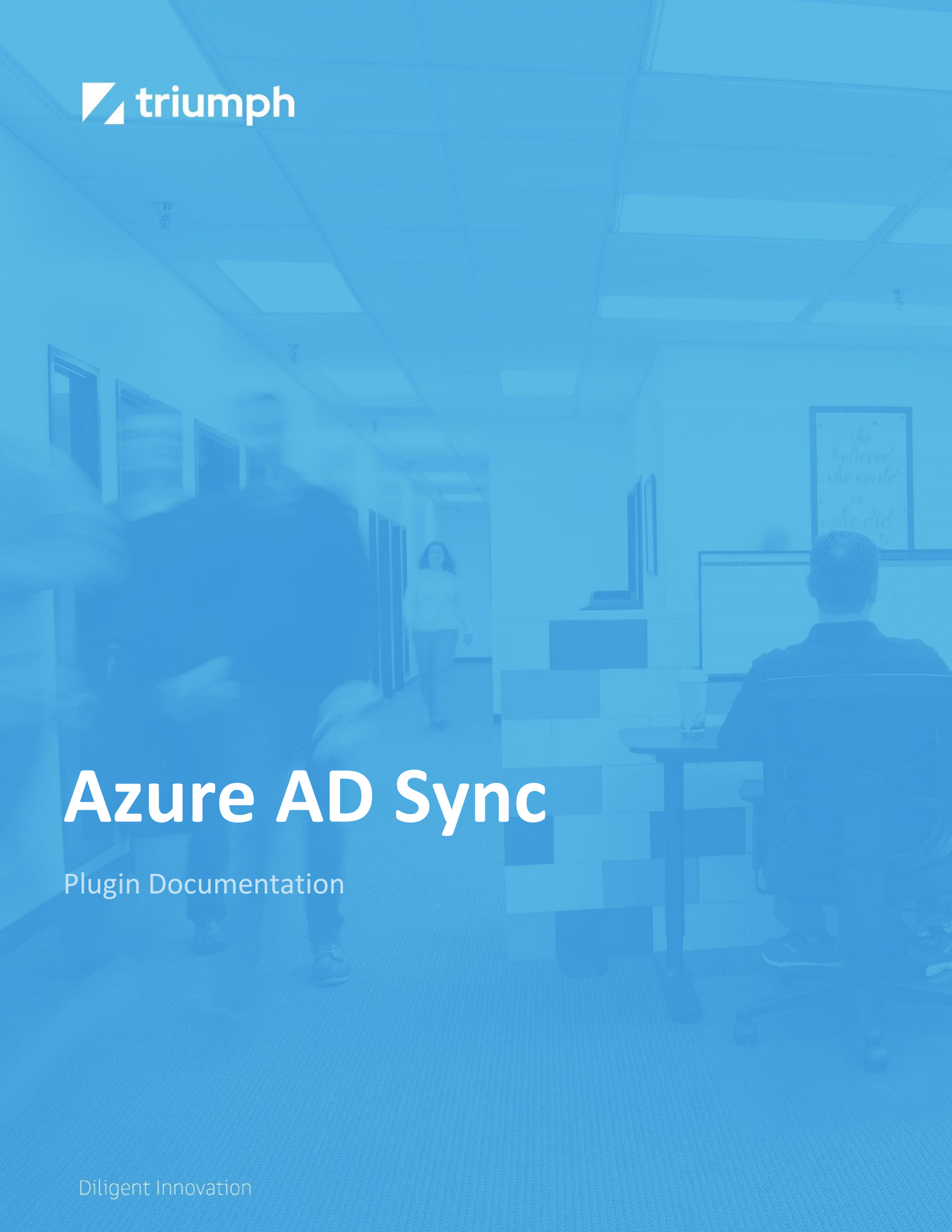


triumph

Azure AD Sync

Plugin Documentation

Diligent Innovation

Overview

The Azure AD (AAD) Sync plugin enables Rock administrators to synchronize data between Rock and Azure Active Directory and enables single sign on (SSO) allowing your Azure AD users to log into Rock with their Azure AD credentials. Data may be synchronized in either direction (from Rock to Azure AD, or from Azure AD into Rock), and may be synchronized on demand or with a schedule job.

By default, the Azure AD Sync plugin will synchronize the members of a group, and will attempt to match existing records in either system using the logic of:

- **AAD -> Rock –** The sync will look for an exact match of 'First Name', 'Last Name' and 'Email'.
- **Rock -> AAD –** The sync will look for an exact match of the Rock 'Email' to the AAD User Principal Name (think email in AAD).

