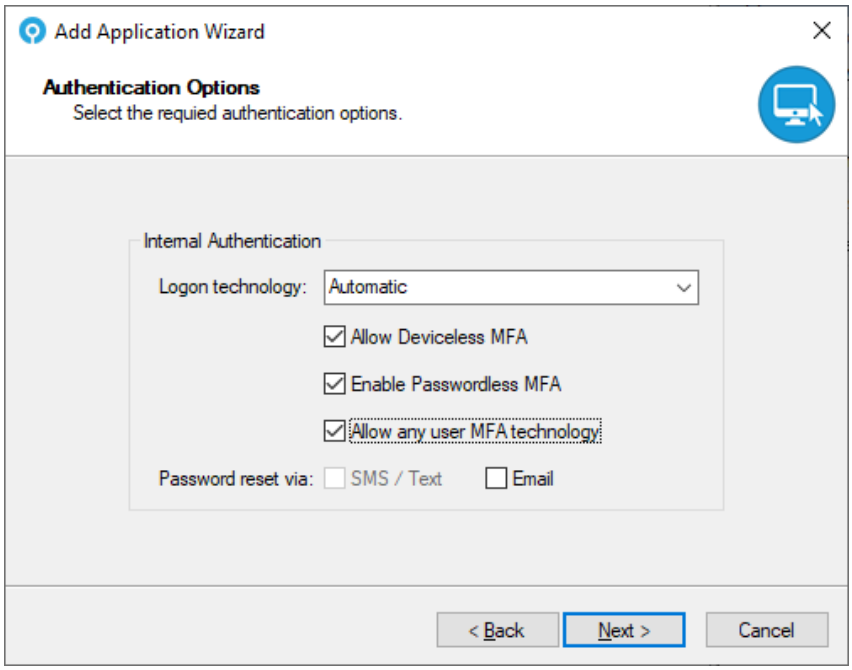
a. To add a certificate, click **Add**.



b. Browse to the signing certificate and click **Open**.

Note: Not all SAML applications require signing or certificates.

8. Configure the signing requirements for the application.
9. Click **Next**.



10. You can specify the logon technology users must use to authenticate. The available options are:
    - **Disabled**
    - **Automatic** (MFA only)
    - **Push**
    - **Grid**
    - **Phrase**
    - **One Time Code**
    - **Passkey**
    - **YubiKey OTP**
    - **Password** (Active Directory password)
    - **Windows Authentication** (pass-through authentication)
    - **Certificate**

    When an MFA license is installed, the default logon option is **Automatic** (MFA only). If only a PSM license is installed, the options are limited to **Password** and **Windows Authentication**, with **Password** being the default logon option.

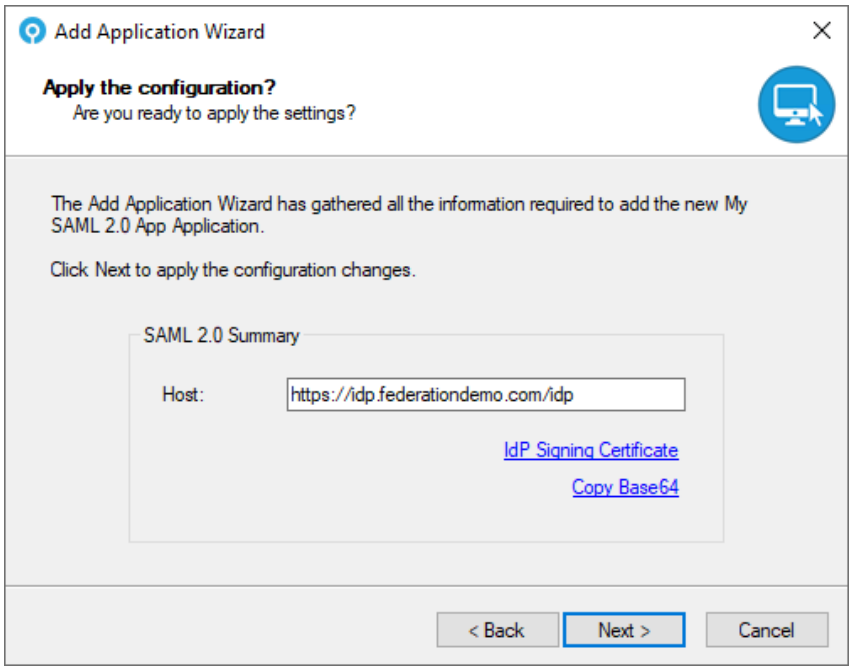
    Automatic determines the most appropriate MFA technology for a user to authenticate with. If a user is enabled for multiple MFA technologies, the application chooses the highest security MFA technology based on in-built hierarchy.

    If you enable the **Allow any user MFA technology** option, users are allowed to authenticate using any MFA technology for which they are provisioned. If this option is not selected, the user must enter valid authentication credentials shown by the application only. Other MFA technology credentials that a user may be provisioned for do not work and they must provide the credentials display of the Self Service logon page.

    Grid and Phrase authentication technologies both support Deviceless authentication, enable the **Allow Deviceless MFA** option to enable this support. If this is not enabled, then MFA is always required.

    If you enable **Allow Passwordless MFA**, that enables passwordless logins. When disabled, users are required to enter a valid Active Directory password as well as their MFA credentials.

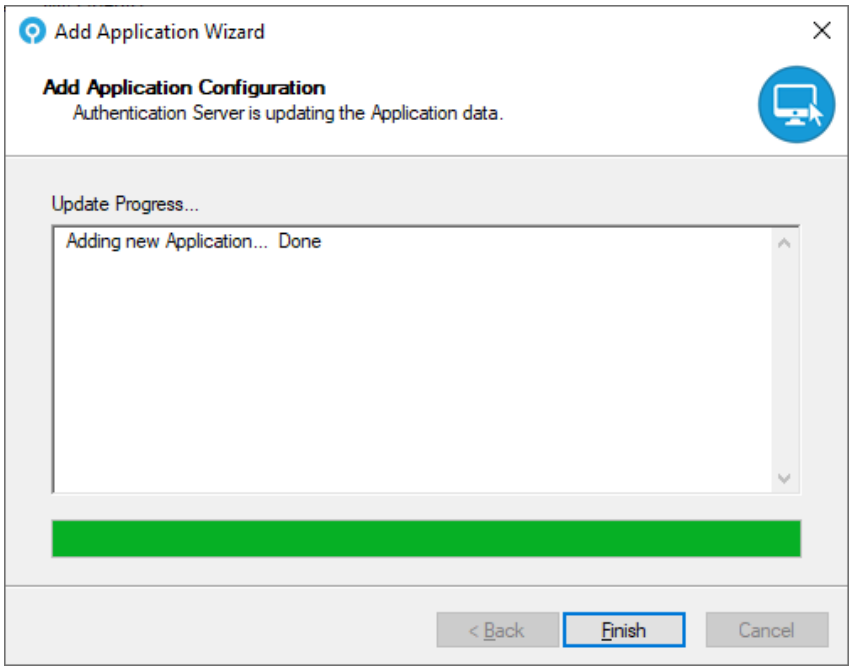
11. Click **Next**.



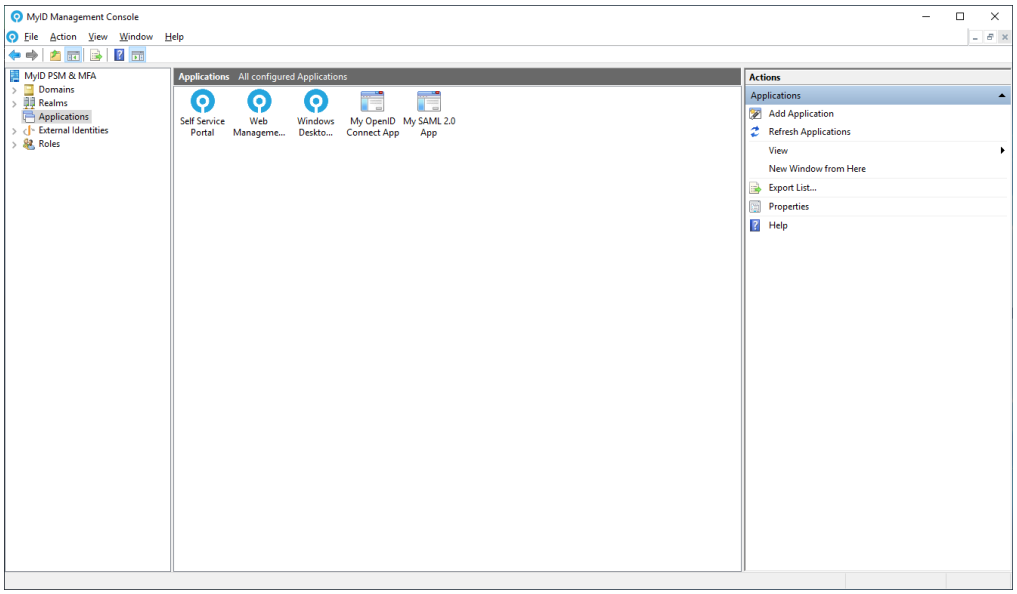
12. Confirm the **Host** configuration information.

    From this screen, you can export or copy the IdP signing certificate that the SAML application requires.

13. Click **Next**.



14. Click **Finish**.

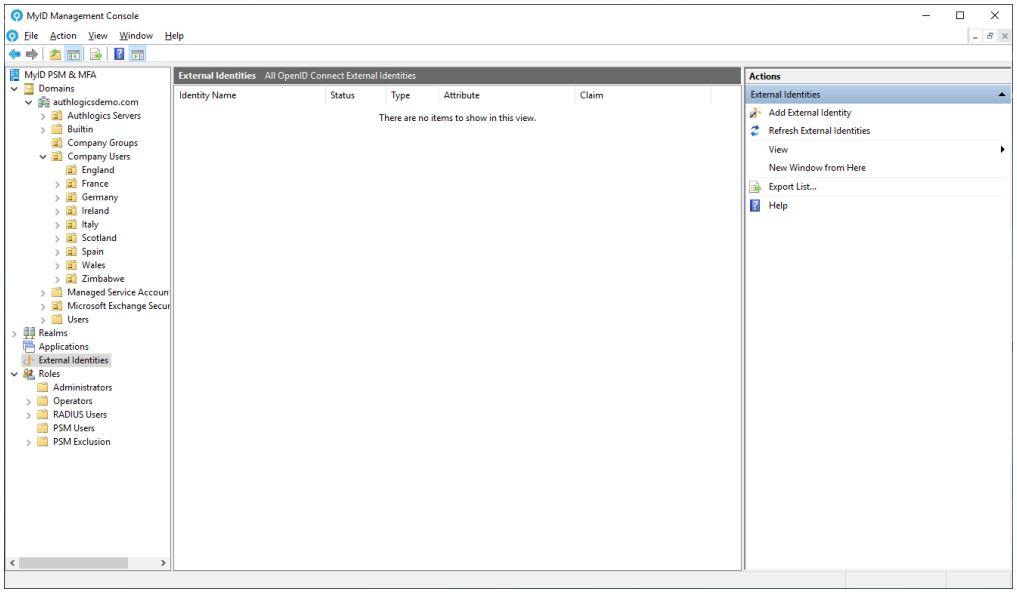


Your application has now been configured.

5.6 Adding External Identities

MyID supports OpenID Connect External Identity Providers to be used as an authentication type for applications. To add an External Identity Provider:

1. In the MyID Management Console, highlight the **External Identities** node.



2. Click **Add External Identity**, in the **Actions** pane.

3. Click **Next**.
4. Provide a descriptive **Name** for the external identity and choose a **Provider**.

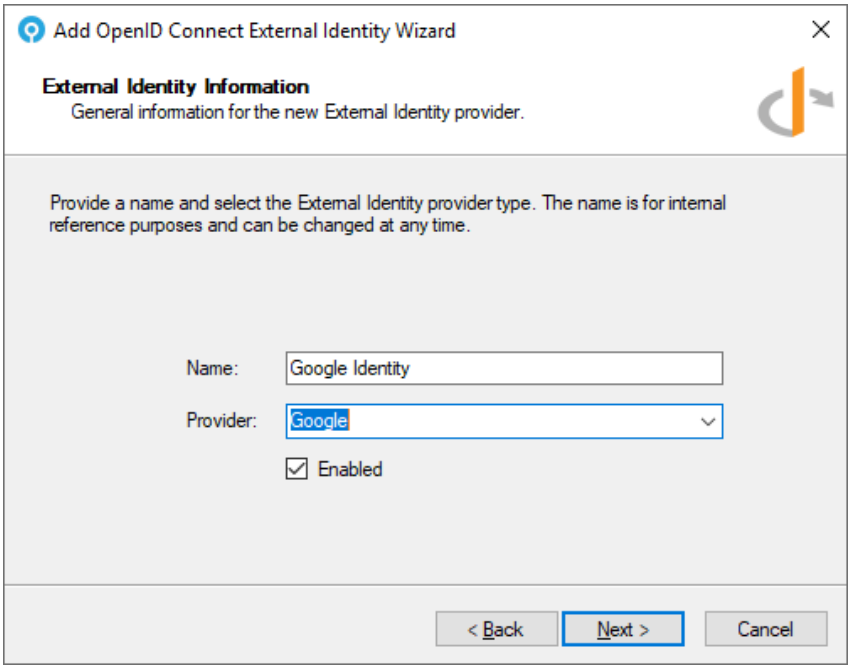
   MyID External Identities supports providers of type:

   - Google

     See section *5.6.1*, *Creating an OpenID Connect External Identity (Google)*.
   - Microsoft

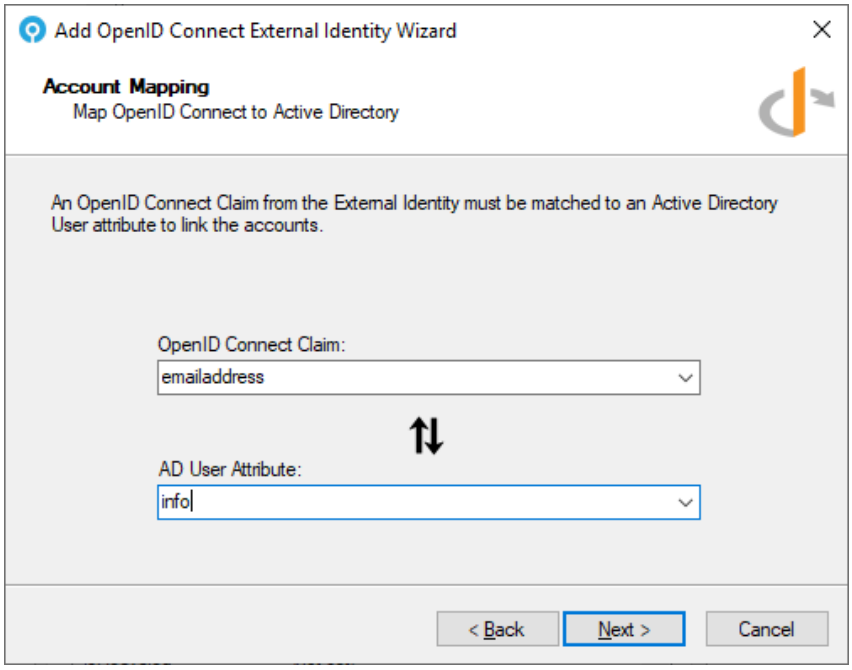
     See section *5.6.2*, *Creating an OpenID Connect External Identity (Microsoft)*.
5. Set the External Identity to be **Enabled**.

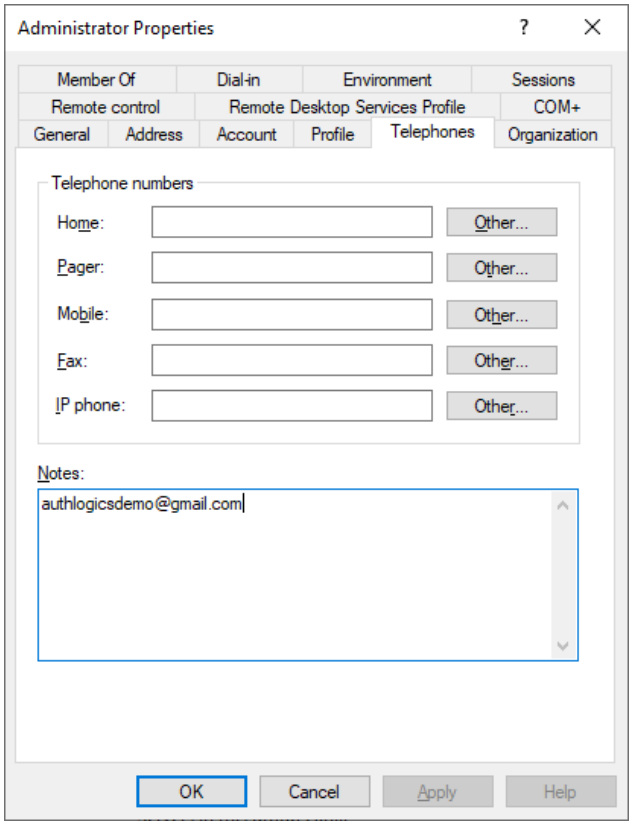
5.6.1 Creating an OpenID Connect External Identity (Google)



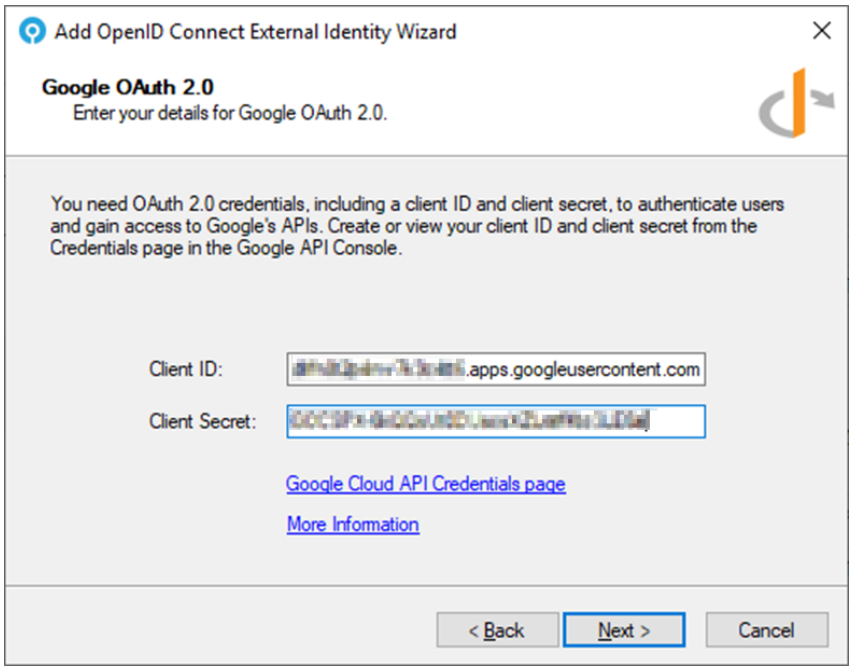
1. Click **Next**.
2. Match the **OpenID Connect Claim** with the **Active Directory User Attribute** to link the accounts.

   For example, you may want to match the user on the email address where the user's Google email address is stored in the user's Info field in the Active Directory.

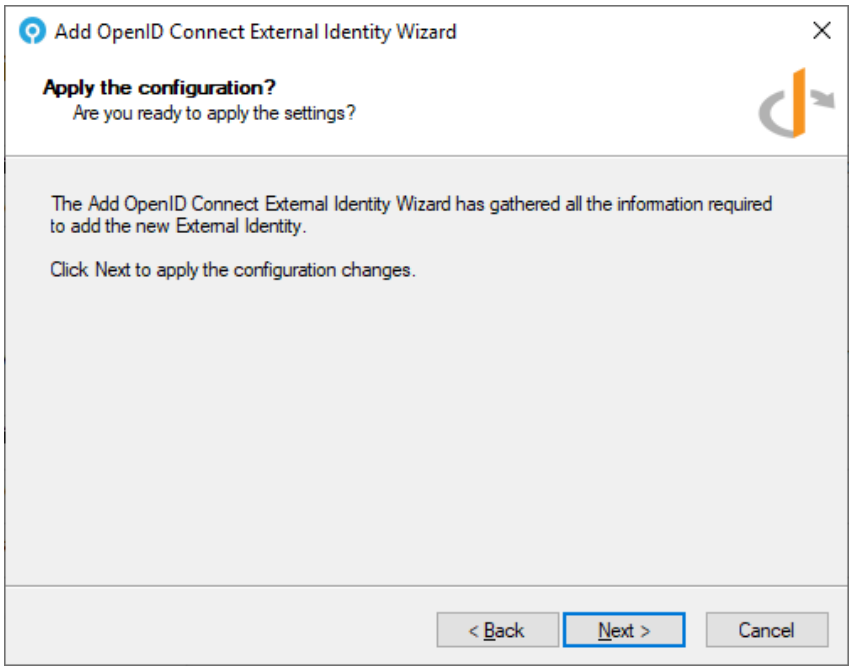




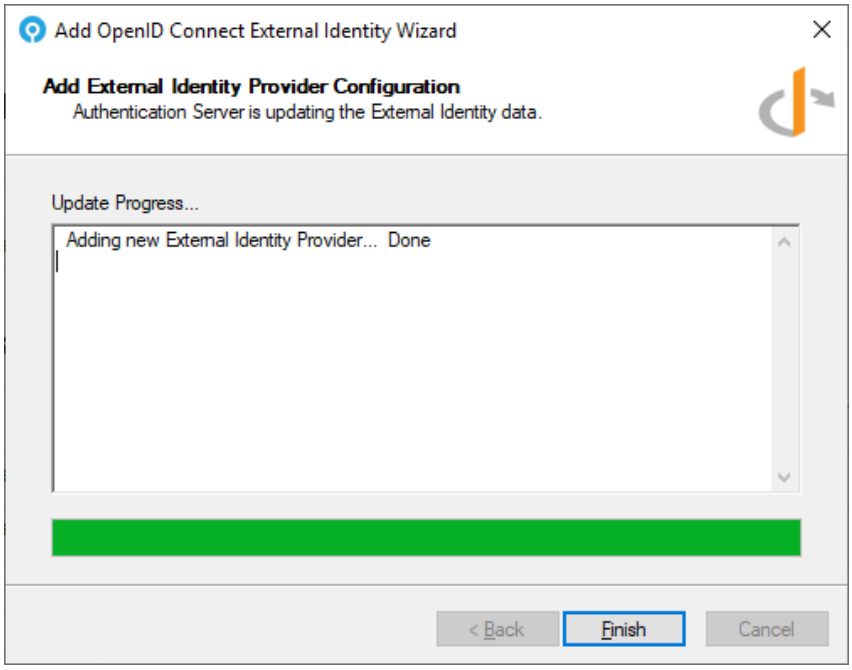
3. Click **Next**.
4. Enter the **Client ID** and **Client Secret** retrieved from the Google Cloud API Credentials page.



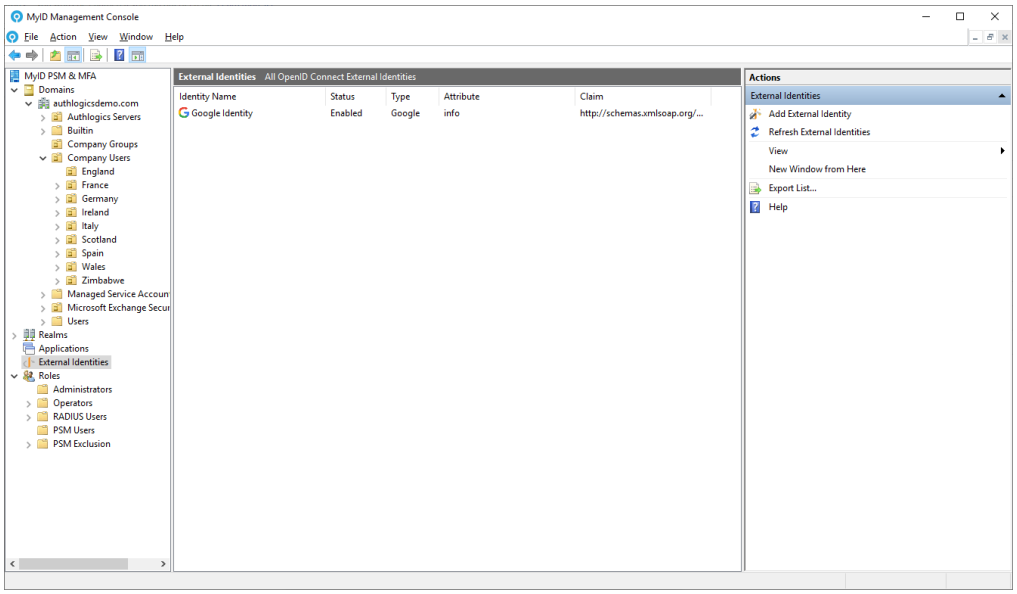
5. Click **Next**.



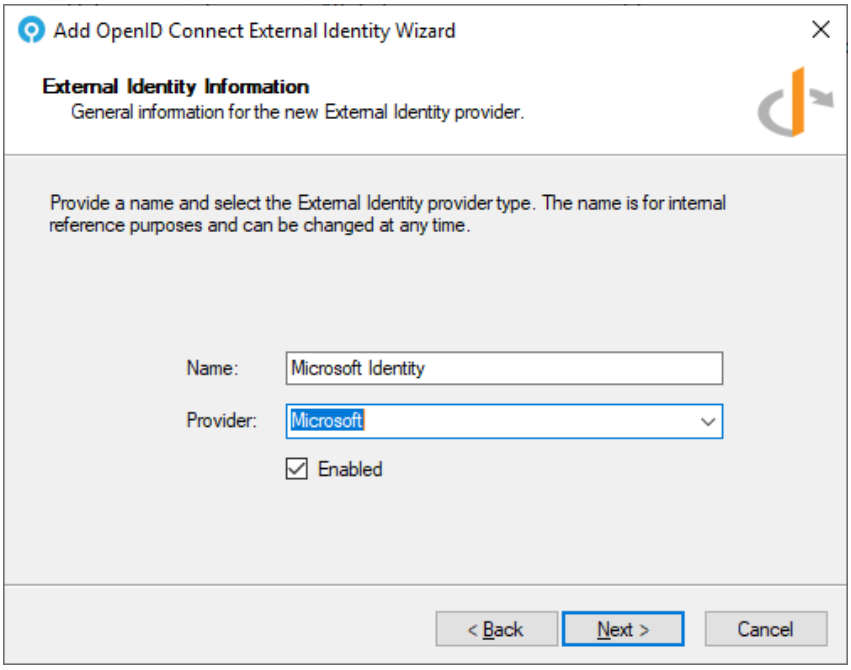
6. Make a copy of the OpenID Connect client secret for integration with the calling application.
7. Click **Next**.



8. Click **Finish**.

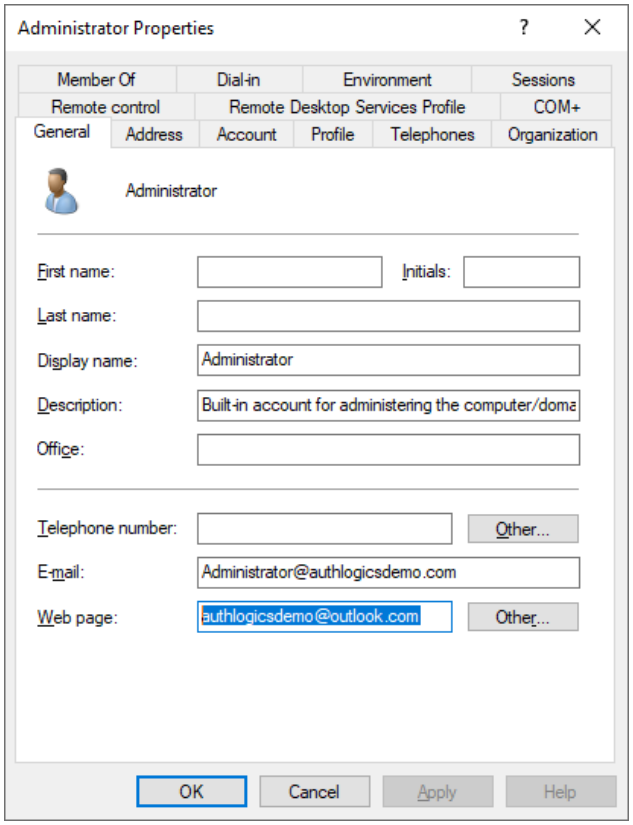


5.6.2 Creating an OpenID Connect External Identity (Microsoft)

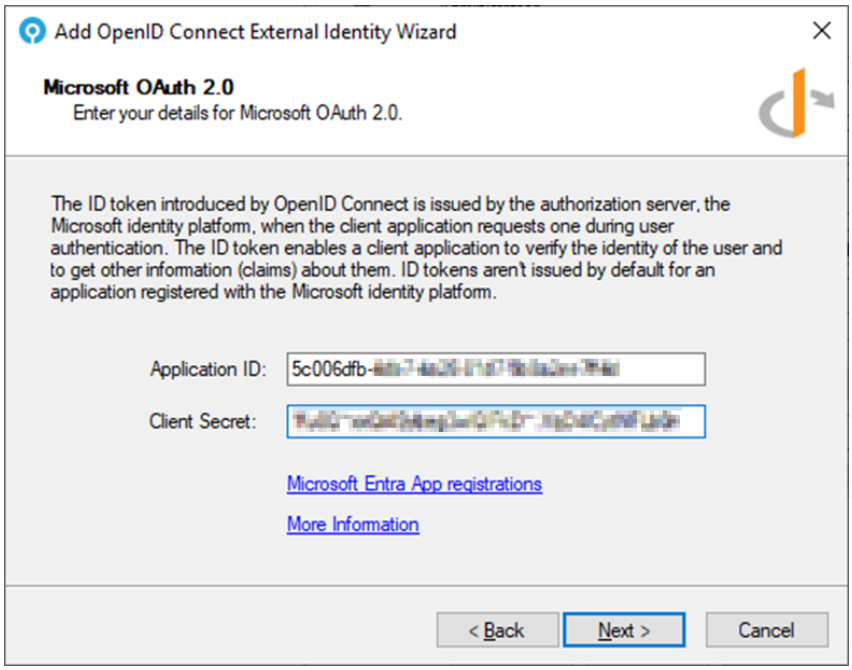


1. Click **Next**.
2. Match the **OpenID Connect Claim** with the **Active Directory User Attribute** to link the accounts.

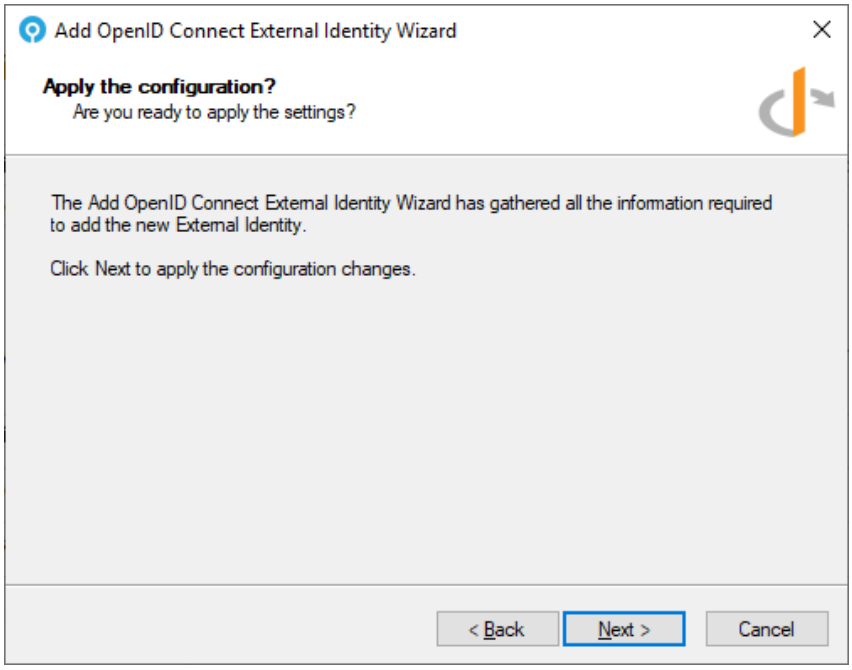
   For example, you may want to match the user by their email address where the user's Microsoft Live email address is stored in the user's Web Page (`wWWHomePage`) field in AD.



3. Click **Next**.

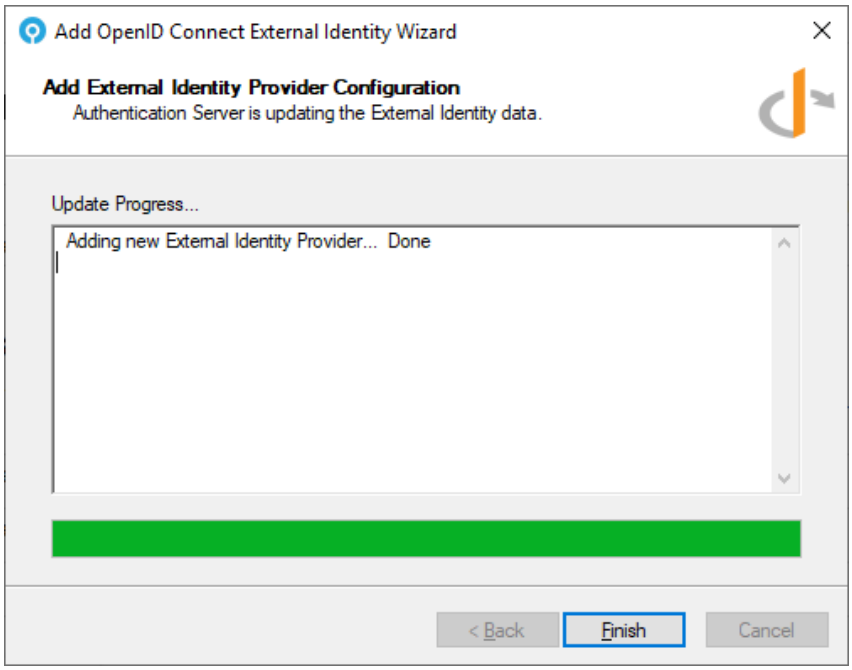


4. Enter the **Application ID** and **Client Secret** retrieved from the Microsoft Identity Platform.
5. Click **Next**.

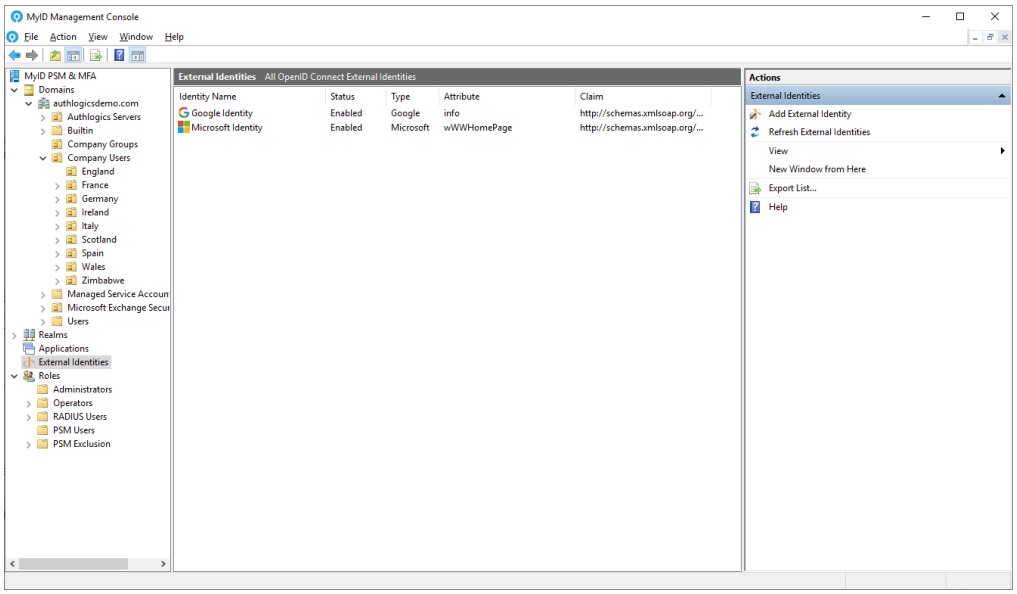


6. Make a copy of the OpenID Connect client secret for integration with the calling application.

7. Click Next.



8. Click **Finish**.



Your Microsoft External Identity has now been configured and is ready for use.

5.7 Managing users

As MyID uses Active Directory as the user account database, the base user accounts may already exist in most cases. You can add Active Directory users one at a time or in bulk to the MyID MMC where they can be set up for various MFA technologies. They can be added from one or multiple OUs at a time as needed.

You can add External User accounts without the need for a full Active Directory Domain user account. These external accounts are stored within the forest root domain as LDAP `person` objects and cannot be used for Windows-based logons. A Realm must be created to contain an External User account.

You can use External User accounts together with the Windows Desktop Agent to add MFA to local Windows user accounts on both domain-joined and workgroup based systems.

Adding a user account to the MyID MMC allows the user to make use of the Self Service Portal and, if an MFA license is installed, they can be provisioned for Multi-Factor Authentication technologies.

You can carry out the following:

- Add a new realm.

  See section *5.7.1*, *Adding a new realm*.
- View MFA and PSM account types.

  See section *5.7.2*, *User account types – MFA or PSM*.
- Add a MyID user account.

  See section *5.7.3*, *Adding a new MyID user account*.
- Add a PSM user account.

  See section *5.7.4*, *Adding a new MyID PSM user account*.
- Add an external MFA user account.

  See section *5.7.5*, *Adding a new external MFA user account*.
- Set up Grid Pattern authentication.

  See section *5.7.6*, *Setting up a user for Grid Pattern Authentication*.
- Set up Phrase authentication.

  See section *5.7.7*, *Setting up a user for Phrase authentication*.
- Set up One Time Code authentication.

  See section *5.7.8*, *Setting up a user for One Time Code*.
- Set up YubiKey OTP.

  See section *5.7.9*, *Setting up a user for YubiKey OTP*.
- View the MFA devices for a user.

  See section *5.7.10*, *Multi-Factor devices assigned to a user account*.
- Assign temporary access codes using the MMC.

  See section *5.7.11*, *Assigning temporary access codes to a user (MMC)*.

- Assign temporary access codes using the web portal.

  See section *5.7.12, Assigning temporary access codes to a user (Web Management Portal)*.

5.7.1 Adding a new realm

A realm is a container to store External User accounts. Each account within a realm must have a unique name. Realms can be nested – you can create a realm inside another realm for easier account management. You can rename realms and account names.

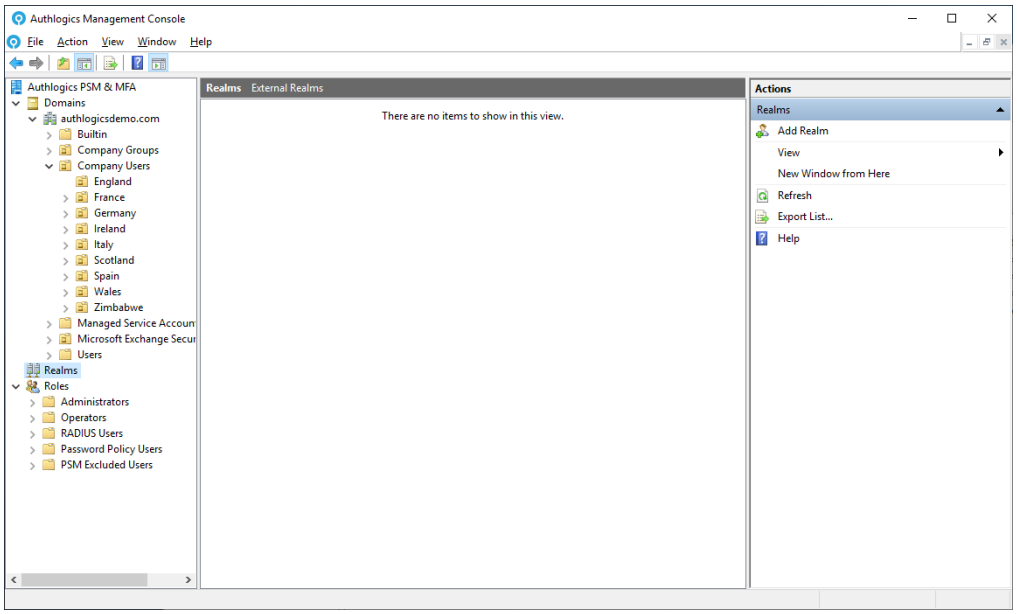
Note: A realm name may contain letters, numbers, dots, and underscores, but cannot be the same as an existing Active Directory domain name.

