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# Azure Active Directory



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Azure Active Directory represents an Identity and Access Management as a service (IDaaS) solution that can be used as your Single Sign-On domain on the CloudBlue Connect platform.

The following provides instructions on how to deploy your configured Azure Active Directory on the Connect platform. The guidelines below also showcase how to create a new Active Directory on the Microsoft Azure portal, how to successfully configure your Azure enterprise application, and more.

## Active Directory Creation

Create your Azure Active Directory via the Microsoft Azure Portal as described below. Skip to Connect Domain Verification in case your Active Directory and custom domain are already configured on the Microsoft Azure portal.

By creating an Active Directory, the Microsoft Azure portal requires you to specify your tenant details. A tenant represents an organization and dedicated instance of Azure AD. The following steps showcase how to successfully create a new Azure Active Directory and configure your new tenant:



Step 1



Step 2



Step 3



Step 4



Step 5



Step 6

1. Click the **Create New Resource** button from the **Microsoft Azure** portal.
2. Locate *Azure Active Directory* from the provided list.



3. Click the **Create** button once Azure Active Directory is located successfully.
4. The portal prompts you to select a tenant type. Specify your required type and click **Next: Configuration** to continue.
5. Specify your organization name, initial domain name, and country/region in the following **Configuration** form. Click **Next: Review + create** to continue.
6. Once your configured tenant validation is passed, click the **Create** button to finalize your Active Directory creation.

Therefore, the Azure portal starts to process your tenant configuration. In case this processing is successfully complete, the Azure portal allows you to access your created Active Directory.

## Azure Custom Domain

Verify your domain name within your Azure Active Directory. Skip to Connect Domain Verification in case your custom domain is already configured on the Microsoft Azure portal.

Follow the steps below to add your custom domain to your Azure Active Directory and successfully verify it.



Step 1



Step 2



Step 3 & 4

1. Access the **Custom Domain Names** section from the left-hand panel of your created Azure Active Domain.
2. Click the **Add custom domain** button to specify your domain name.
3. Enter your domain to the appeared form and click the **Add domain** button.
4. The Azure portal prompts you to specify create a new TXT record with your domain name registrar using the provided information. Click **Verify** once your TXT with required information is successfully created.

As a result, the Azure portal starts to process your domain configuration. If this processing is complete, the Azure portal will successfully verify your added domain.

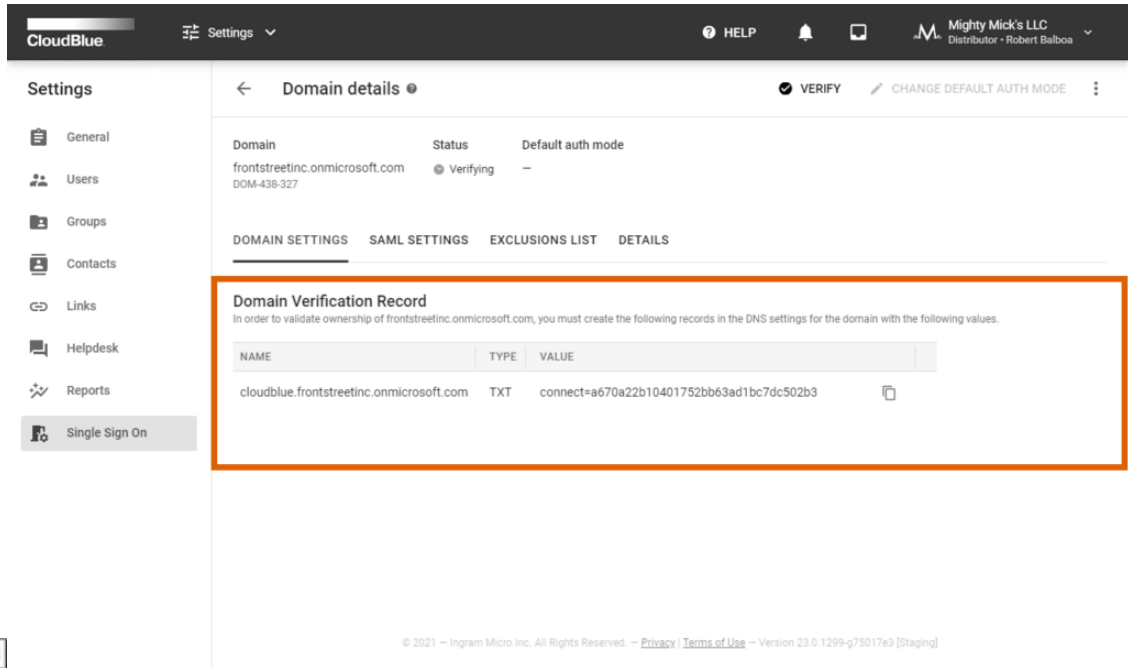
## Connect Domain Verification

Create a domain on the CloudBlue Connect platform. Once your domain instance is created, Connect prompts users to create a

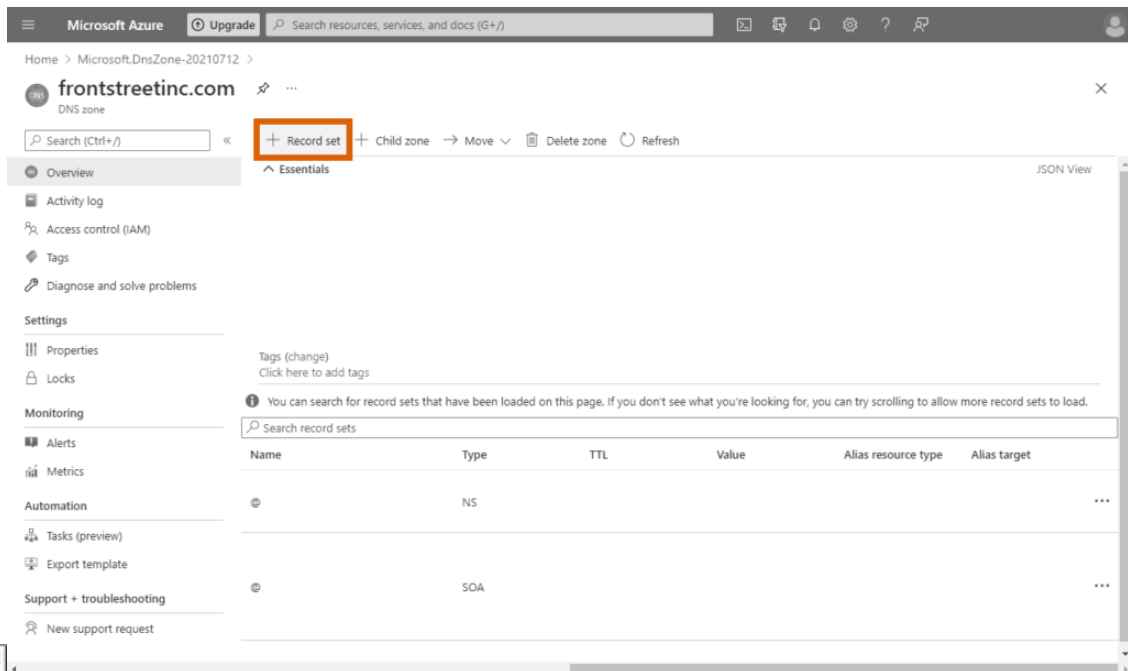


domain verification record via the domain details screen.

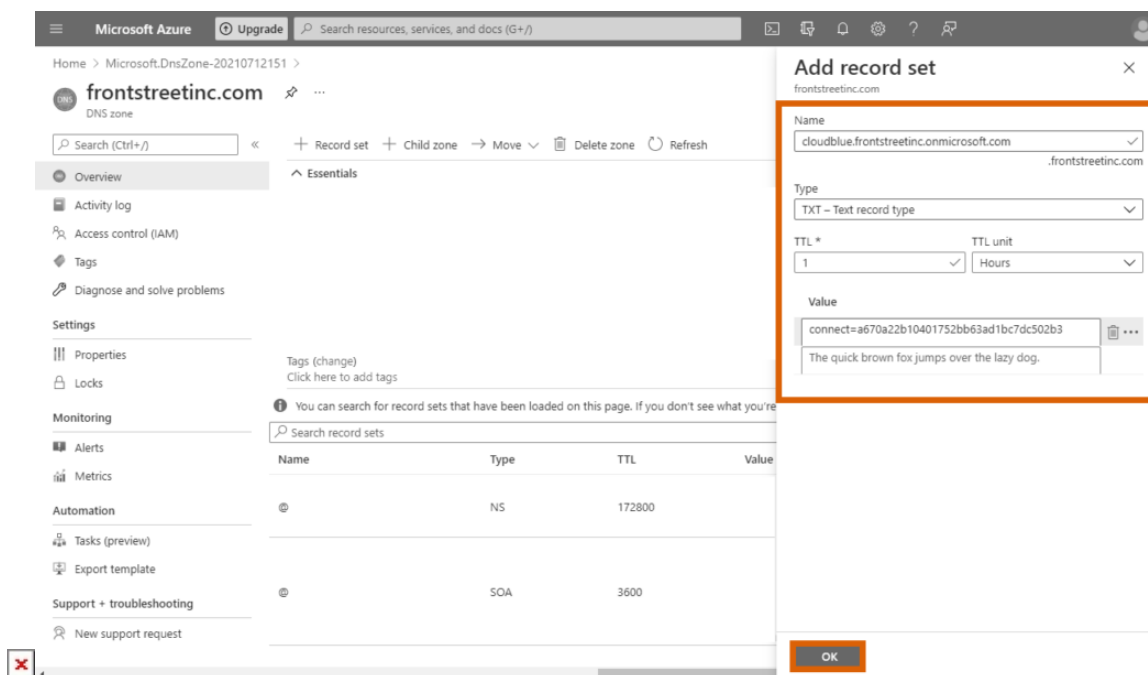
Create an Azure Active Directory record set with required data as follows:



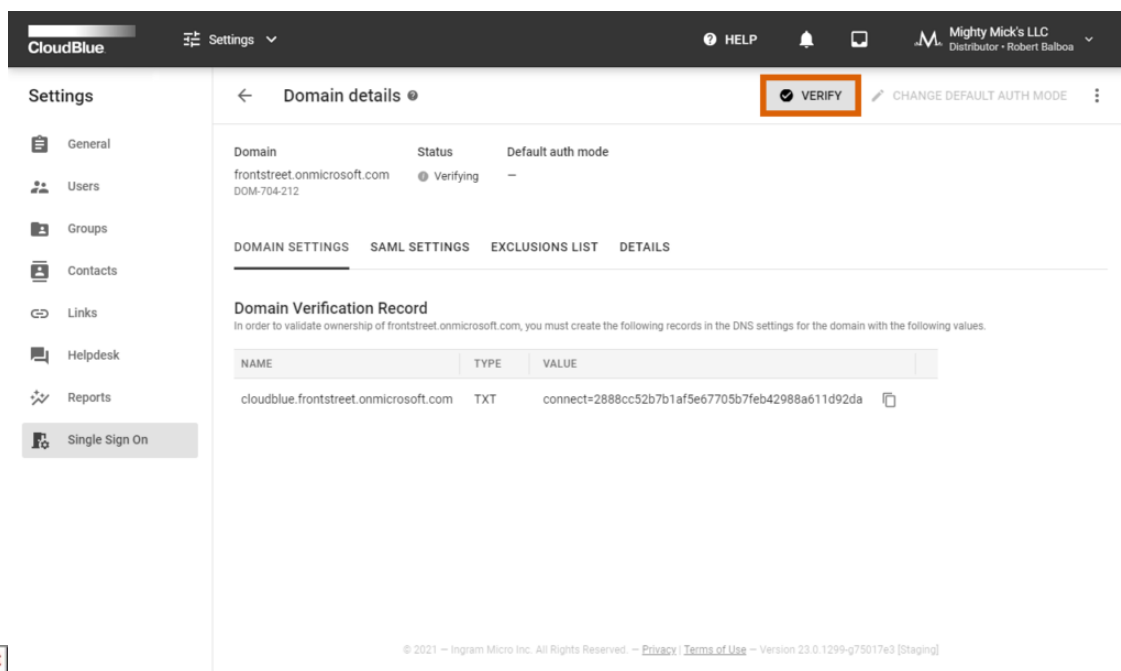
Step 1



Step 2



Step 3 & 4



Step 5

1. Copy your provided domain and value from the **Domain Settings** tab on Connect.
2. Create a new **Record Set** within the DNS zone section on the Microsoft Azure portal.



3. Paste your copied domain and value to the appeared form. Note that it is also necessary to specify a record type as displayed within *Domain Settings* on Connect.
4. Click **OK** to save your record configurations.
5. Verify your domain on the Connect platform by clicking the **Verify** button at the top right corner of your domain details screen.

Thus, the system should successfully verify your domain instance on the Connect platform. Note, however, that sometimes DNS changes can take a while to appear. Please wait a few hours, then reopen your domain instance and try to verify it again. In case the verification operation keeps failing, try to add a different DNS TXT record and make sure that all provided values are correct.

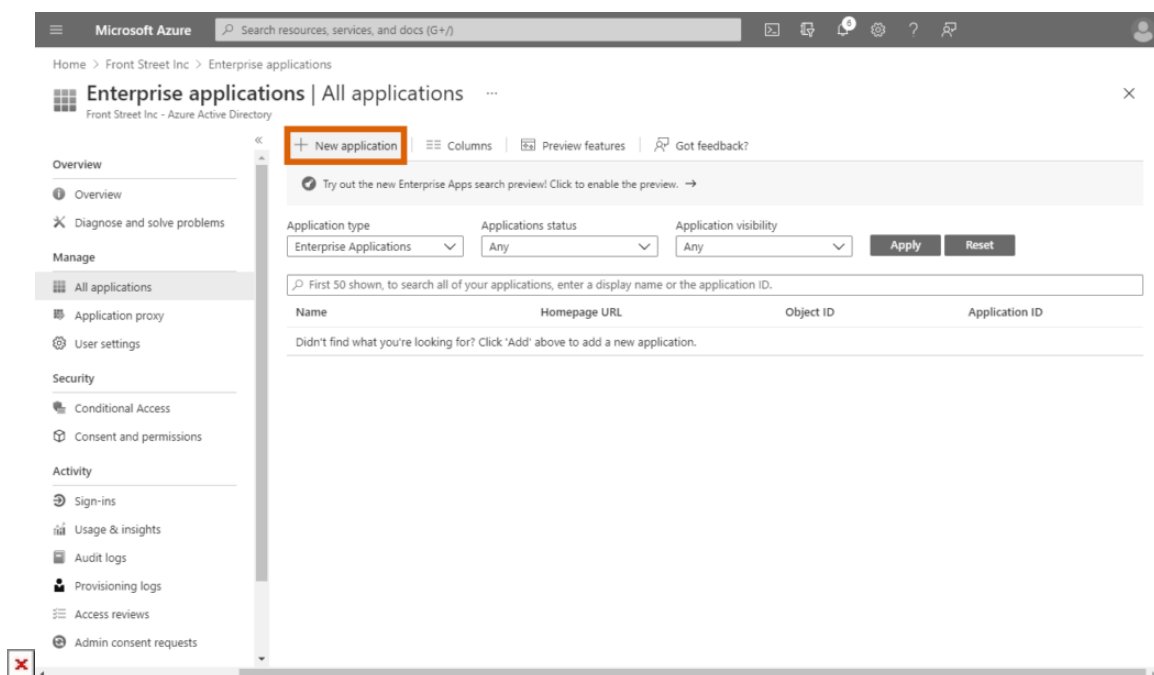


### One Domain & Multiple Accounts

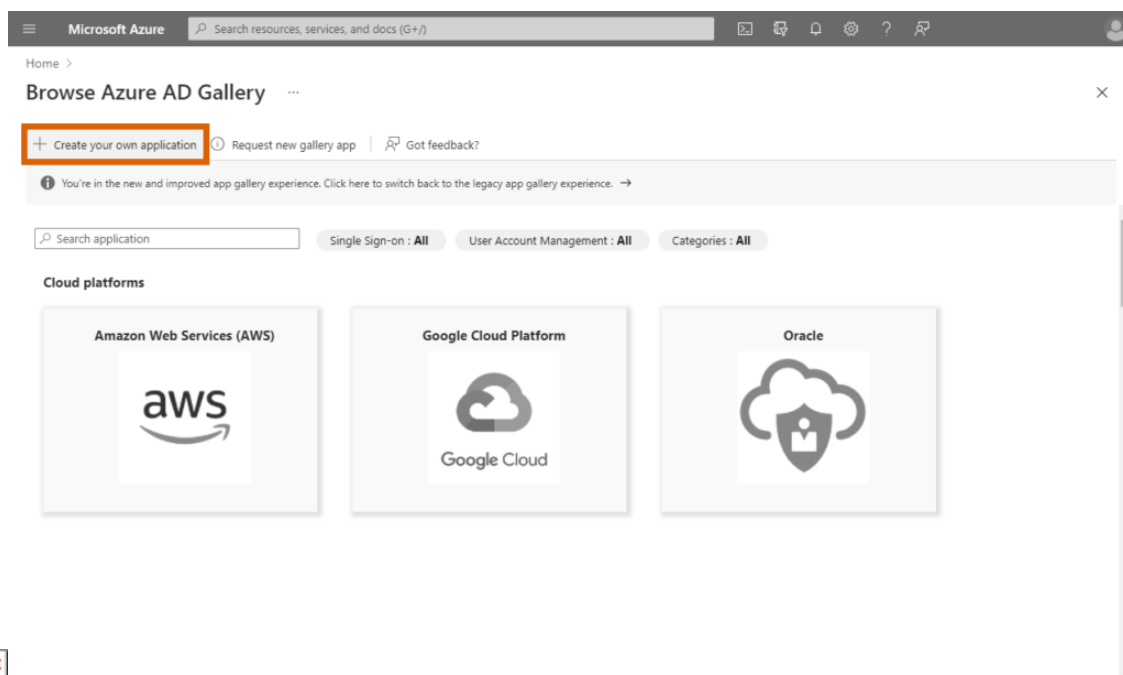
In case you have the same domain for two different Connect accounts (e.g., one domain for Vendors and Distributors), it is required to add two DNS records for each domain instance on the Connect platform.