IMPORTANT NOTE: The plugin can only sync users from Rock to AAD if they have an email address with a domain that exists in the Azure Active Directory under "Custom domain names".

Additionally, you may configure an automated job to sync changes in one direction (from Rock to Azure AD) for the following fields:

- Office Phone
- Home Phone
- Job Title
- Department
- Company

Data may also be synchronized for User Photos in either direction.

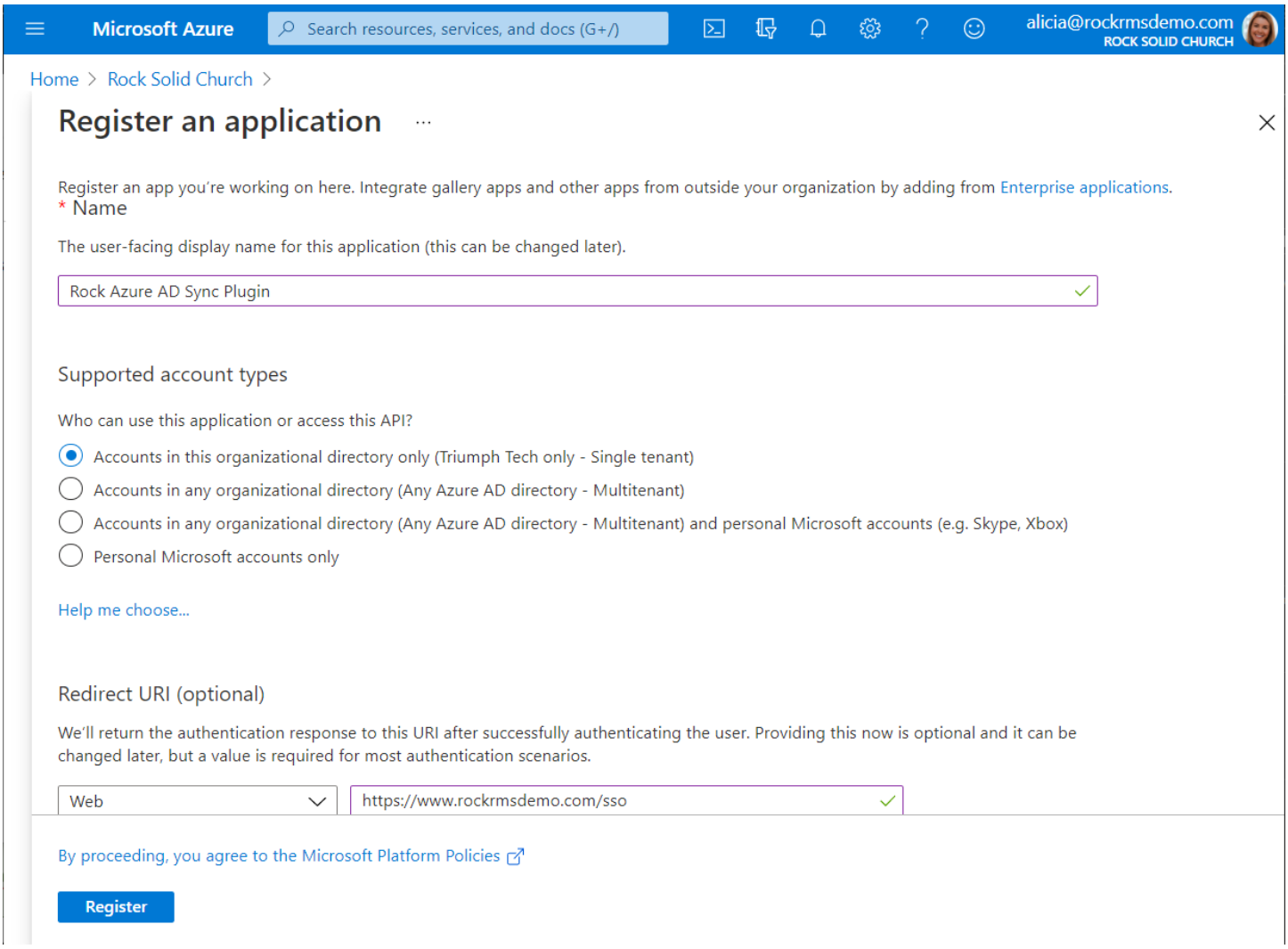
NOTE: User pictures in Azure Active Directory can only be retrieved or modified if the user has an Exchange mailbox (usually part of an Office 365 subscription). This is a limitation of the Microsoft Graph API.

Pre-Installation Setup: Configuring Your Azure Active Directory

To configure the plugin, you will need to register the application and grant necessary permissions in your Azure Active Directory tenant.