The realm name forms part of the user logon name. A user would enter their logon names as follows:

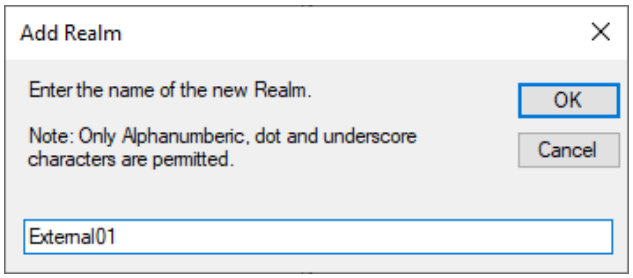
- Domain style: `<realm>\<account>`
- UPN style: `<account>@<realm>`

To add a new realm:

1. In the MyID Management Console, highlight the **Realms** node.

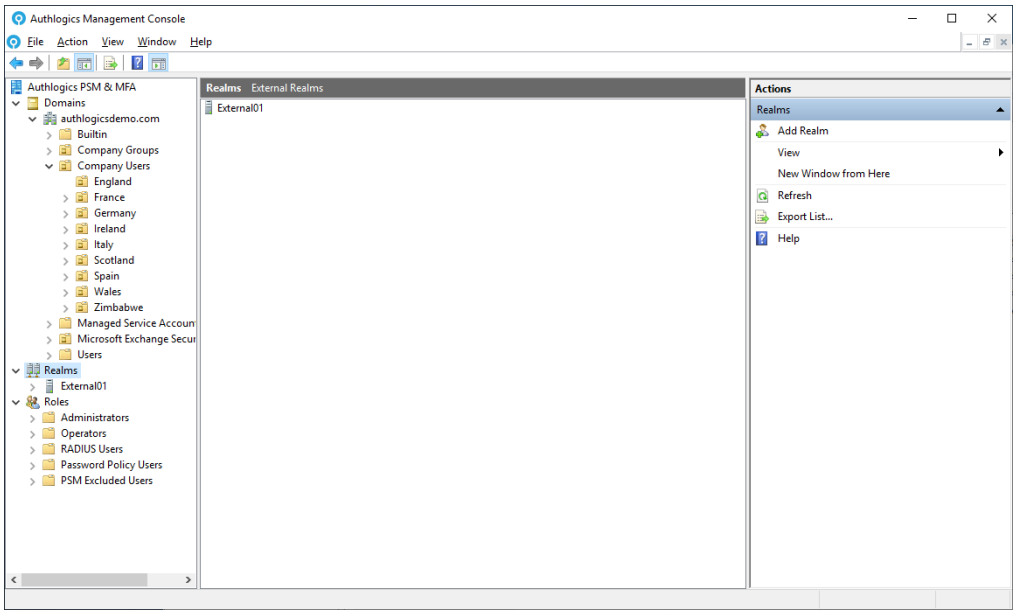


2. Click **Add Realm**, in the **Actions** pane.



3. Enter the name of the new realm.

4. Click **OK**.



You have now added a realm. You can add more realms using the same method if required,

5.7.2 User account types – MFA or PSM

You can add different types of users based on the type of licenses installed. If an MFA license is installed, you can create a user account that can be provisioned for various MFA logon technologies and devices.

If only a PSM license is installed, you can create users with only PSM self-services features. PSM users can access the Self Service Portal to change or reset their password with One Time Codes. PSM users cannot be provisioned for use with Multi-Factor Authentication.

If an MFA license is added to an installation that previously only had a PSM license, existing users can immediately be provisioned for Multi-Factor Authentication.

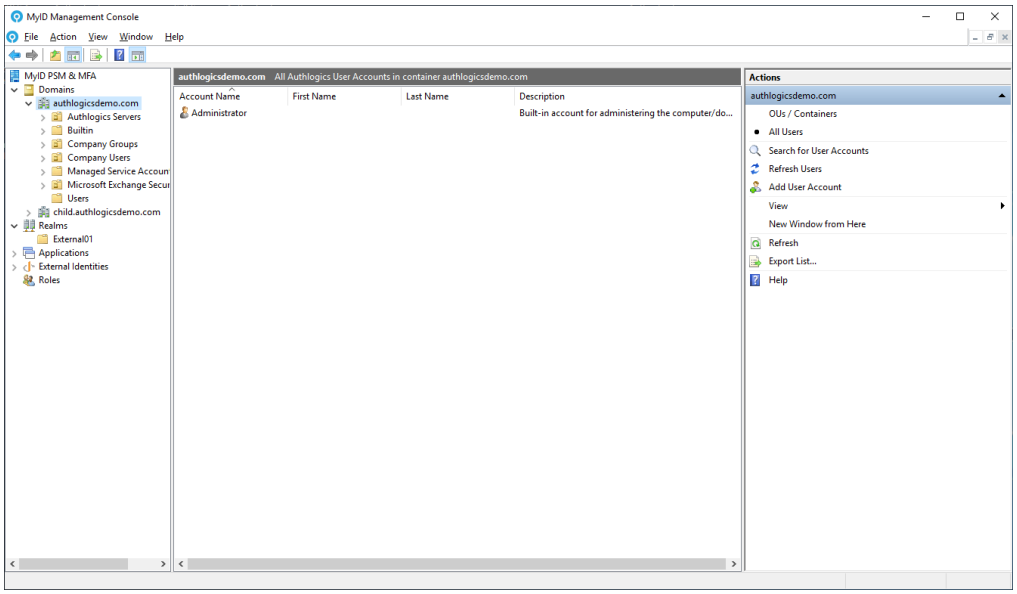
Note: External User Accounts can be used with MFA only, as PSM requires an Active Directory user account.

5.7.3 Adding a new MyID user account

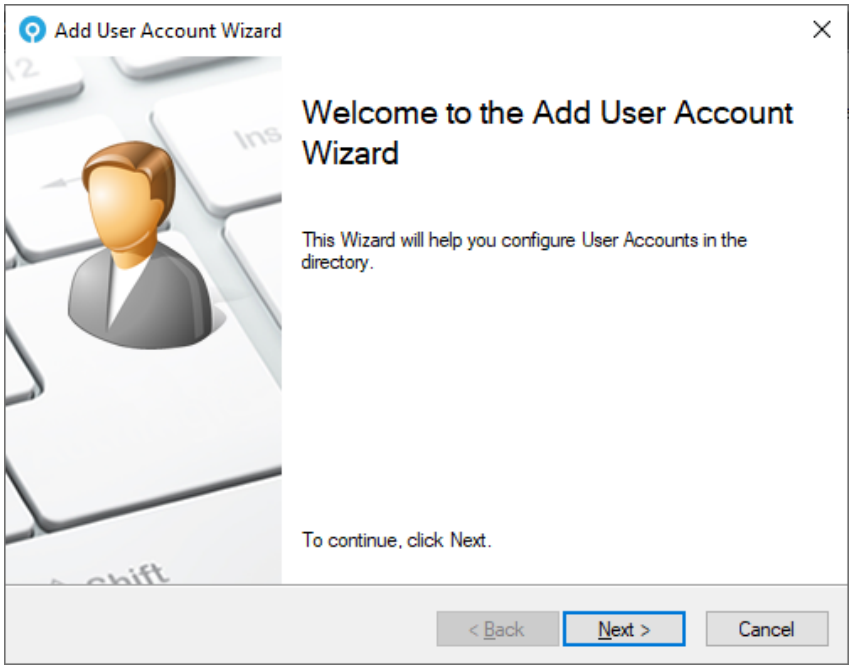
To add a new MyID user account:

1. In the MyID Management Console, expand the **Domains** and select the appropriate domain.

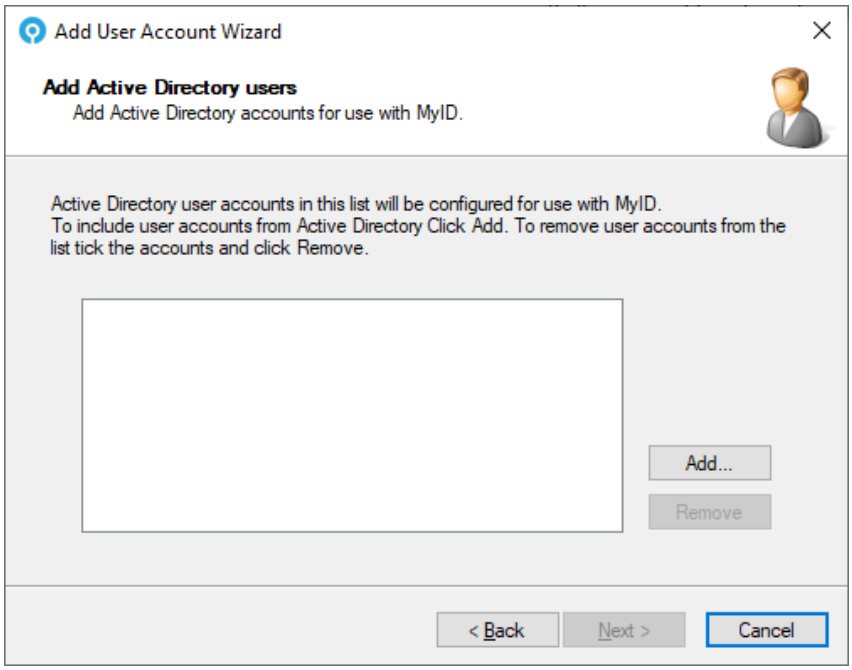
   You can expand the list of OUs to see what accounts already exist.



2. Click **Add User Account**, in the **Actions** pane.

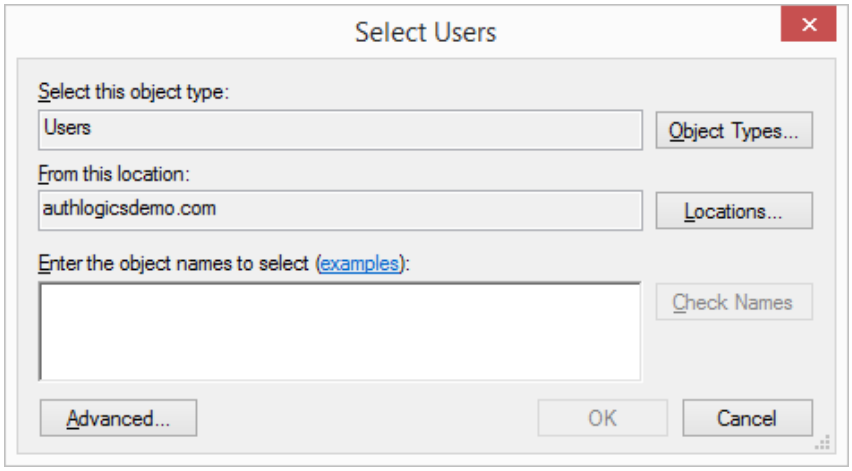


3. Click **Next**.

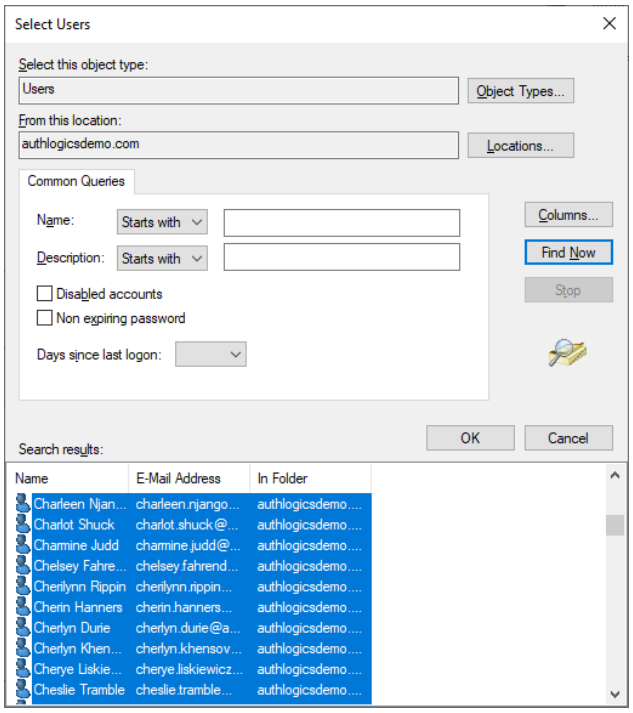


4. To add existing Active Directory users click **Add**.

   Note: This process does not create user accounts in the Active Directory Domain, it simply adds MyID metadata to an *existing* account. Ensure that the domain accounts exist before adding them to the MyID MMC.

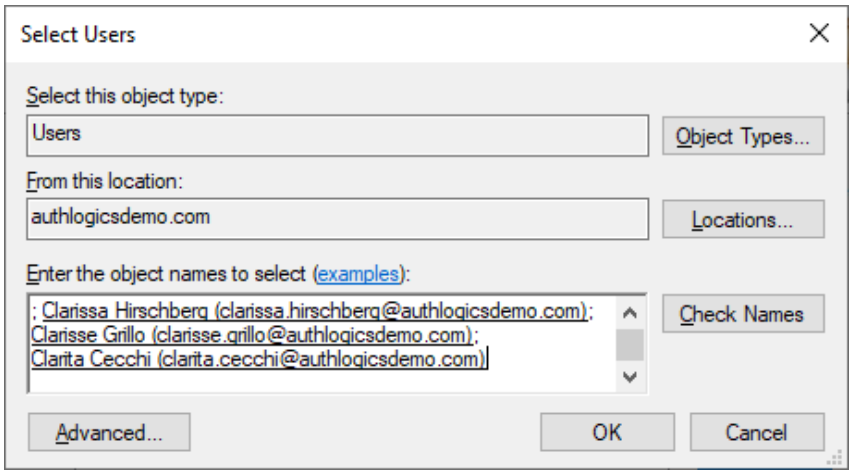


5. Click **Advanced**.



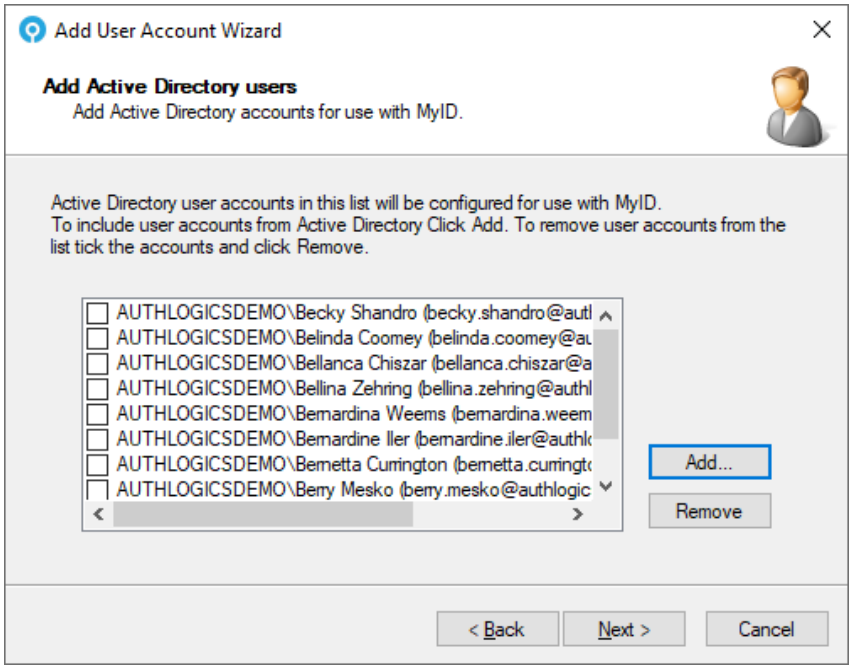
6. Click **Find Now**.

7. Select the required users from Active Directory and click **OK**.

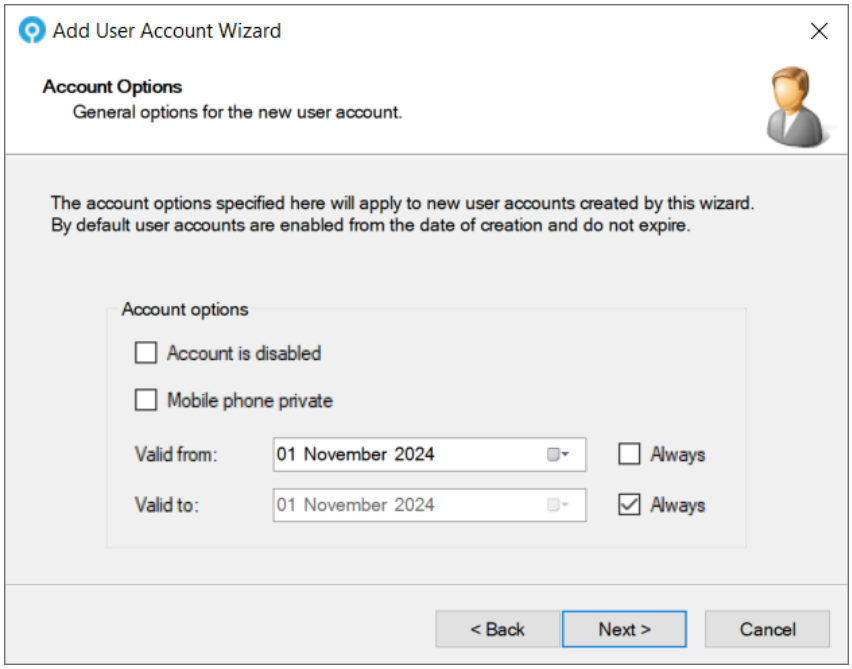


8. Click **OK**.

   To remove accounts from the list, check the box next to the name and click **Remove**.



9. Click **Next**.

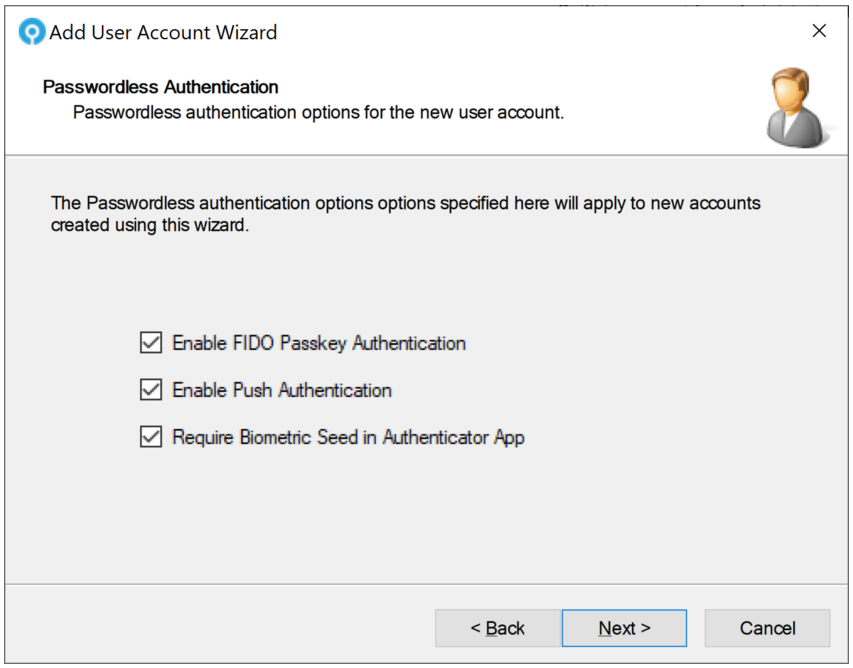


10. Set the account options.

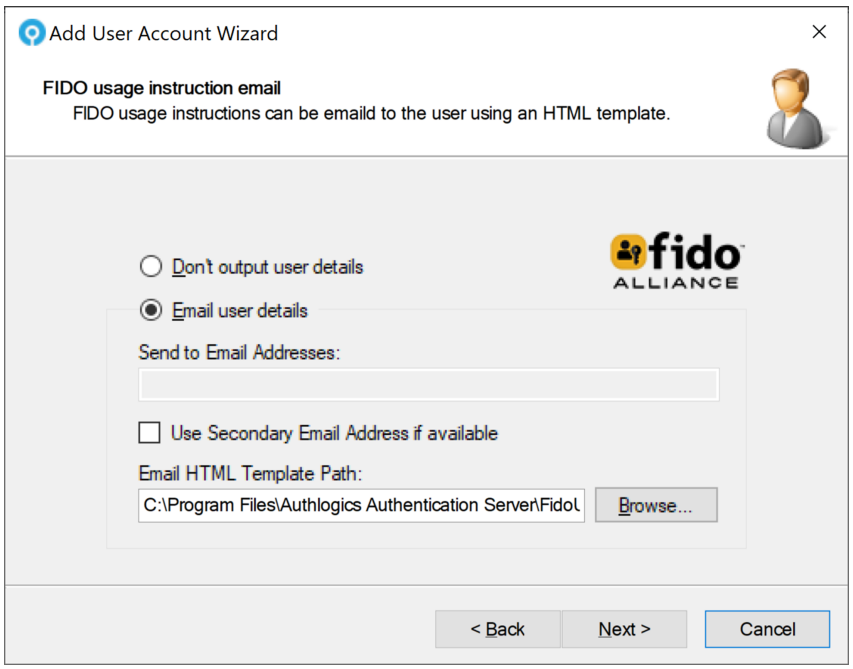
    Account options determine the user's initial state. Accounts can be given the start and end validity dates and can be created as disabled accounts for later use.

    The mobile phone privacy setting can also be specified.

11. Click **Next**.



12. Choose whether the users are enabled for FIDO and/or Mobile Push authentication.
13. Click **Next**.



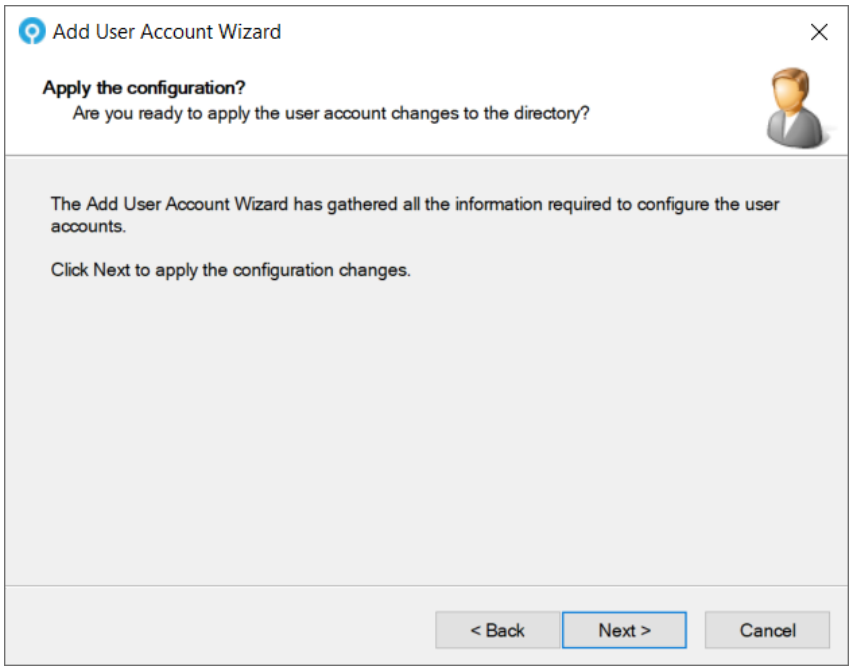
14. Choose if or how the users receive their welcome email.

    The welcome email contains instructions on how to set up their device for FIDO and Mobile Push based on your selection above.

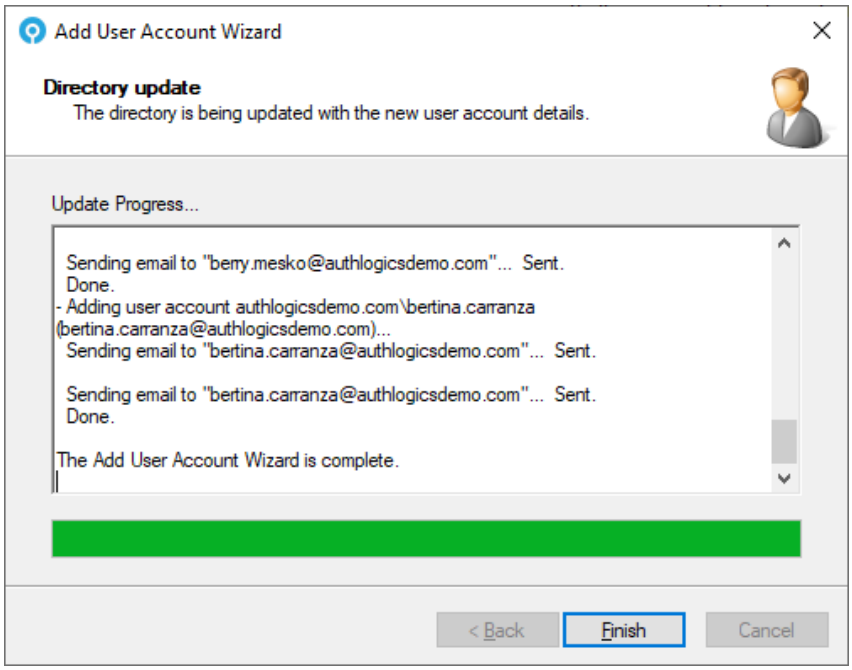
    If a single user is selected, you can specify the email address to deliver the email to.

    When adding multiple users, the user's email address is retrieved from Active Directory or the alternate email address field and sent to them automatically.

15. Click **Next**.

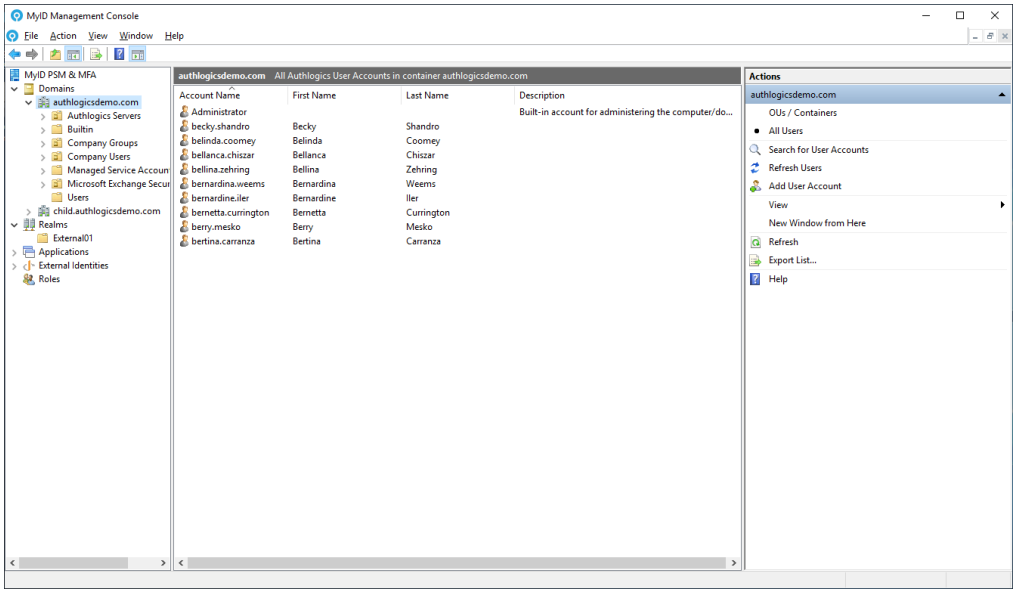


16. Click **Next**.



The new user accounts have been created.

17. Click **Finish**.

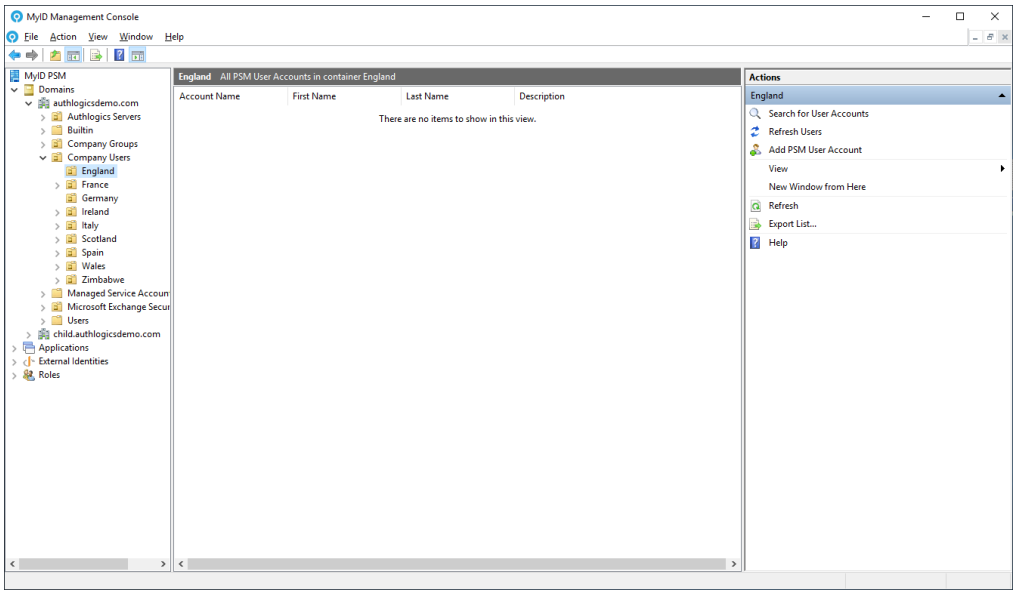


5.7.4 Adding a new MyID PSM user account

PSM user accounts can be manually added if required, however PSM users automatically appear in the MMC when a user changes their password or logs onto the Self Service Portal.

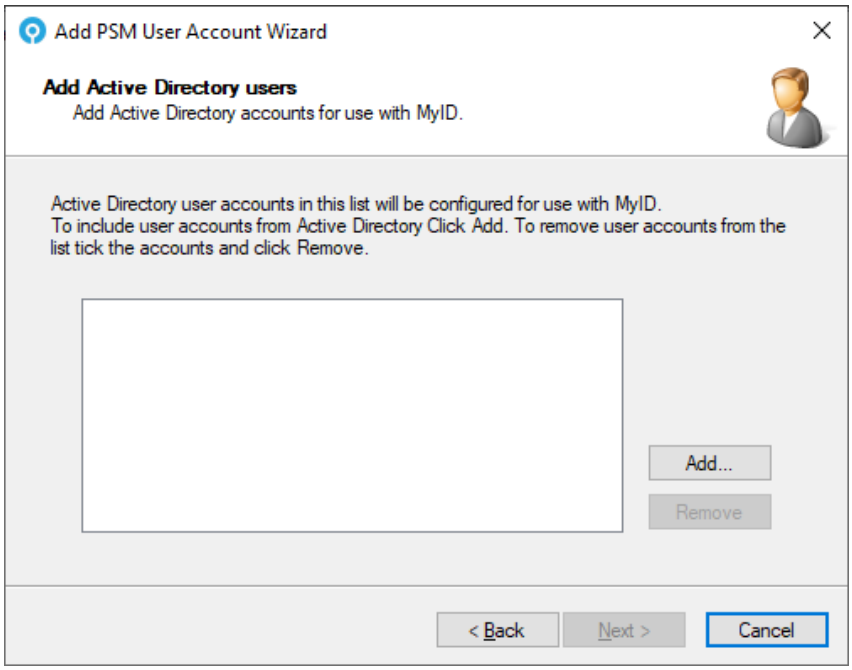
1. In the MyID Management Console, expand the **Domains** and select the appropriate domain.

   You can expand the list of OUs to see what accounts already exist.



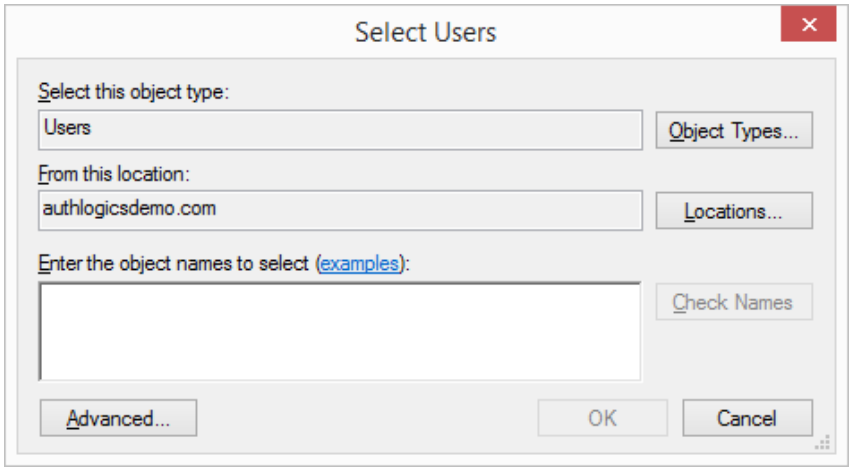
2. Click **Add PSM User Account**, in the **Actions** pane.

3. Click **Next**.

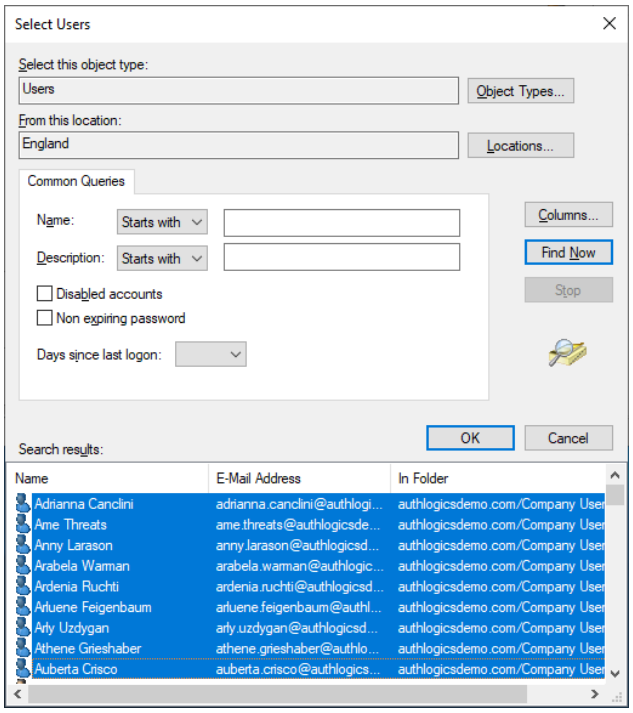


4. To add existing Active Directory users, click **Add**.

   Note: This process does not create user accounts in the Active Directory Domain, it simply adds MyID metadata to an *existing* account. Ensure that the domain accounts exist before adding them to the MyID MMC.

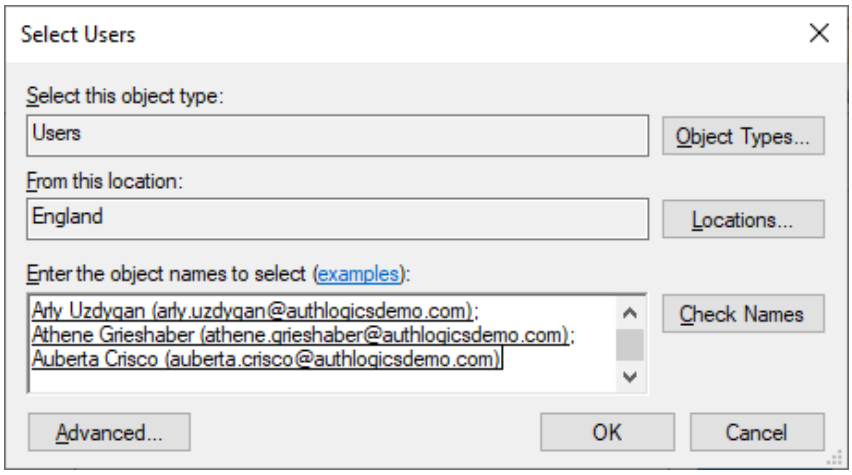


5. Click **Advanced**.



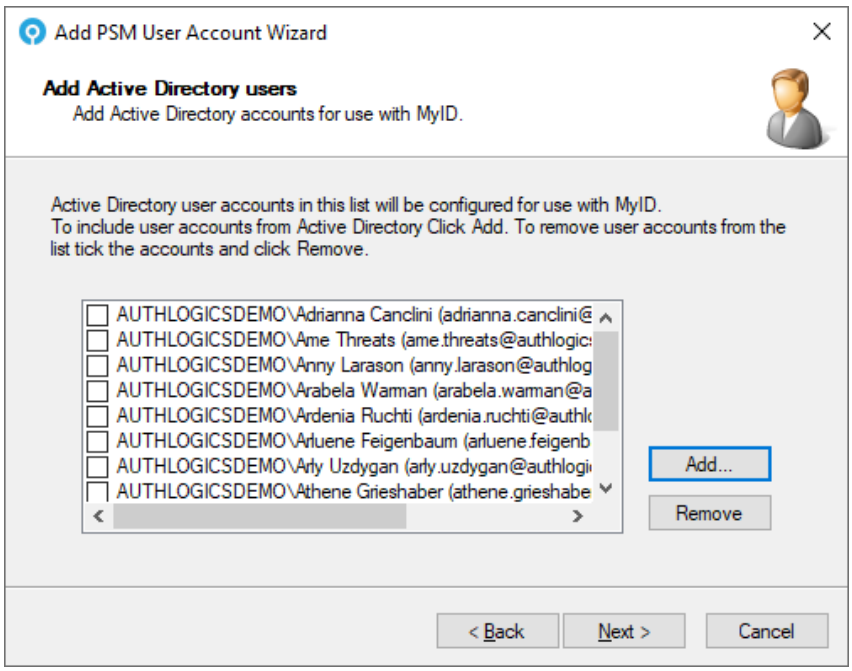
6. Click **Find Now**.