## Enterprise Application

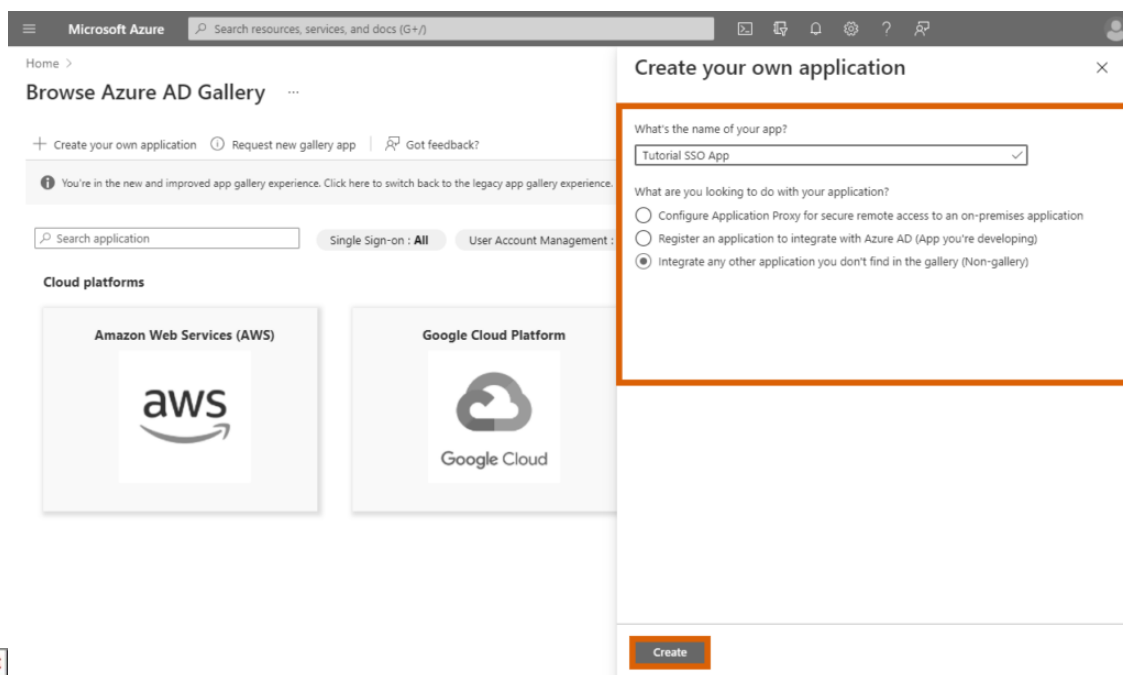
In case your Active Directory is successfully configured and your domain is successfully on the Connect platform, it is necessary to define your single sign-on system via the *Enterprise applications* section on the Microsoft Azure portal and upload your Connect *Service Provider* metadata and certificate files to the Azure portal. The following instructions showcase how to perform the aforementioned operations:



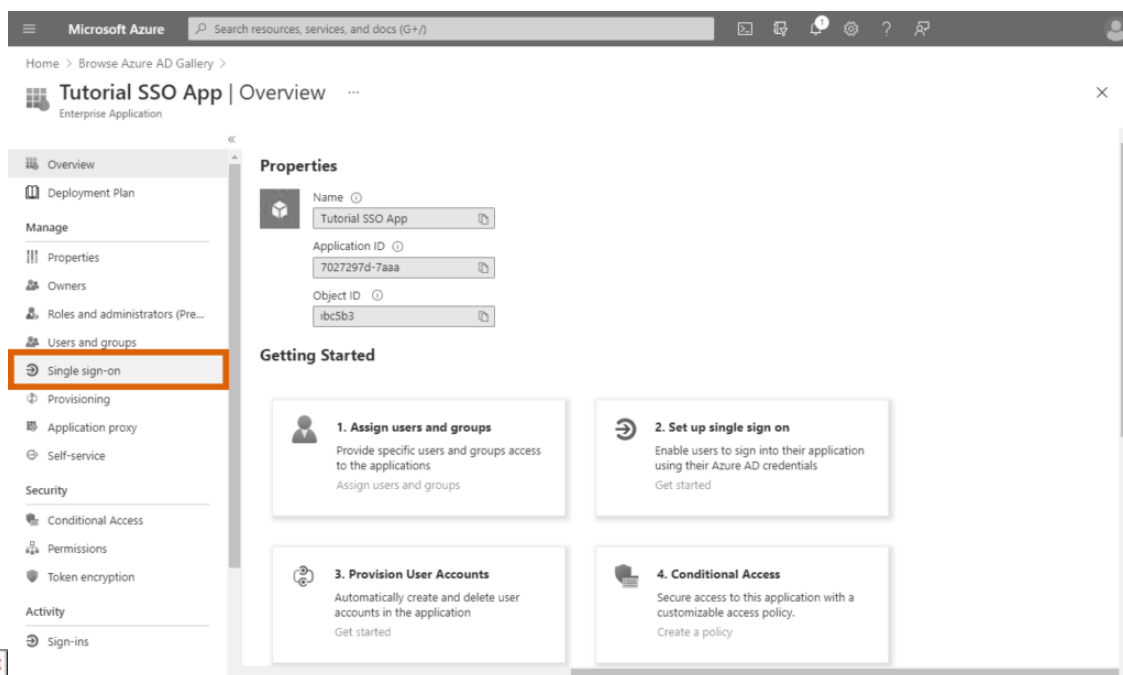
Step 1



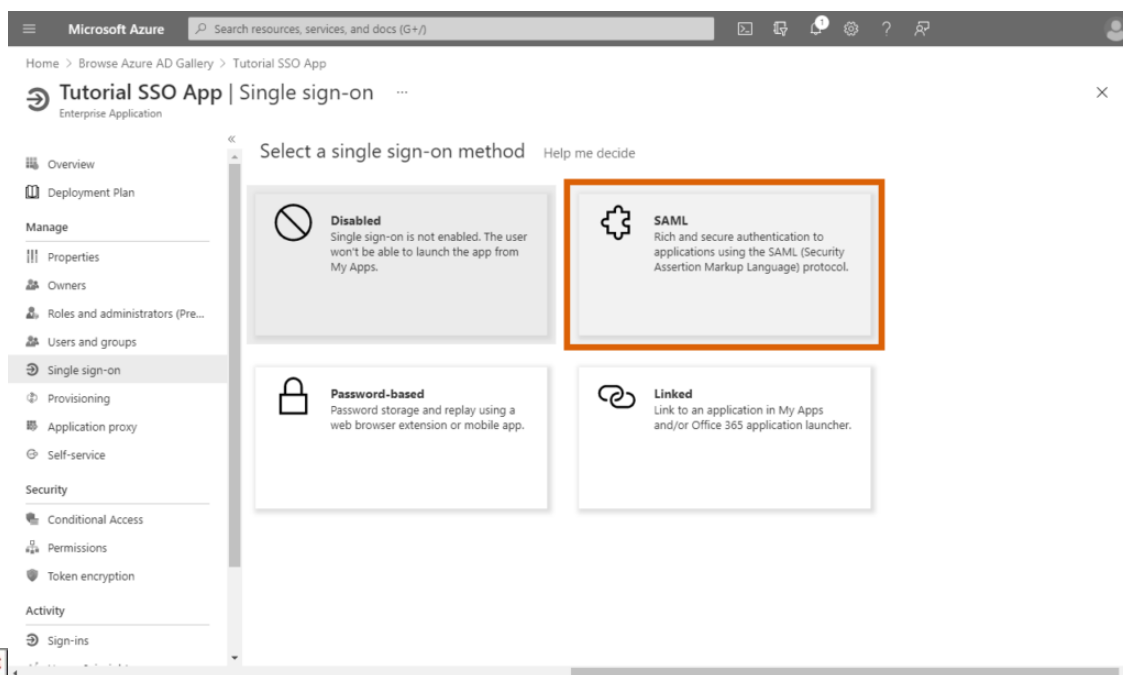
Step 2



Step 3

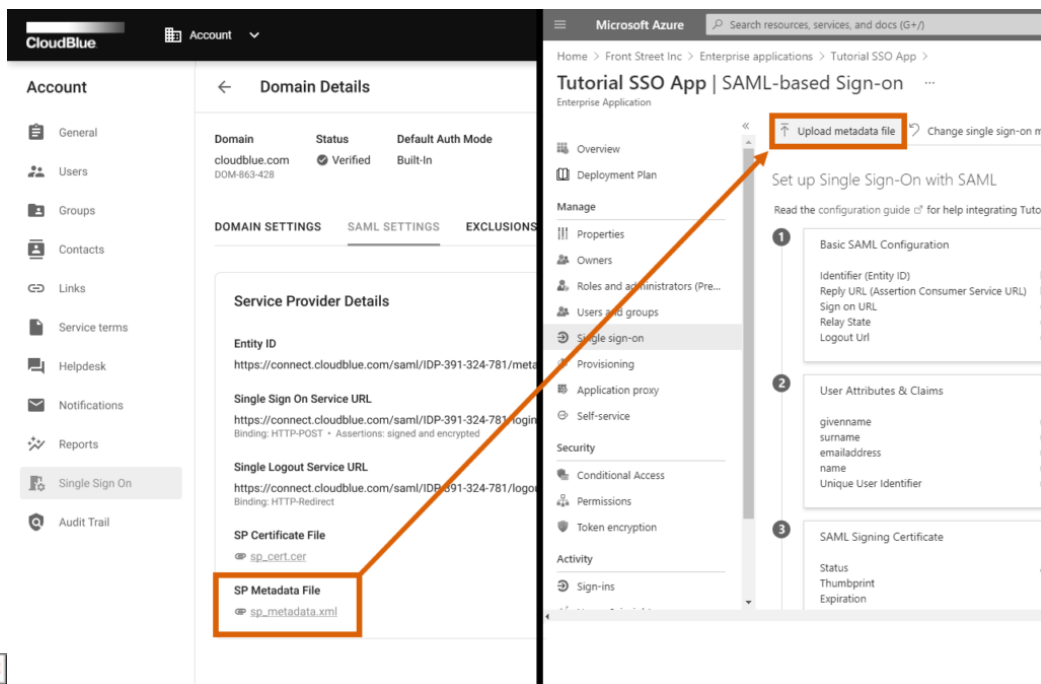


Step 4

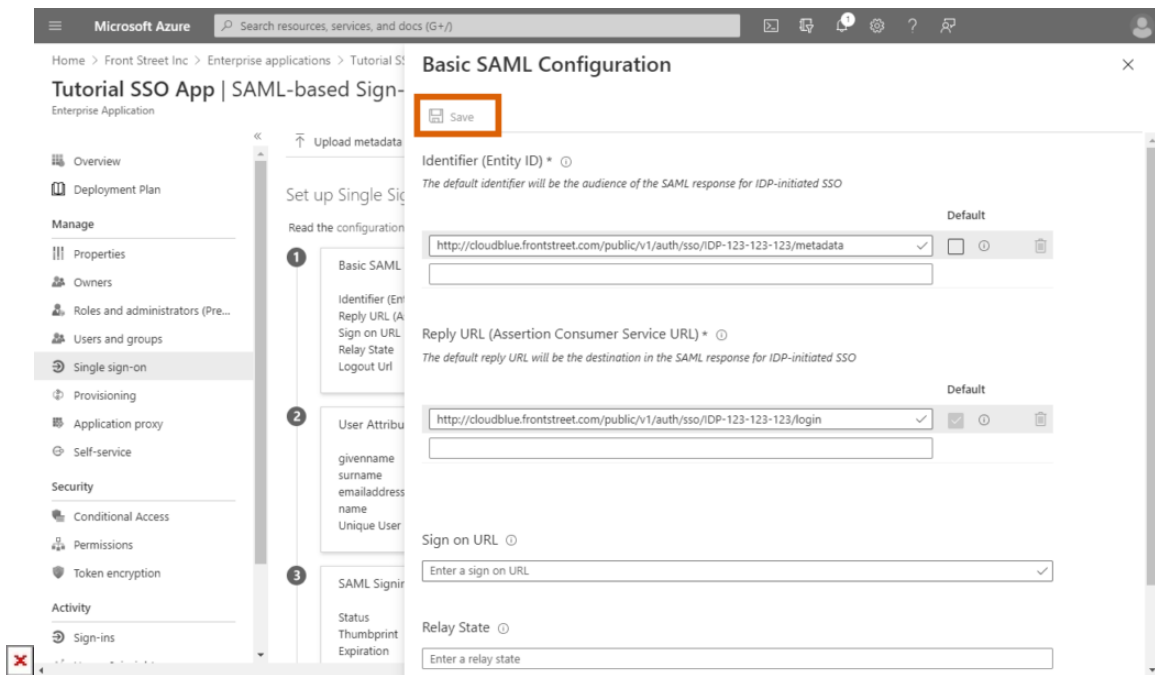


Step 5

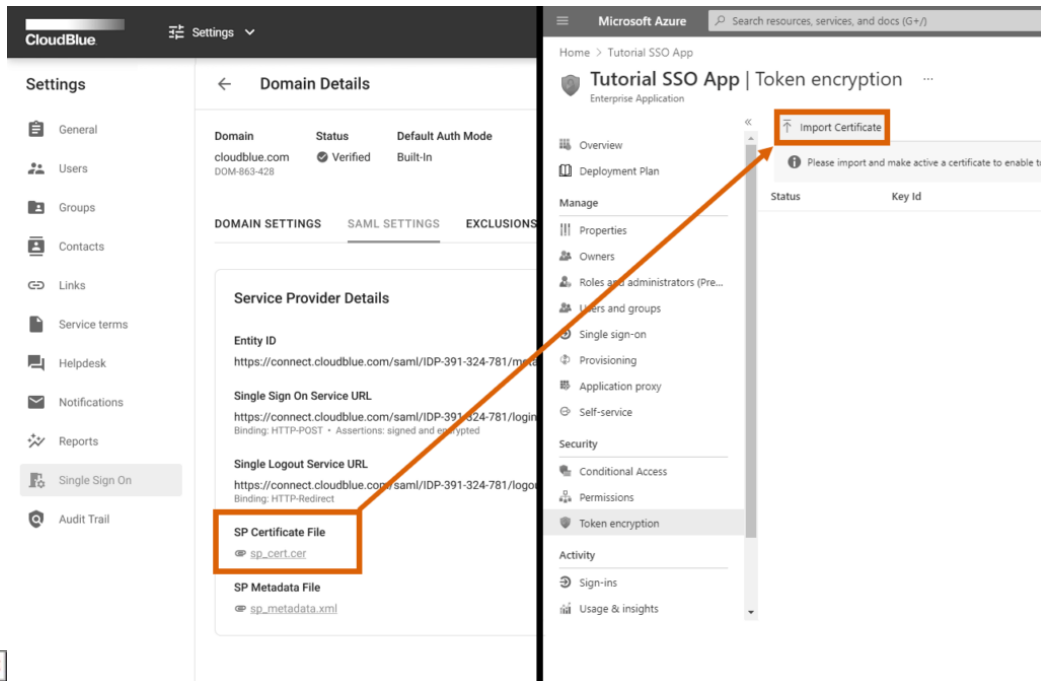




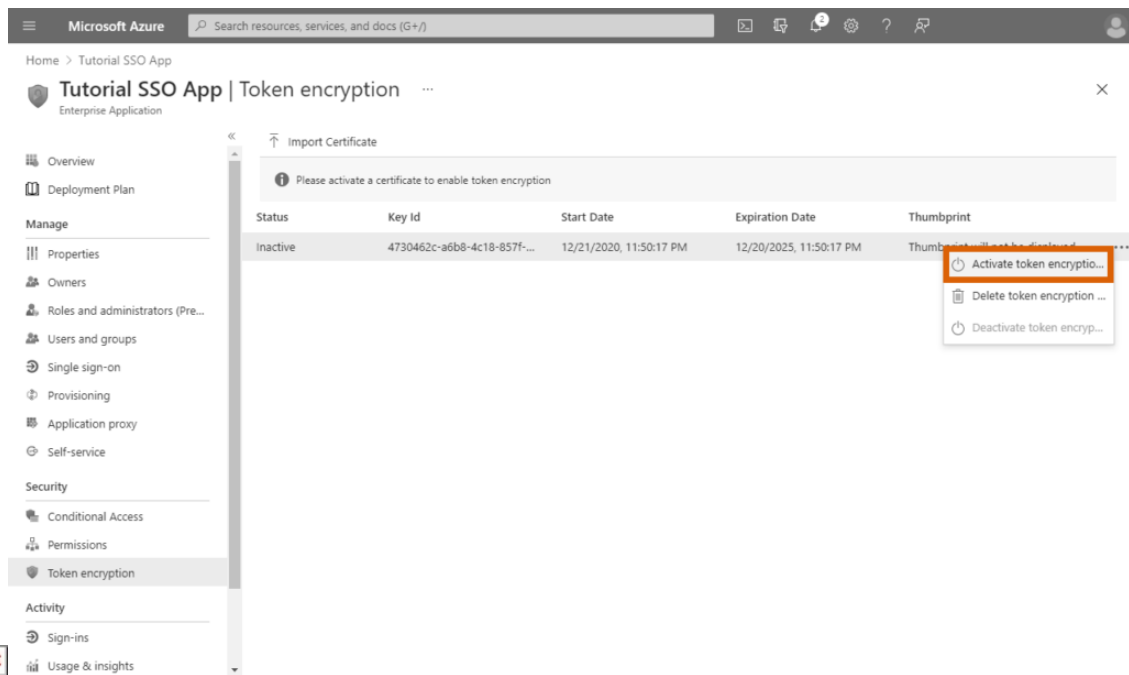
Step 6



Step 7



Step 8



Step 9

1. Access the **Enterprise applications** section from your created Azure Active Directory.
2. Click the **Create your own application** button under *Browse Azure AD Gallery*.