Step 1: Create a new App registration in your Azure AD tenant.

Begin by opening your Active Directory blade (and ensure you have selected the correct tenant) in the Azure Portal and then selecting the “App registrations” option from the resource menu on the left. Create the new registration by clicking on the “New registration” button on the top of the App registration blade.



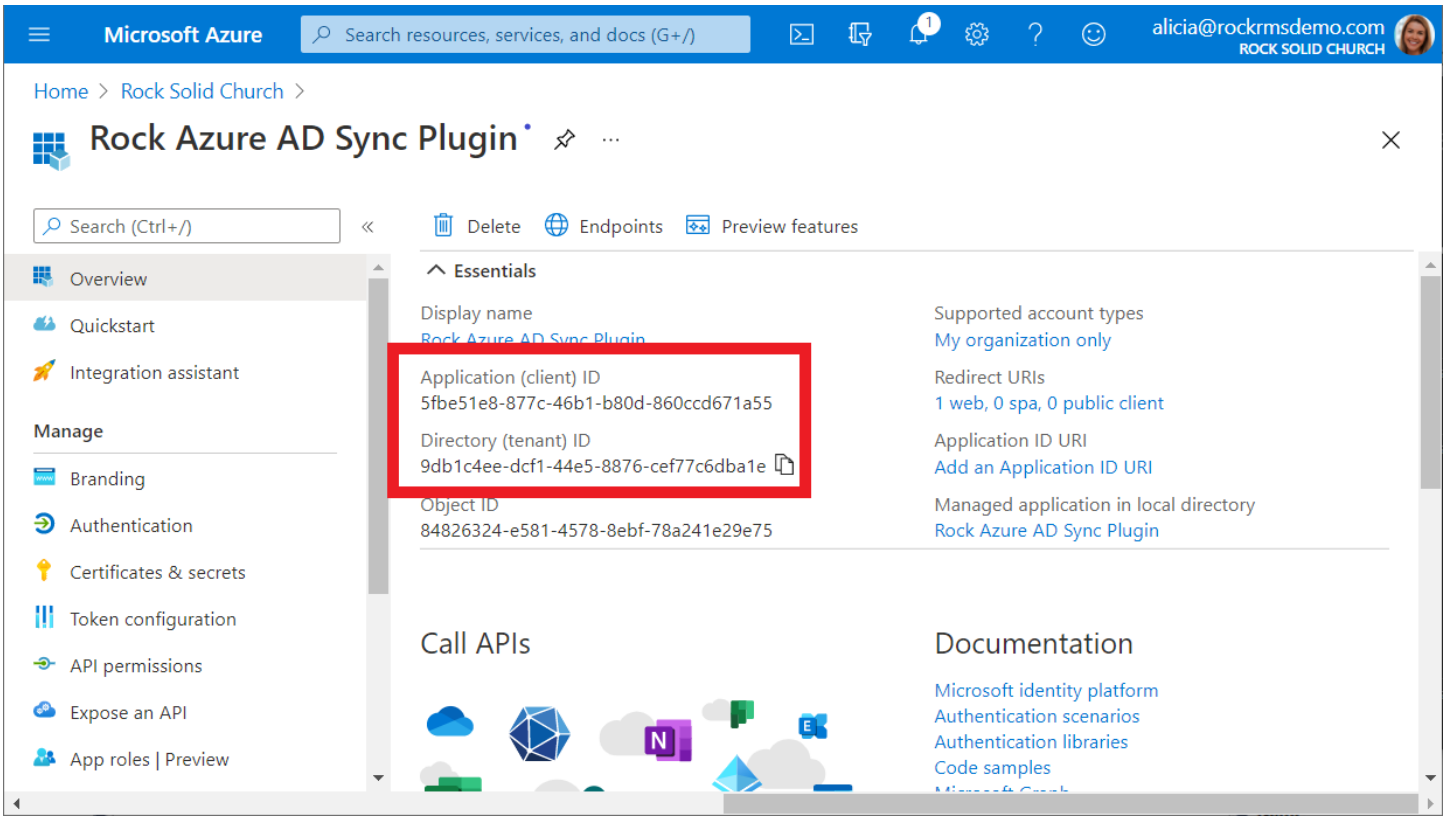
Configuration Option Explanations:

- **Name -** You can choose any name here you want, but we recommend going with something like “Rock Azure AD Sync Plugin” to make this app registration’s purpose obvious.
- **Supported Account Types -** Leave the default selection (single tenant) selected for this option.