7. Select the required users from Active Directory and click **OK**.

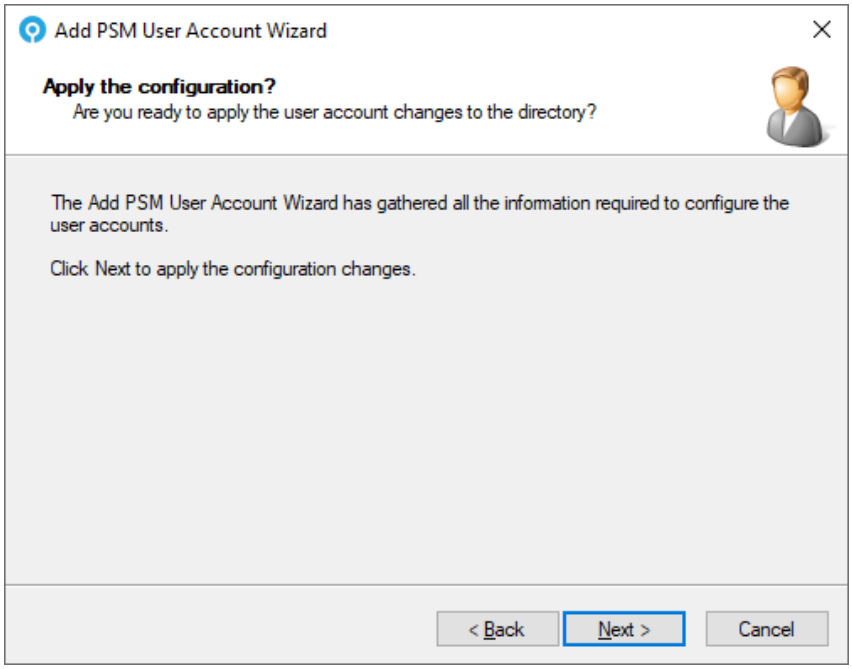


8. Click **OK**.

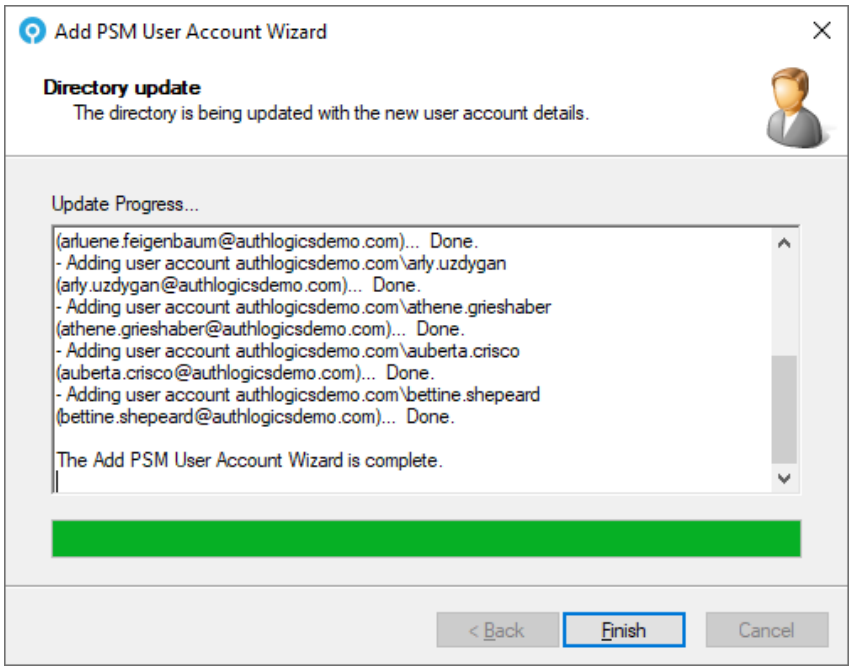
   To remove accounts from the list, check the box next to the name and click **Remove**.



9. Click **Next**.

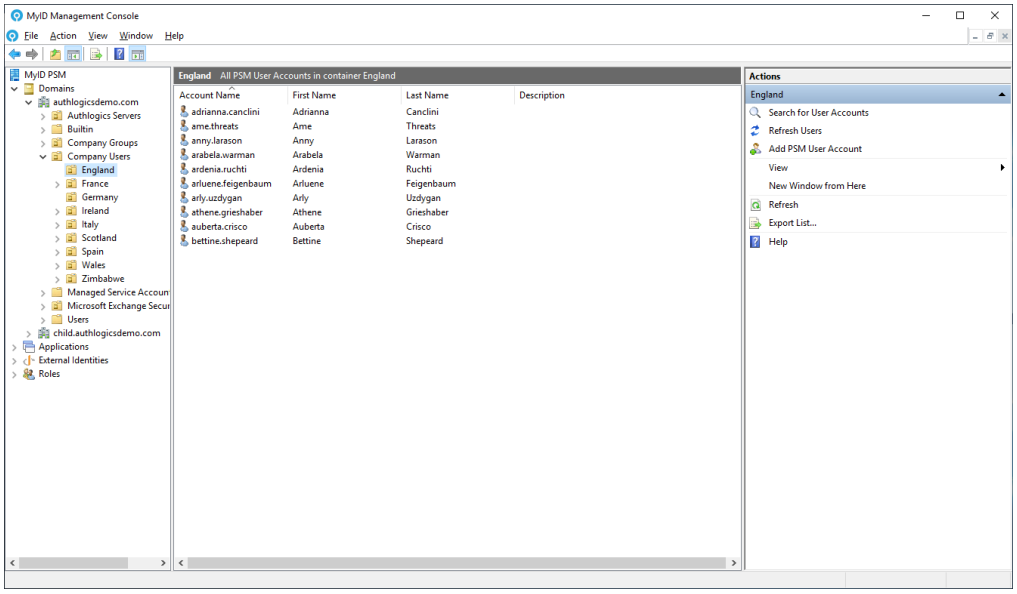


10. Click **Next**.



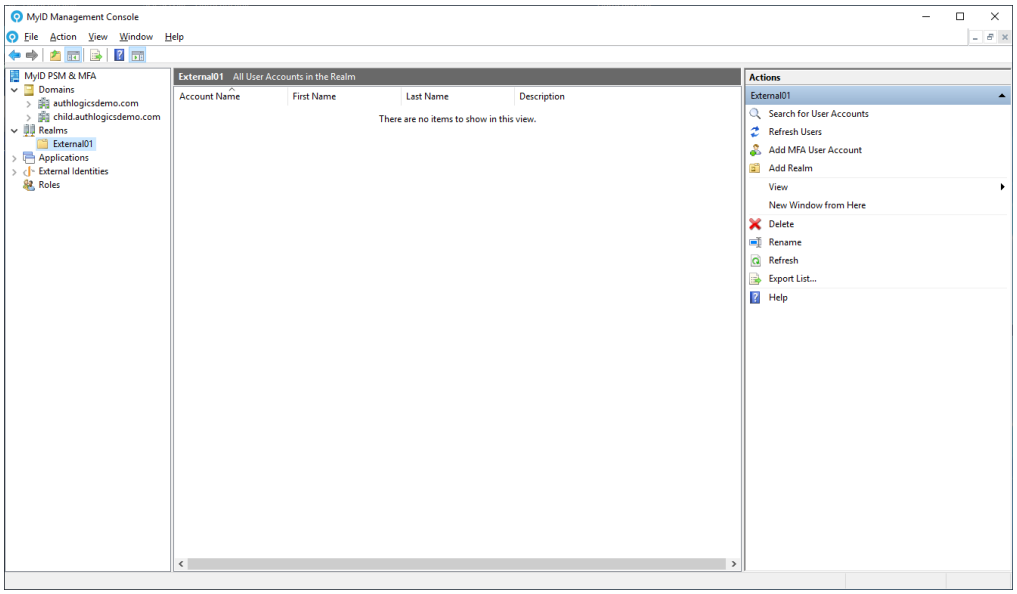
The new user accounts have been created.

11. Click **Finish**.

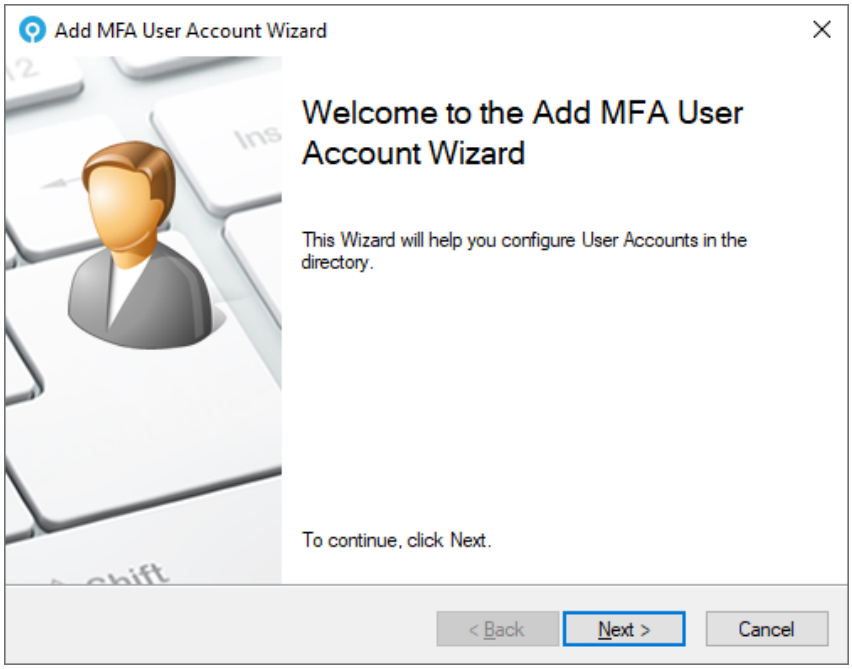


5.7.5 Adding a new external MFA user account

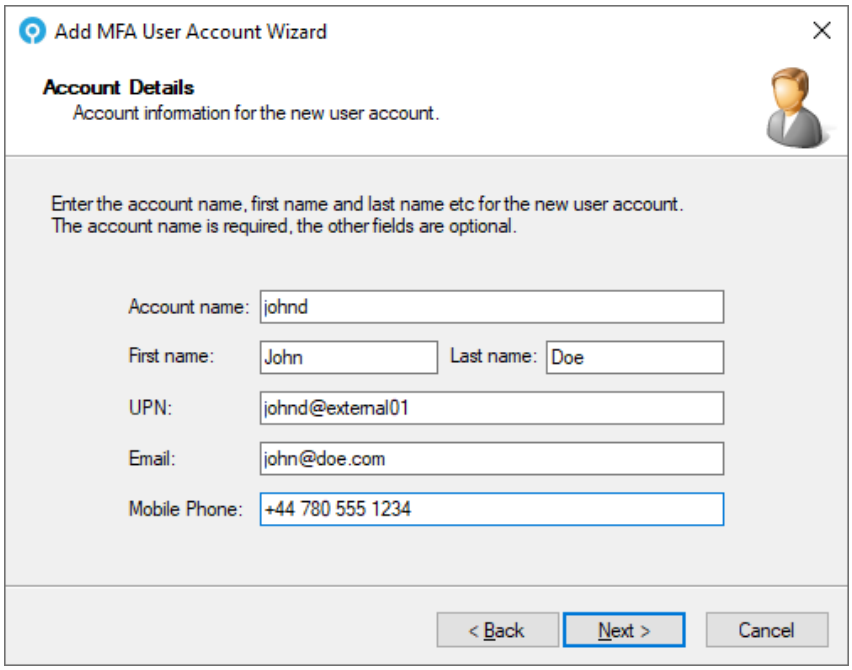
1. In the MyID Management Console, expand the **Realms** and select the appropriate realm.



2. Click **Add MFA User Account**, in the **Actions** pane.



3. Click **Next**.

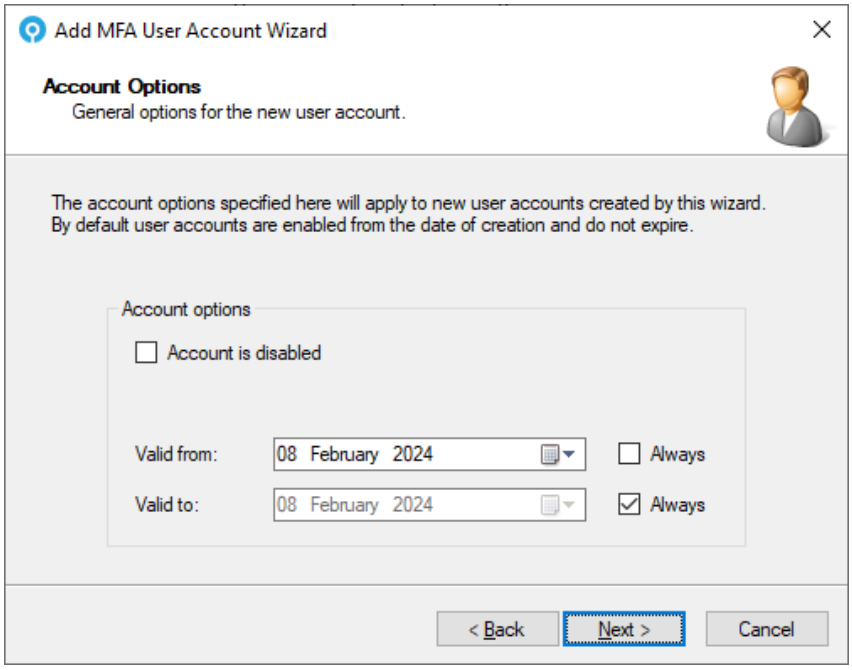


4. Enter the details for the new user account.

   Only the **Account name** is required, all other fields are optional.

   The UPN is automatically generated based on the **Realm** and **Account name**; however, it may be manually edited as needed.

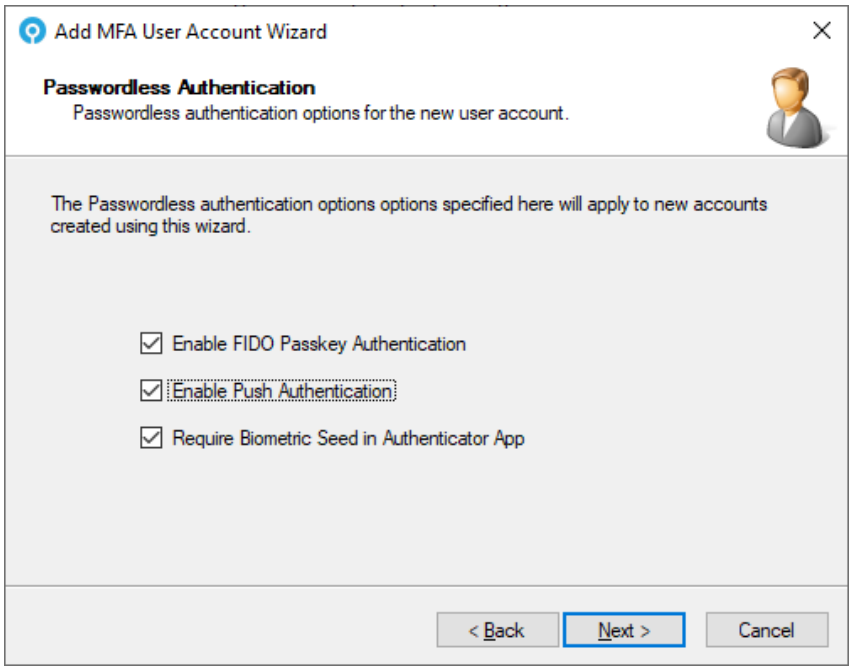
5. Click **Next**.



6. Set the account options.

   Account options determine the user's initial state. Accounts can be given the start and end validity dates and can be created as disabled accounts for later use.

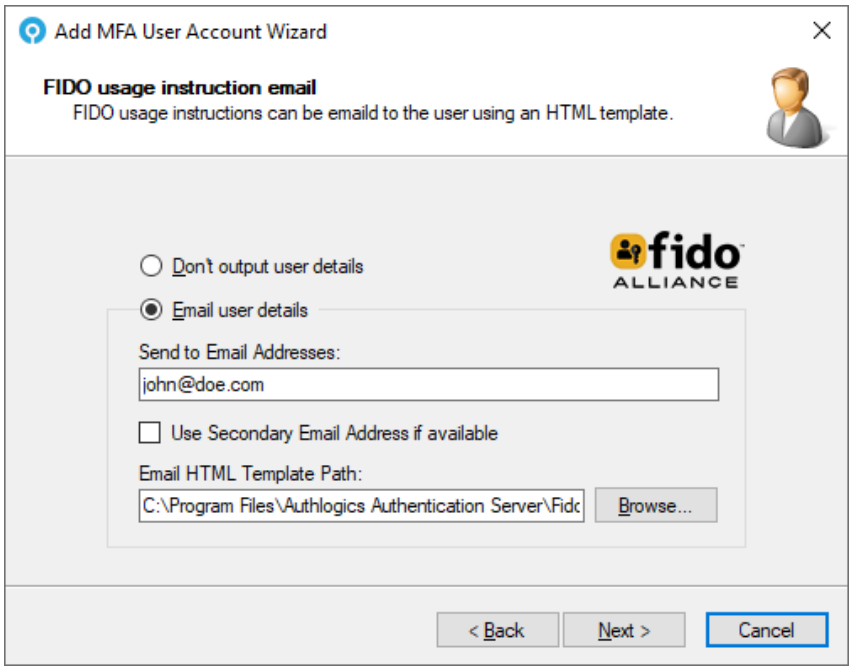
7. Click **Next**.



8. Choose whether to enable the users for FIDO and/or Mobile Push authentication.

   At this stage, you can force Mobile App users to provide Biometric information as part of the authentication process.

9. Click **Next**.



10. Choose if or how the users receive their welcome email.

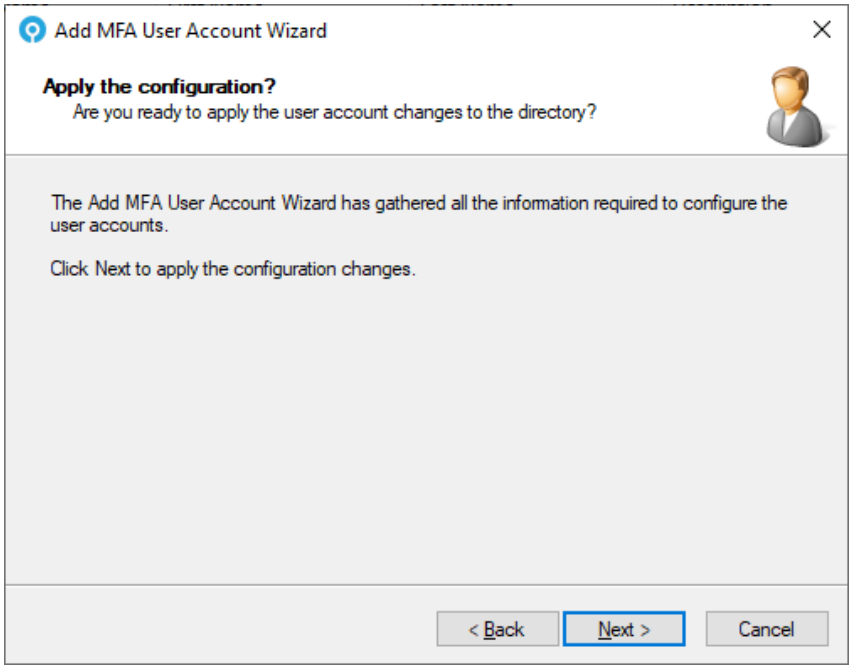
    The welcome email contains instructions on how to set up their device for FIDO and Mobile Push based on your selection above.

    If a single user is selected, you can specify the email address to deliver the email to.

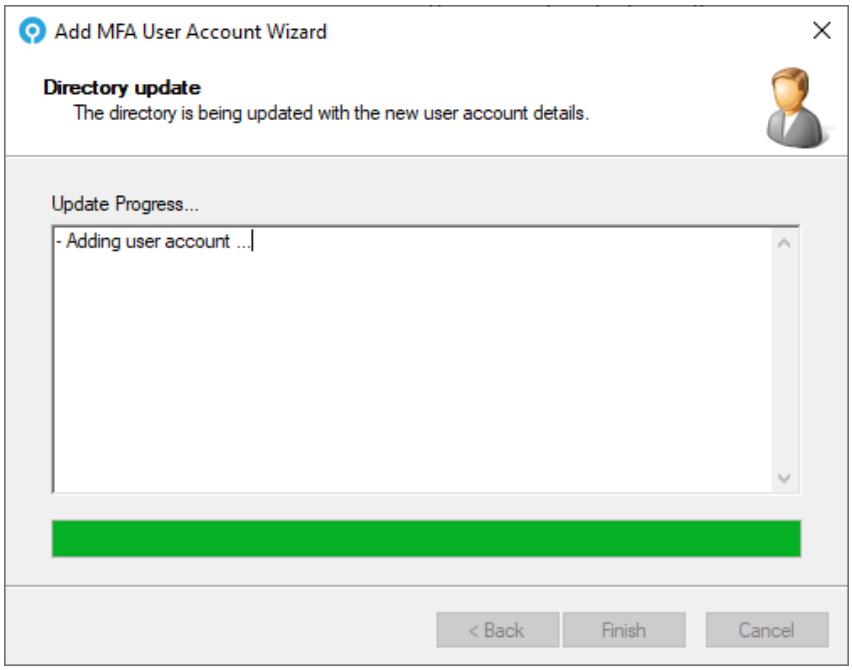
    When adding multiple users, the user's email address is retrieved from Active Directory or the alternate email address field and sent to them automatically.

    The appropriate FIDO and PUSH HTML template files can be selected to use for the email.

11. Click **Next**.

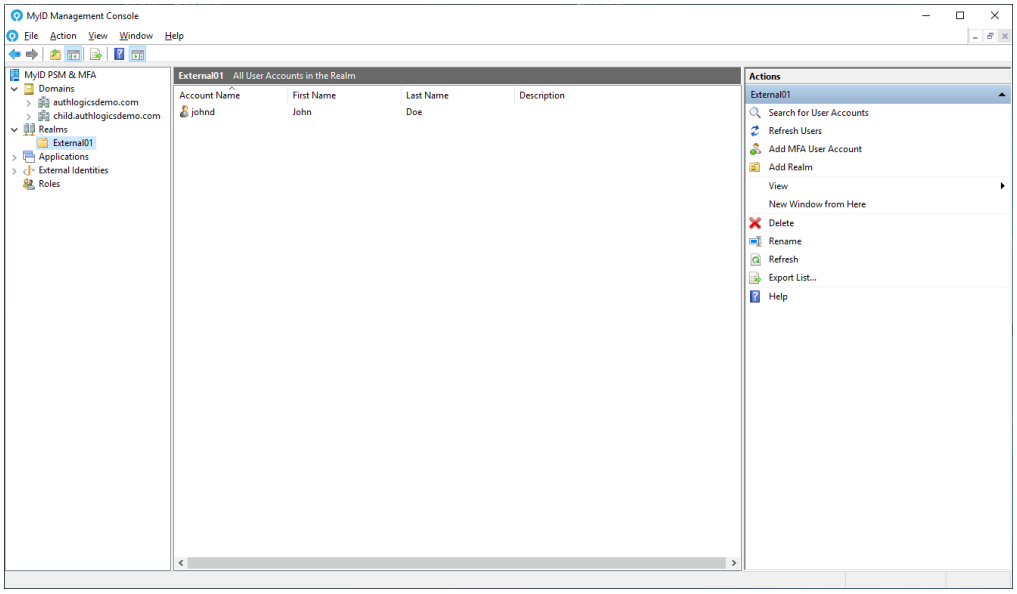


12. Click **Next**.



The new user account is created.

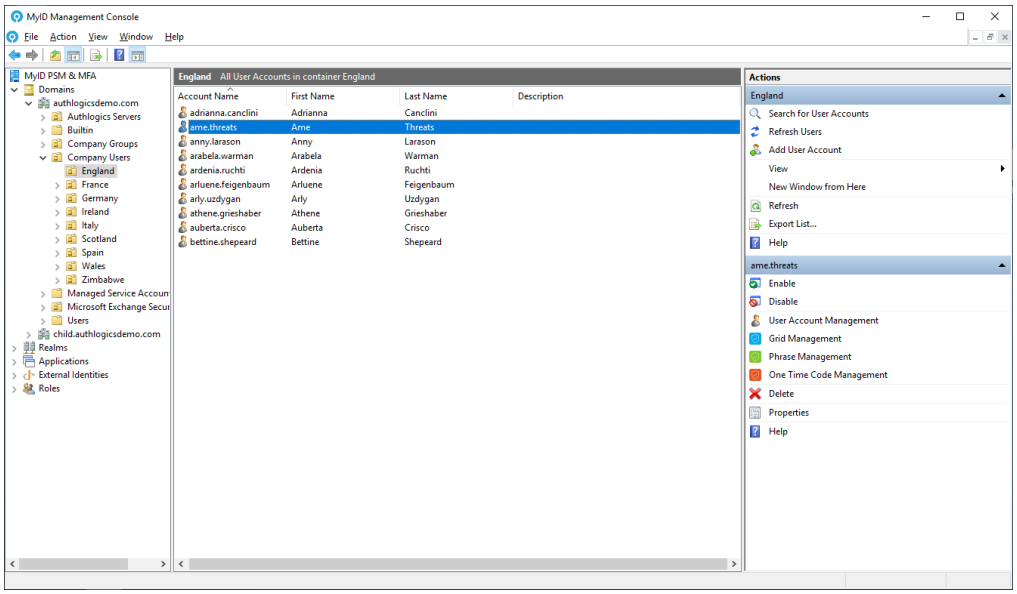
13. Click **Finish**.



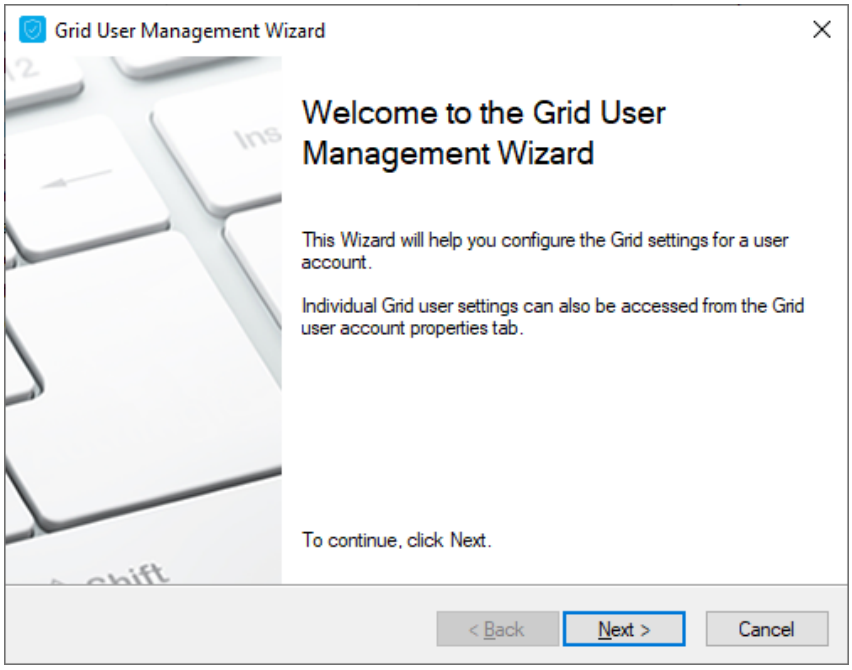
5.7.6 Setting up a user for Grid Pattern Authentication

Once you have created a MyID user account, you can configure it for use with Grid Pattern Authentication.

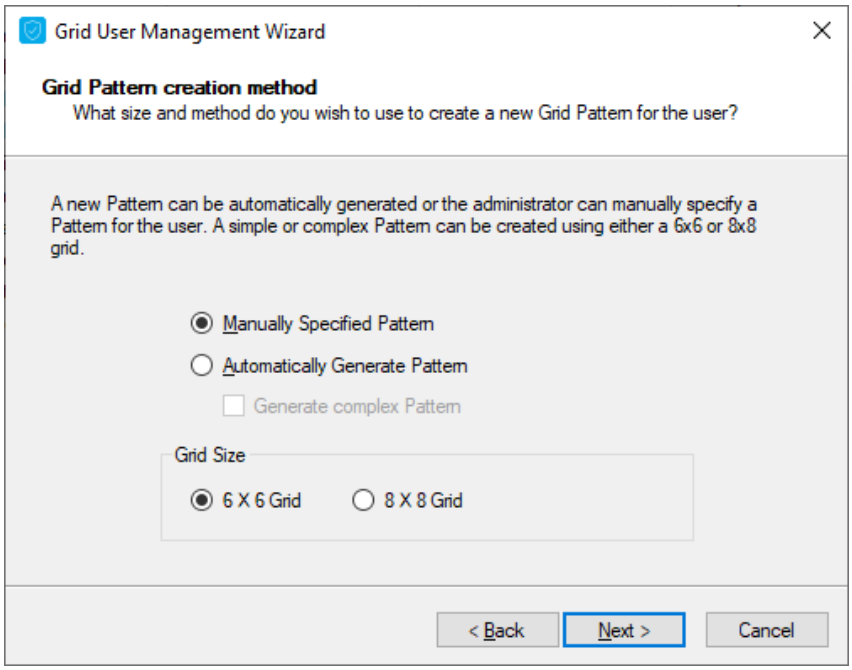
1. In the MyID Management Console, either expand the **Domains** and select the appropriate OU, or expand the **Realms** and select the appropriate realm.
2. Select the user account (or accounts) for which you want to manage the Grid settings.



3. Click **Grid Management**, in the **Actions** pane, or from right-clicking the account (or accounts).



4. Click **Next**.

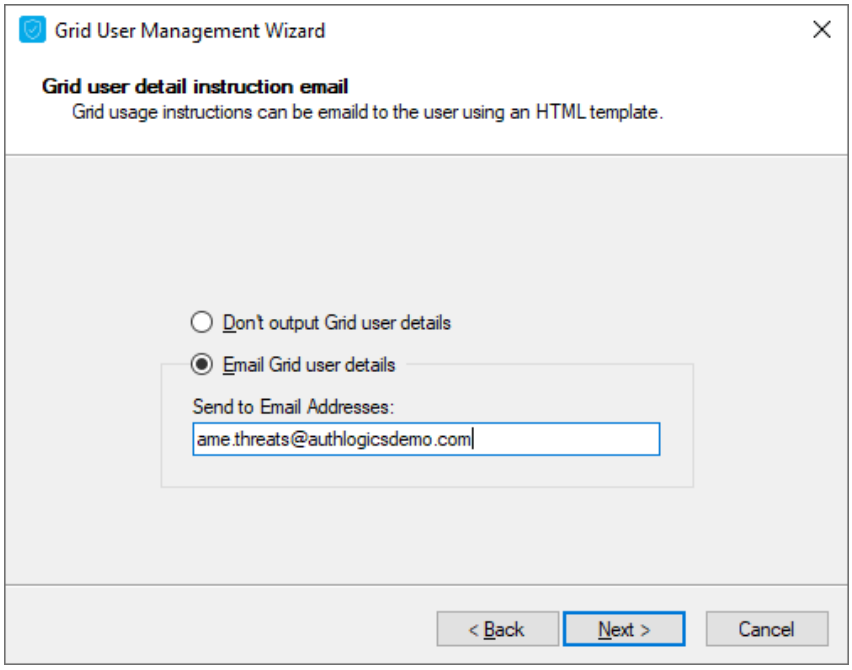


5. Choose the Pattern provisioning method and grid size for the selected users.

   Users can have random Patterns generated automatically or the administrator can choose to manually configure the user's information. If you are applying these settings to multiple accounts simultaneously, only the automatic option is available.

   By default, MyID MFA generates a simple pattern for the user. Enable the **Generate complex Pattern** option for a more secure pattern.

6. Click **Next**.



7. Select the method used to distribute the Pattern and grid usage instructions to the user.

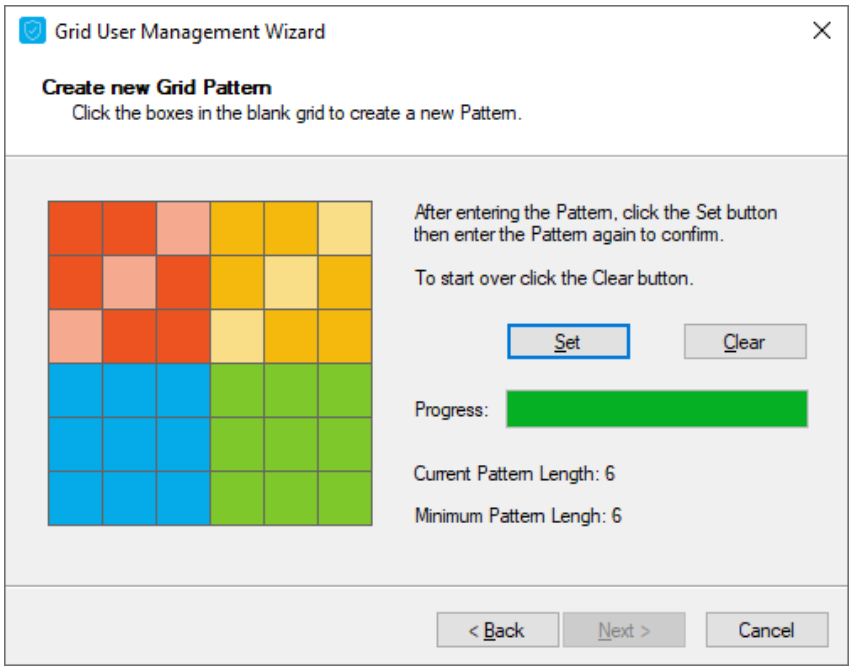
   Auto-generated information can be emailed to the user. Additionally, if you provide manually specified settings, you can specify not to output any details; this option is not available for auto-generated details.

   You can send the email to multiple addresses by entering multiple email addresses separated by a semi-colon (;).

8. Click **Next**.

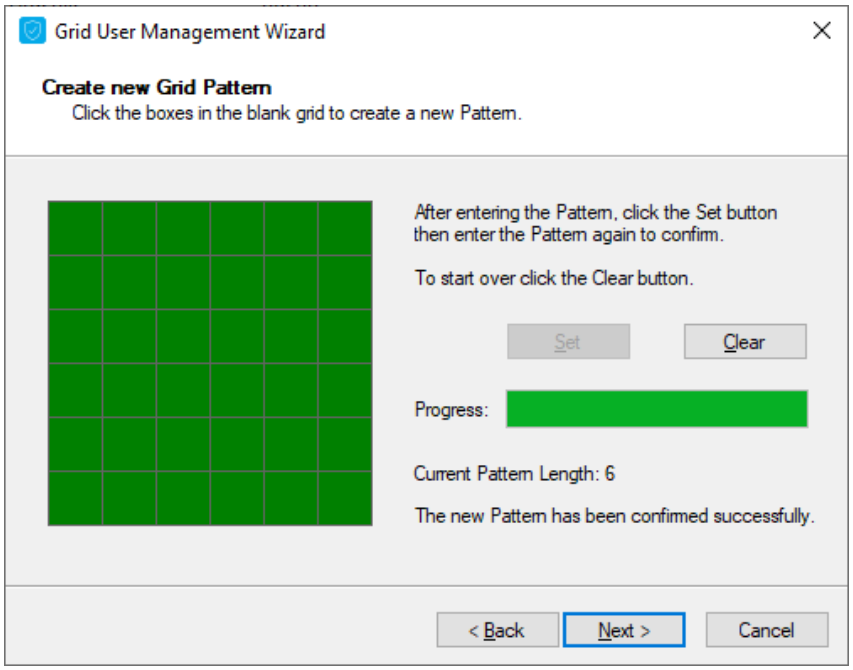
9. If you are manually specifying a pattern:

   a. Enter the required pattern.



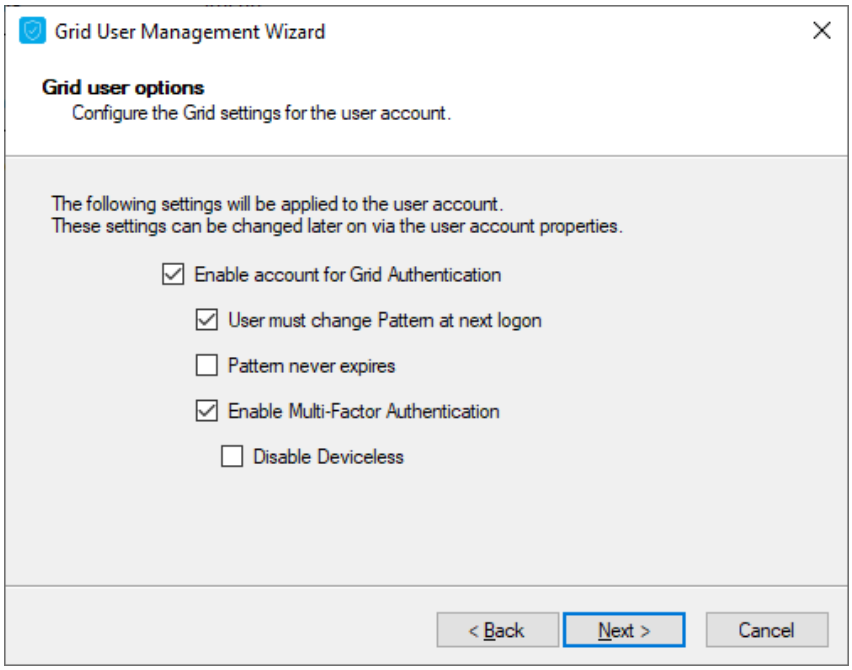
   b. Click **Set**.

c. Confirm the Pattern entered previously.



If the patterns match, the displayed grid turns green. If the patterns do not match, the grid turns red.

d. Click **Clear** to re-enter the pattern or click **Next** to continue.

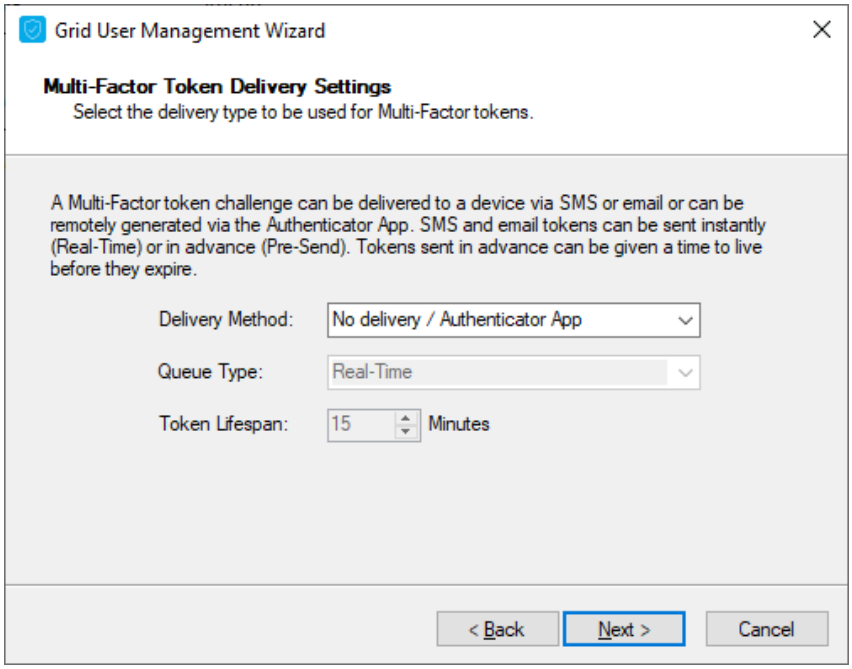


10. Configure the Grid pattern user options.

    You can set a user's Pattern to expire the next time that they log in, forcing them to change the pattern. You can also set a user's Pattern to never expire.

    In MFA deployments, you can enable and enforce the user account to use a Multi-Factor device. An MFA device must be registered with the user account, otherwise the challenge delivered through email or SMS/TEXT fails.