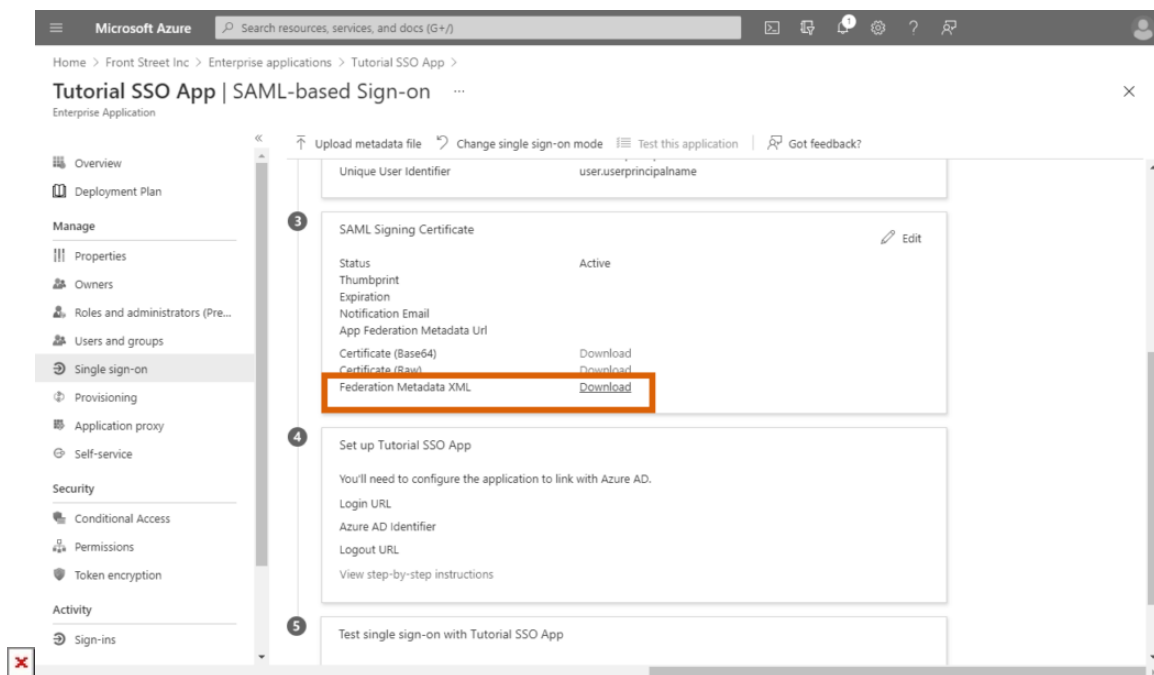


3. Enter your application name and select the **Integrate any other application you don't find in the gallery (Non-gallery)** radio option. Thereafter, click **Create** to create your enterprise application.
4. Access the **Single Sign-on** section of your created enterprise application once the system successfully processes your app.
5. Select the **SAML** option as your *Single Sign-On method*.
6. Click the **Upload metadata file** button to upload your Service Provider metadata file. Access the SP metadata file via the SAML settings tab from your verified domain on the Connect platform.
7. Once your metadata file is uploaded to the Microsoft Azure portal, click the **Save** button to save your provided metadata.
8. Access the **Token Encryption** section and click **Import Certificate** to upload your Connect certificate. Download this certificate via the SAML settings tab from your verified domain on the Connect platform. Note that Microsoft Azure requires you to get a Azure AD Premium P2 license in order to access this section.
9. Once your certificate is uploaded, activate this certificate by accessing the ellipsis (...) menu and clicking **Activate token encryption** within the Token Encryption section.

Therefore, your SSO system and the assertion encryption will be successfully configured on the Microsoft Azure portal. Note, however, that Azure's token encryption usually takes from 5 to 10 minutes to start working. Don't close your created Azure application just yet. It is required for the Connect SAML configuration as described below.

## Connect SAML Configuration

If your created application and the assertion encryption is successfully configured on the Azure portal, it is necessary to configure *Identity Provider Details* and *User Management* attributes within your verified domain on the CloudBlue Connect platform. In addition, you can switch the SAML authentication mode of your domain to test out your configured single sign-on system. Note that in order to enable this mode at least one user should be added to the *Exclusions* list. The following steps showcase how to successfully perform all of the aforementioned operations:



Step 1

Microsoft Azure Search resources, services, and docs (G+)

Home > Tutorial SSO App > Tutorial SSO App | SAML-based Sign-on

Enterprise Application

Upload metadata file Change single sign-on mode Test this application Got feedback?

Properties

- Owners
- Roles and administrators (Pre...
- Users and groups
- Single sign-on
- Provisioning
- Application proxy
- Self-service

Security

- Conditional Access
- Permissions
- Token encryption

Activity

- Sign-ins
- Usage & insights
- Audit logs
- Provisioning logs
- Access reviews

2 User Attributes & Claims Edit

givenname	user.givenname
surname	user.surname
emailaddress	user.mail
name	user.userprincipalname
Unique User Identifier	user.userprincipalname

3 SAML Signing Certificate Edit

Status	Active
Thumbprint	
Expiration	
Notification Email	
App Federation Metadata Uri	
Certificate (Base64)	Download
Certificate (Raw)	Download
Federation Metadata XML	Download

4 Set up Tutorial SSO App

You'll need to configure the application to link with Azure AD.

Step 2

Microsoft Azure Search resources, services, and docs (G+)

Home > Tutorial SSO App > SAML-based Sign-on > User Attributes & Claims

+ Add new claim + Add a group claim Columns

Required claim

Claim name	Value
Unique User Identifier (Name ID)	user.userprincipalname [nameid-for... ***

Additional claims

Claim name	Value
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress	user.mail ***
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	user.givenname ***
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	user.userprincipalname ***
http://schemas.xmlsoap.org/ws/2005/05/identity/claims/surname	user.surname ***

Step 3

**CloudBlue** Settings

**Domain Details** VERIFY CHANGE DEFAULT AUTH MODE

Domain	Status	Default Auth Mode
cloudblue.com DOM-863-428	Verified	Built-In

DOMAIN SETTINGS | SAML SETTINGS | EXCLUSIONS LIST | DETAILS

**Service Provider Details**

**Entity ID**  
https://connect.cloudblue.com/saml/IDP-391-324-781/metadata

**Single Sign On Service URL**  
https://connect.cloudblue.com/saml/IDP-391-324-781/login  
Binding: HTTP-POST - Assertions: signed and encrypted

**Single Logout Service URL**  
https://connect.cloudblue.com/saml/IDP-391-324-781/logout  
Binding: HTTP-Redirect

**SP Certificate File**  
sp\_cert.cer

**SP Metadata File**  
sp\_metadata.xml

**Identity Provider Details** EDIT

**ID**  
-

**Issuer (Entity ID)**  
-

**Single Sign On Service URL**  
-

**Single Logout Service URL**  
-

**IDP Certificate File**  
-

Upload Federation Metadata XML

Step 4

**CloudBlue** Settings

**Domain Details** VERIFY CHANGE DEFAULT AUTH MODE

Domain	Status	Default Auth Mode
cloudblue.com DOM-863-428	Verified	Built-In

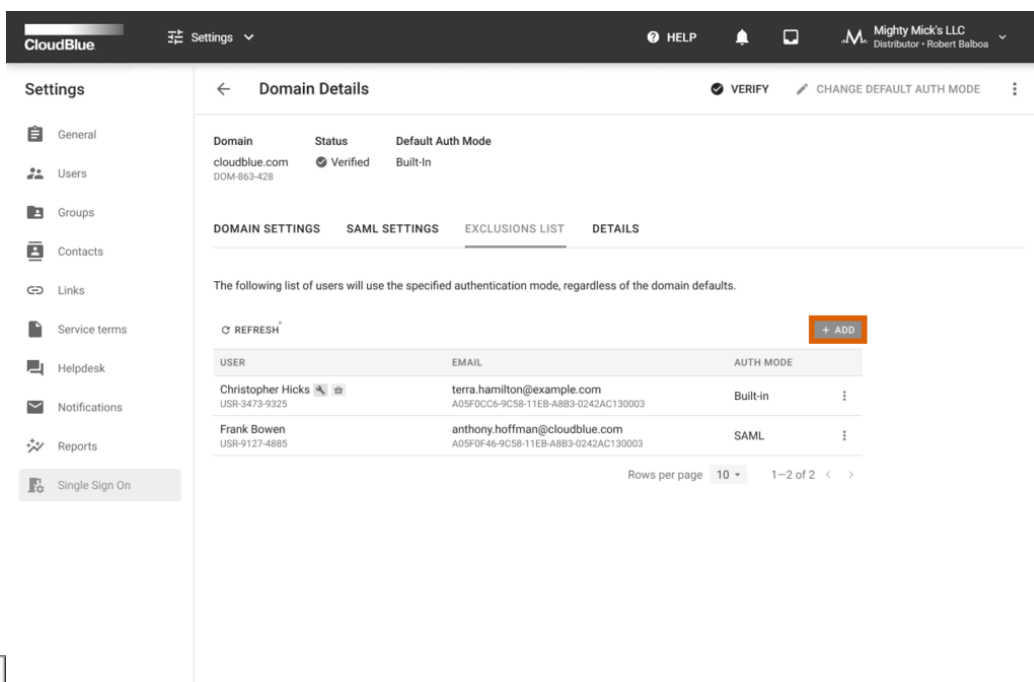
DOMAIN SETTINGS | SAML SETTINGS | EXCLUSIONS LIST | DETAILS

**Users Management**  
Configure mapping between external users using SAML assertion attributes.

USER ATTRIBUTE	SAML ATTRIBUTE NAME	
<b>External ID</b> Unique identifier of a user in the IDP	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname	
<b>Email</b> Unique immutable email of a user	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress	
<b>Full Name (optional)</b> Non-unique full name of a user	http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name	

**Password Management Notice**  
Your password is managed externally, please visit <https://example.com> to change your password or contact your support team.