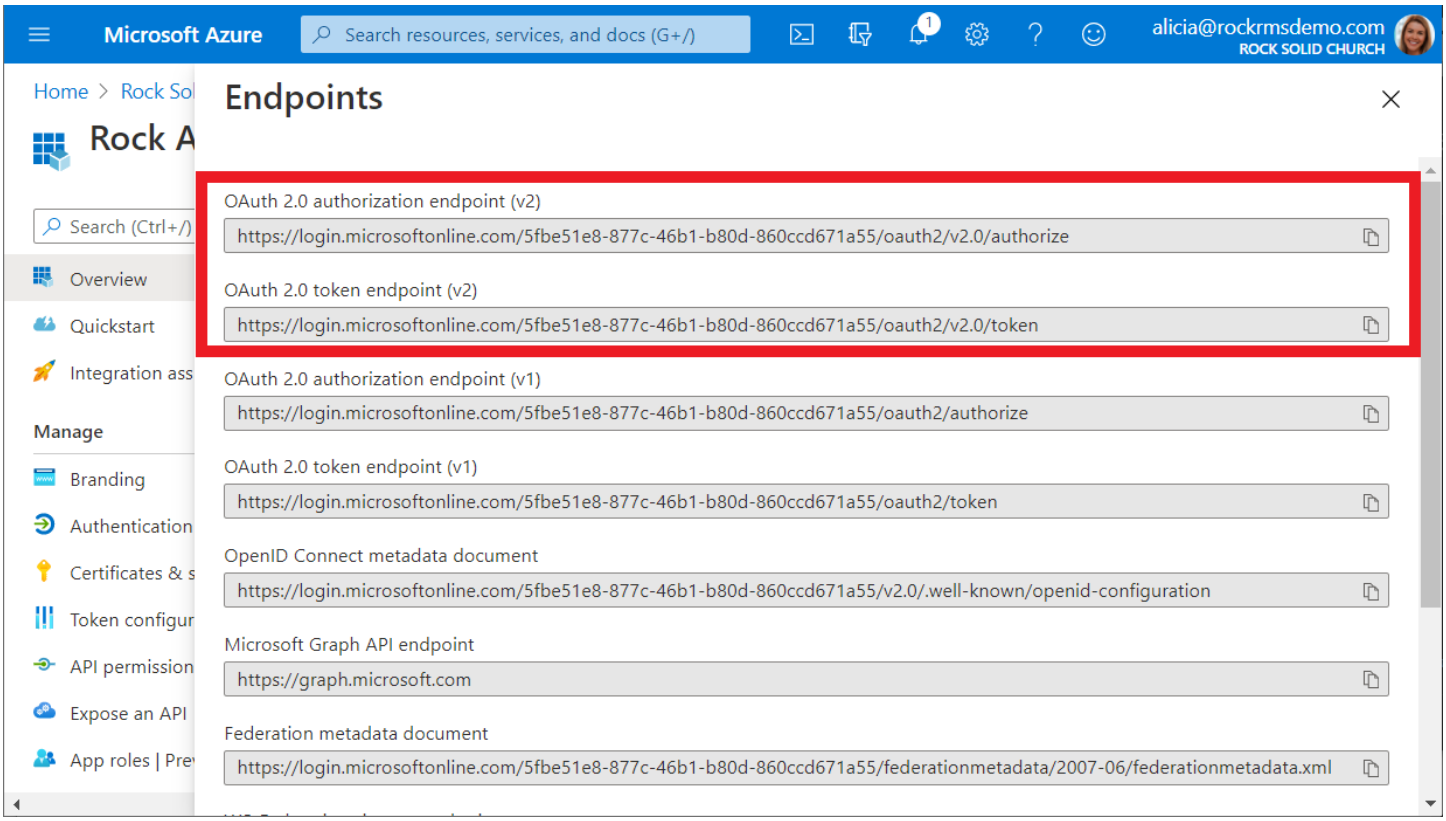
- **Redirect URI -** If you will be using the SSO functionality of the plugin (to allow you to log in to Rock with your Azure AD credentials) you will need to enter a value here. This is the page (on your Rock server) that you will use to log in to Rock with your Azure AD credentials. It can be any URL that you want, but we recommend that you use something like https://my.church/sso or https://my.church/azurelogin. We will discuss setting this page up in Rock in a later section. If you will not be using the SSO functionality, you may leave this setting blank.

Step 2: Make a note of your configuration settings.

After you create your new App registration, you will be taken to the management blade for the new resource you created. This page has some important information that you will need to configure the plugin later, so go ahead and make a note of the "Application (client) ID" value and the "Directory (tenant) ID" value. If you entered a Redirect URI value in Step 1, make a note of that as well.