11. Click **Next**.



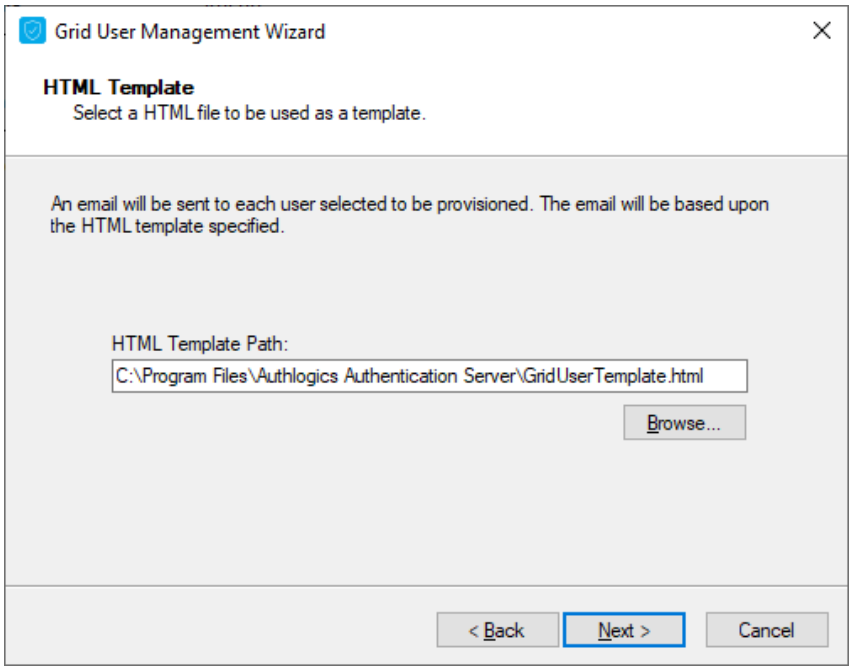
12. Select the delivery method for Multi-Factor tokens.

    Ensure that the user has either an Email address or Mobile telephone number for the tokens to be delivered to, if you have chosen either of those methods for delivery.

    Queue Type determines whether tokens are pre-sent or generated in Real-Time. When **Queue Type** is set to `Pre-Send`, an administrator must specify the **Token Lifespan** for these token types.

    The **Enable remote seed for soft tokens** option requires that the remote seed value generated by the Authentication Server is configured on the MFA device registered with the user account, otherwise authentication fails. This value is automatically installed through the QR code in the device enrollment process.

13. Click **Next**.

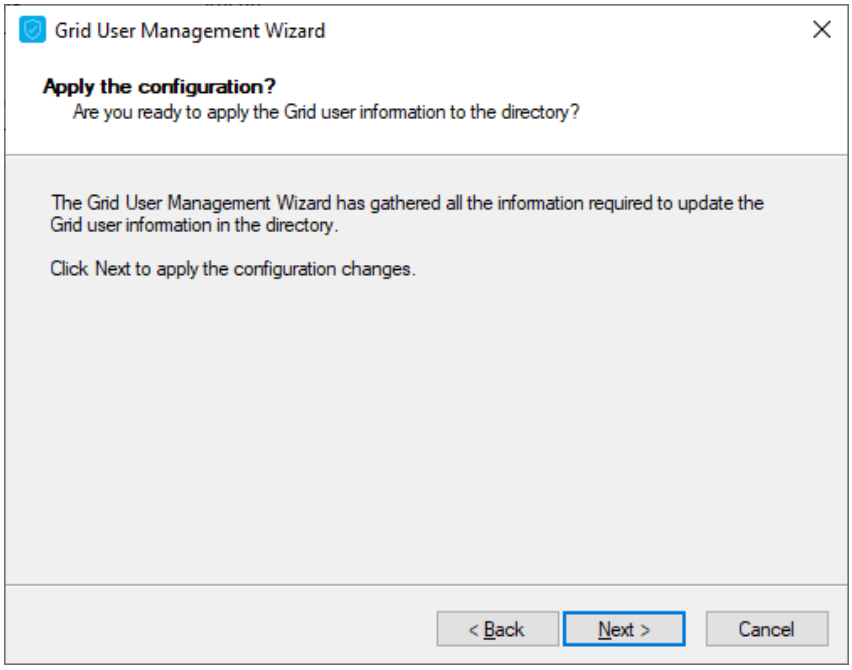


14. Specify the **HTML Template Path** to the automated notification letter or email.

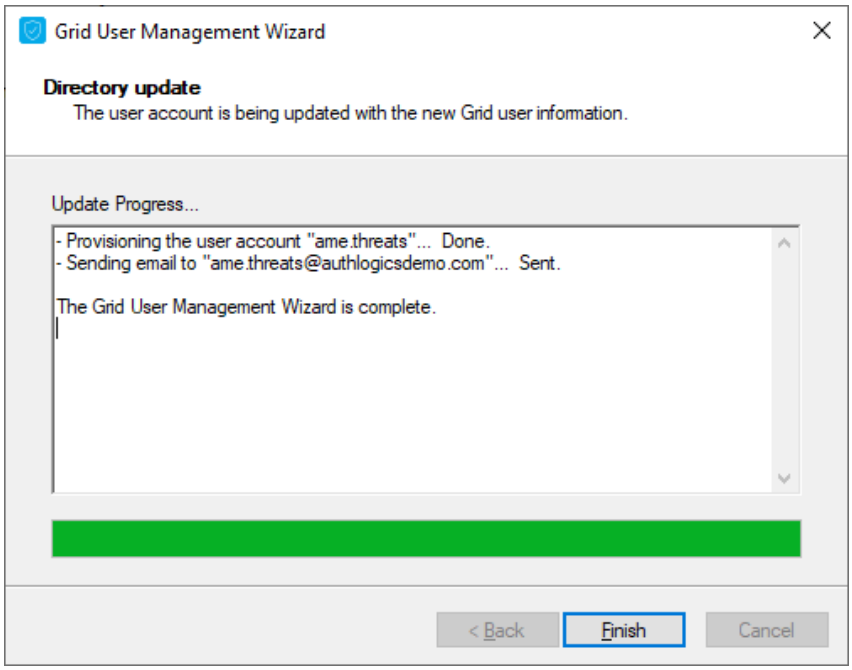
    This HTML file can be modified and customized for your organization. Each letter or email is customized for the user to contain their unique information by substituting HTML comment values in the template.

    To locate a custom template click **Browse**.

15. Click **Next**.



16. Click **Next**.

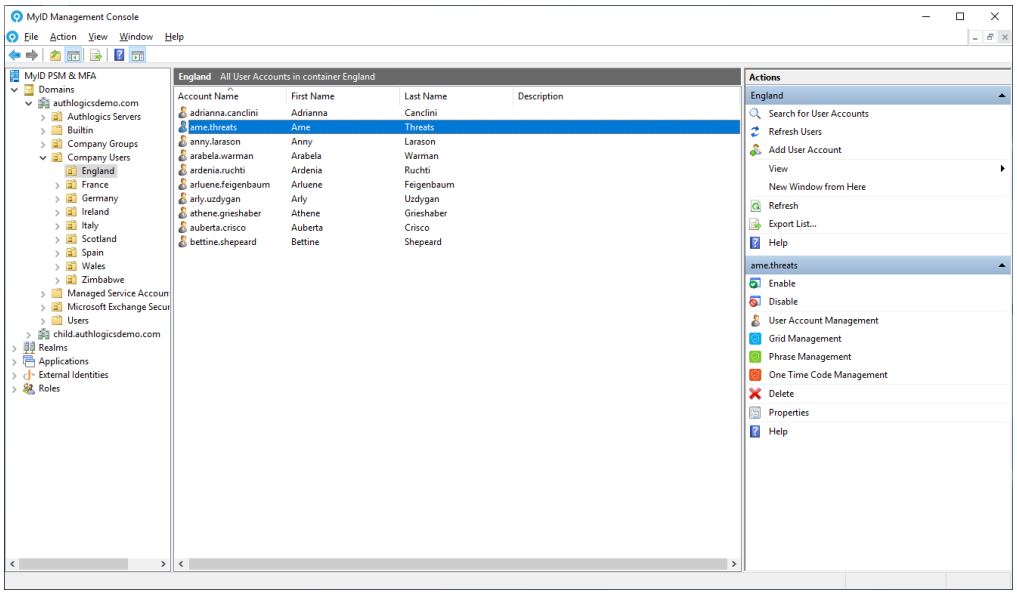


17. Click **Finish**.

5.7.7 Setting up a user for Phrase authentication

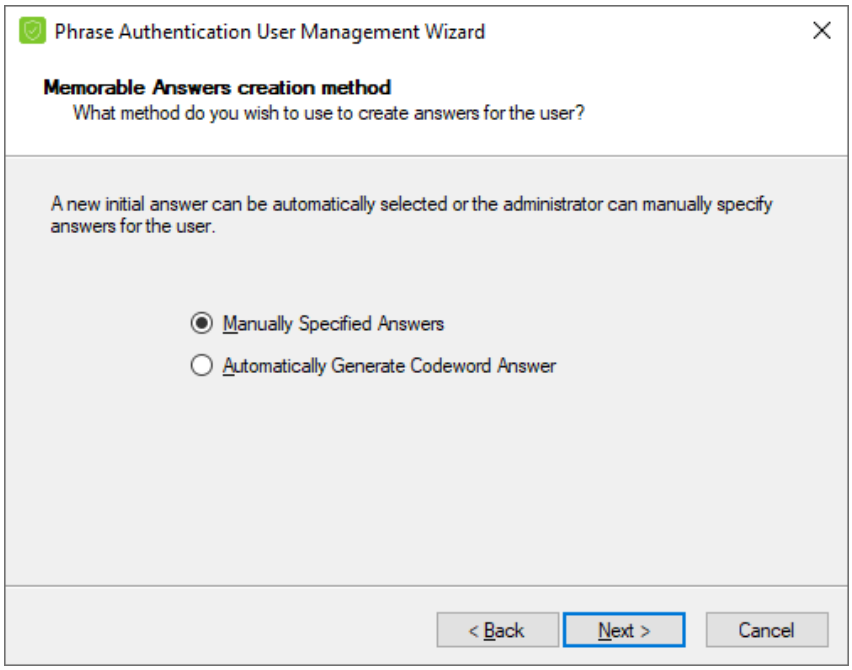
Once you have created a MyID user account, you can configure it for use with Phrase Pattern Authentication.

1. In the MyID Management Console, either expand the **Domains** and select the appropriate OU, or expand the **Realms** and select the appropriate realm.
2. Select the user account (or accounts) for which you want to manage the Phrase settings.



3. Click **Phrase Management**, in the **Actions** pane, or from right-clicking the account (or accounts).

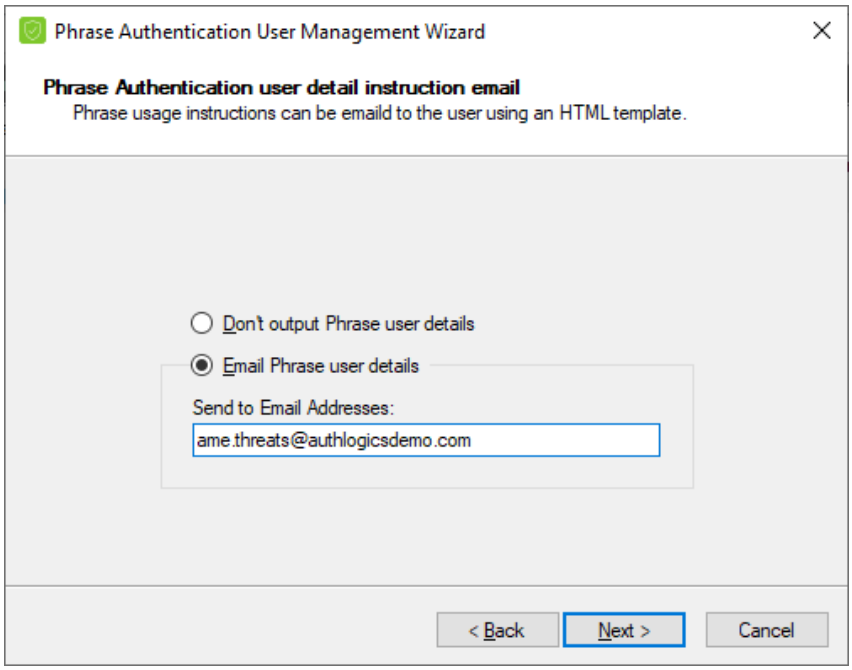
4. Click **Next**.



5. Choose the provisioning method.

   You can set a user to get a randomly generated Codeword answer, or the administrator can choose to manually configure the user's information. If multiple accounts were selected before starting the wizard, only the automatic option is available.

6. Click **Next**.

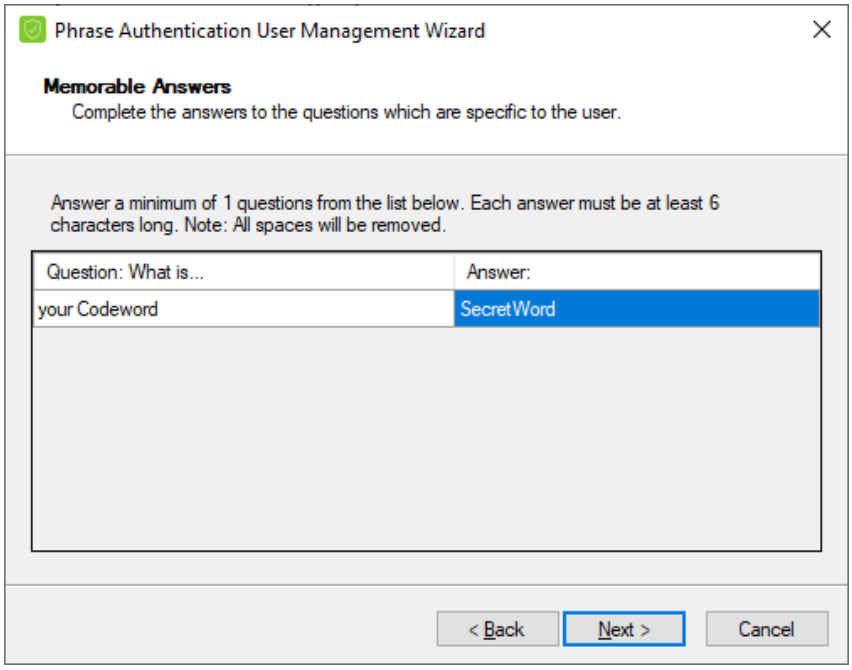


Select the delivery method for Phrase settings and usage instructions.

Auto-generated information can be emailed to the user.

If you manually specified the settings, you can specify not to output any details – this option is not available for auto-generated details.

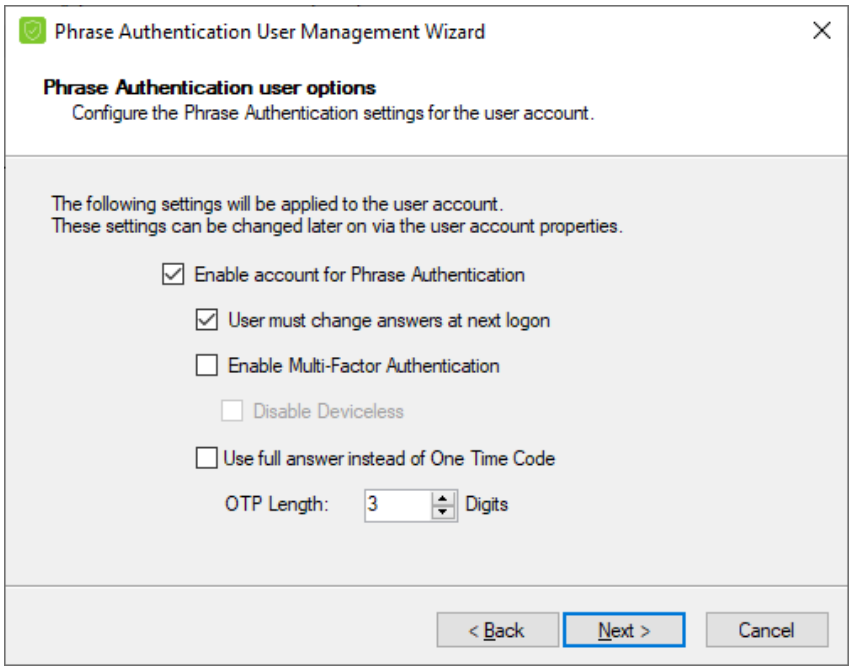
7. Click **Next**.



8. To specify the pattern manually, enter answers for the questions ensuring that each answer is at least the minimum number of prescribed characters and that enough questions have been answered.

   The **Next** button appears only when these conditions are satisfied.

9. Click **Next**.



10. Configure Phrase Authentication user options.

    You can set up an account so that the next time the user logins with the account, the user is forced to change the answers at the next logon.

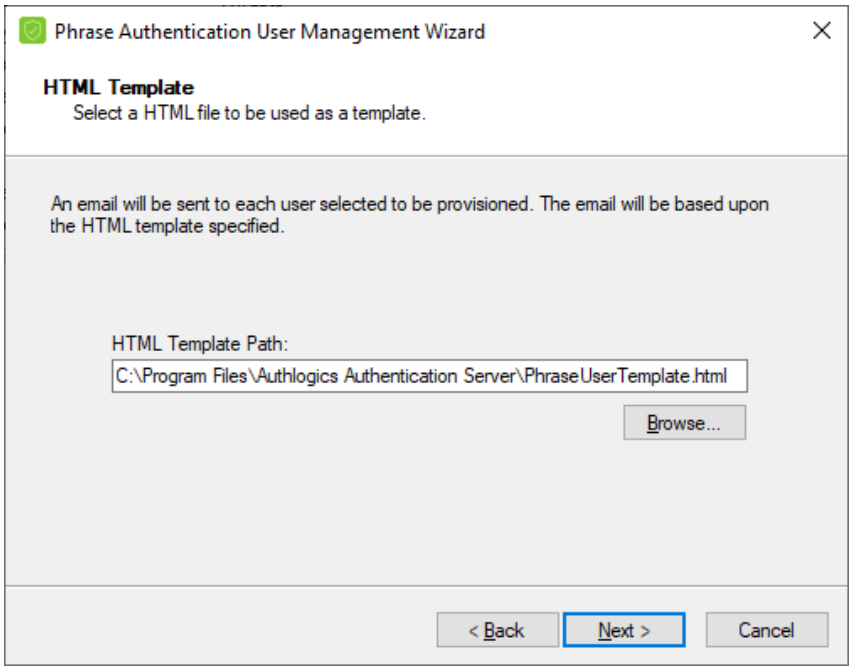
    In MFA deployments, you can enable and enforce the user account to use a Multi-Factor device by selecting the Disable Deviceless option.

    You can configure an account to require the user to enter the full answer instead of random letters from the answer.

    Note: This is not meant to be used as a true password-based system and is disabled by default.

    Set the OTC Length for the number of characters a user needs to provide from the predetermined answer.

11. Click **Next**.

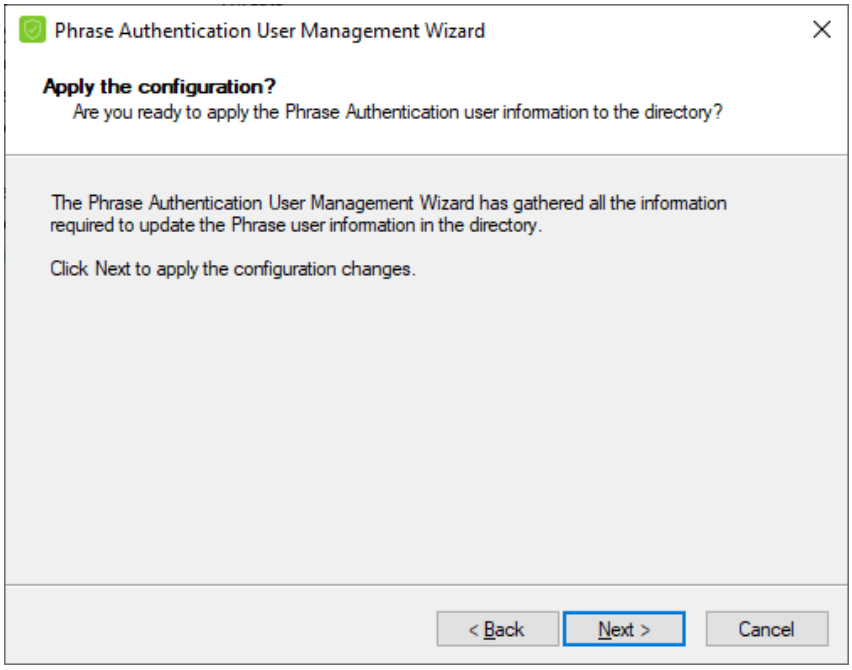


12. Specify the **HTML Template Path** to the automated notification letter or email.

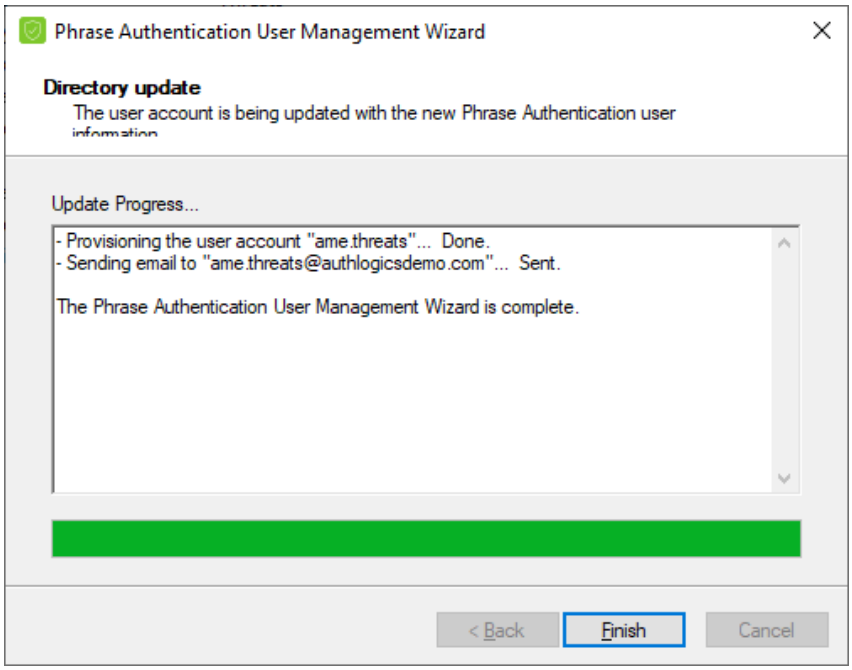
    This HTML file can be modified and customized for your organization. Each letter or email is customized for the user to contain their unique information by substituting HTML comment values in the template.

    To locate a custom template click **Browse**.

13. Click **Next**.



14. Click **Next**.



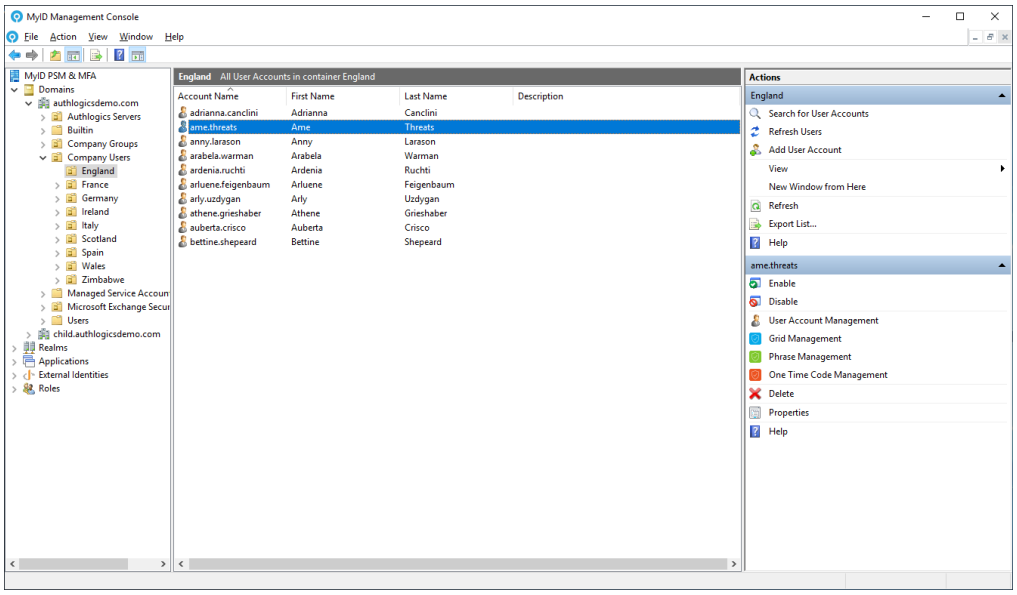
The configuration changes are applied.

15. Click **Finish**.

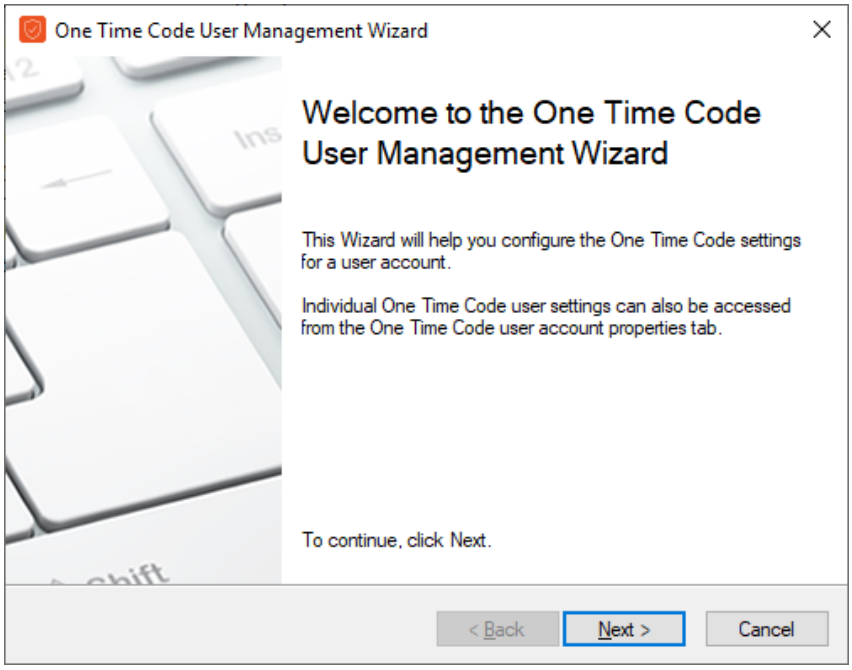
5.7.8 Setting up a user for One Time Code

Once you have created a MyID user account, you can configure it for use with One Time Code.

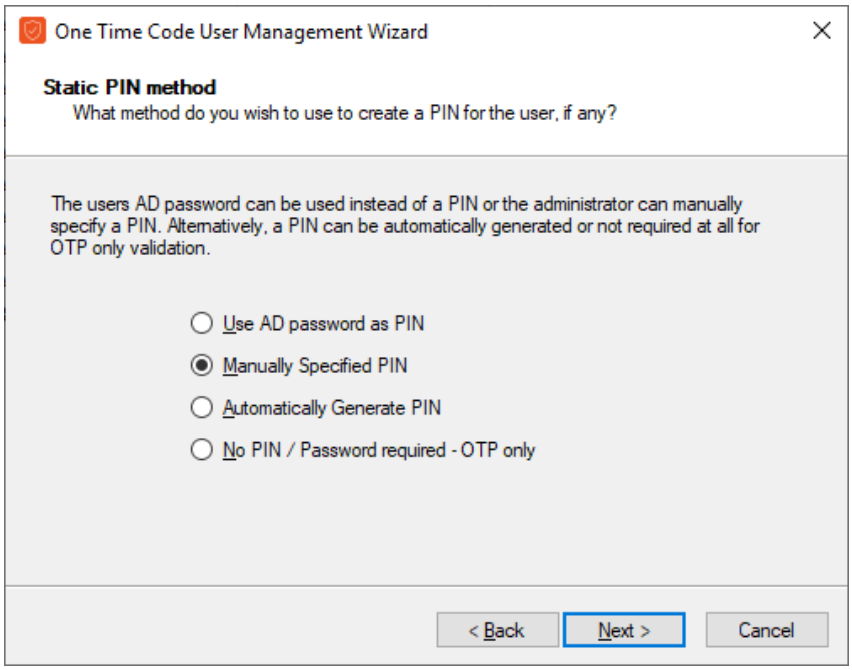
1. In the MyID Management Console, either expand the **Domains** and select the appropriate OU, or expand the **Realms** and select the appropriate realm.
2. Select the user account (or accounts) for which you want to manage the One Time Code settings.



3. Click **One Time Code Management**, in the **Actions** pane, or from right-clicking the account (or accounts).



4. Click **Next**.



5. Choose the Static PIN Method.

   The following PIN options exist:

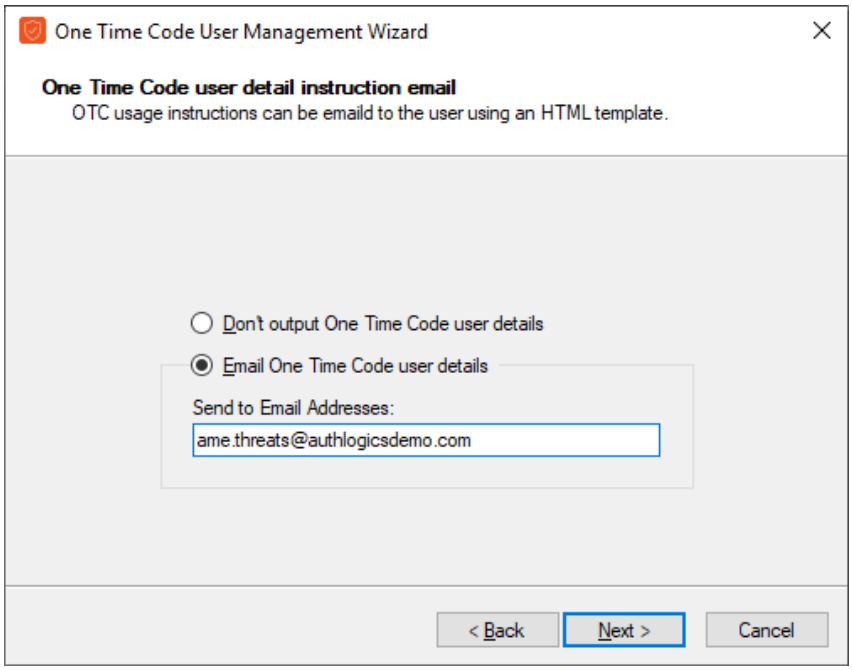
   - **Use AD Password as PIN** – The user's Active Directory password is used instead of a PIN.
   - **Manually Specified PIN** – The administrator manually specifies a PIN.

   If multiple accounts were selected before starting the wizard, this option is not available.

   - **Automatically Generate PIN** – The PIN is automatically generated.
   - **No PIN / Password required – OTP only** – The PIN is not required at all for OTP only validation.

     This option is only available if you enabled it through Global settings.

6. Click **Next**.



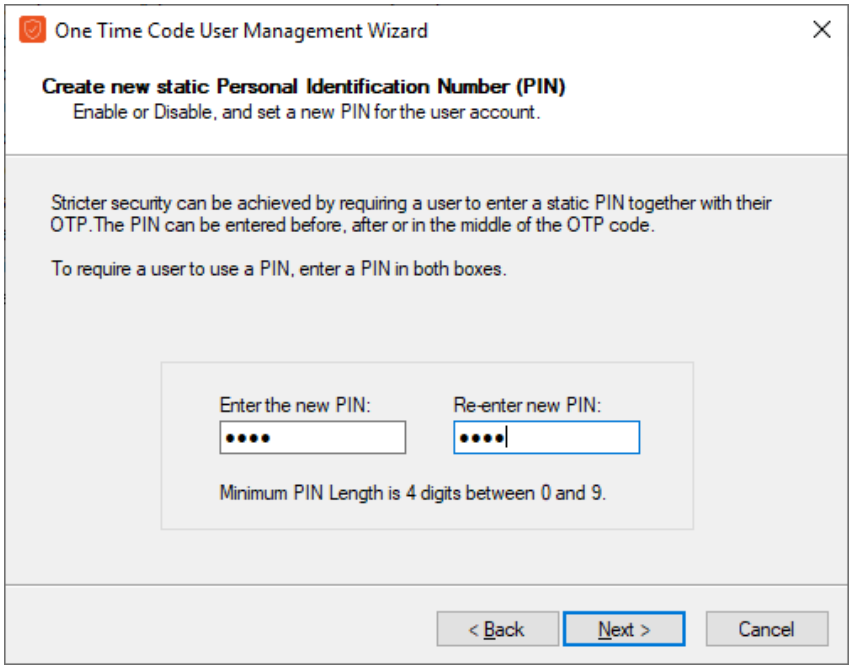
7. Select the delivery method for One Time Code settings and usage instructions.

   Auto-generated information can be printed or emailed to the user.

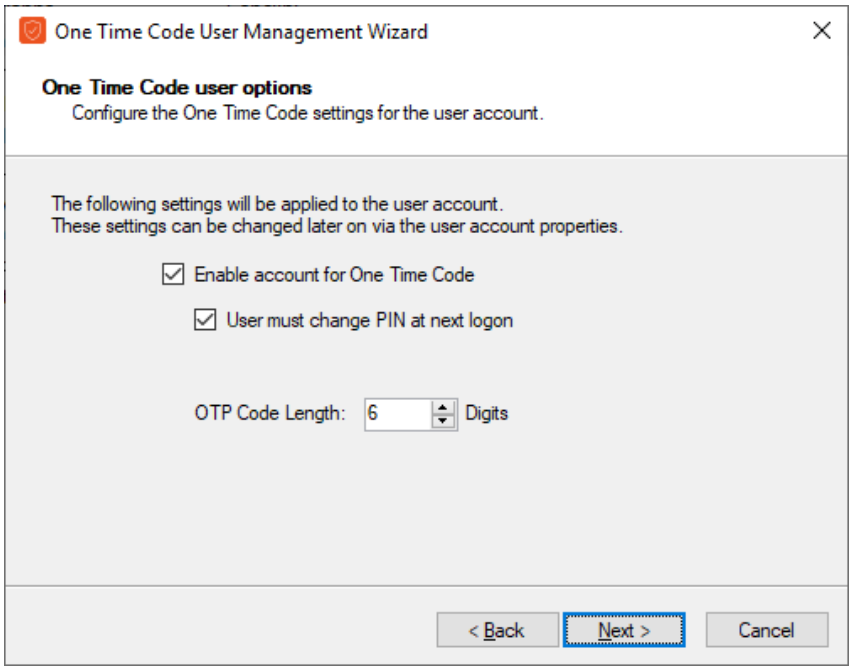
   If you manually specified the settings, you can specify not to output any details – this option is not available for auto-generated details.

8. Click **Next**.

9. If you are manually specifying the PIN, enter the user's PIN and confirm the PIN.



10. Click **Next**.

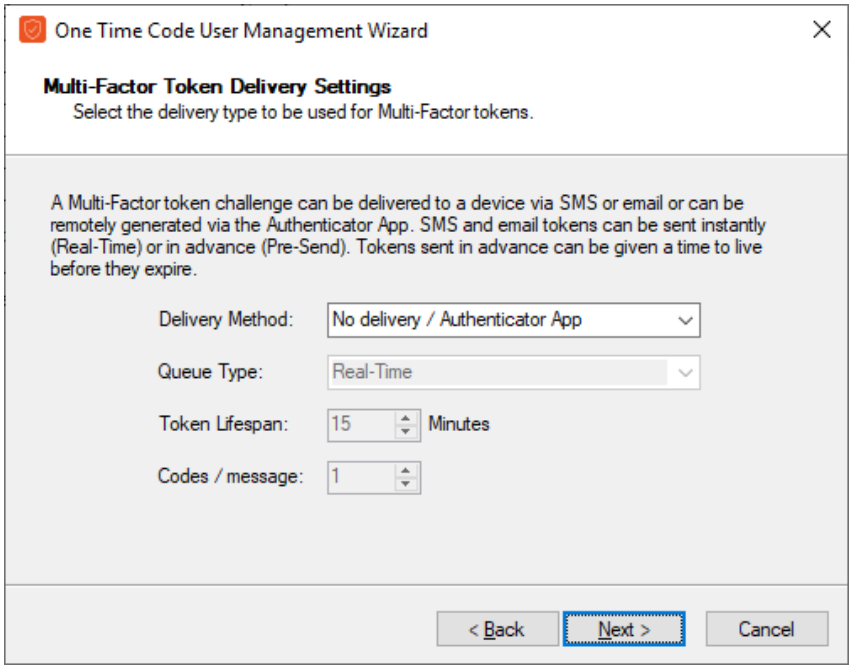


11. Configure One Time Code user options.

    You can set an account so that the next time the user logins with this account, the user is forced to change the PIN at the next logon.

    Set the **OTP Code Length** to the number of characters long that you want the OTP code to be.

12. Click **Next**.



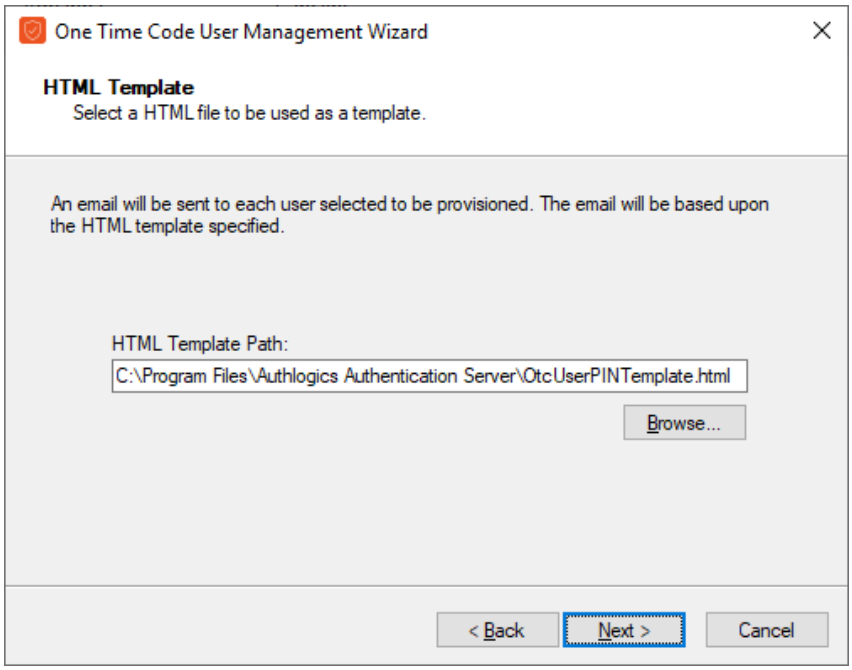
13. Select the delivery method for Multi-Factor tokens.

    Ensure that the user has either an Email address or Mobile telephone number for the tokens to be delivered to, if you have chosen either of those methods for delivery.

    Queue Type determines whether tokens are pre-sent or generated in Real-Time. When **Queue Type** is set to `Pre-Send`, an administrator must specify the **Token Lifespan** for these token types.

    The **Enable remote seed for soft tokens** option requires that the remote seed value generated by the Authentication Server is configured on the MFA device registered with the user account, otherwise authentication fails. This value is automatically installed through the QR code in the device enrollment process.