Step 5

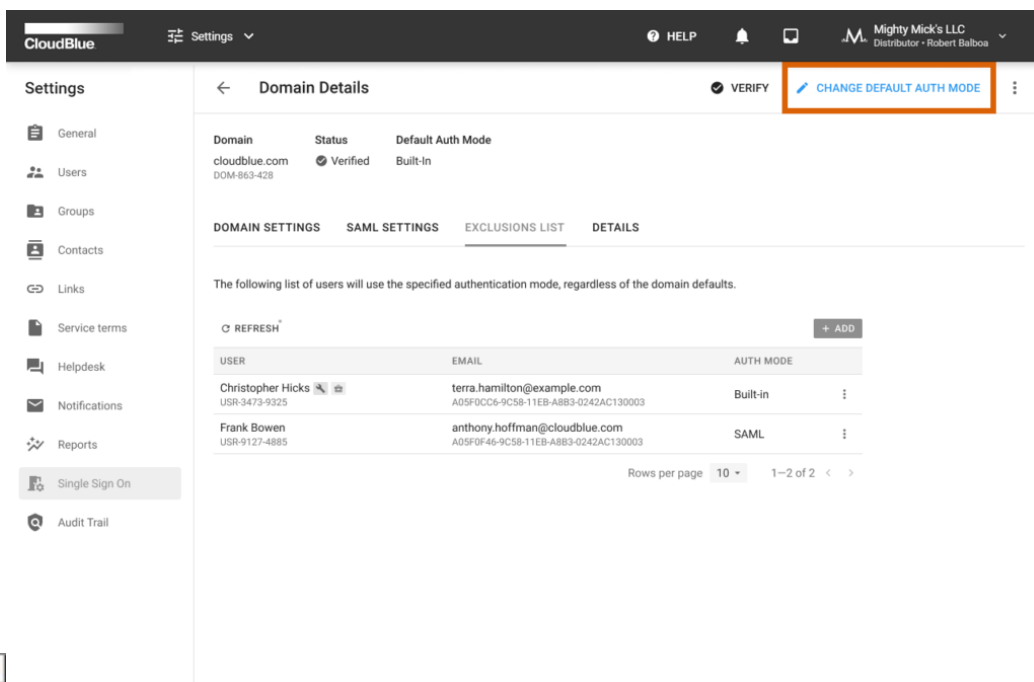


The screenshot shows the 'Domain Details' page for 'cloudblue.com'. The domain status is 'Verified' and the default auth mode is 'Built-In'. Under the 'EXCLUSIONS LIST' tab, a table lists users with their authentication modes:

USER	EMAIL	AUTH MODE
Christopher Hicks USR-3473-9325	terra.hamilton@example.com A05F0CC6-9C58-11E8-AB83-0242AC130003	Built-in
Frank Bowen USR-9127-4885	anthony.hoffman@cloudblue.com A05F0F46-9C58-11E8-AB83-0242AC130003	SAML

At the top right of the table, there is a '+ ADD' button. At the bottom right, there is a 'Rows per page' dropdown set to '10' and a '1-2 of 2' indicator.

Step 6



This screenshot is identical to the previous one, but the 'CHANGE DEFAULT AUTH MODE' button in the top right corner of the 'Domain Details' header is highlighted with an orange box.

Step 7

1. Access the **Single Sign-on** section from your configured Azure application. Thereafter, download the **Federation Metadata XML** under *SAML Signing Certificate*.

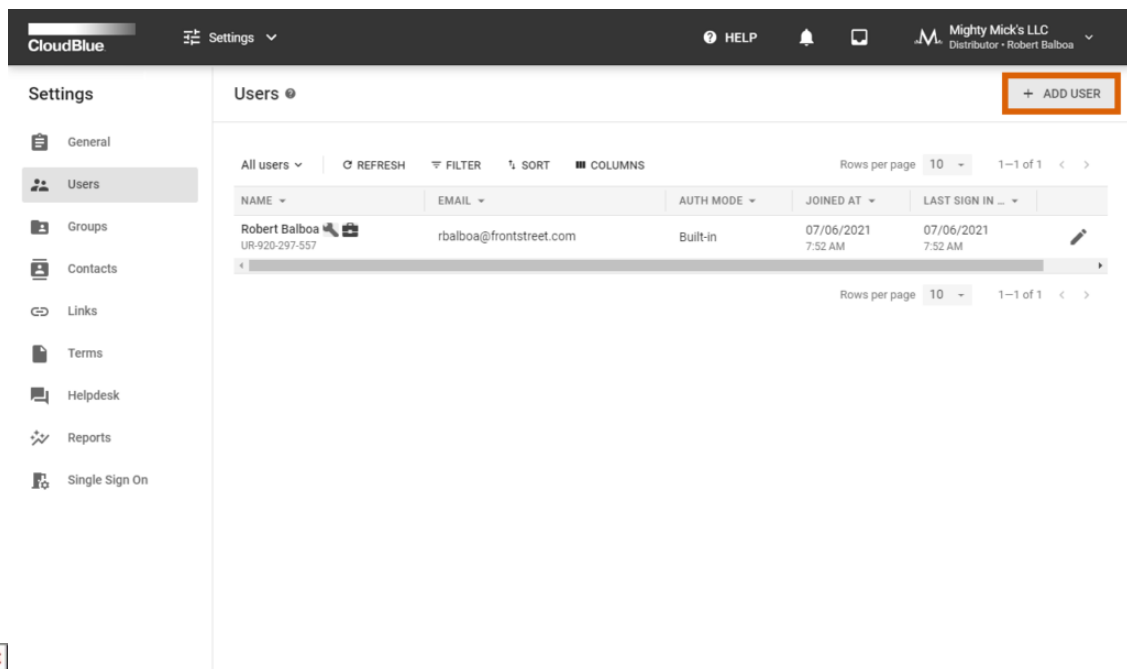


2. Scroll up to the *User Attributes & Claims* section and click the **Edit** button to access required user management attributes.
3. Copy the Azure claim names under *Additional Claims*. Namely, it is required to copy the following claim names:  
Email: `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/emailaddress`  
External ID: `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/givenname`  
Full Name: `http://schemas.xmlsoap.org/ws/2005/05/identity/claims/name`
4. Access the SALM Settings tab from your verified domain on Connect. Click the **Edit** button next to *Identity Provider Details* and upload your exported **Federation Metadata XML** to the corresponding form.
5. Locate the *User Management* section of the SAML Settings tab and provide the copied claim names as **SAML Attribute Names**.
6. Access the **Exclusions List** tab of your Connect domain. Click the **Add** button to specify at least one user with the *built-in* authentication mode.
7. Click **Change Default Auth Mode** at the top-right corner of your domain details screen. The appeared wizard will help you switch the default mode to the *SAML* authorization mode.

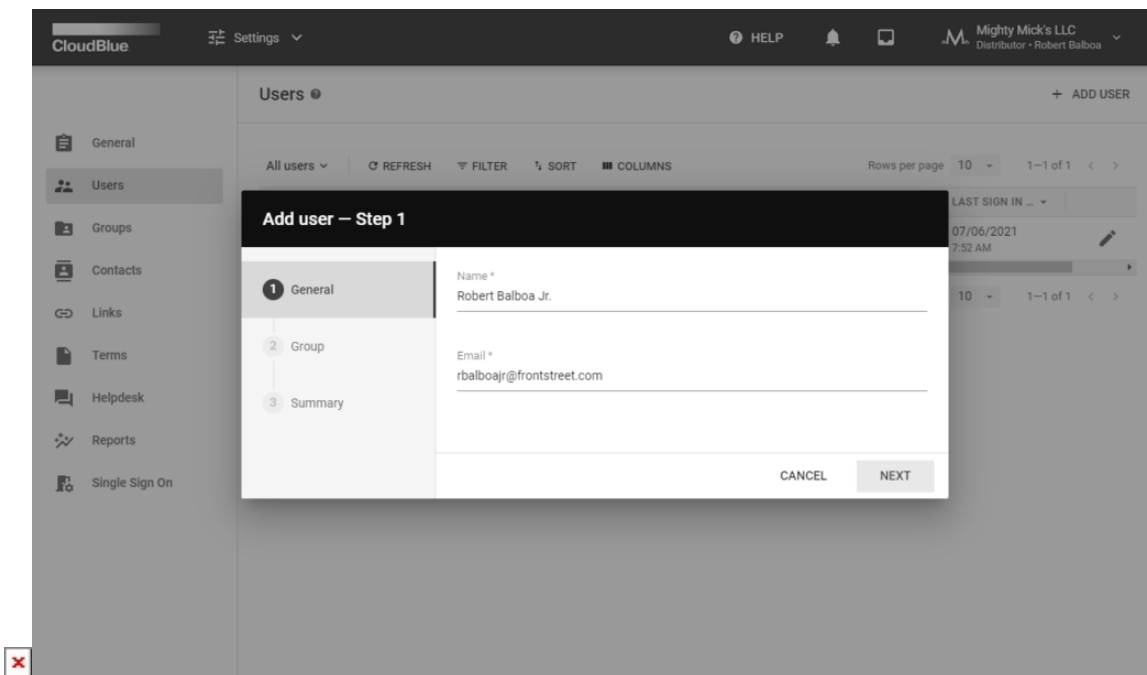
By completing the provided instruction, your Connect domain will be successfully configured for single sign-on authorization via the Azure Active Directory. Therefore, you can add users to your authorization system and test out as described below.