14. Click **Next**.

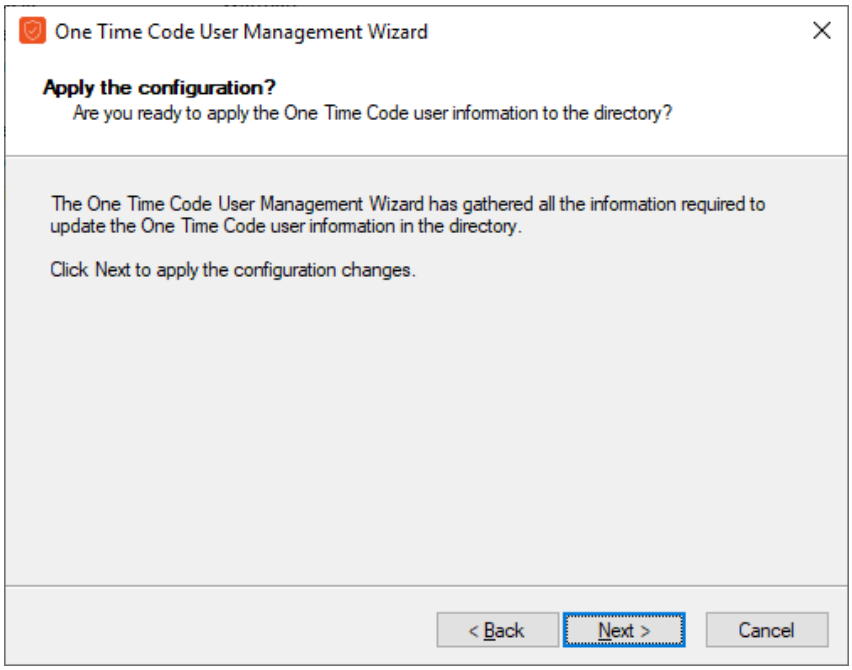


15. Specify the **HTML Template Path** to the automated notification letter or email.

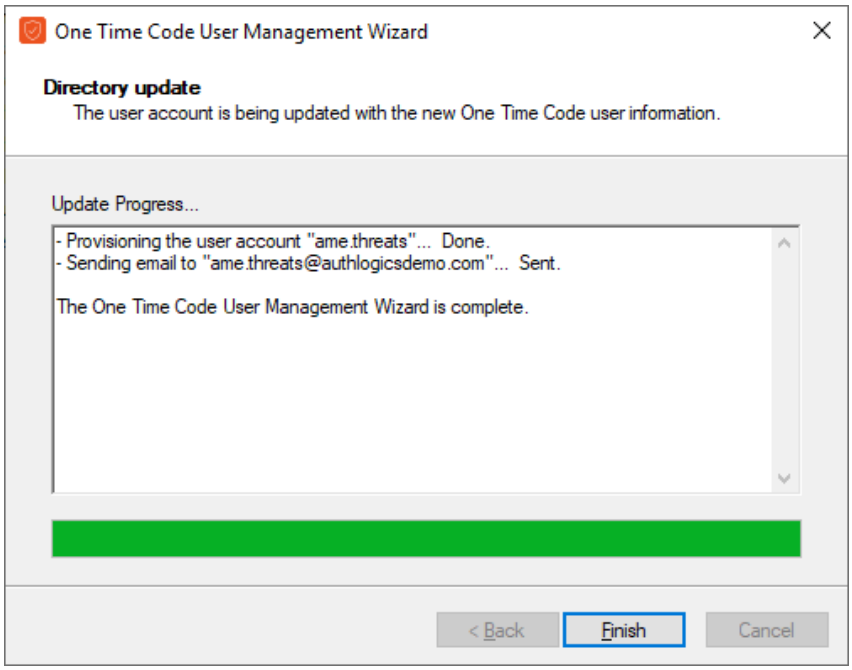
    This HTML file can be modified and customized for your organization. Each letter or email is customized for the user to contain their unique information by substituting HTML comment values in the template.

    To locate a custom template click **Browse**.

16. Click **Next**.



17. Click **Next**.



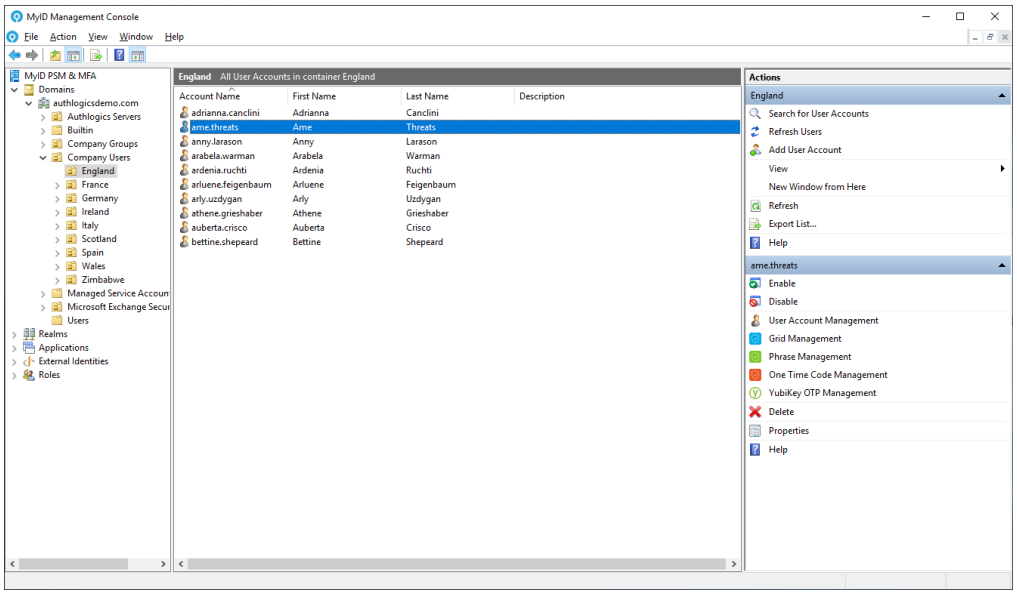
The configuration changes are applied.

18. Click **Finish**.

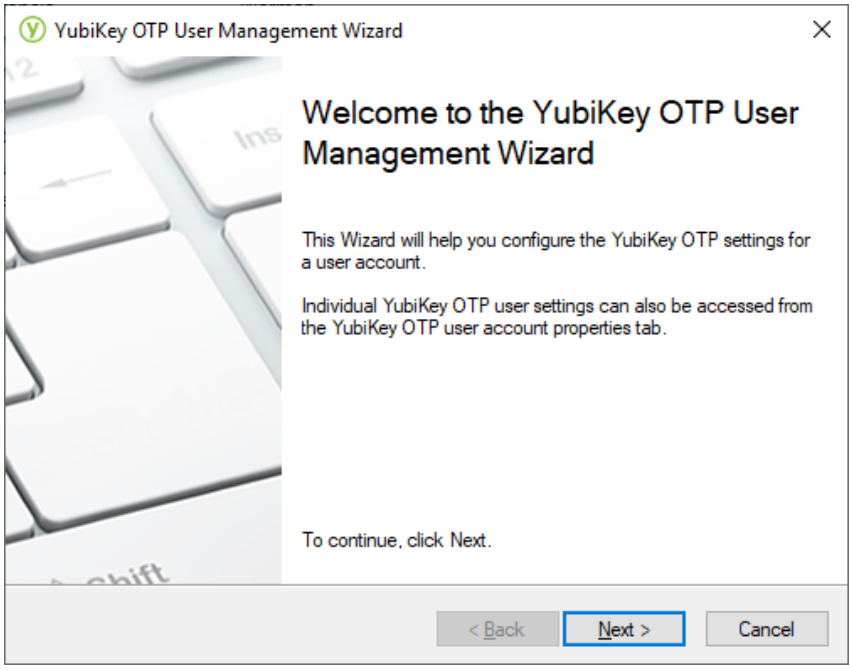
5.7.9 Setting up a user for YubiKey OTP

Once you have created a MyID user account, you can configure it for use with One Time Code.

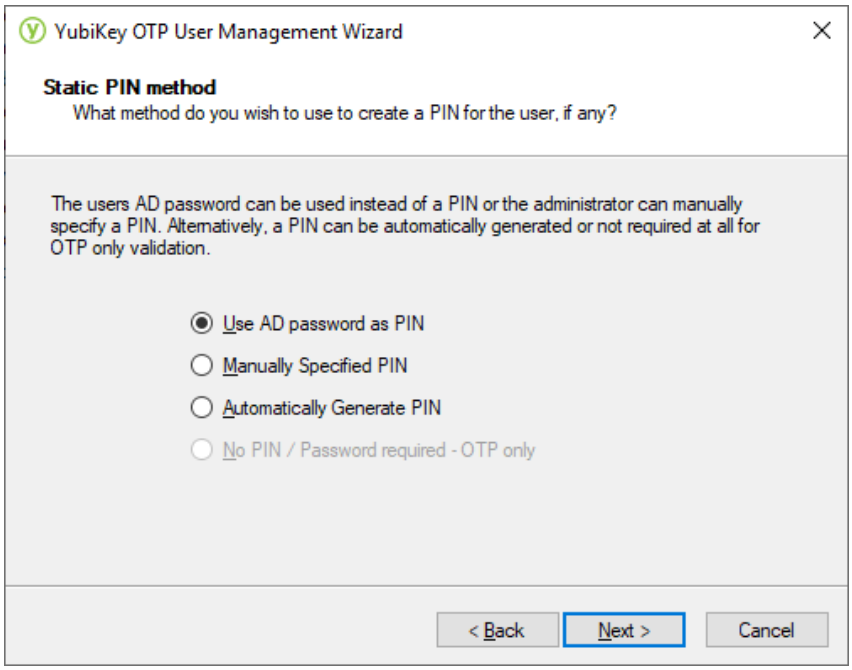
1. In the MyID Management Console, either expand the **Domains** and select the appropriate OU, or expand the **Realms** and select the appropriate realm.
2. Select the user account (or accounts) for which you want to manage the YubiKey One Time Code settings.



3. Click **YubiKey One Time Code Management**, in the **Actions** pane, or from right-clicking the account (or accounts).



4. Click **Next**.



5. Choose the Static PIN Method.

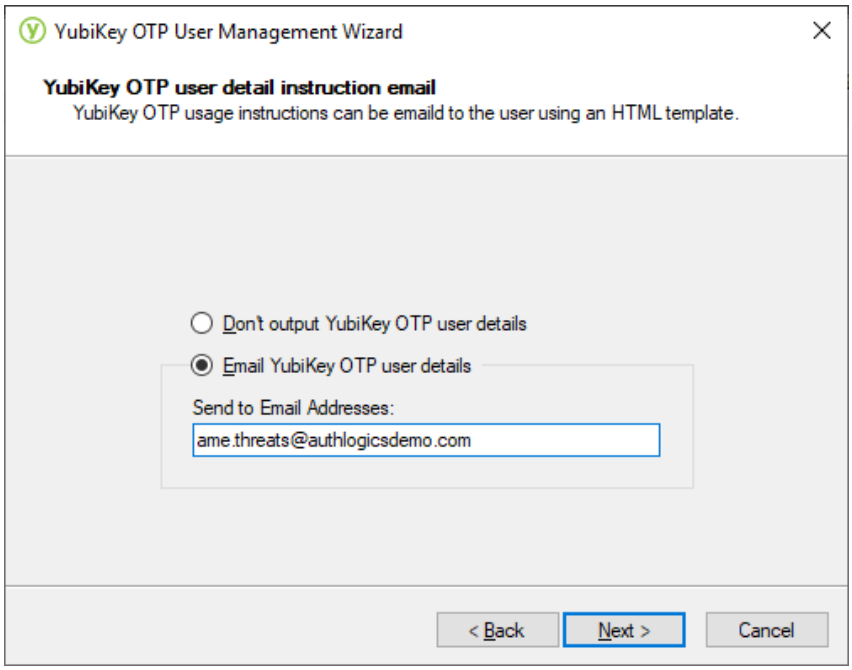
   The following PIN options exist:

   - **Use AD Password as PIN** – The user's Active Directory password is used instead of a PIN.
   - **Manually Specified PIN** – The administrator manually specifies a PIN.

     If multiple accounts were selected before starting the wizard, this option is not available.
   - **Automatically Generate PIN** – The PIN is automatically generated.
   - **No PIN / Password required – OTP only** – The PIN is not required at all for OTP only validation.

     This option is available only if you enabled it through Global settings.

6. Click **Next**.



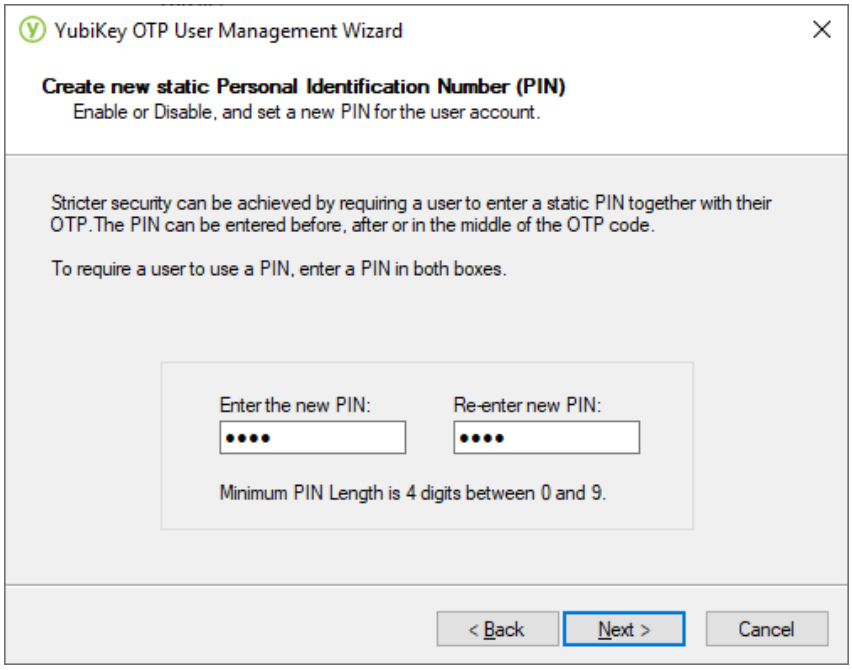
7. Select the delivery method for One Time Code settings and usage instructions.

   Auto-generated information can be printed or emailed to the user.

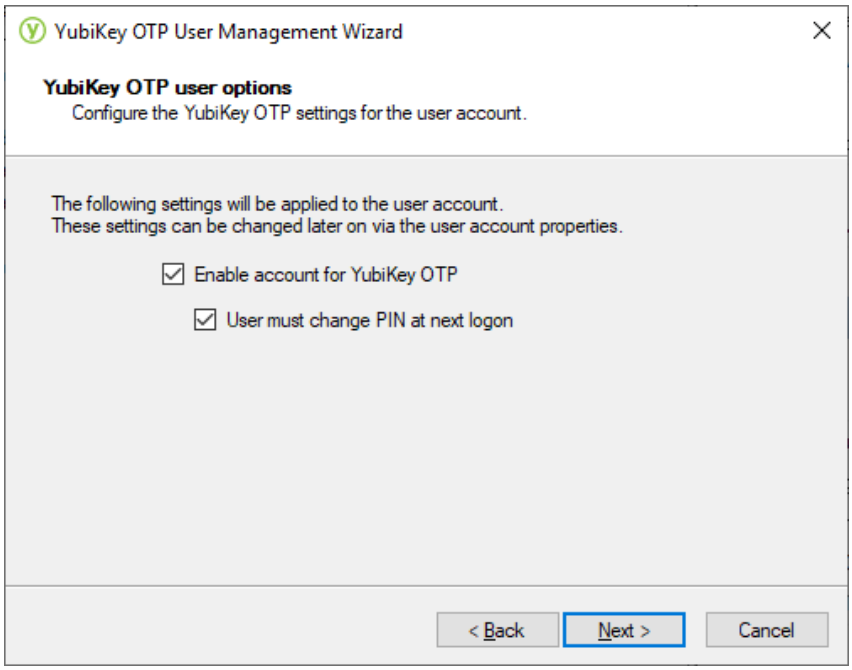
   If you manually specified the settings, you can specify not to output any details – this option is not available for auto-generated details.

8. Click **Next**.

9. If you are manually specifying the PIN, enter the user's PIN and confirm the PIN.



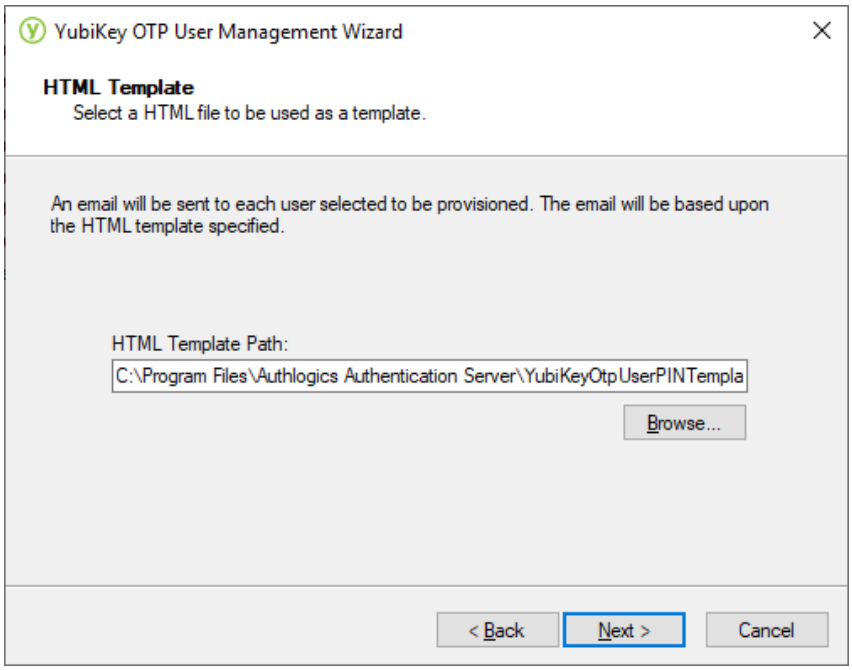
10. Click **Next**.



11. Configure YubiKey One Time Code user options.

    You can set an account so that the next time the user logins with this account, the user is forced to change the PIN at the next logon.

12. Click **Next**.

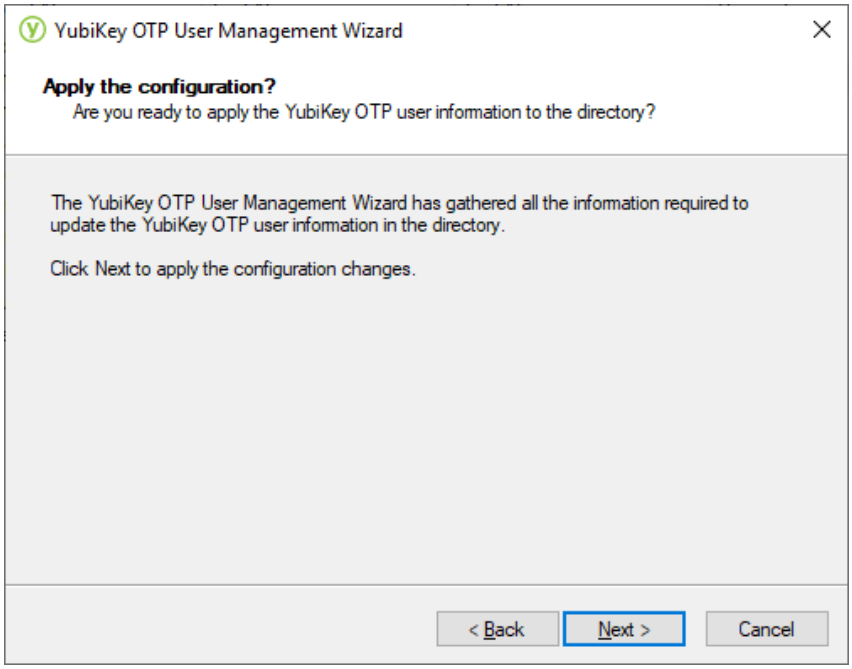


13. Specify the **HTML Template Path** to the automated notification letter or email.

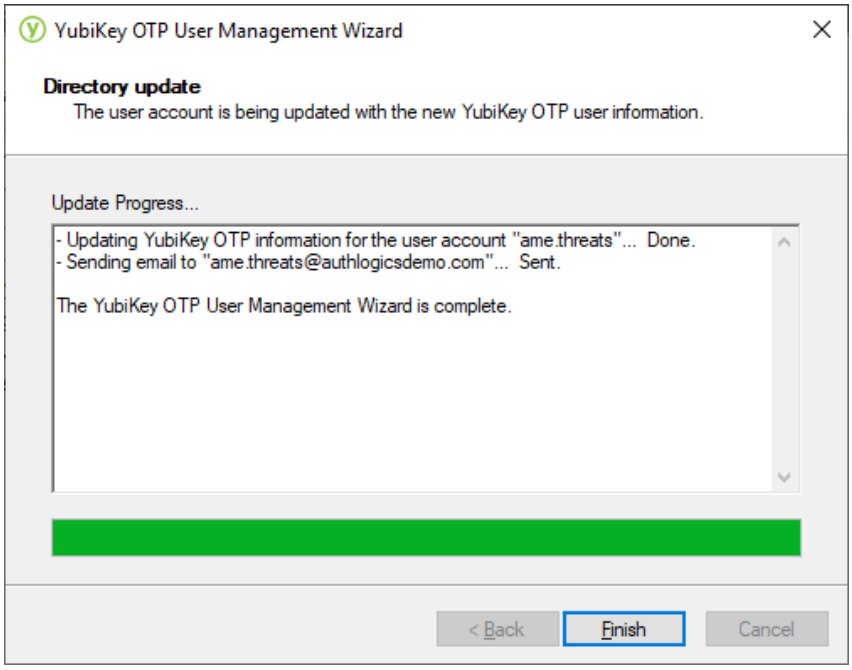
    This HTML file can be modified and customized for your organization. Each letter or email is customized for the user to contain their unique information by substituting HTML comment values in the template.

    To locate a custom template click **Browse**.

14. Click **Next**.



15. Click **Next**.

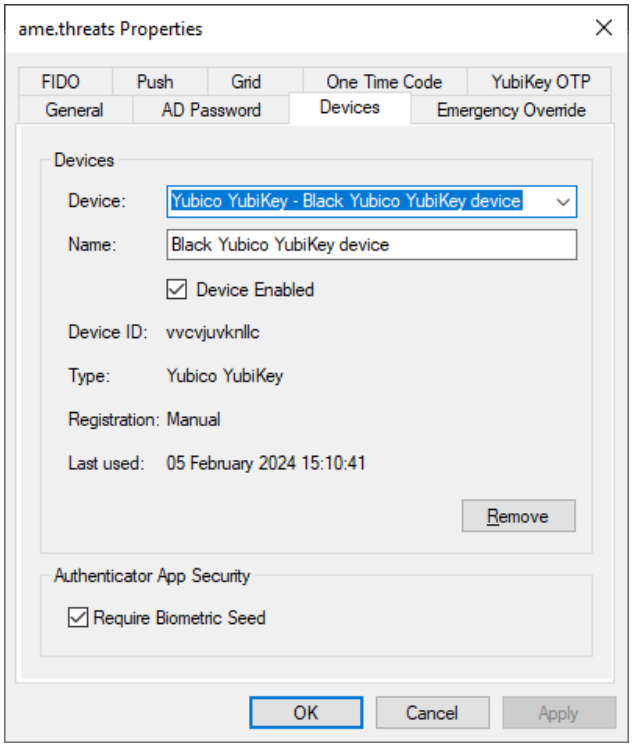


16. Click **Finish**.

5.7.10 Multi-Factor devices assigned to a user account

Users can enroll their MFA device or devices through the self-service portal or through the MyID Windows Desktop Agent. You can view the devices assigned to the user by using the MyID MMC.

1. In the MyID Management Console, expand the **Domains** and select the appropriate OU and user account to manage.
2. Click **Properties**, in the **Actions** pane.
3. Select the **Devices** tab.



Each user can have up to ten Multi-Factor Authentication devices. You can view any device assigned to a user by selecting it as a **Device**.

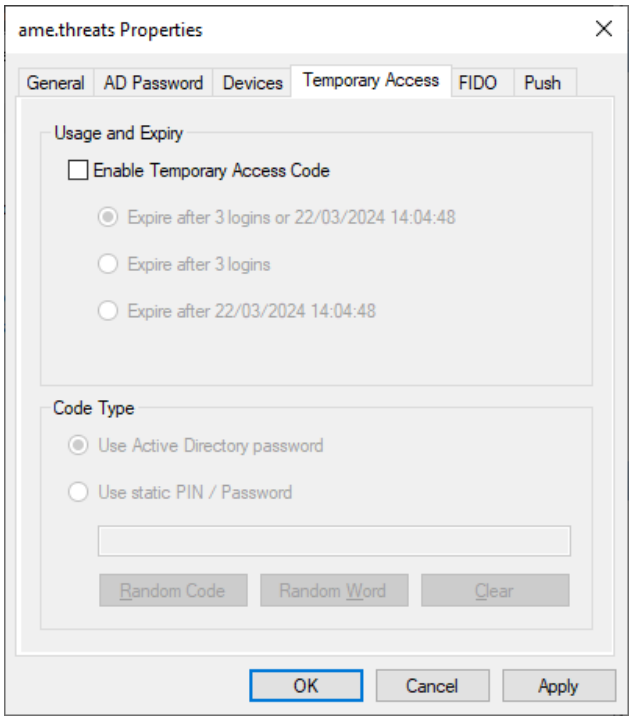
You can enable or disable each device as needed. You may want to do this if the device is temporarily misplaced.

You can also enforce the user to provide biometrics when using access tokens that support biometric validation.

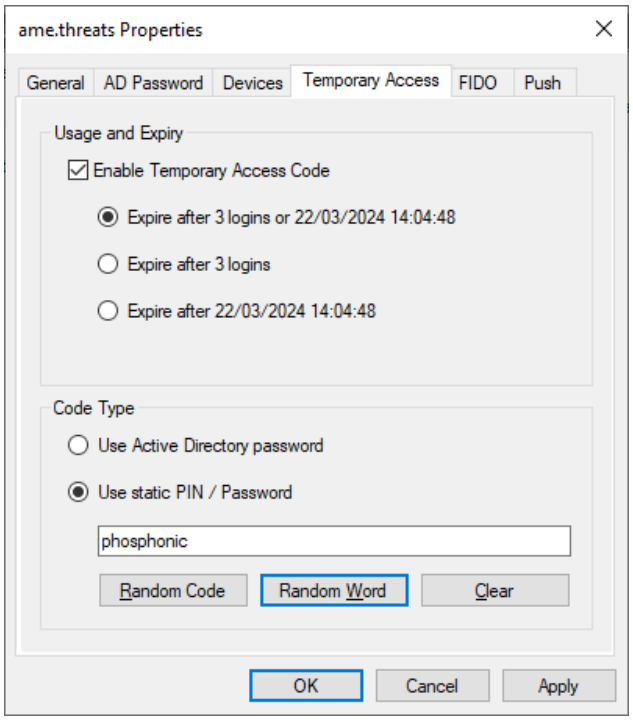
5.7.11 Assigning temporary access codes to a user (MMC)

1. Ensure that **Allow Temporary Access Codes** is enabled on the global settings General tab.

   For more information, see section *5.2.1*, *General tab*.
2. In the MyID Management Console, either expand the **Domains** and select the appropriate OU, or expand the **Realms** and select the appropriate realm.
3. Select the user account (or accounts) that you want to manage.
4. Click **Properties**, in the **Actions** pane.
5. Select the **Temporary Access** tab.



6. Enable the **Enable Temporary Access Code** option.



Select when temporary access codes are automatically disabled. Options include at a specific date and time, after a specific number of uses or both; the default is both.

You can configure the user to utilize their existing Active Directory password as a temporary access code as it is something they should already know.

Alternatively, specify a PIN or a password for the user of at least six digits. To assist in choosing a PIN or password you can click the **Random Code** or **Random Word** buttons to create one for you.

7. Click **Apply** or **OK** to save the configured settings for the user account.

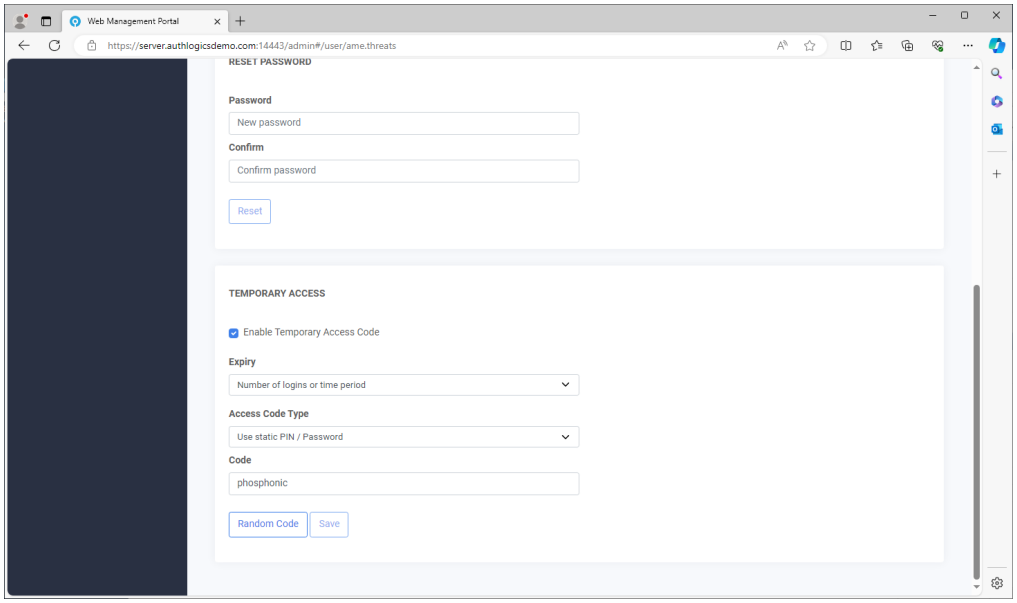
5.7.12 Assigning temporary access codes to a user (Web Management Portal)

1. Ensure that **Allow Temporary Access Codes** is enabled on the global settings General tab.

   For more information, see section *5.2.1*, *General tab*.

2. Load the Web Management Portal and select the user account to manage.

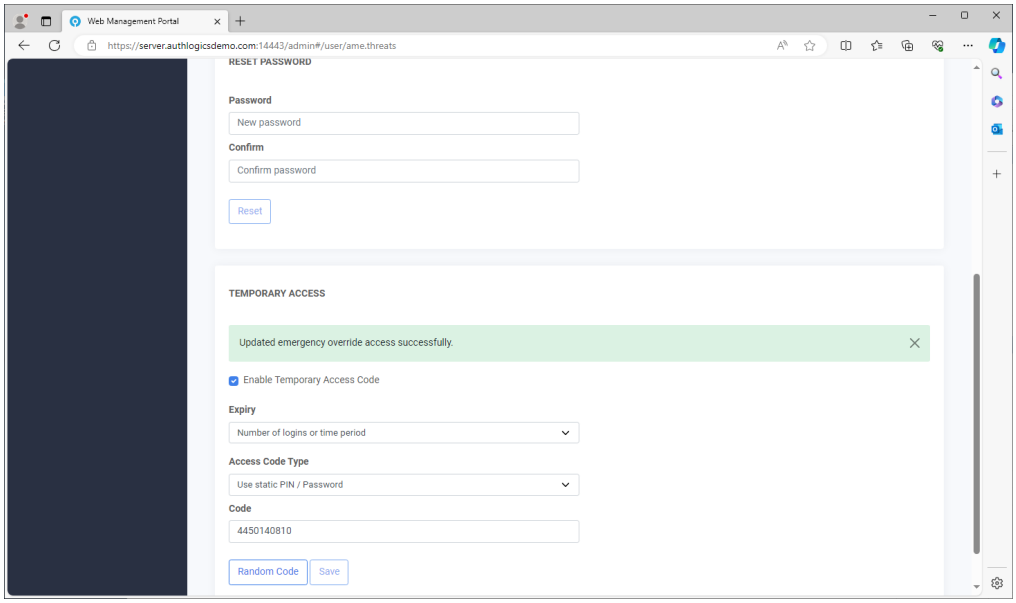
3. Enable the **Enable Temporary Access Code** option.



4. Select if the temporary access code expires after a certain number or logons, a period of time, or both.

5. You can configure the user to utilize their existing Active Directory password as a temporary access code as it is something they should already know.

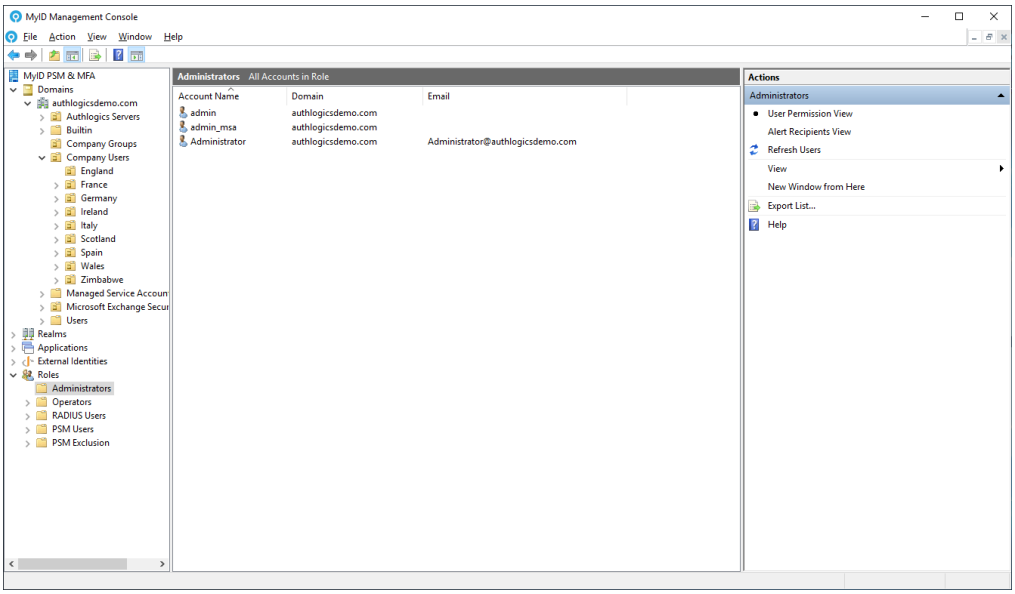
   Alternatively, specify a PIN or a password for the user of at least six digits. To assist in choosing a PIN or password you can click **Random Code** for a random temporary access code.



6. Click **Save**.

5.8 Roles

The MyID Authentication Server provides administrators with the ability to assign rights to users for MyID administrative functions and product features. Users can be designated as Administrators and Operators.



Administrators can fully administer MyID using the MyID Management Console and can perform day-to-day operational functions using the Web Management Portal.

Operators can access the Web Management Portal, which provides day-to-day operational functions, but they do not have access to the MyID Management Console.

If you have MyID MFA, authorization through RADIUS can be restricted using the RADIUS Users role.

If you have MyID PSM and you do not want to protect every account with PSM, user accounts that should be protected by PSM can be specified using the PSM Users role.

Note: Active Directory groups are created automatically for Administrators and Operators and are assigned to the roles by default. For all other roles, an Active Directory group must be created manually first.

You can:

- Use groups with roles.

  See section *5.8.1*, *Active Directory Group types for roles*.
- Work with administrator roles.

  See section *5.8.2*, *Administrator role views*.
- Manage administrative roles.

  See section *5.8.3*, *Managing administrative roles*.
- Manage the role for PSM users.

  See section *5.8.4*, *Managing the Password Security Management Users role*.
- Manage the role for RADIUS users.

  See section *5.8.5*, *Managing the RADIUS Users role*.

5.8.1 Active Directory Group types for roles

Both Global and Universal Security groups can be used with all MyID Roles. Group nesting is supported – groups may contain other groups.

In addition, both Global and Universal Distribution groups can be used with the MyID Administrators Role to allow people to receive administrative alerts, but not have administrative permissions. For more information, see section *5.8.2*, *Administrator role views*.

For multi-domain forests, the groups can be created in any domain in the forest. It is recommended that Universal groups are used in multi-domain forests so that Global Catalog servers can be contacted to check role membership, otherwise, Domain Controllers from other domains may need to be contacted, which can affect performance depending on the infrastructure.

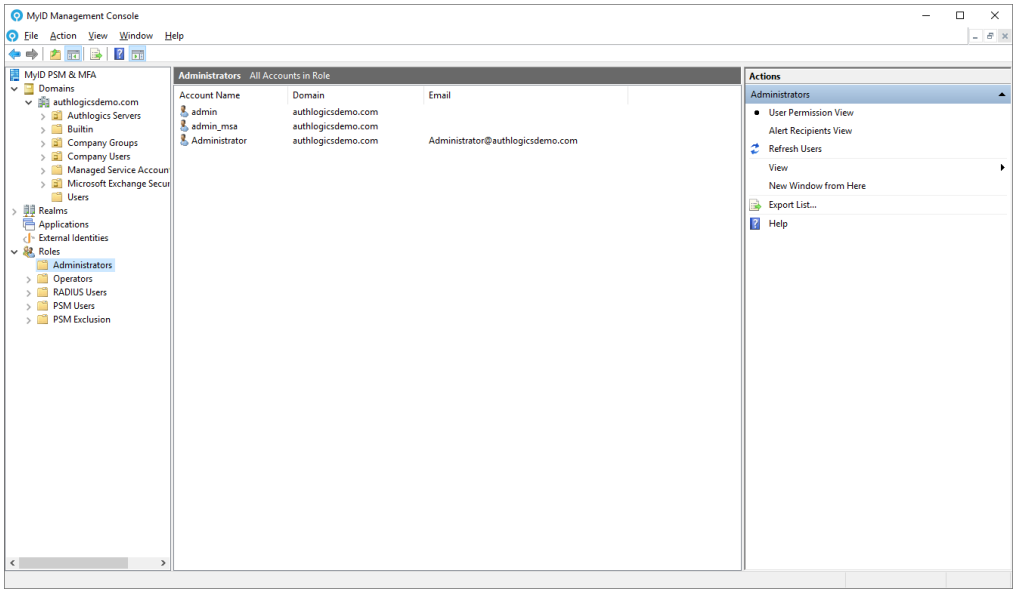
5.8.2 Administrator role views

The Administrator Role is dual purpose and therefore has the following views:

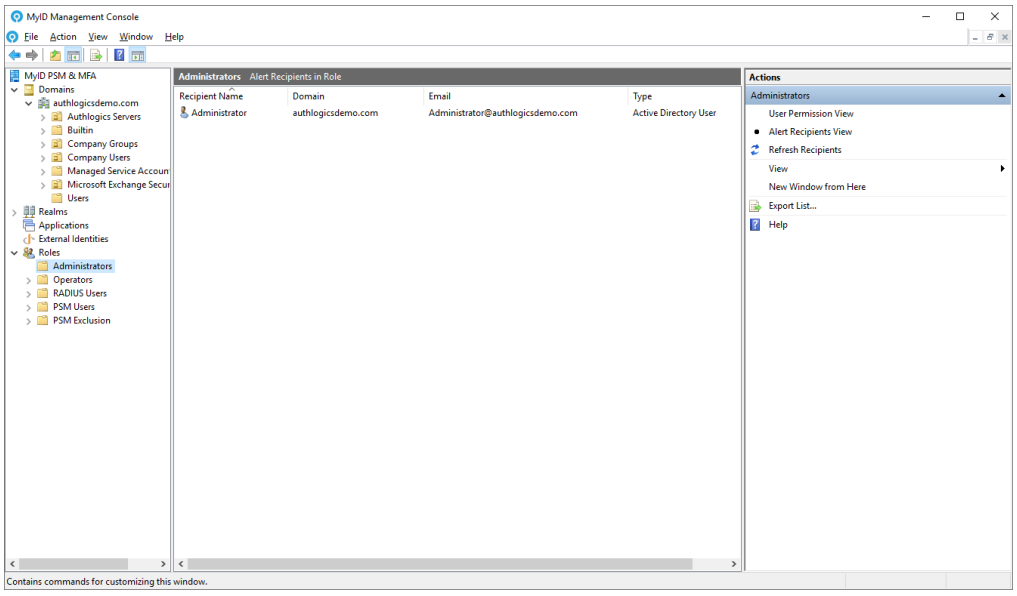
- **User Permissions View** – User accounts that have MyID Administrative permissions.
- **Alert Recipients View** – Email addresses that should receive Admin Alerts.

To toggle these views:

1. In the MyID Management Console, under **Roles**, expand **Administrators**.



2. In the **Actions** pane, select the view that you want.



This allows you to determine the resultant set of users of that case.

This feature may be useful if your admin personnel have split role user accounts and need to use their admin user account to perform administrative tasks but need to receive Admin Alerts on a non-admin user account.

Administrative Permissions can only be assigned to Active Directory User Accounts through either direct membership of the MyID Administrators group, or by being a member of a nested **Security group** (Global or Universal). Permissions are not assigned to Active Directory Contacts or through membership of a Distribution Group. The existence of an email address on a user account or group has no effect.

Admin Alerts can be sent to Active Directory User Accounts, Contacts or Groups (Global or Universal, Security or Distribution) that have an email address configured. They can be direct members of the Authlogics Administrators group, or a member of a nested Security or Distribution group (Global or Universal). If a nested group does not have an email address configured on it, the members of the group are processed individually, including other nested groups. However, if a group does have an email address configured on it, the email address of the group is used, and the members of the group are ignored, leaving the email system (for example, Microsoft Exchange) to deliver the email to the group members.

To use split role user accounts for Admin Alerts, create a Distribution group in the Active Directory, add the non-admin user accounts to it, then add the group to the Authlogics Administrators group.

When using Microsoft Exchange, create a Mail Enabled Distribution group, add the non-admin user accounts to it, then add the group to the Authlogics Administrators group. MyID then sends Admin Alerts to the group and not directly to the member.

5.8.3 Managing administrative roles

Role membership is managed through the corresponding Active Directory groups. These groups are created during the directory configuration and can be renamed and moved to different OUs as needed. You *must not* delete these groups.

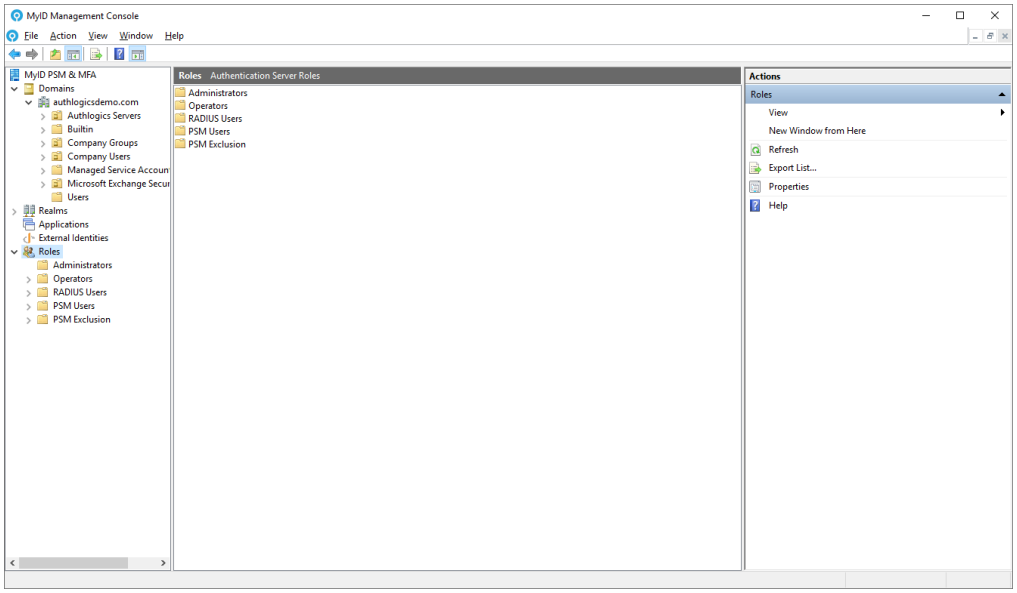
Non-administrative roles are optional and the group filtering for the role can be enabled or disabled as needed.

Role members cannot be added and removed using the MyID Management Console – this must be done by editing the appropriate Windows group using either the Active Directory Users and Computers MMC, or the Local Users and Groups MMC.

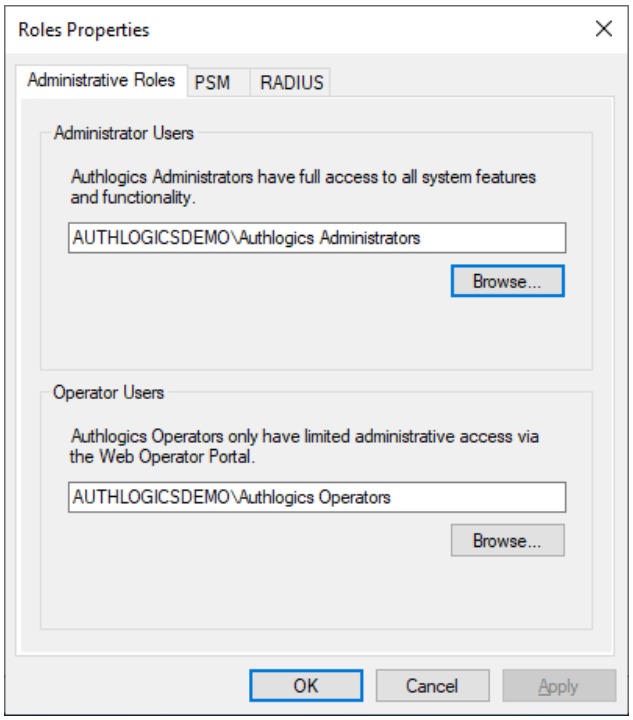
Note: When assigning Active Directory groups to MyID administrative roles, the Active Directory groups must already exist in the domain.

To assign Active Directory groups to MyID administrative roles:

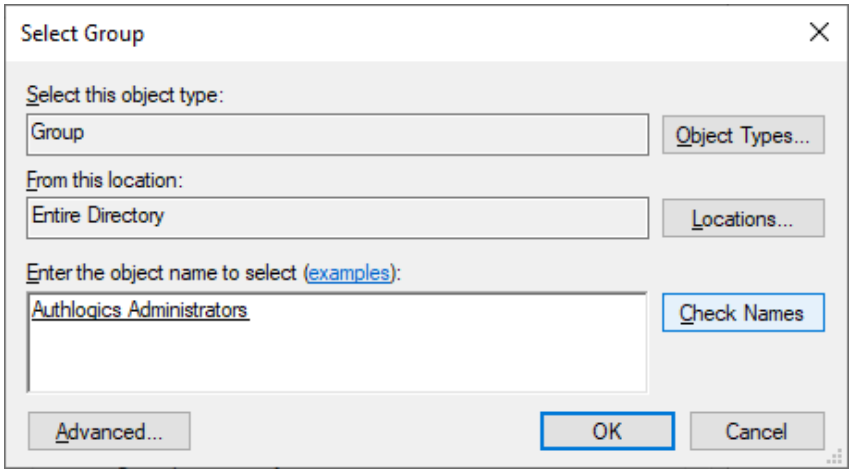
1. In the MyID Management Console, highlight the **Roles** node.



2. Click **Properties**, in the **Actions** pane.

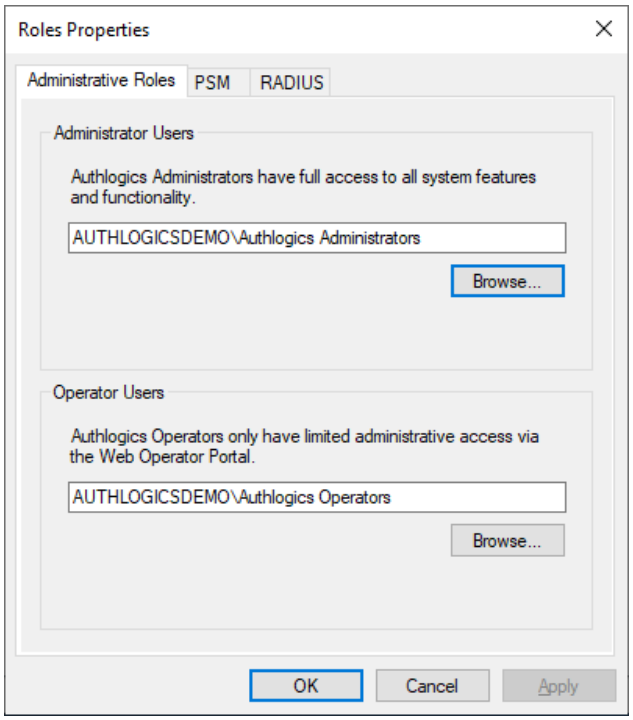


3. To select administrators, click **Browse** in the Administrator Users section.

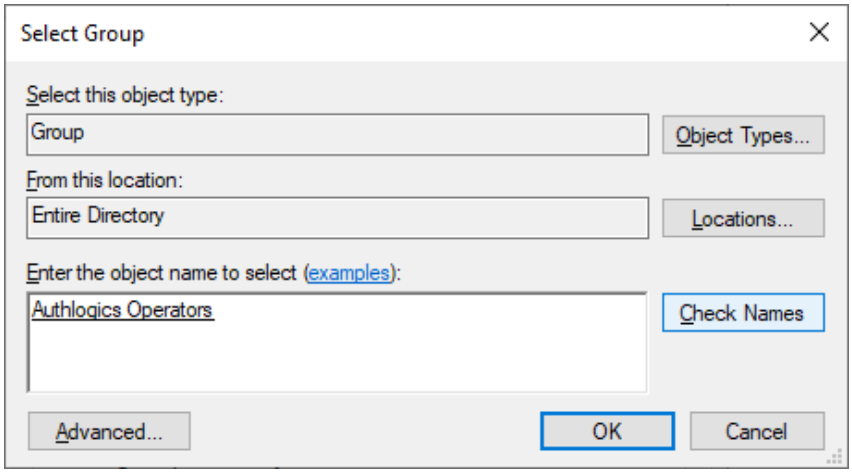


4. Locate the Active Directory group.

5. Click **OK**.



6. To select operators, click **Browse** in the Operator Users section.

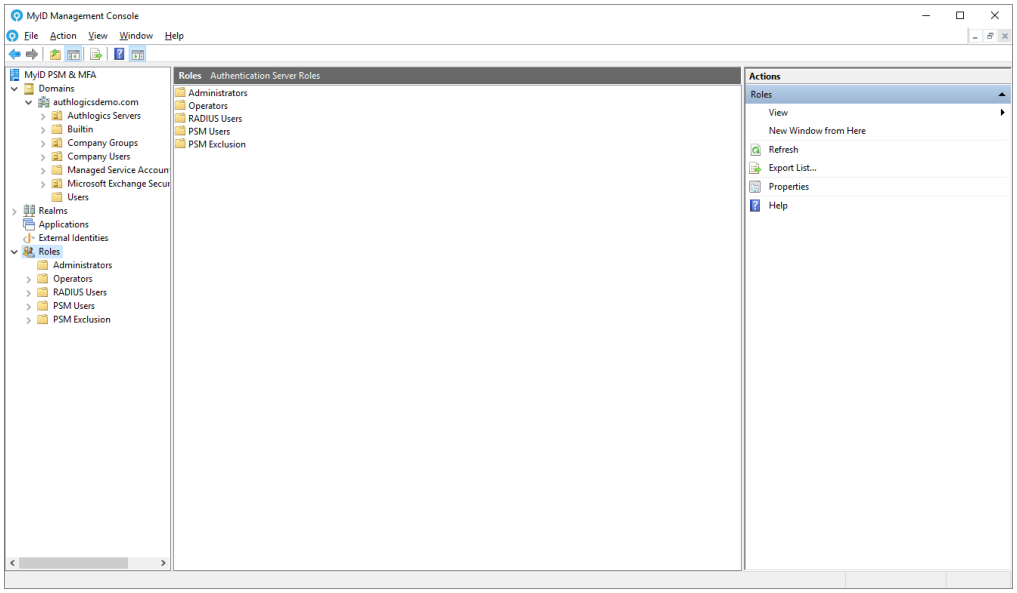


7. Locate the Active Directory group.
8. Click **OK**.

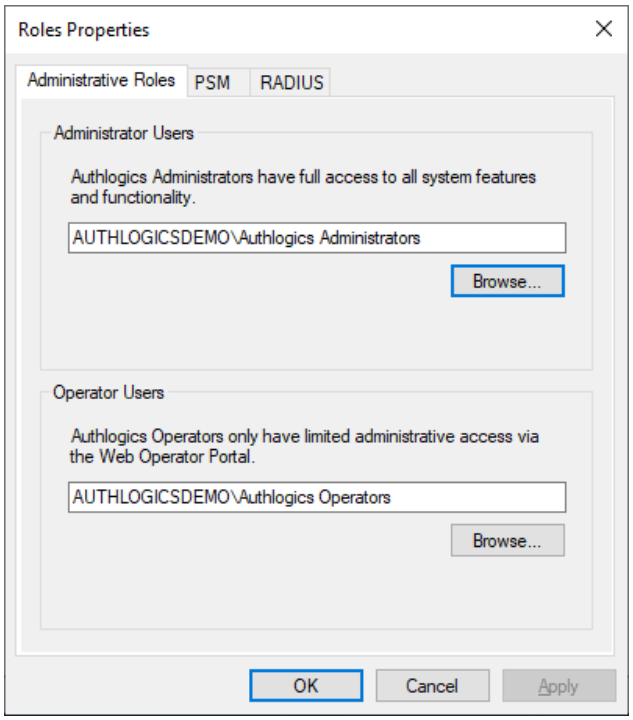
5.8.4 Managing the Password Security Management Users role

To assign an Active Directory group to the MyID Password Security Management Users role:

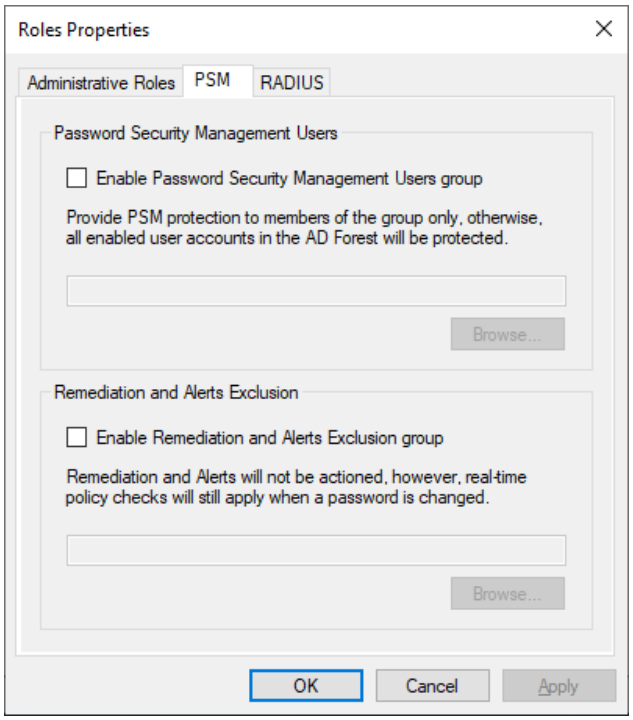
1. In the MyID Management Console, highlight the **Roles** node.



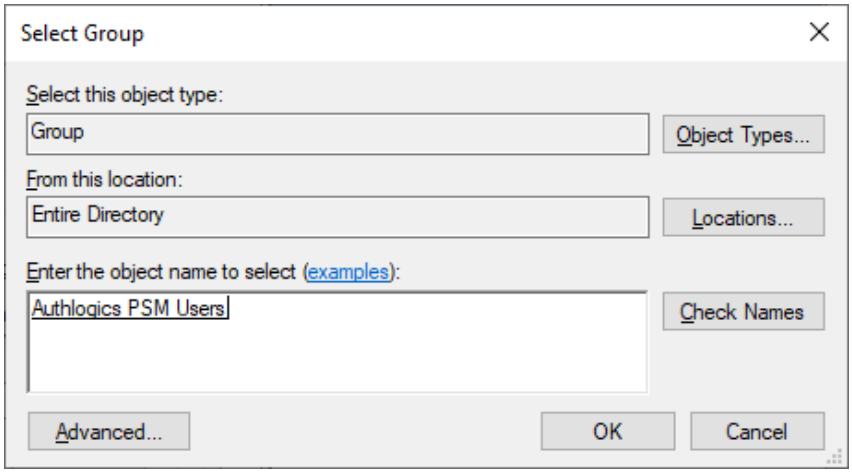
2. Click **Properties**, in the **Actions** pane.



3. Select the **PSM** tab.

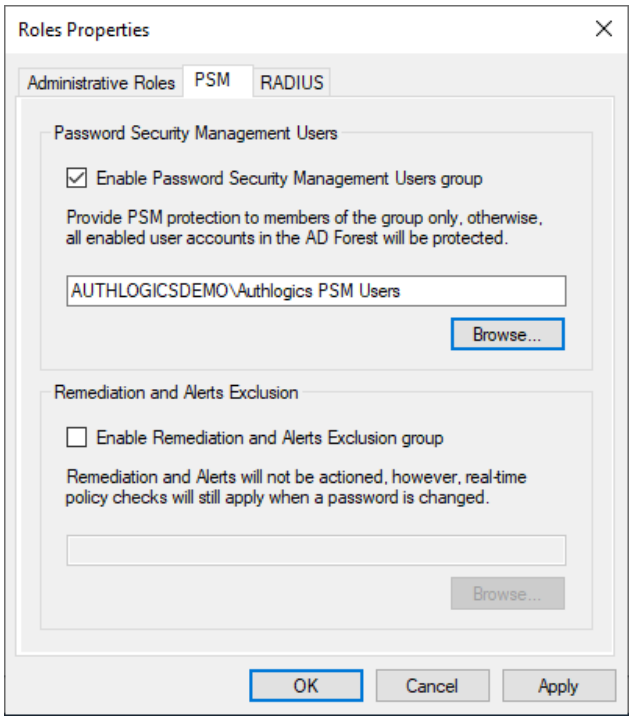


4. Enable the **Enable Password Security Management Users group** option.
5. Click **Browse**.



6. Locate the Active Directory Password Policy group.

7. Click **OK**.



8. Click **OK**.

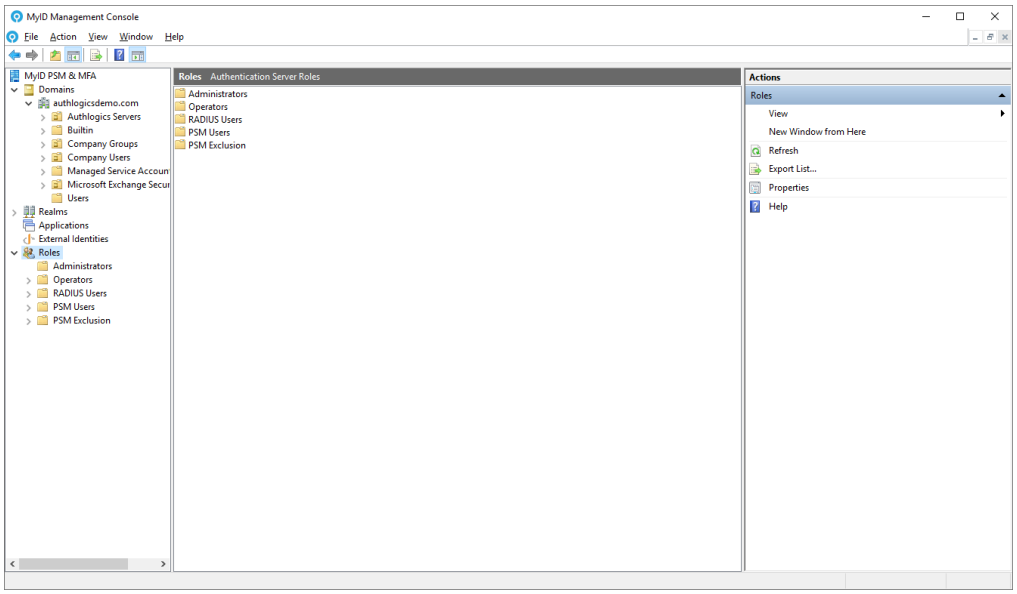
To view the members, in either the **Roles** node or the **PSM Users** node, in the Action pane, click **Refresh**.

5.8.5 Managing the RADIUS Users role

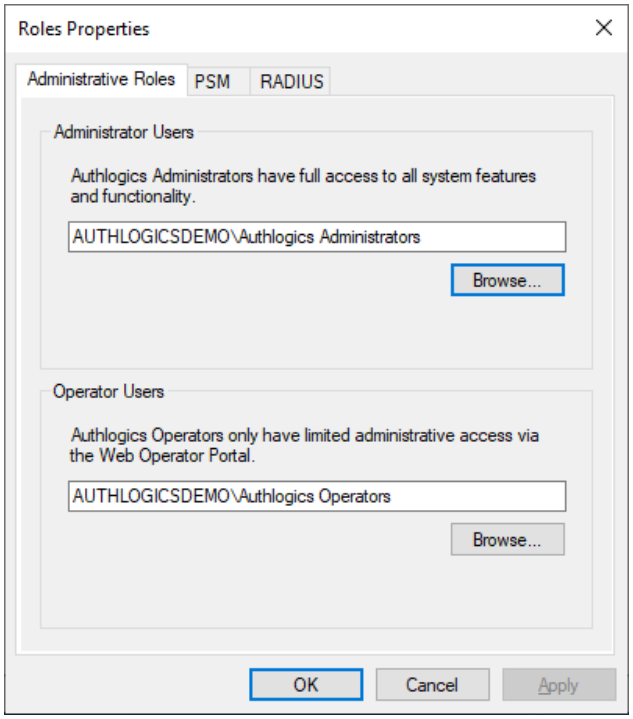
To assign an Active Directory group to the MyID RADIUS Users role:

Note: The Active Directory group must already exist in the domain. A default RADIUS group is *not* created during setup.

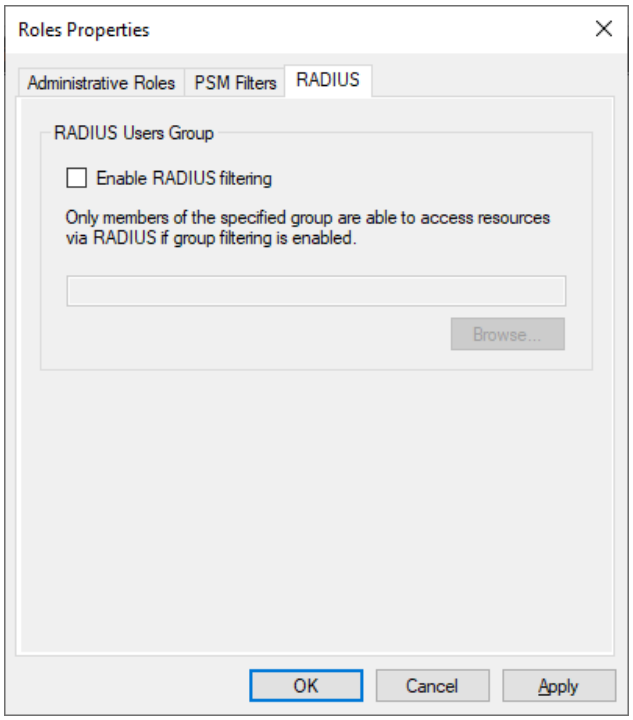
1. In the MyID Management Console, highlight the **Roles** node.



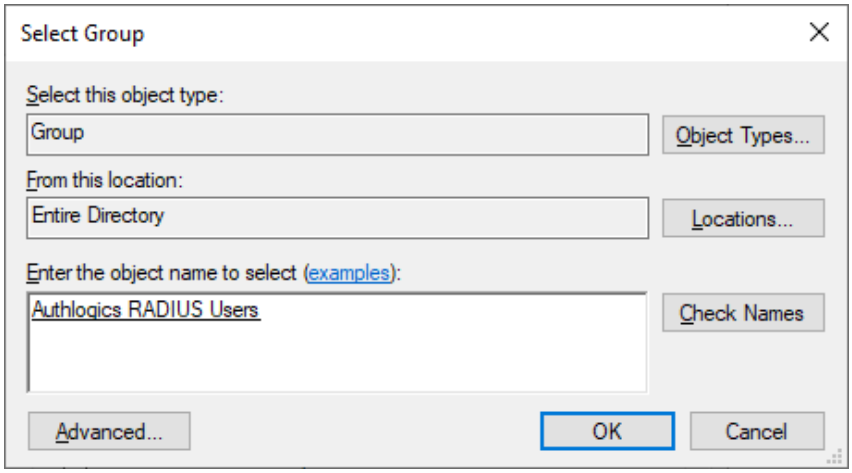
2. Click **Properties**, in the **Actions** pane.



3. Select the **RADIUS** tab.

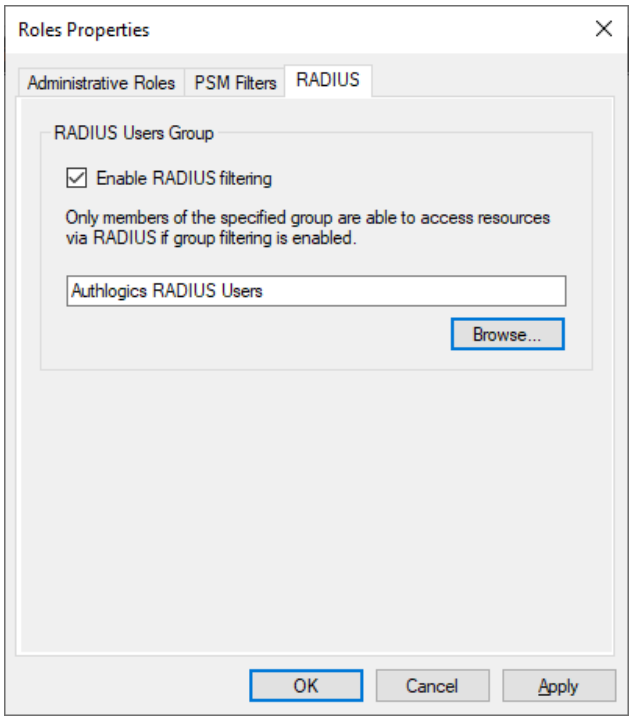


4. Enable the **Enable RADIUS filtering option**.
5. Click **Browse**.



6. Locate the Active Directory RADIUS group.

7. Click **OK**.



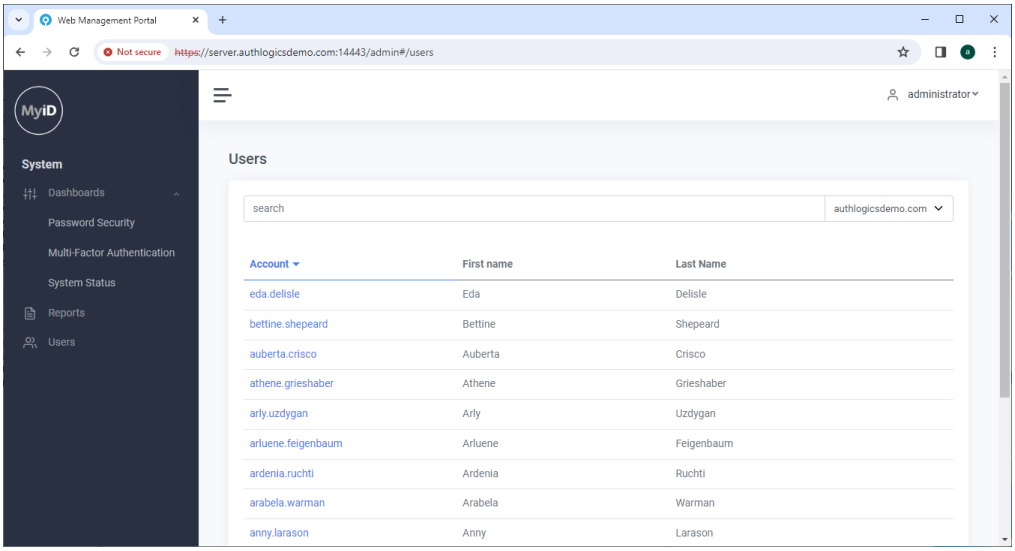
8. Click **OK**.

To view the members, in either the **Roles** node or the **PSM Users** node, in the Action pane, click **Refresh**.

5.9 The Web Management Portal

The MyID Web Management Portal provides operational staff with an easy-to-use web-based interface to perform common administrative tasks. Members of the Operators Role may only use the Web Management Portal. The Web Management Portal UI is well suited to tablet and touch-based devices.

The Web Management Portal includes dashboards to provide a high-level overview of core Password Security and Multi-Factor Authentication events. The dashboard also provides administrators with the ability to generate reports.



Day-to-day user management functions available through the Web Management Portal include:

- Viewing all MyID events for the selected user.
- Enabling or disabling an account.
- Unlocking an account.
- Updating a Mobile / Cellular phone number.
- Resetting user passwords.
- Configuring Temporary Access Codes.
- Viewing, enabling, disabling, and resyncing MFA devices.
- Configuring MFA settings.
- Resetting a Grid Pattern.
- Resetting a Phrase answers.
- Resetting a One Time Code PIN.
- Verifying a One Time Code.
- Performing 2-Way-Identification.

The Web Management Portal does *not* allow the following actions:

- Modification of the global settings.
- Adding new user accounts.
- Provisioning MFA technologies.
- Changing the Pattern size.
- Changing logon times.

The Web Management Portal is compatible with multiple web browsers including Microsoft Edge, Google Chrome, Firefox, and Safari. Internet Explorer may function but is no longer recommended or supported.

This section contains information on:

- Accessing the portal.

  See section *5.9.1*, *Accessing the Web Management Portal*.
- Using the portal.

  See section *5.9.2*, *Using the Web Management Portal*.
- Viewing user events.

  See section *5.9.3*, *Viewing all user events*.
- Viewing and disabling devices.

  See section *5.9.4*, *Viewing and disabling devices for a user account*.
- Removing devices.

  See section *5.9.5*, *Removing a device from a user account*.

5.9.1 Accessing the Web Management Portal

The Web Management Portal is accessed using Forms-based authentication with MFA or passwords, or Windows-based authentication.

There is a start menu shortcut on the MyID server for easy access. Alternatively, you can use the following URL from any remote location:

```
https://<servername>:14443/admin
```

Where `<servername>` is the name of your MyID Authentication Server.

The portal can be accessed using HTTPS on port TCP:14443.

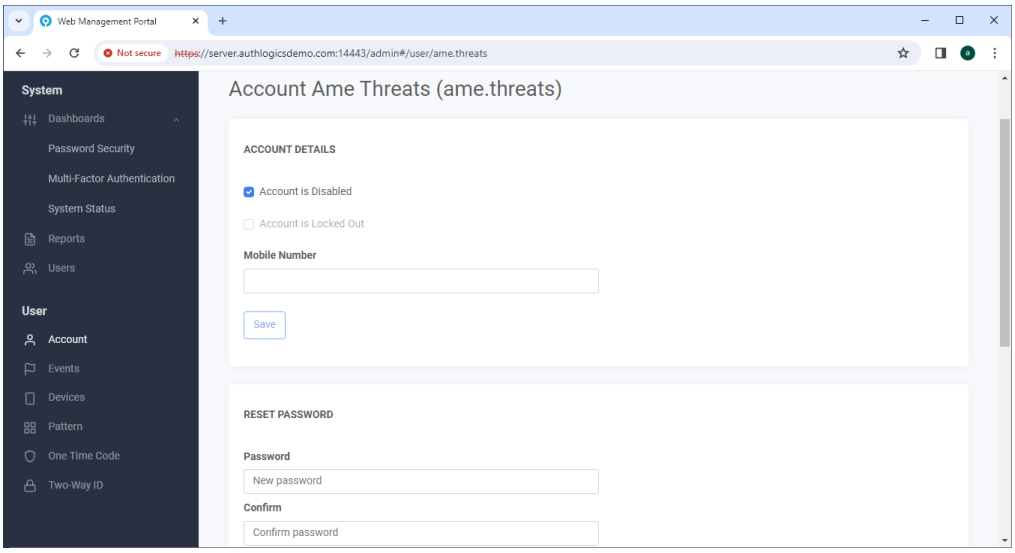
The installation process configures a self-signed SSL certificate for use with the MyID Authentication Server. You can replace this certificate with one from an internal or third-party trusted root when needed.

5.9.2 Using the Web Management Portal

When using the Web Management Portal, start by selecting the domain in the forest that you want to administer. If there is only a single domain then it is selected automatically.

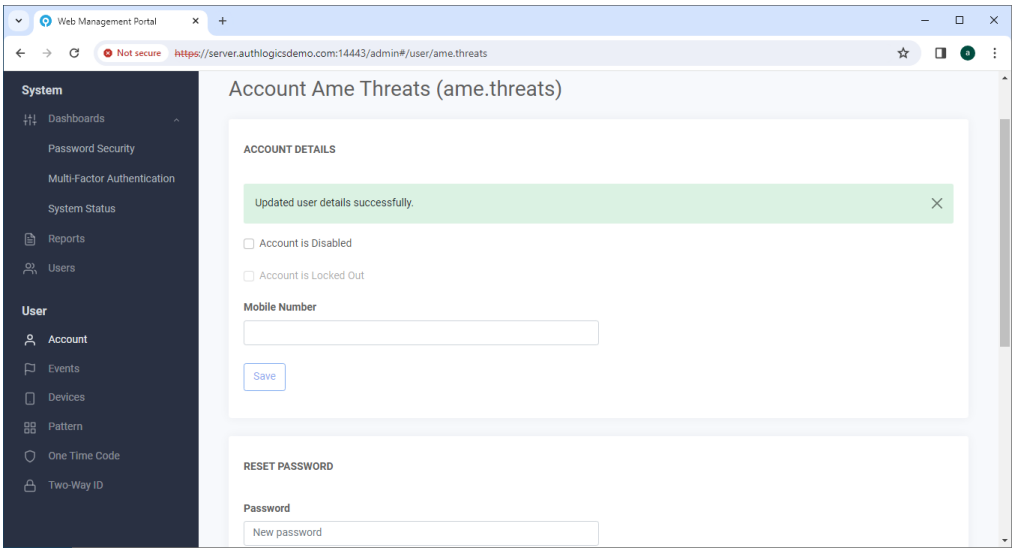
To search for a particular user, or to narrow down the list of users, enter some search criteria in the Search box and press enter.

To make changes to a user account, click a user to view and edit the account details.



When you have finished making changes to the user account, click **Save**.

A notification at the top of the console displays if the update is successfully saved.



A record of changes made to user accounts is kept in the MyID Server Application Event Log.

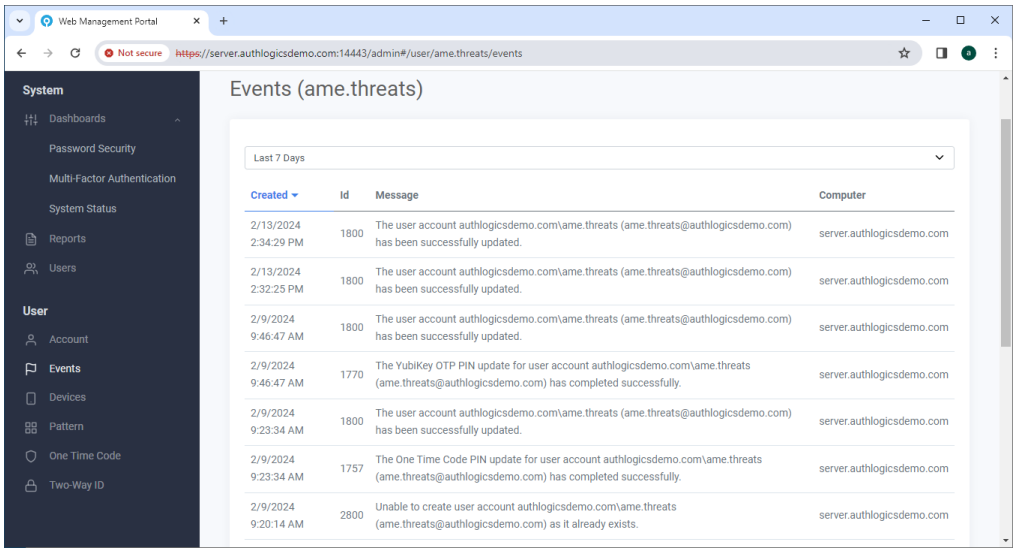
5.9.3 Viewing all user events

Every user-related event is registered in the Windows Events log on the MyID Authentication Server or Domain Controller that processed the request. In environments containing multiple MyID Authentication Servers and Domain Controllers, it can be challenging to locate the server containing the required log data.

The Web Management Portal Events view consolidates events from all servers into a single view for each user.

To view a user's events:

1. Select the user account for which you want to access events.
2. In the User section, click **Events**.

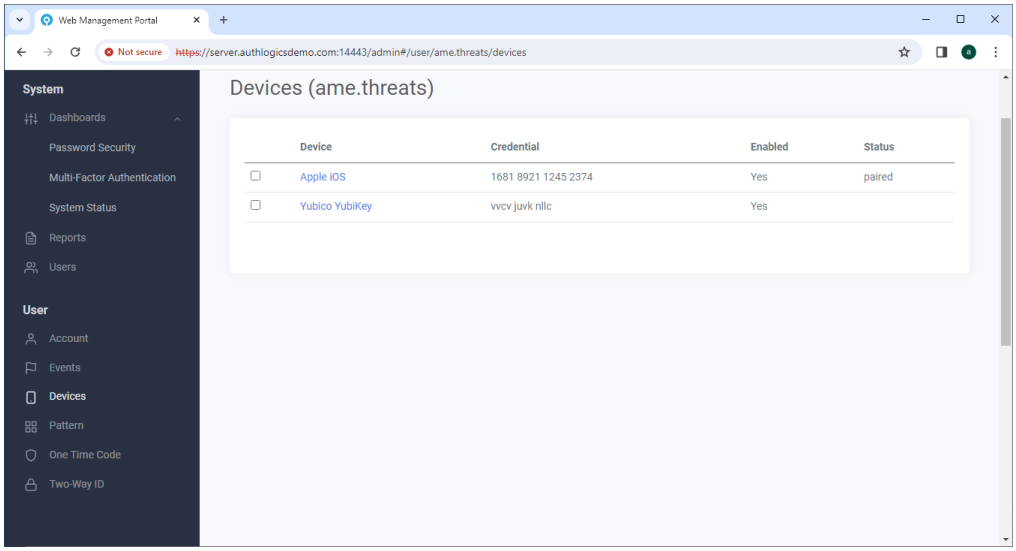


5.9.4 Viewing and disabling devices for a user account

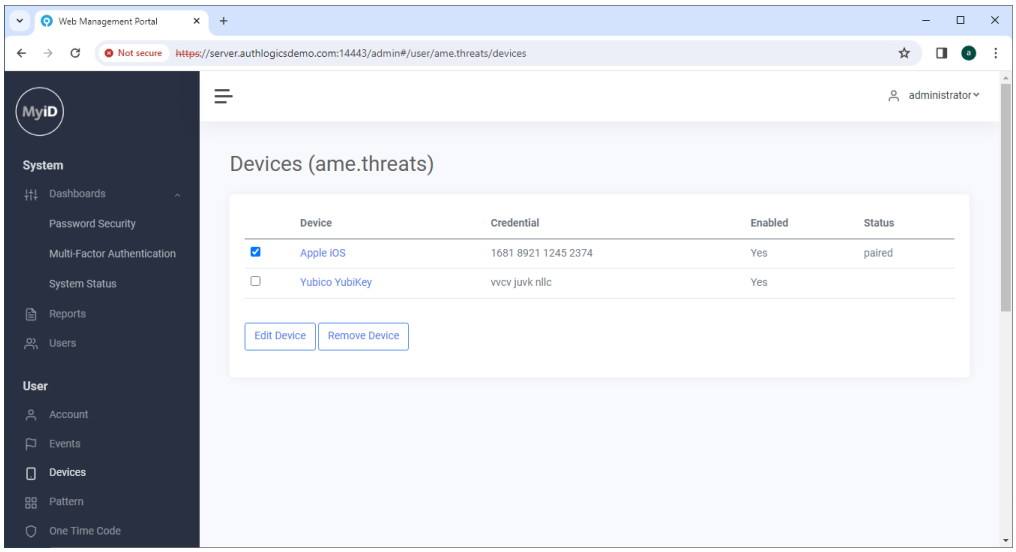
A user account can be linked to up to ten devices running a soft token app. These can be assigned through the Web Management Portal, the MMC or the User Self Service Portal.