## Adding Users and Test Authorization

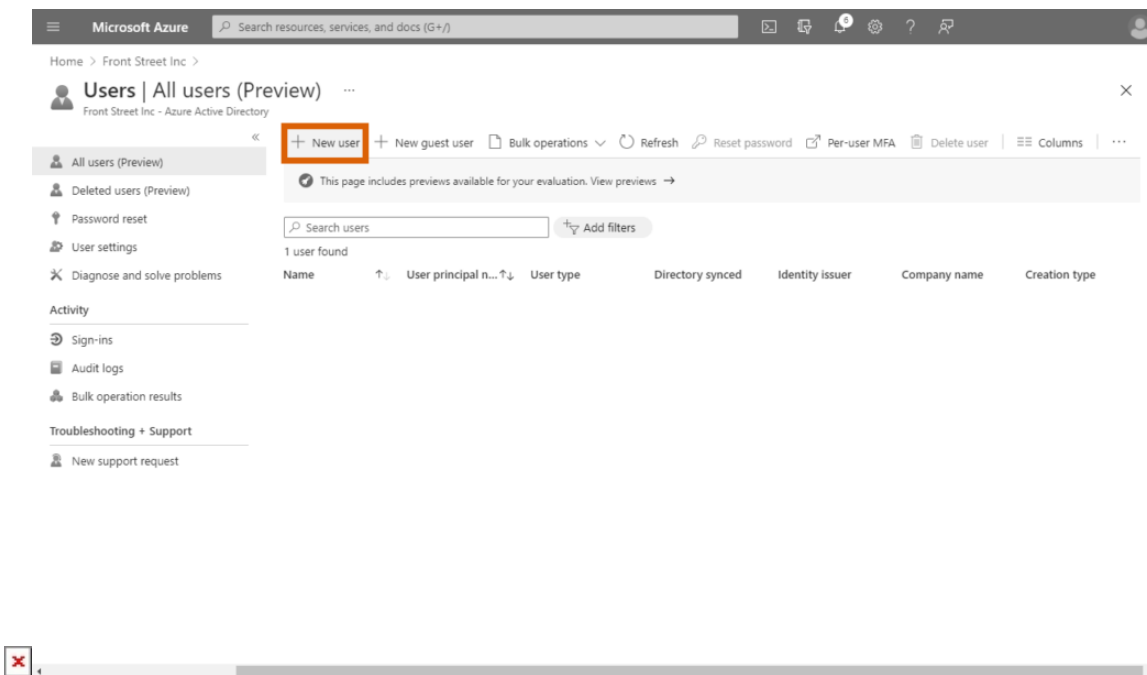
Once your single sign-on system will be successfully configured, you can create a new user on Connect and add this user to your Azure Active Directory as well as your to your configured application. Therefore, you can test out your configured SAML authorization. Follow the steps below to add a new user and test your single sign-on system:



Step 1

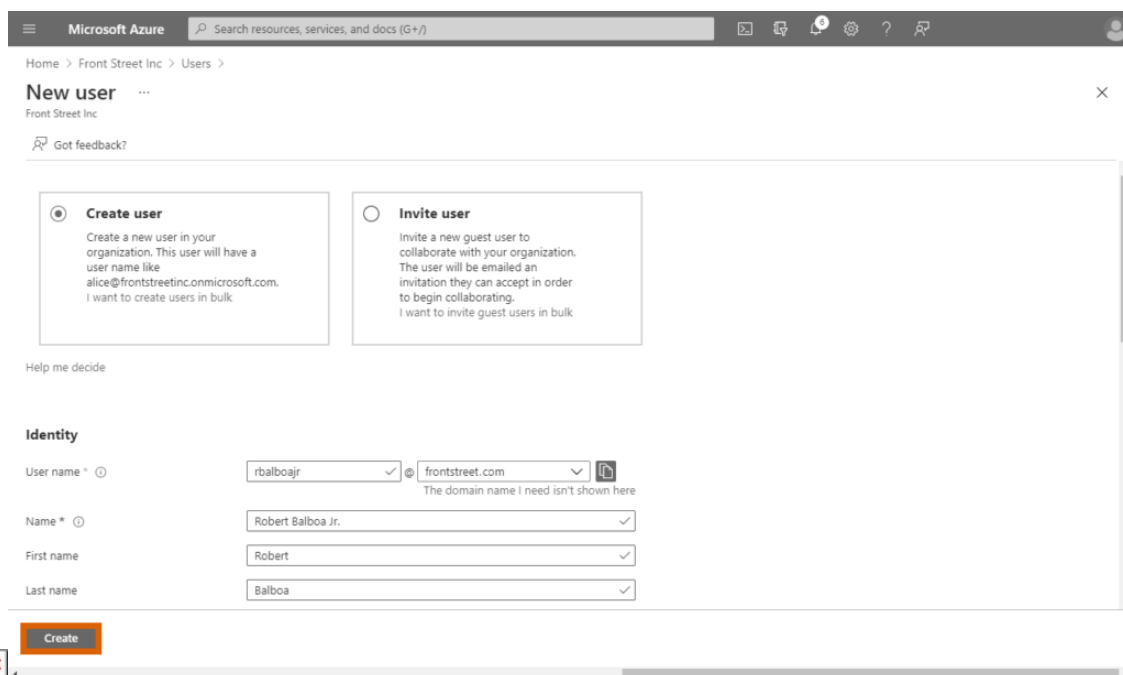


Step 1

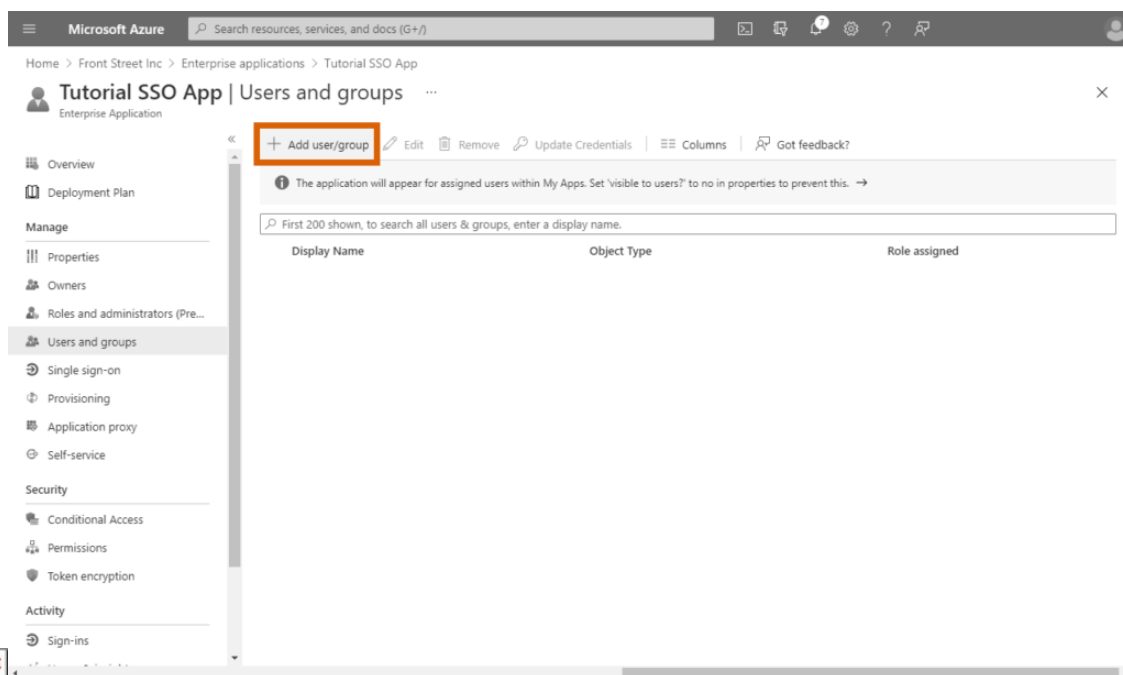


Step 2

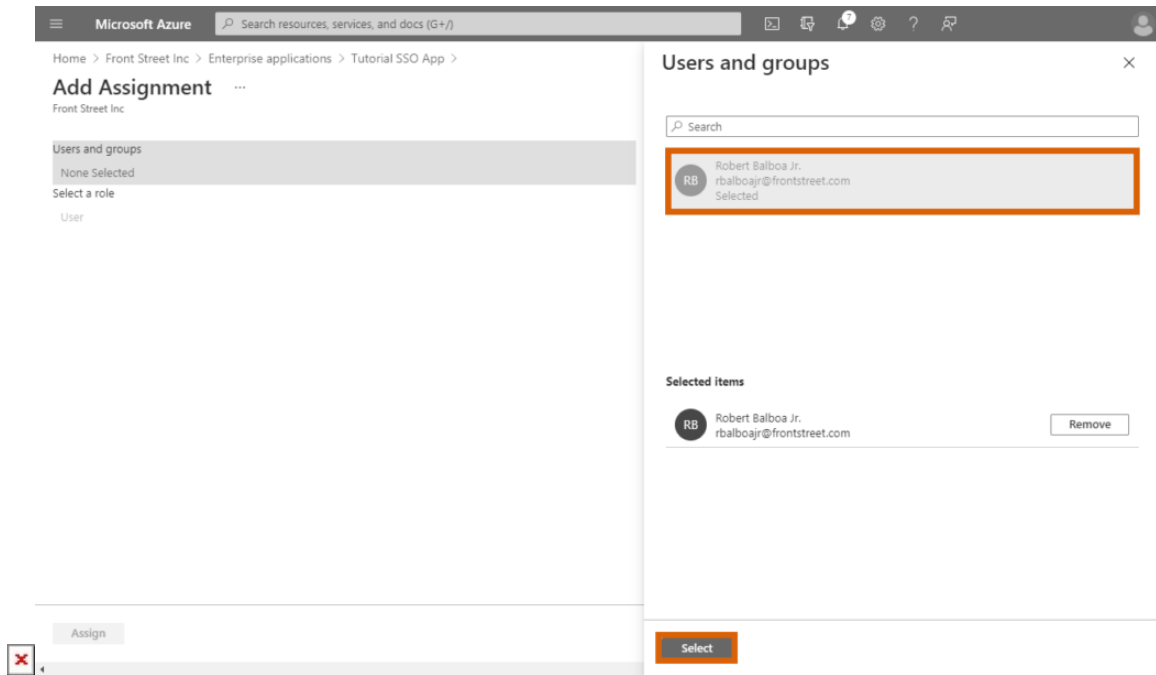




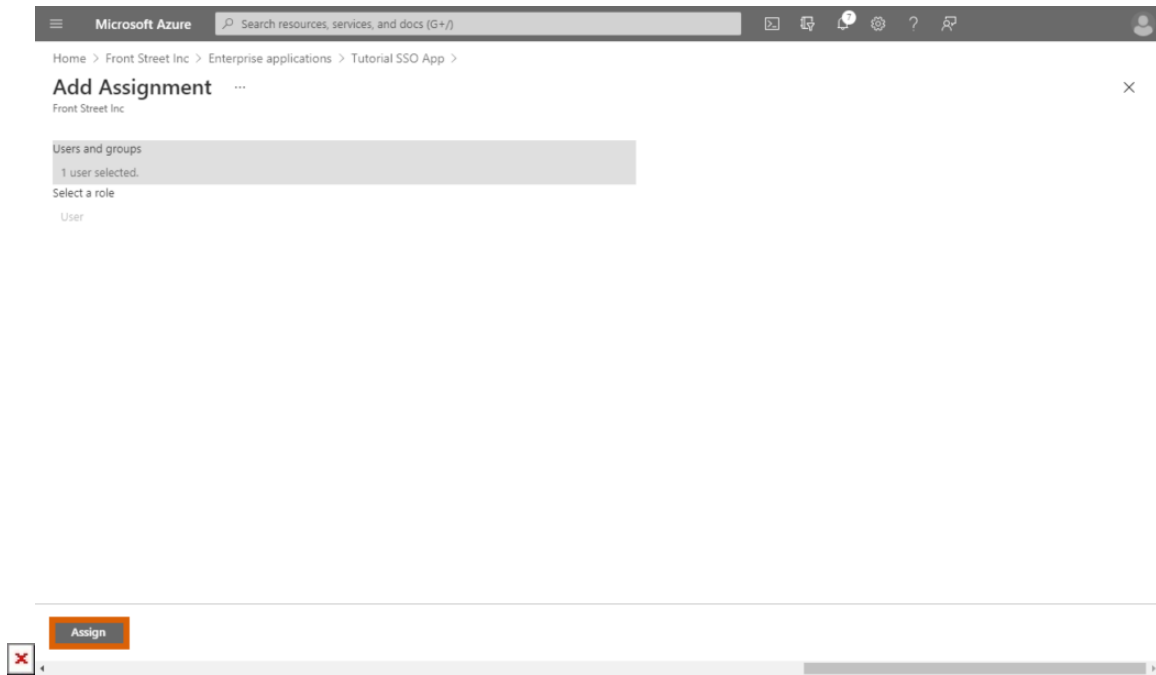
Step 2



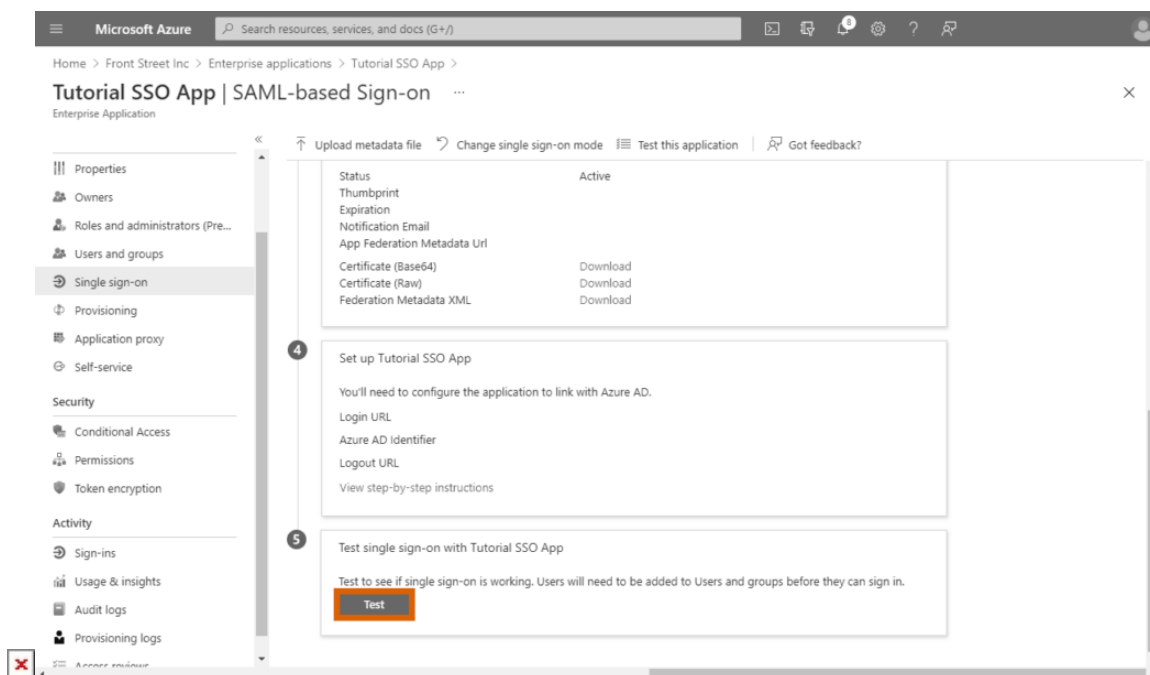
Step 3



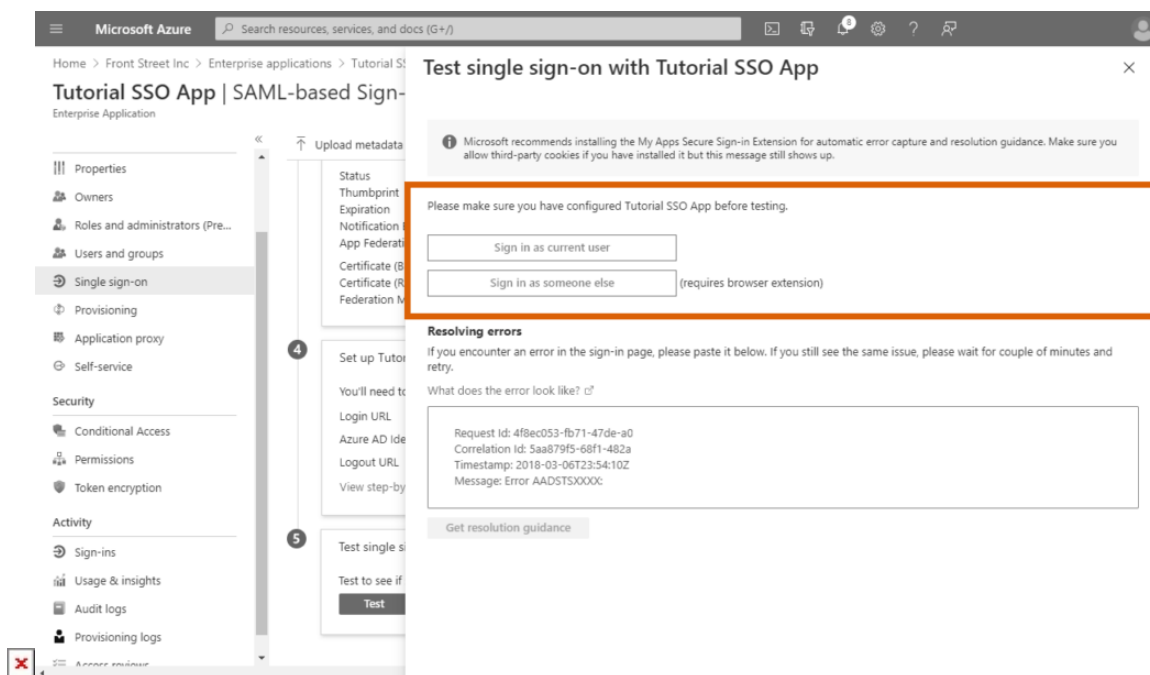
Step 4



Step 5



Step 6



Step 6



Step 7



Step 7

1. Access the **Users** section of the Account module on the Connect platform. Click **Add User** to launch the wizard and create your test user on Connect.



2. Proceed to the **Users** section from your configured **Azure Active Directory**. Click the **New User** button to add your test user with same credentials.
3. Navigate to the **Users and Groups** section from your configured *Enterprise Application*. Click the **Add user/group** to add your configured user.
4. Click on *Users and Groups* from the provided form. Thereafter, choose your user from the list and click the **Select** button.
5. Click **Assign** to successfully assign your selected user to your application.
6. Access the **Single Sign-on** section and click the Test button in case you want to test your SAML configuration. Sign in as your current user or test your application as someone else.
7. Finally, use your created user's credentials to sign into your Connect domain.

In case your single-sign on authorization system is configured correctly, the Connect platform will allow you to sign into your domain by using your specified credentials.