To view or disable a device:

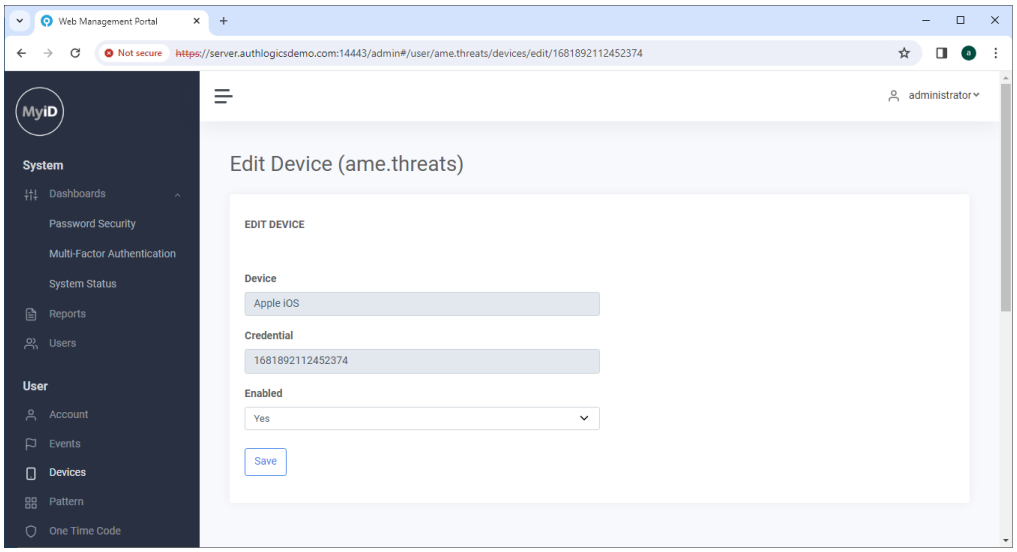
1. Select the user account that owns the device.
2. In the User section, click **Devices**.



3. Select the device to modify.

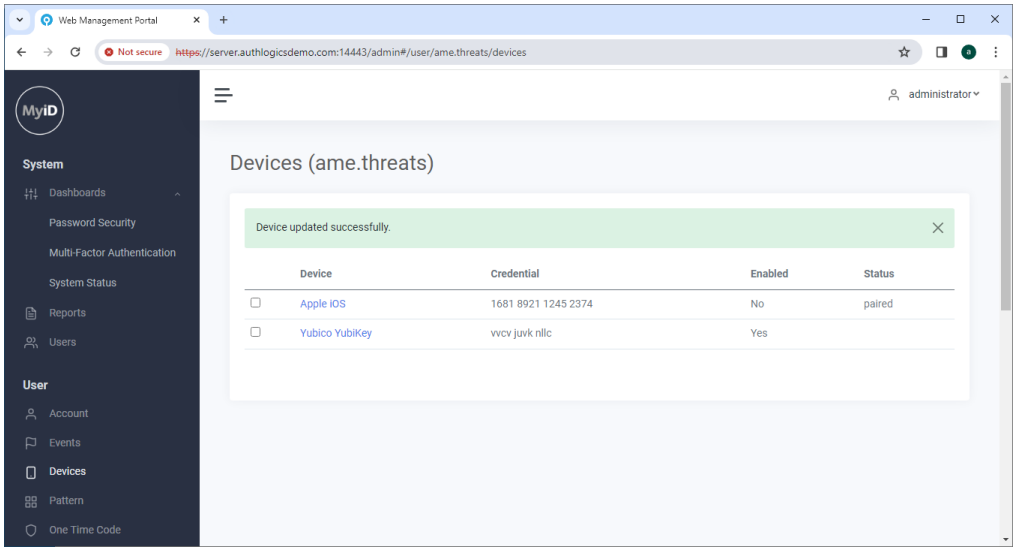


4. Click **Edit Device**.



You are now viewing the details of the device.

5. To change the enabled status of the device:
   - To disable the device, set **Enabled** to `No`.
   - To enable the device, set **Enabled** to `Yes`.
6. To confirm the enabled status of the device, click **Save**.

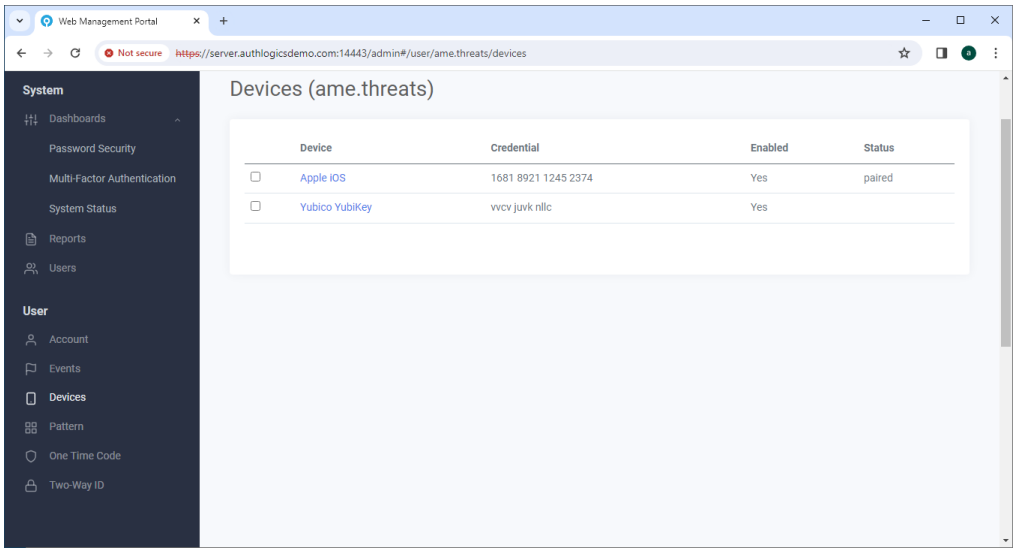


The enabled status of the device is now changed.

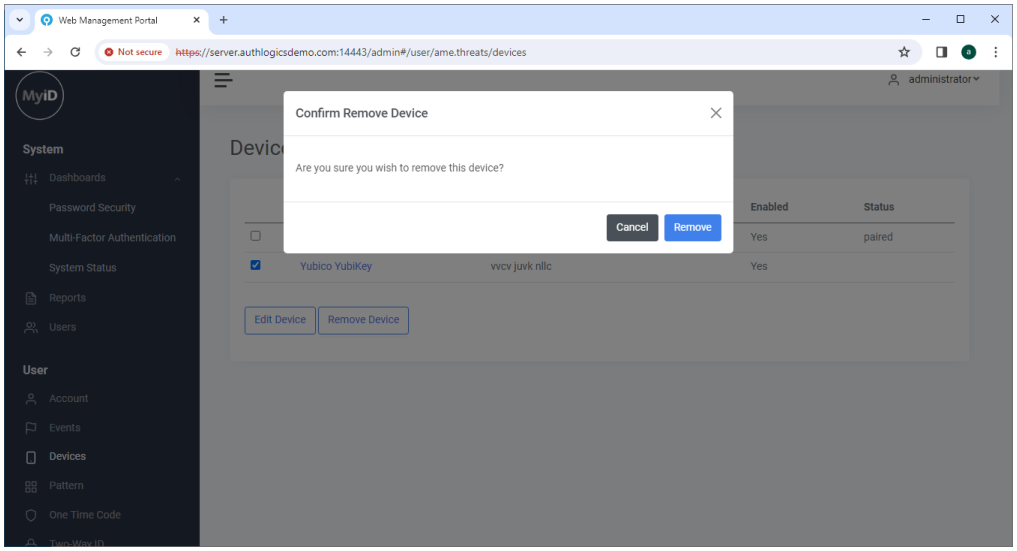
5.9.5 Removing a device from a user account

To remove a device:

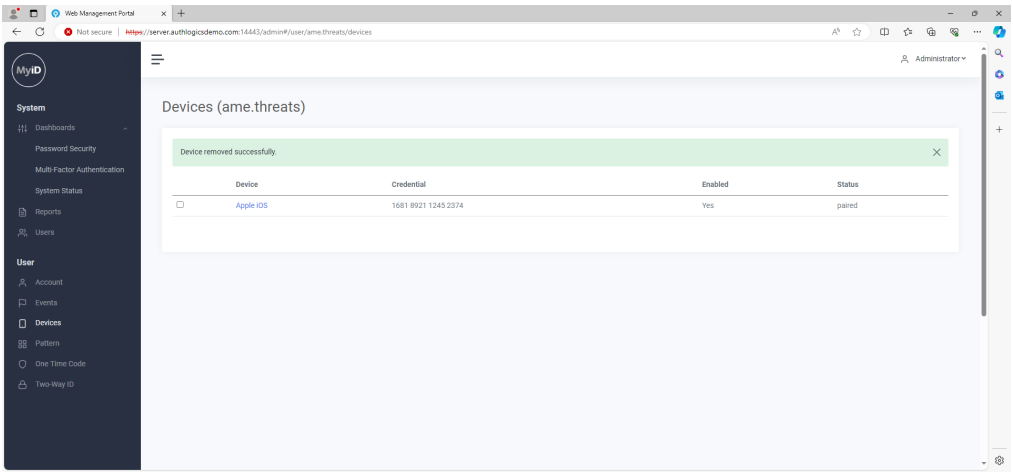
1. Select the user account from which you want to remove the device.
2. In the User section, click **Devices**.



3. Select the device that you want to remove.
4. Click **Remove Device**.



5. Click **Remove** to confirm that you want to remove the device.



The device is now removed.

5.10 Web Management Portal dashboards

To use the Web Management Portal dashboards, in the System section of the Web Management Portal, click **Dashboards**.

The Dashboard is broken into the following categories:

- System Status.

  See section *5.10.1*, *System Status*.

- Multi-Factor Authentication – the availability of this is dependent on applied MFA and PSM licenses.

  See section *5.10.2*, *Multi-Factor Authentication*.

- Password Security – the availability of this is dependent on applied MFA and PSM licenses.

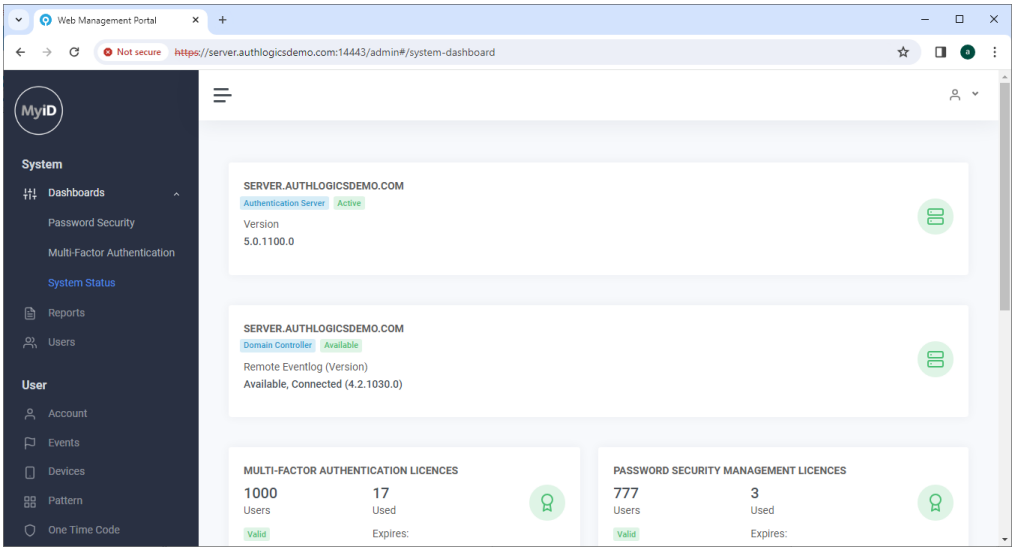
  See section *5.10.3*, *Password Security*.

5.10.1 System Status

The System Status area of the Dashboards shows all the MyID Authentication servers, Domain Controllers, and applied licenses through the deployment.

Each server listing shows the role of the server in the environment (whether it is a MyID Authentication Server and/or a Domain Controller), the server's availability state, and lists MyID's ability to access the server's Windows Event Logs.

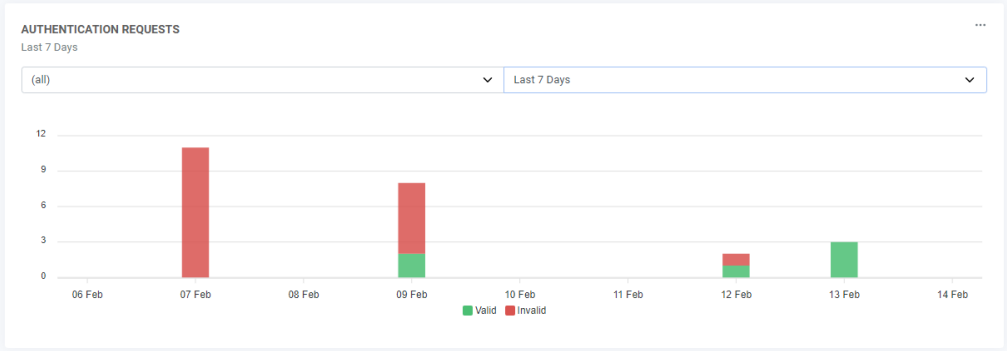
The license components show the applied licenses, the validity of the licenses, the quantities of the license assigned and used, as well as the license's expiry date.



5.10.2 Multi-Factor Authentication

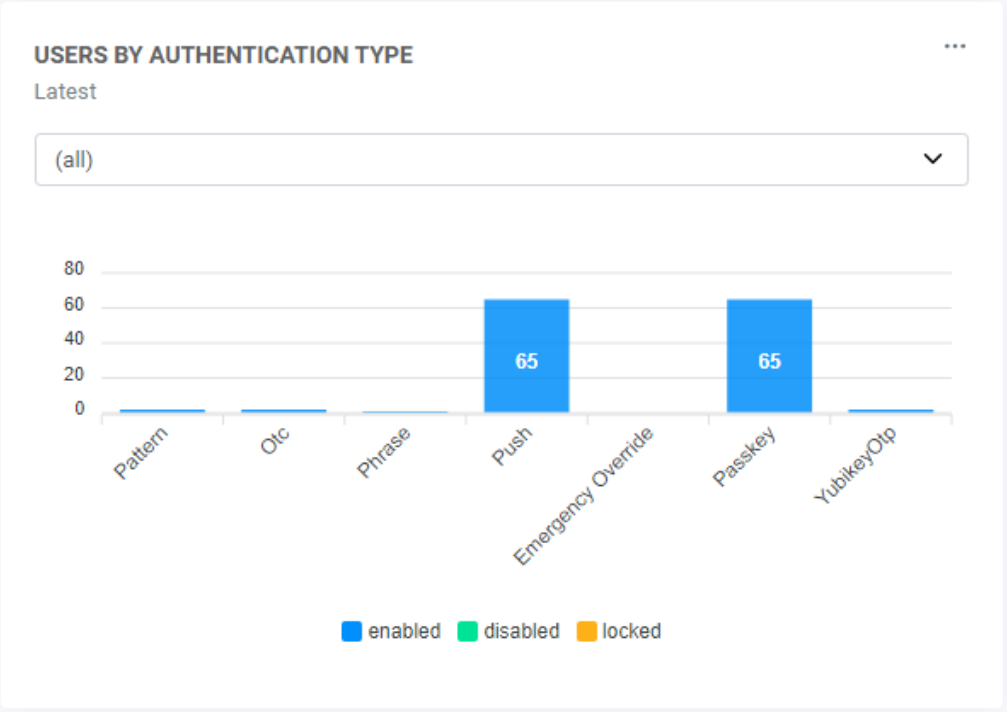
The Multi-Factor Authentication dashboard shows a near-live view of:

- **Authentication Requests** – displays all valid and invalid MFA authentication requests over the selected period.

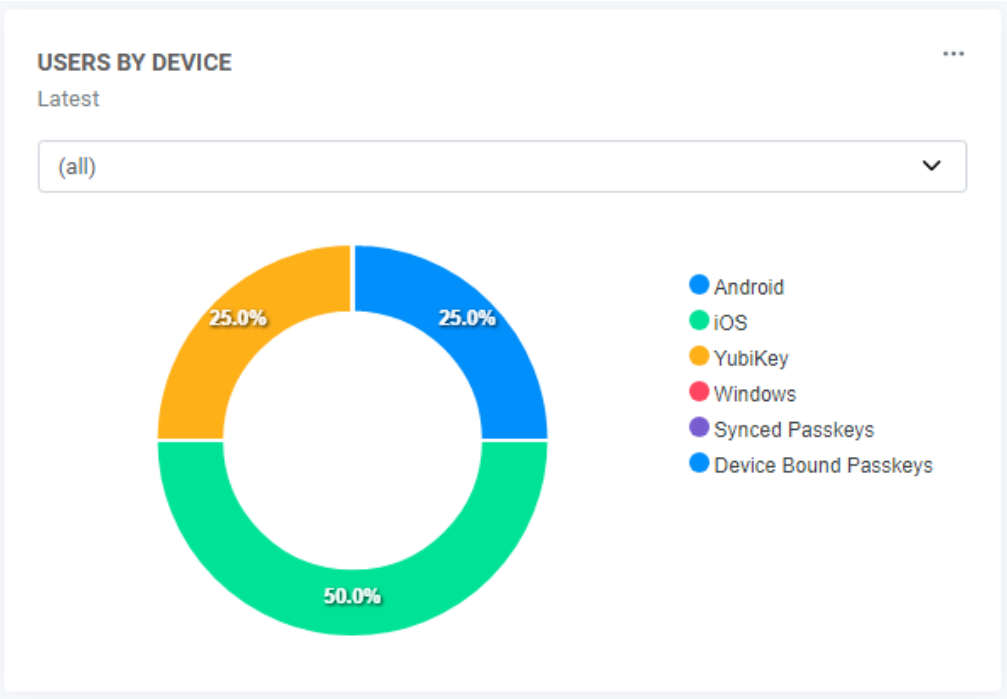


- **Authentication Request By Type** – breaks down successful authentication requests by MyID MFA authentication type.

- **Users By Authentication Type** – displays the total number of users who are provisioned to each MyID MFA authentication type.



- **Users By Device** – displays the percentages of device types that are provisioned to users.

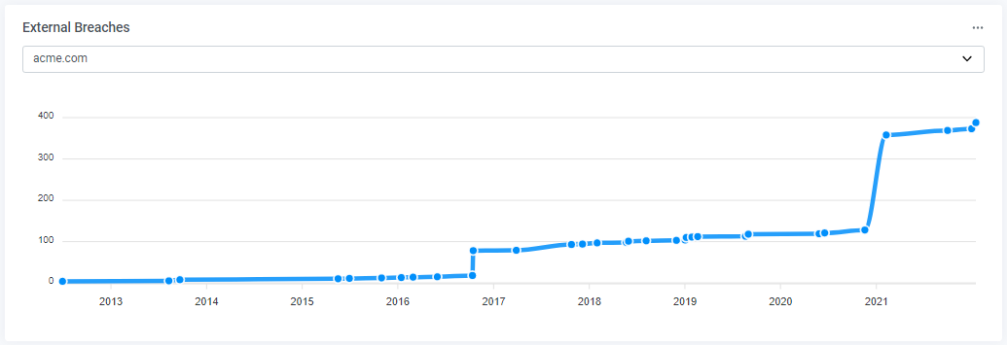


Multi-Factor Authentication dashboards reflect the information across the Active Directory forest or for each domain over the selected period. All dashboard reports can be downloaded to SVG or CSV formats.

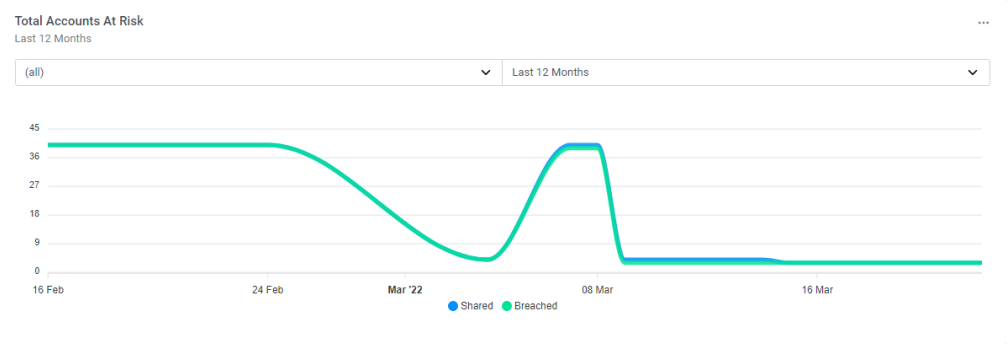
5.10.3 Password Security

The Password Security Dashboard shows a near-live view of:

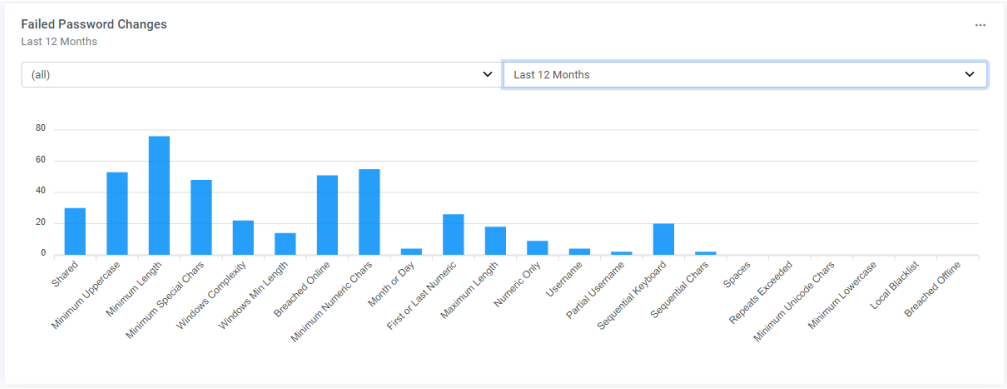
- **External Breaches** – shows the password breaches for the organization according to the MyID Password Breach database.



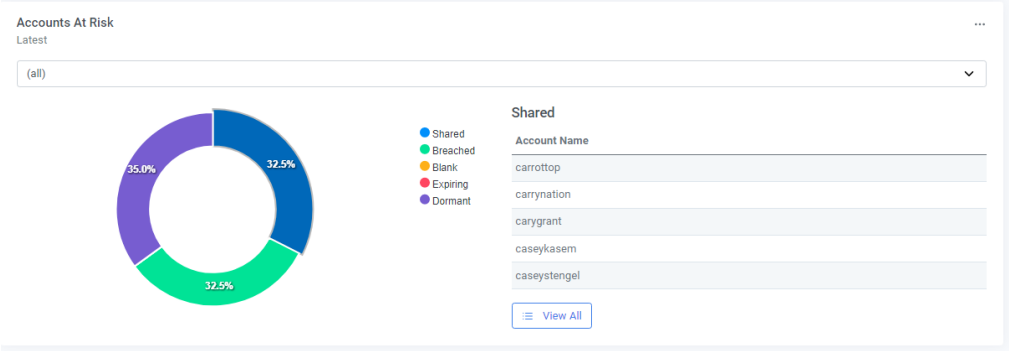
- **Total Accounts at Risk** – shows the number of accounts using breached or shared passwords as detected over the specified period.



- **Failed Password Changes** – shows the failed password changes and the reason for the password rejection over the selected time period.



- **Users Accounts at Risk** – shows all the accounts with passwords that are shared, breached, blank, or soon to expire. This dashboard also shows dormant accounts.



  If you click **View All**, all the accounts that fall under the highlighted category are displayed.

Password Security dashboards reflect the information across the Active Directory forest or for each domain over the selected period. All dashboard reports can be downloaded to SVG or CSV formats.

5.11 Customizing the portal interfaces

You can customize the portal interfaces in the following ways:

- Customize authentication for the Web Management Portal or the Self Service Portal.

  See section *5.11.1*, *Portal authentication type settings*.
- Customize the IdP logon page.

  See section *5.11.2*, *IdP Logon Page customization*.
- Customize the Self Service Portal.

  See section *5.11.3*, *SSP customization*.
- Carry out advanced customization of the Self Service Portal.

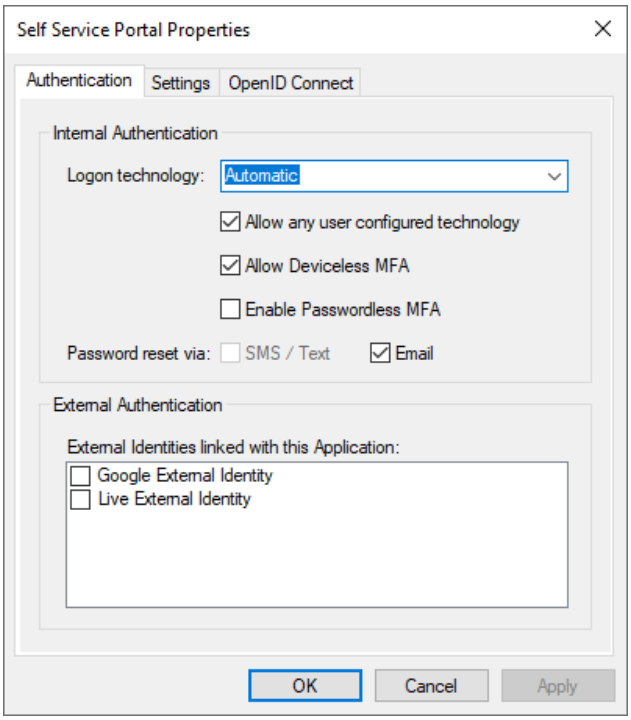
  See section *5.11.4*, *Advanced Self Service Portal UI customization*.

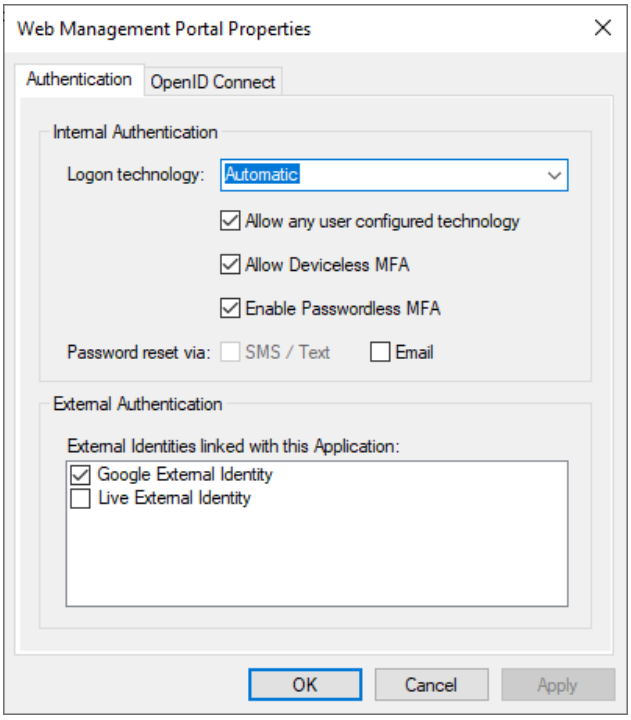
5.11.1 Portal authentication type settings

The Self Service Portal and Web Management Portal support both Windows Authentication and other forms of authentication – for example, One Time Codes and Grids.

A logon page can be displayed to require strong authentication using MyID supported MFA technologies or password. You can set the logon page to use a specific technology only, or to auto to cater for all MFA technologies at once. In addition, the user's Active Directory password can be required on the logon page.

To change the Self Service Portal or Web Management Portal authentication type, on the relevant application settings' Authentication tab, select the desired **Logon technology** from the dropdown list.





5.11.1.1 Using Deviceless OTP with non-Windows authentication

MyID Grid Pattern and Phrase questions can be displayed on the login page to cater for Deviceless OTP authentication. If Deviceless OTP authentication is not required, the logon challenge can be disabled on the logon page.

To allow this, enable the **Allow Deviceless MFA** option on the relevant portal.

5.11.2 IdP Logon Page customization

You can customize the branding look of the IdP logon page by editing settings in the `appsettings.json` file. This can be found at the following location:

`C:\Program Files\Authlogics Authentication Server\Web\IdP\appsettings.json`

Item	Value	Details
`LogoPath`	`/img/logo-colour-transparent.png`	A full or relative path to a graphic file such as a company logo.
`UserGuideUrl`	`https://www.intercede.com/wp-content/uploads/2024/03/MyID-Self-Service-Portal-User-Guide-5.0.pdf`	A full or relative path to a downloadable user guide document.
`PasswordLabelText`	`Password`	Any custom text to help the user know which password is required; for example, `Coprnet Password`.

Note: The installer does *not* maintain backups of the `appsettings.json` files so manual backups should be taken.

Note: Editing other values in the `appsettings.json` files is not supported.

5.11.3 SSP customization

You can customize the branding look and other user interface features of the Self Service Portal page by editing settings in the `appsettings.json` file. This can be found at the following location:

```
C:\Program Files\Authlogics Authentication Server\Web\SSP\appsettings.json
```

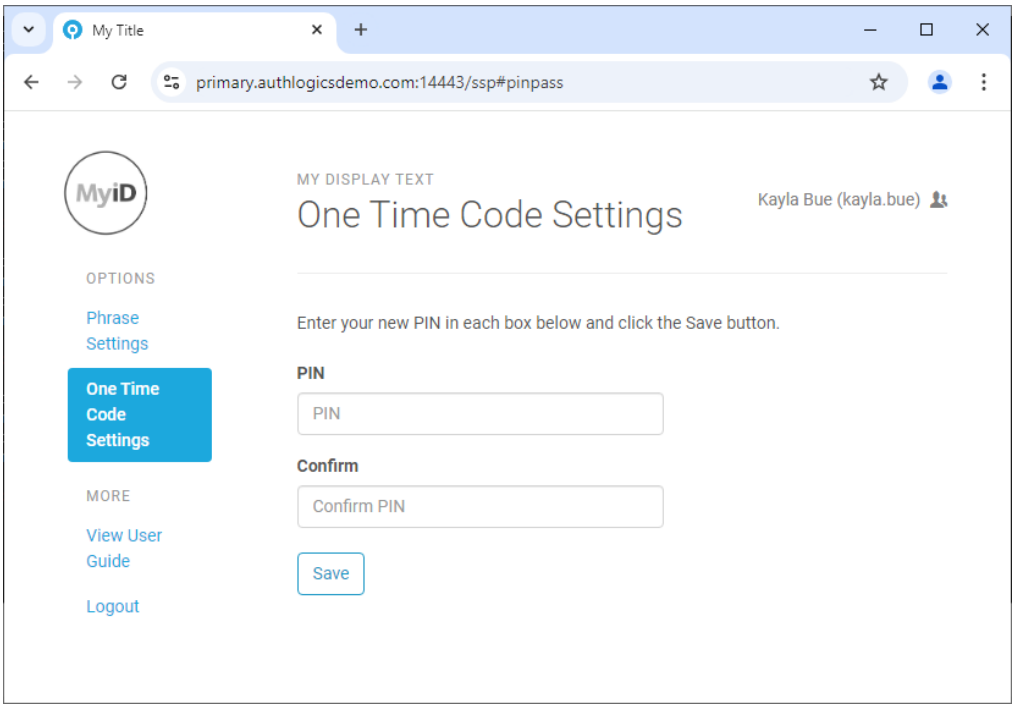
Item	Value	Details
`Title`	`Self Service Portal`	Any custom text. The title of the SSP web page.
`DisplayText`	`Self Service Portal`	Any custom text. This is displayed at the top of the SSP web page.
`LogoPath`	`/ssp/img/myid-none-grey.png`	A full or relative path to a graphic file such as a company logo.
`UserGuideUrl`	`https://www.intercede.com/wp-content/uploads/2024/03/MyID-Self-Service-Portal-User-Guide-5.0.pdf`	A full or relative path to a downloadable user guide document.

Item	Value	Details
`PasswordLabelText`	`Password`	Any custom text to help the user know which password is required; for example, `Coprnet Password`.
`IncreasedAccessibilityRequirements`	`False`	If set to `True`, this enables the high-contrast UI customization. For more information, see section *5.11.4*, *Advanced Self Service Portal UI customization*.
`ShowResetPinGridIndicators`	`True`	If set to `False`, the user cannot choose to display the numbered indicators that appear when they click on the grid on the Grid Settings screen.

Note: The installer does *not* maintain backups of the `appsettings.json` files so manual backups should be taken.

Note: Editing other values in the `appsettings.json` files is not supported.

This is an example of the SSP with the `Title` set to `My Title` and the `DisplayText` set to `My Display Text`.



Note: While the content of the SSP appears in the primary language of the browser, assuming the language is supported, the `Title` and the `DisplayText` are not translated, and you must change them in the `appsettings.json` file. For information on which languages are supported, see the *Language requirements* section of the ***Self Service Portal User Guide***.

5.11.4 Advanced Self Service Portal UI customization

You can carry out advanced customization of the Self Service Portal using CSS and JavaScript. The portal has built-in customization files where all customizations can be placed. These are in the following locations:

```
C:\Program Files\Authlogics Authentication Server\Web\SSP\wwwroot\css\custom.css
```

```
C:\Program Files\Authlogics Authentication Server\Web\SSP\wwwroot\js\custom.js
```

There is a high-contrast UI customization file for SSP in the following location:

```
C:\Program Files\Authlogics Authentication Server\Web\SSP\wwwroot\css\high-contrast.css
```

To allow a more accessible, high contrast customization:

1. Update your custom CSS file:
   - If you already have UI customizations that you want to preserve, copy the contents of the SSP `high-contrast.css` file and add it into your `custom.css`.
   - If you do not have an existing UI customization, rename the SSP `high-contrast.css` file to `custom.css`.
2. Enable the SSP `IncreasedAccessibilityRequirements` flag.

For more information, see section *5.11.3*, *SSP customization*.

5.11.4.1 Advanced Web Management Portal UI customization

You can customize the Web Management Portal using CSS. The portal has a built-in customization file where you can place customizations:

```
C:\Program Files\Authlogics Authentication Server\Web\Admin\wwwroot\css\custom.css
```

5.11.4.2 Advanced IdP UI customization

You can customize the IdP login page using CSS. The portal has a built-in customization file where you can place customizations:

```
C:\Program Files\Authlogics Authentication Server\Web\IdP\wwwroot\css\custom.css
```

There is a high-contrast UI customization file for IdP in the following location:

```
C:\Program Files\Authlogics Authentication Server\Web\IdP\wwwroot\css\high-contrast.css
```

To allow a more accessible, high contrast customization, update your custom CSS file:

- If you already have UI customizations that you want to preserve, copy the contents of the IdP `high-contrast.css` file and add it into your `custom.css`.
- If you do not have an existing UI customization, rename the IdP `high-contrast.css` file to `custom.css`.

5.11.4.3 Advanced UI customization considerations

The web pages within the portal load the custom CSS and JS files automatically. The files are loaded last in the load order to allow custom code to override code in built-in functions if required.

Editing of any other files in the portal folder structure is *not* supported. The custom files may be replaced by future updates or upgrades and existing customizations may not be compatible with future product versions. Intercede is unable to provide product support for any third-party code placed in the `custom.css` or `custom.js` files and any additions to the files are done so at your own risk.

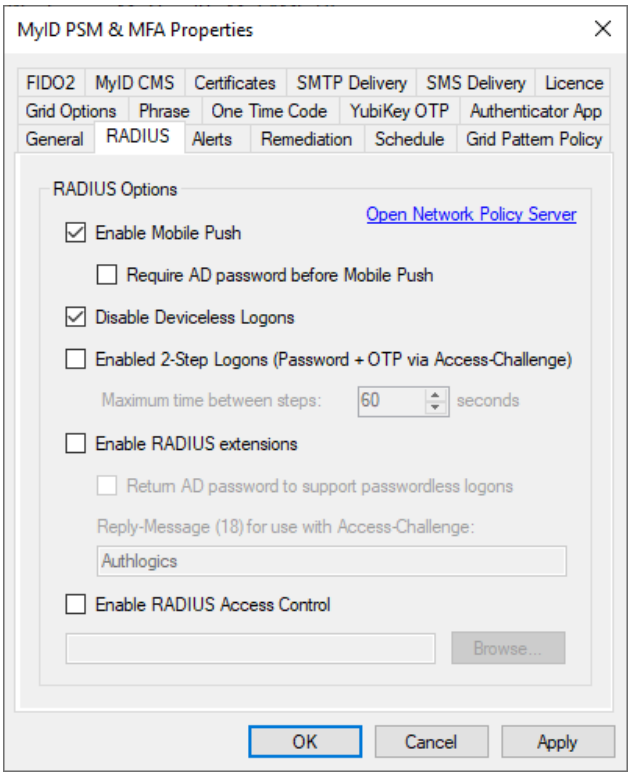
Note: The installer attempts to retain your `custom.css` and `custom.js` files, but you should always keep a backup of your custom files to ensure they are not lost after an upgrade.

5.12 RADIUS communication

The MyID Authentication Server leverages the Windows Network Policy Server role to provide RADIUS connectivity. This is a high performance and robust RADIUS server that allows you to configure a flexible RADIUS policy, including RADIUS proxy capabilities that can simplify migrations from other token solutions.

The MyID RADIUS server supports only PAP authentication from RADIUS client devices.

You can carry out RADIUS configuration in the MyID MMC as well as the Microsoft Network Policy Server MMC.



This section contains information on:

- Mobile Push MFA.
- 2-step logons (Access-Challenge).
- RADIUS extensions.
- RADIUS server ports and protocols.
- Adding a RADIUS client.
- RADIUS policies.

5.12.1 Mobile Push MFA

You can enable and disable Mobile Push MFA through RADIUS to other mechanisms.

When a RADIUS request is received containing only a username, the MyID Authentication Server triggers a Mobile Push to the user's device only if the user is configured for Mobile Push. You may configure it so that a username and password is required before a Mobile Push notification is triggered; to do this, enable the **Require AD password before Mobile Push** option.

5.12.2 2-step logons (Access-Challenge)

RADIUS Access-Challenge is supported by some RADIUS clients. It allows for a two-step logon process where the client sends their username and password to the server for verification and the server responds with either an Access-Challenge or Access-Reject. If the client supports Access-Challenge, the user is prompted for a second set of credentials, for example an OTP, which are then sent to the server. The server then processes the username and OTP and responds with an Access-Accept (only if an Access-Challenge preceded the request) or Access-Reject.

5.12.3 RADIUS extensions

You can enable RADIUS extensions to send metadata from the server back to the RADIUS client. This can return the following:

- The user's Active Directory password to support single sign-on to certain applications such as Citrix Access Gateway.
- Custom reply text for the RADIUS client to display when using Access-Challenge (where supported by the RADIUS client).

5.12.4 RADIUS server ports and protocols

The MyID RADIUS server uses the IANA assigned ports for authentication and accounting, as well as the unofficial ports for backward compatibility with legacy RADIUS clients.

- Authentication:
  - `UDP:1812`
  - `UDP:1645`
- Accounting:
  - `UDP:1812`
  - `UDP:1645`

Both IPv4 and IPv6 are supported for communication with RADIUS clients.

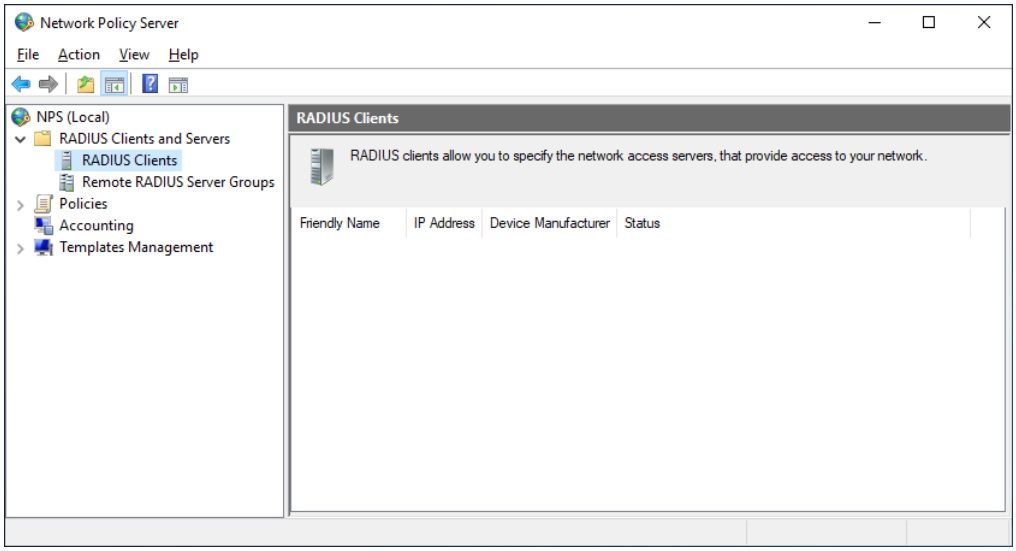
5.12.5 Adding a RADIUS client

A RADIUS client device is typically a VPN concentrator or remote access server; however, it can also be a wireless access point or a door access system. RADIUS is a common system used by a multitude of applications and platforms.

Note: This section of the installation process requires Local Administrator rights on the server. Domain rights are not required at this stage.

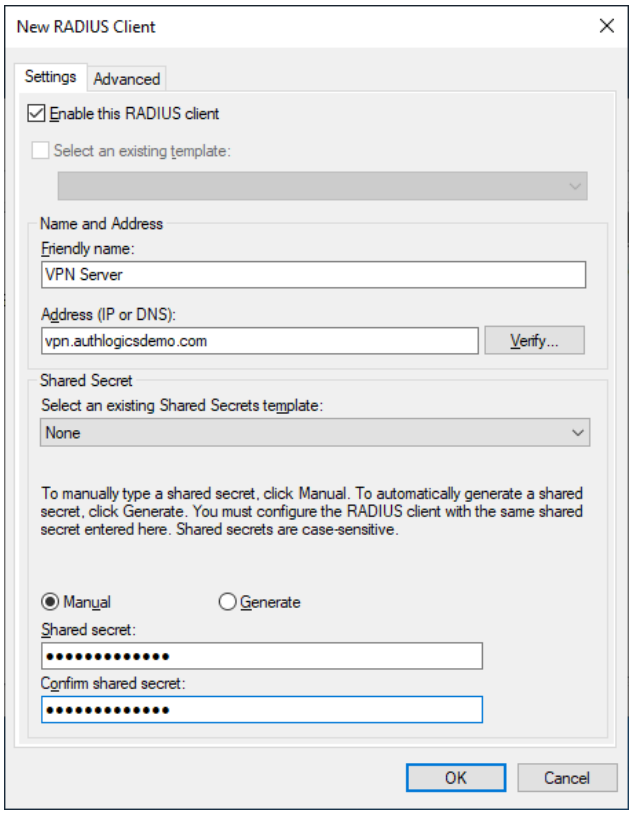
To add a RADIUS client:

1. Open the Network Policy Server from the Administrative Tools start menu group.



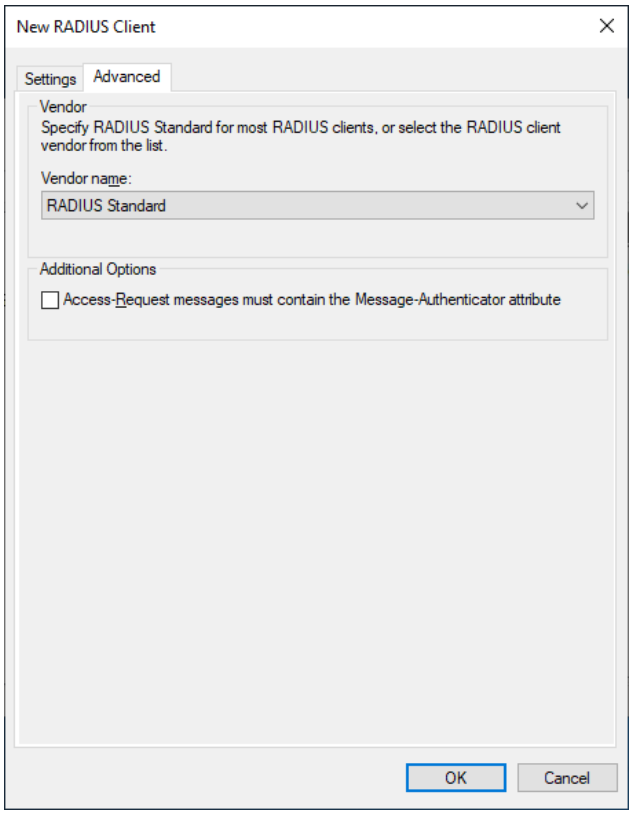
2. Expand the **RADIUS Clients and Servers** node, and select **RADIUS Clients**.

3. Right-click **RADIUS Clients** and click **New**.



4. On the **Settings** tab, set the following:
   - **Enable this RADIUS client** – ensure that this option is enabled.
   - **Friendly name** – a friendly name for the remote RADIUS client.
   - **Address (IP address or DNS)** – the address of the RADIUS client.

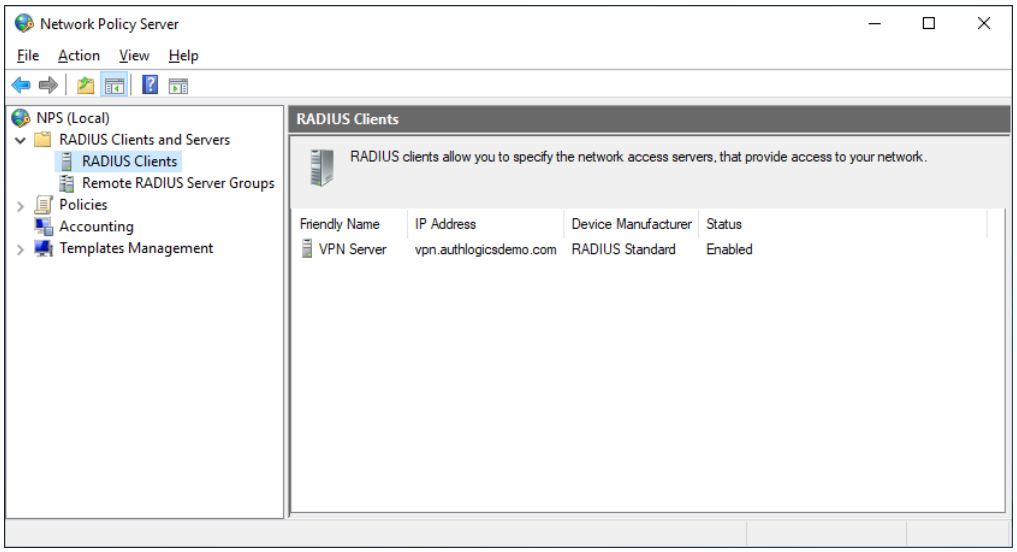
     To ensure that entered IP Address or DNS name is valid, click **Verify**.
   - **Shared secret** – enter and confirm your shared secret, ensuring that the shared secret matches the secret entered on the RADIUS client device. You can also use the **Generate** option to generate a highly secure random secret.



5. On the **Advanced** tab, ensure that the following are set:
   - **Vendor name** – must be set to `RADIUS Standard`.
   - **Access-Request messages must contain the Message-Authenticator attribute** – optional, but must be set the same as on the RADIUS client device.

   Note: Ensure that the Message-Authenticator attribute status is set to the same value on the RADIUS client devices as on the RADIUS server. They can either both be enabled or both disabled.

6. Click **OK**.



You may add as many RADIUS clients as required.

5.12.6 RADIUS policies

The MyID Authentication Server installation automatically configures a Connection Request Policy within NPS, which allows MyID to support configured RADIUS clients automatically. A Network Policy is not required as the MyID NPS plug-in functions without one.

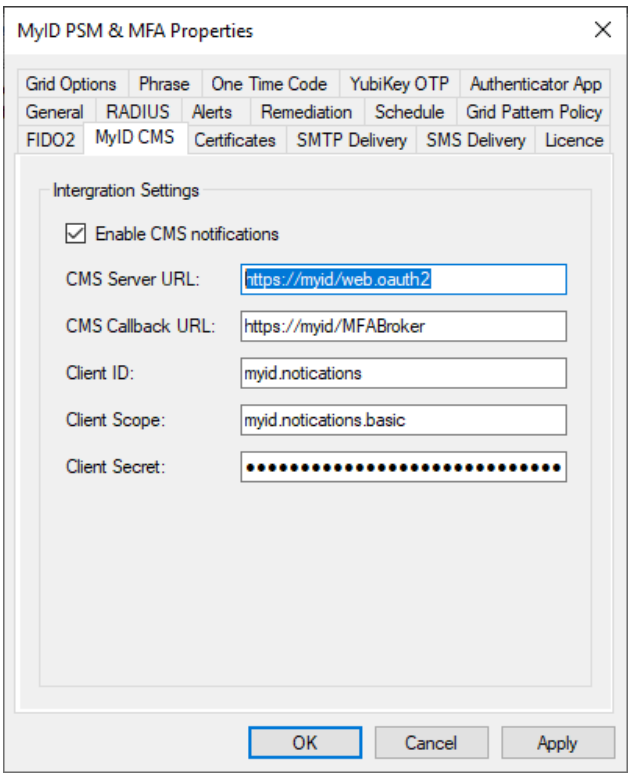
If you need to modify the default Connection Request Policy it is recommended that you duplicate (right-click, **Duplicate Policy**) the default policy as a backup and then disable it. Once complete you can modify the duplicated policy as needed.

6 Configuring MyID CMS settings

The MFA Broker Service module allows you to integrate the MyID credential management system (CMS) with MyID MFA. It allows you to use features from both products in an integrated fashion; for example, you can manage both smart cards and PIN grids for your users. The MFA Broker Service allows you to manage credentials in the MyID MFA system using the MyID CMS.

For instructions on configuring the connection between MyID CMS and MyID MFA, see the *MFA Broker Service* guide provided with the MFA Broker Service module.

You can configure the MyID CMS settings in the MyID Authentication Server through the **MyID CMS** tab in Global Settings.



You require the following information to complete the configuration:

- **CMS Server URL** – the MyID CMS OAuth2 Authentication Service URL.

  For example:

  `https://myid/web.oauth2`
- **CMS Callback URL** – the MyID CMS MFA Broker Service URL.

  For example:

  `https://myid/MFABroker`
- **Client ID** – the MyID CMS Client ID used to authenticate.

  For example:

  `myid.notifications`
- **Client Scope** – the MyID CMS Client Scope used to authenticate.

  For example:

  `myid.notifications.basic`
- **Client Secret** – the MyID CMS Client Secret used to authenticate.

  For example:

  `4116e8f9-92e2-48b1-8616-5fb3d130b91d`

7 Configuring the PSM password policy

To deploy the MyID PSM Password Policy:

1. In Active Directory Group Policy, create a MyID PSM Password Policy.
2. Deploy the Domain Controller Agent.
3. Make the following Group Policy changes:
   - Assign the MyID Password Policy to the Domain Controllers OU.
   - Assign the MyID Password Policy to the Authlogics Authentication Servers group.
   - Modify the built-in Default Domain Policy.

7.1 Configuring the MyID Password Policy settings

The MyID Authentication Server includes Active Directory Group Policy Template files `AuthlogicsPasswordPolicy.admx` and `AuthlogicsPasswordPolicy.adml`, which are used to create policies. The **User Configuration** section of the GPO can be disabled as the settings only apply to the **Computer Configuration**.

7.1.1 The PSM Users role

The PSM Users role is disabled by default. To enable it you must assign an Active Directory group to the role. For more information, see section *5.8.4*, *Managing the Password Security Management Users role*.

If the PSM Users role is not enabled, all Active Directory users have the MyID Password Policy applied to them. If enabled, only members of this group have the MyID Password Policy applied to them and non-members have the Exception Password Policy applied to them, which mirrors the equivalent default Windows password policy settings.

7.2 Main settings

Setting	Enable Authlogics Password Policy
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting enables the MyID Password Policy functionality on all Agents and Servers where this Group Policy is applied. If you enable this policy complexity and validity checks will be performed on the passwords. If you disable or do not configure this policy then no password processing will function as per the configured policy thus deeming all passwords as acceptable.

7.2.1 Primary password policy

These settings control the MyID specific password policy. The default settings work in most scenarios and are NIST 800-63B compliant by default.

Setting	Disable Online Password Breach Database checking
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting prevents querying the MyID Password Breach Database in the Cloud consisting of billions of known previously breached passwords. If you enable this policy then no checks against the MyID Password Breach Database in the Cloud will be performed. If you disable or do not configure this policy a partial HASH of the password will be sent over SSL to Intercede for analysis. The password will be rejected if it is a known/previously breached password to comply with to comply with NIST SP 800-63B.

Setting	Disable Offline Password Breach Database checking
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting prevents querying the offline MyID Password Breach Database installed on the MyID Authentication Server. If you enable this policy then no checks against the offline MyID Password Breach Database will be performed. If you disable or do not configure this policy passwords will checked against the offline database and will be rejected if it is found in order to comp with NIST SP 800-63B.

Setting	Disable Custom Password Blacklist checking
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting prevents querying the custom Password Blacklist consisting of passwords entered by an administrator. If you enable this policy then no checks against the custom Blacklist file will be performed. If you disable or do not configure this policy then entered passwords will be compared with the contents of the custom blacklist file and is also be available for use by the heuristics engine. The password will be rejected if it is found on the custom blacklist to comply with NIST SP 800-63B.

Setting	Disable Shared Password Protection
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting prevents checking if the password is already in use by another user account in the Domain. If you enable this policy then no checks against the Domain for shared passwords will be performed. If you disable or do not configure this policy the Domain will be checked and the password will be rejected if it is currently in use.

Setting	Enable Passphrases
Values	(6 - 30)
Default	12
Description	This policy setting enables the use of passphrases if a password is longer than the specified value. Passphrases do not have to pass the following complexity checks if they are long enough: • Minimum Lowercase Characters • Minimum Uppercase Characters • Minimum Numeric Characters • Minimum Special Characters • Minimum Unicode Characters • Maximum Repeating Characters • Maximum Allowed Characters From Username If you enable this policy then the specified complexity checks will be skipped only if the password length is equal to or longer than the specified value. If you disable or do not configure this policy then users may find it difficult to set a passphrase as all configured complexity checks must pass.

Setting	Override Password Policy for new User Accounts
Values	(1 - 30)
Default	5
Description	This policy setting overrides password the password policy checks for accounts that have been created within a specified time period and will be accepted. If you enable this policy, specify the number of seconds from when an account has been created for it to be deemed as being a new account. If you disable or do not configure this policy then the password policy will apply to passwords specified during the Active Directory account creation process.

Setting	Disable Heuristic Scanning
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting controls the heuristic scanning engine behaviour on password checks. Heuristic scanning will undergo a series of checks where known character replacements are detected and reverted to their original base value and then revalidated for compliance. For example, '@' reverts to 'a', '!' to 'i' etc. If you enable this policy the heuristic scanning engine will not be active for any checks. If you disable or do not configure this policy then heuristic scanning will be performed to comply with NIST SP 800-63B against the Offline Password Breach Database, Custom Password Blacklist, all or part of the username, and Month and Day names.

Setting	Enable Cloud Heuristic Scanning
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting controls the heuristic scanning engine behaviour on passwords with the MyID Password Breach Database in the Cloud. Heuristic scanning will undergo a series of checks where known character replacements are detected and the various derivatives will the evaluated to see if they have been breached. For example, '@' reverts to 'a', '!' to 'i' etc. If you enable this policy the heuristic scanning will be used when checking the MyID Password Breach Database. Warning: By enabling this policy the full password HASH will be sent over the Internet to MyID as k-Anonymity cannot be used. If you disable or do not configure this policy then heuristic scanning will not be performed with the MyID Password Breach Database and k-Anonymity will still be used.

7.2.2 Complexity rules

These settings provide fine grain control of password complexity settings.

If you set too many of these settings, users may find it too difficult to choose a memorable password, which may encourage them to write passwords down.

Setting	Disallow Incremental / Numeric-Only changes
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting prevents changing only a single digit, or appending a single digit compared to the existing password. If you enable this policy then users must change more than just a single digit compared to their old password. If you disable or do not configure this policy then entered passwords with a simple numeric change from the previous password will be allowed. **Note:** This check requires that the PSM Wizard has been run and enabled on the domain.

Setting	Disallow First or Last Character being a number
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting disallows passwords that start or end with a numeric character. If you enable this policy then users cannot use a password that begins or ends with a number. If you disable or do not configure this policy then passwords which start or end with a numeric character will be allowed.

Setting	Disallow Month and Day names
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting disallows the use of month and day names in the password. If you enable this policy a password will be rejected if a month or day name is found in an entered password. If you disable or do not configure this policy then the check will not be performed.

Setting	Disallow spaces
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting disallows the use of a space character in a password. If you enable this policy a password will be rejected if a space is found in an entered password. If you disable or do not configure this policy then the check will not be performed.

Setting	Minimum Password Length
Values	(4 - 127)
Default	8
Description	This policy setting sets the minimum number of characters allowed for a compliant password. Setting this value too high may make the password too difficult for users to remember password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the length of the password is less than the value specified. Note: Consecutive space characters will be counted as a single space character as per NIST SP 800-63B guidance. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the default value of 8 will be used to comply with NIST SP 800-63B.

Setting	Maximum Password Length
Values	(4 - 127)
Default	127
Description	This policy setting sets the maximum number of characters allowed for a compliant password. Setting this value too low may stop users from selecting passphrases which are typically more secure than passwords. The password will be rejected if the length of the password is more than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the default value of 127 will be used to comply with NIST SP 800-63B.

Setting	Minimum Lowercase Characters
Values	(1 - 127)
Default	2
Description	This policy setting sets the minimum number of allowed lowercase characters a compliant password must have. Setting this value too high may make it too difficult for users to enter a valid password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the number of lowercase letters in the password is less than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Minimum Uppercase Characters
Values	(1 - 127)
Default	2
Description	This policy setting sets the minimum number of allowed uppercase characters a compliant password must have. Setting this value too high may make it too difficult for users to enter a valid password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the number of uppercase letters in the password is less than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Minimum Numeric Characters
Values	(1 - 127)
Default	2
Description	This policy setting sets the minimum number of allowed numeric digits a compliant password must have. Setting this value too high may make it too difficult for users to enter a valid password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the number of numeric digits in the password is less than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Minimum Special Characters
Values	(1 - 127)
Default	2
Description	This policy setting sets the minimum number of allowed special characters a compliant password must have. Setting this value too high may make it too difficult for users to enter a valid password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the number of special characters in the password is less than the value specified. The following are recognised as special characters `! " # % & ' ( ) * , - . / : ; ? @ [ \ ] _ { }'` If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Minimum Unicode Characters
Values	(1 - 127)
Default	2
Description	This policy setting sets the minimum number of allowed Unicode characters a compliant password must have. Setting this value too high may make it too difficult for users to enter a valid password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the number of Unicode characters in the password is less than the value specified. Unicode characters are non-printable characters that are not punctuation or alphanumeric characters. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Maximum Repeating Characters
Values	(0 - 126)
Default	8
Description	This policy setting sets the maximum number of times a character can be repeated anywhere within a compliant password. Setting this value too low may make it too difficult for users to enter a valid password, whereas setting this value too high could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if a character is repeated in the password more times than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed to comply with NIST SP 800-63B.

Setting	Maximum Consecutive Repeating Characters
Values	(0 - 126)
Default	3
Description	This policy setting sets the maximum number of times a character can be repeated anywhere within a compliant password. Setting this value too low may make it too difficult for users to enter a valid password, whereas setting this value too high could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if a character is repeated in the password more times than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed to comply with NIST SP 800-63B.

Setting	Maximum Sequential Characters
Values	(0 - 127)
Default	3
Description	This policy setting sets the maximum number of times a sequence of characters can be used within a compliant password. Setting this value too low may make it too difficult for users to enter a valid password, whereas setting this value too high could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the number of characters in a sequence is more than the value specified. Sequential characters are both forward and backwards i.e. ABC and CBA are deemed to be sequential. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed to comply with NIST SP 800-63B.

Setting	Maximum Sequential Keyboard Characters
Values	(0 - 5)
Default	2
Description	This policy setting sets the maximum sequential keyboard characters allowed within a compliant password. The password will be rejected if the number of keyboard layout characters in sequence is more than the value specified. Sequential characters are both forward and backwards i.e. "`qwerty`" and "`ytrewq`" with both be deemed to be sequential. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Maximum Allowed characters from User Account name
Values	(1 - 127)
Default	3
Description	This policy setting sets the maximum number of characters from a user account name that are allowed in a password. Passwords will be rejected if the number of characters from the user account name in a password is more than this value specified. e.g. If the user account name is Robert and the value is 3 then passwords containing "`robe`", "`ober`" and "`bert`" will be rejected. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the check will not be performed.

Setting	Allow Full User Account name in password
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting allows the use of the full user account name within the password. If you enable this policy a password will not be blocked if the full user account name is found within the entered password. If you disable or do not configure this policy then the password may not contain the full user account name to comply with NIST SP 800-63B.

7.2.3 Dynamic password expiry

These settings dynamically control the maximum age of a password depending on its length. This allows for passwords to be used for longer the longer they are, which encourages users to create longer, and thus more secure, passwords.

A password is matched to the highest zone possible depending on the length of the password. When MyID detects that a password has dynamically expired, the user account is be configured to change password at next logon.

There are five password expiry zones, each consisting of a minimum password length and maximum password age in days. A sixth zone can be used to configure accounts to never expire if they are over the specified length.

Setting	Password Expiry Default Zone
Values	Maximum Age in days: (1 - 999)
Default	42
Description	This policy setting configures the default password expiry period. If a password length is unknown or less than what is required by any other Zone then the Default Zone will apply. **Note:** If a password was created prior to installing MyID its length will be unknown and the Default Zone will apply. Once the password has been changed the length will be known and other Zones may then apply. If you enable this policy you must specify the Maximum Age in days until the user account's password will be set to expire. If you disable or do not configure this policy then the setting will not take effect.

Setting	Password Expiry Zone 1	
Values	Minimum Password Length: (6 - 100)	Maximum Age in days: (1 - 999)
Default	8	60
Description	This policy setting configures the dynamic password expiry period for this zone. If you enable this policy you must specify both the Minimum Password Length for which this policy shall take effect and the Maximum Age in days until the user account’s password will be set to expire. If you disable or do not configure this policy then the zone setting will not take effect.	

Setting	Password Expiry Zone 2	
Values	Maximum Age in days: (1 - 999)	Maximum Age in days: (1 - 999)
Default	90	90
Description	This policy setting configures the dynamic password expiry period for this zone. If you enable this policy you must specify both the Minimum Password Length for which this policy shall take effect and the Maximum Age in days until the user account's password will be set to expire. If you disable or do not configure this policy then the zone setting will not take effect.	

Setting	Password Expiry Zone 3	
Values	Minimum Password Length: (6 - 100)	Maximum Age in days: (1 - 999)
Default	10	180
Description	This policy setting configures the dynamic password expiry period for this zone. If you enable this policy you must specify both the Minimum Password Length for which this policy shall take effect and the Maximum Age in days until the user account's password will be set to expire. If you disable or do not configure this policy then the zone setting will not take effect.	

Setting	Password Expiry Zone 4	
Values	Minimum Password Length: (6 - 100)	Maximum Age in days: (1 - 999)
Default	11	270
Description	This policy setting configures the dynamic password expiry period for this zone. If you enable this policy you must specify both the Minimum Password Length for which this policy shall take effect and the Maximum Age in days until the user account's password will be set to expire. If you disable or do not configure this policy then the zone setting will not take effect.	

Setting	Password Expiry Zone 5	
Values	Minimum Password Length: (6 - 100)	Maximum Age in days: (1 - 999)
Default	12	365
Description	This policy setting configures the dynamic password expiry period for this zone. If you enable this policy you must specify both the Minimum Password Length for which this policy shall take effect and the Maximum Age in days until the user account's password will be set to expire. If you disable or do not configure this policy then the zone setting will not take effect.	

Setting	Password Never Expires Zone
Values	Minimum Password Length: (6 - 100)
Default	20
Description	This policy setting configures the dynamic password expiry period for this zone. If you enable this policy you must specify both the Minimum Password Length for which this policy shall take effect. If you disable or do not configure this policy then the zone setting will not take effect.

7.2.4 Exception password policy

These settings control the exception settings to the Primary Password Policy. The default settings mirror the equivalent default Windows password policy settings.

These settings apply only to the users who are *not* members of the PSM Users role, if you have configured a group for that role. For more information, see section *7.1.1*, *The PSM Users role*.

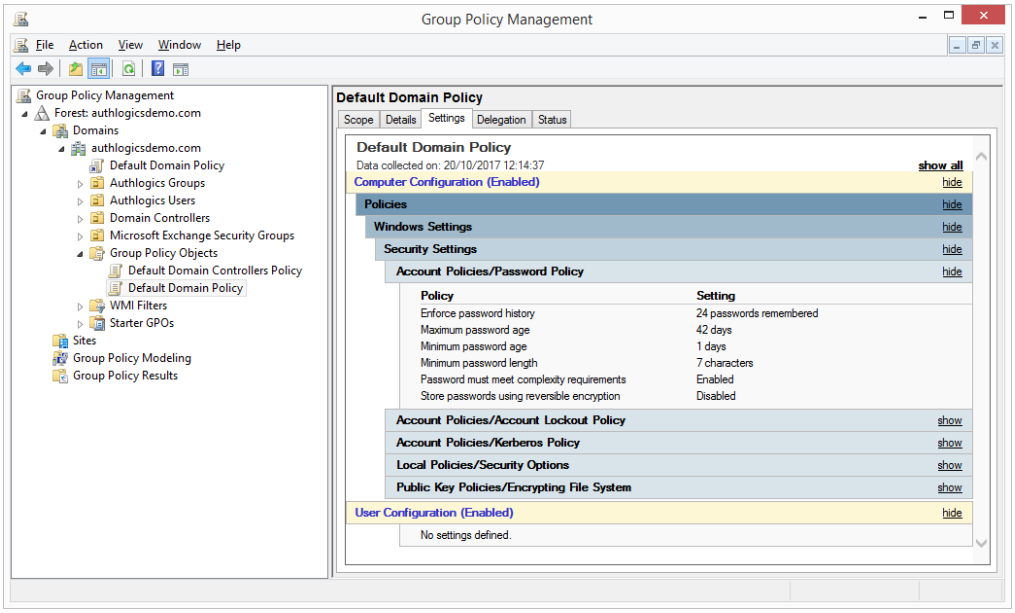
Setting	Maximum Password Age
Values	Maximum Age in days: (1 - 999)
Default	42
Description	This policy setting configures the maximum password age for accounts that are NOT a member of the PSM Users Role. If you enable this policy you must specify the Maximum Age in days until the user account's password will be set to expire. If you disable or do not configure this policy then the setting will not take effect.

Setting	Minimum Password Length
Values	(1 - 127)
Default	7
Description	This policy setting sets the minimum number of characters allowed for a compliant password for accounts that are NOT a member of the PSM Users Role. Setting this value too high may make the password too difficult for users to remember password, whereas setting this value too low could result in the password becoming too weak and easily guessed or brute forced. The password will be rejected if the length of the password is less than the value specified. If you enable this policy then you must specify a value. If you disable or do not configure this policy then the default value of 7 will be used as per Windows password policy.

Setting	Mirror Windows ‘Password Complexity’ requirements
Values	Enabled / Disabled
Default	Disabled
Description	This policy setting mirrors the Windows built in 'Password must meet complexity requirements' restriction for accounts that are NOT a member of the PSM Users Role. This check ensures that a password does not contain the username, that it contains a minimum of 3 of the following character types: uppercase, lowercase, numeric, non-alphabetic/special characters. If you disable or do not configure this policy then the check will not be performed.

7.3 Modifying the default domain policy

The following password settings apply to the Default Domain Policy by default:



The following password settings for the Default Domain Policy must be changed so that the built-in Windows policy does not conflict with the MyID Password Policy and NIST guidance:

- **Maximum password age**: `0`

  This should be set to `0` when MyID PSM **Dynamic Password Complexity** is used, or to comply with NIST SP 800-63, which states that passwords should not periodically expire.

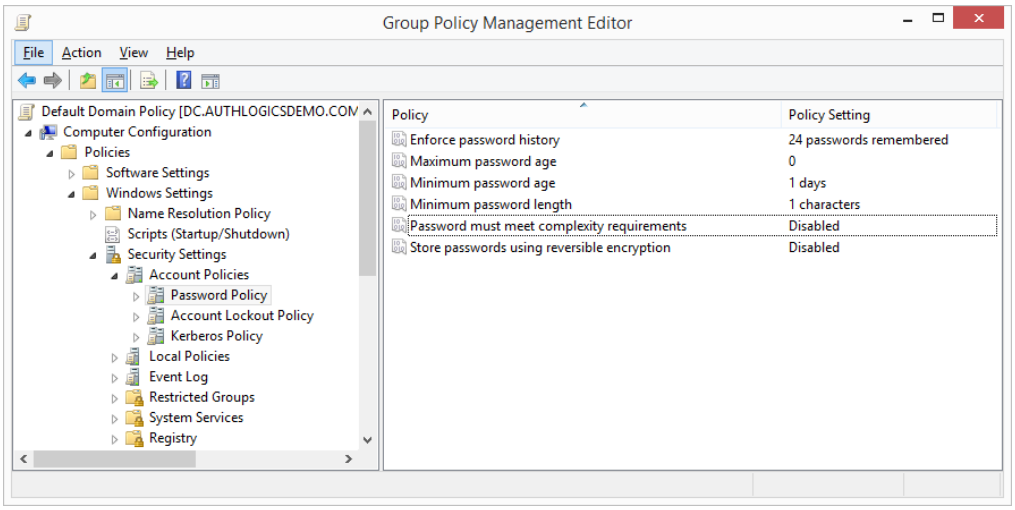
- **Minimum password length**: `1`

  This should be set to `1` so that it does not conflict with MyID PSM **Minimum Password Length** complexity rule setting.

- **Passwords must meet complexity requirements**: `Disabled`

  This should be set to `Disabled` to allow the MyID PSM policy to function, or to comply with NIST SP 800-63B which states that passwords should not be forced to contain complexity rules.

Note: You *must not* set these settings to `Not Configured`, as this causes Windows to revert to default settings.



7.4 Configuring custom password blacklist checking

MyID PSM provides administrators with the ability to add their own unwanted passwords to a blacklist text file. The blacklist allows for the rejection password based on full passwords as well as those matching wildcard characters, `*` and `#`. For more information on wildcard characters, see section *7.4.1*, *Wildcard usage within local blacklist*.

The heuristics engine also adds further protection to the file by substituting common letter substitutions withing passwords, for example `@` to `a`, and `5` to `s`.

To enable the local password blacklist, modify the contents of the following text file:

```
C:\Program Files\Authlogics Authentication Server\blacklist.txt
```

Once a blacklist file has been updated it must be copied to all MyID Authentication Servers. The file is not required to be placed on Domain Controllers.

The custom blacklist can be disabled by emptying the contents of the file or by enabling the **Disable Custom Password Blacklist checking** Group Policy.

7.4.1 Wildcard usage within local blacklist

To enforce password rejection, full words and the wildcards characters `*` and `#` can be added to the local blacklist file. If a password matches what is defined in the local blacklist file, the password is rejected. How a password is processed depends on the positioning of the wildcard in the entry.

The wildcard `*` refers to any character for any length, if a `*` is entered on its own, all passwords are rejected.

The wildcard `#` refers to a single numeric character and translates to 9 – `##` = `99`. Numeric characters within passwords are converted to a number and then, if they are less than the restricted value, the password is rejected.

This table shows examples of how MyID Authentication Server processes a password based on the blacklist entry:

Blacklist Entry	Description	Password	Result
`Authlogics`	Reject any direct matches to the restricted word `Authlogics`.	`Authlogics` `Authlogics01`	Rejected Accepted
`Auth*`	Reject any password starting with `Auth`.	`Authlogics` `HelloAuthlogics`	Rejected Accepted
`*Auth*`	Reject any password with `Auth` in the middle.	`Authlogics01` `helloAuth123`	Accepted Rejected

`*Auth`	Reject any password ending with `Auth`.	`helloAuth123`
		`Authlogics`
		`helloAuth`
			Accepted
			Accepted
			Rejected

`Authlogics##`	Reject any password starting with word `Authlogics` ending in two digits.	`Authlogics12`
		`Authlogics12`
		`Authlogics112`
		`Helloworld12`
			Rejected
			Rejected
			Accepted
			Accepted

`##Authlogics`	Reject any password starting with two digits and ending with the word `Authlogics`.	`12Authlogics` `123Authlogics`	Rejected Accepted

`##*`	Reject any password starting with two digits.	`12Authlogics`
		`Authlogics12`
		`1Authlogics`
		`123Authlogics`
			Rejected
			Accepted
			Accepted
			Rejected

`*##`	Reject any password ending with two digits.	`12Authlogics`
		`Authlogics12`
		`Authlogics123`
			Accepted
			Rejected
			Accepted

`*###*`	Reject any password with two consecutive digits in the middle of the password.	`12Authlogics`
		`Authlogics12`
		`Auth12logics`
		`Authlogics123`
			Accepted
			Accepted
			Rejected
			Accepted

8 Advanced configuration

Advanced configuration options for MyID are controlled using the Windows registry. The following entries are created during the installation of MyID server components and most of them should typically only be changed if instructed by Intercede support.

Note: After changing a registry key on the MyID Server, the IIS components must be restarted by running `IISRESET` from an elevated admin command prompt.

You can carry out the following:

- Specify Active Directory Domain Controllers.

  See section *8.1*, *Specifying Active Directory Domain Controllers*.
- Add an SSL certificate.

  See section *8.2*, *Adding a trusted SSL certificate for secure connections*.
- Configure the connection timeout for Active Directory.

  See section *8.3*, *Active Directory timing*.
- Log diagnostic messages.

  See section *8.4*, *Diagnostics logging*.

Important: Changing other registry values is *not* supported unless instructed by Intercede Support.

8.1 Specifying Active Directory Domain Controllers

The MyID Authentication Server automatically locates Domain Controllers as needed. In environments where network segmentation exists, the MyID Authentication Server may not be able to contact all Domain Controllers. This can cause connectivity problems and logon delays.

In these environments, you can specify which Domain Controllers and Global Catalog Servers should be used using registry keys. Each key can contain one or many server names (FQDN recommended) separated by commas.

8.1.1 Specifying Global Catalog Servers

To specify the global catalog server to access from the MyID Authentication Server, set the following registry value:

```
HKLM\SOFTWARE\Authlogics\Authentication Server\DomainGCs
```

By default, this is blank.

Accepted values:

- One or more server names (FQDN recommended), separated by commas.

Used by components: MyID Authentication Server; Management Console

The MyID Authentication Server attempts to connect to each specified global catalog server and then remains connected to the server that responds to LDAP queries the quickest.

Note: This setting disables the auto-detect global catalog servers functionality within MyID.

8.1.2 Specifying Domain Controllers

To specify the Domain Controllers to access from the MyID Authentication Server, set the following registry value:

```
HKLM\SOFTWARE\Authlogics\Authentication Server\DomainDCs
```

By default, this is blank.

Accepted values:

- One or more Domain Controller names (FQDN recommended), separated by commas.

Used by components: MyID Authentication Server; Management Console

The MyID Authentication Server attempts to connect to each specified Domain Controller and then remains connected to the server that responds to LDAP queries the quickest. The MyID Authentication Server initially finds the names of all the Domains in the Forest, and the Domain Controllers in each Domain by querying the Global Catalog. It then maps the results against the Domain Controllers list in the registry to calculate which server to use for each Domain. If a Domain does not have a Domain Controllers specified, one is selected automatically.

Note: This setting disables the auto-detect Domain Controller functionality within MyID.

8.2 Adding a trusted SSL certificate for secure connections

When replacing the self-signed SSL certificate on the MyID server with an alternative from a trusted root authority, the certificate must obey the following:

- The Common Name (CN or SAN) in the certificate must match the DNS value use by MyID agents or make use of a wide card certificate.
- The certificate must be trusted by all systems that connect directly to the MyID server.

To do the replacing, using Internet Information Services (IIS) Manager, edit the HTTPS IIS bindings for the MyID web site and select the new SSL certificate.

8.3 Active Directory timing

You can set the following values in the registry:

- Domain access timeout.
- Domain controller refresh.

8.3.1 Domain access timeout

`HKLM\SOFTWARE\Authlogics\Authentication Server\DomainAccessTimeout`

Default value: `60`

Accepted values:

- `0` – disabled, indefinite timeout.
- `1` to `120` – timeout in seconds.

The time taken in seconds before a connection established by a MyID component to a Domain Controller times out.

8.3.2 Domain Controller refresh

`HKLM\SOFTWARE\Authlogics\Authentication Server\DomainControllerRefeshTime`

Default value: `15`

Accepted values:

- `1` to `9999` – timeout in minutes.

The time taken in minutes before a new search is done to locate the quickest Global Catalog Server and Domain Controller.

8.4 Diagnostics logging

You can control the diagnostics logging using the Windows registry.

8.4.1 Enabling logging

To enable or disable diagnostics logging, set the following registry value:

```
HKLM\SOFTWARE\Authlogics\Authentication Server\LoggingEnabled
```

The default value is `0`.

Accepted values:

- `0` – disabled.
- `1` – enabled.

The MyID Server uses this setting.

When you enable this value, various log files are created in the logging folder. Intercede support may request these logs from you.

8.4.2 Setting the logging location

To control the location of the log file, set the following registry value:

```
HKLM\SOFTWARE\Authlogics\Authentication Server\LoggingFolder
```

The default value is:

```
C:\Program Files\Authlogics Authentication Server\Log
```

The MyID Server uses this setting.

Accepted values:

- Any valid local folder with the same NTFS permissions as the default folder.

9 Integration with external systems

Intercede provides integration guides for various external systems that may include step-by-step instructions or custom integration components.

You are recommended to use the ***MyID Authentication Server Developers Guide*** when planning to access the MyID Authentication Server programmatically for automation, scripting, or app integration. You can achieve extensive provisioning and workflow integration by using the Web Services APIs to create, delete, enable, disable accounts.

You can integrate MyID Authentication Server with any other external or third-party systems using Web Services or RADIUS, or a combination of the two.

If you are using Multi-Factor Authentication with an SSL VPN, no logon screen customization is required as a logon challenge is not displayed on a login screen. In this scenario a soft token, hardware token, or a SMS/TEXT token must be used, and the SSL VPN can use RADIUS to validate login requests.

If you are using deviceless authentication with an SSL VPN, you need to modify the login page of the SSL VPN to display a challenge. The SSL VPN can request the image from the MyID server using the `GetToken.ashx` web service with some coding effort. The SSL VPN can still use RADIUS to validate login requests but may alternatively use Web Services, if supported by the SSL VPN vendor.