You will also need to click the "Endpoints" at the top of the blade and make a note of the first two endpoints:



You should now have the following information collected:

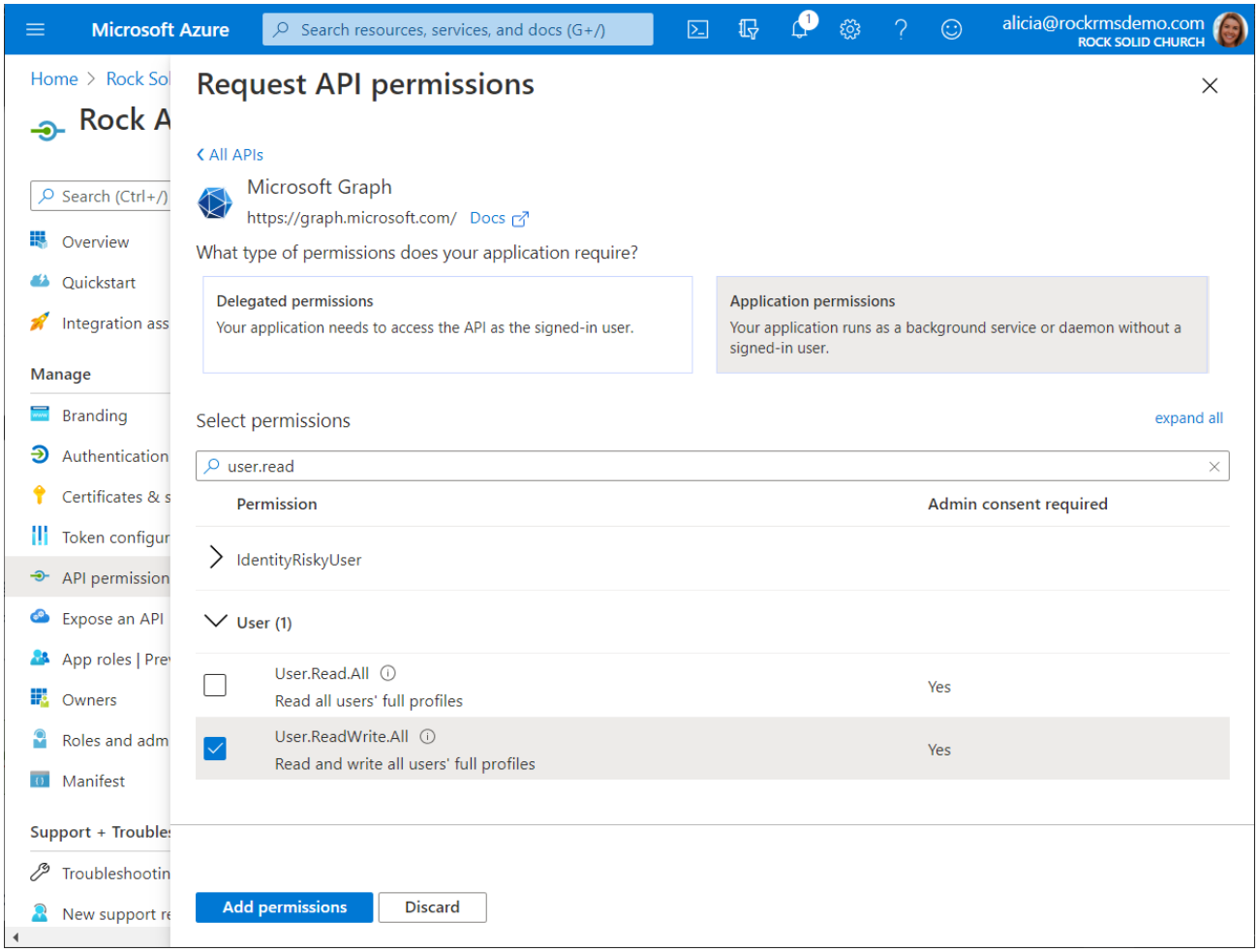
1. Azure Tenant Id
2. Azure Client Id
3. OAuth 2.0 authorization endpoint (v2)
4. OAuth 2.0 token endpoint (v2)
5. Redirect URI (if you are using the SSO feature of the plugin)

Step 3: Grant your App registration permissions to read and write users and groups.

The Azure AD plugin needs permission to read and modify user and group records in your Azure AD tenant and to read basic data from your directory. It does this with the Microsoft Graph API, and it will need the following permissions:

1. Directory.Read.All
2. Group.ReadWrite.All
3. User.ReadWrite.All

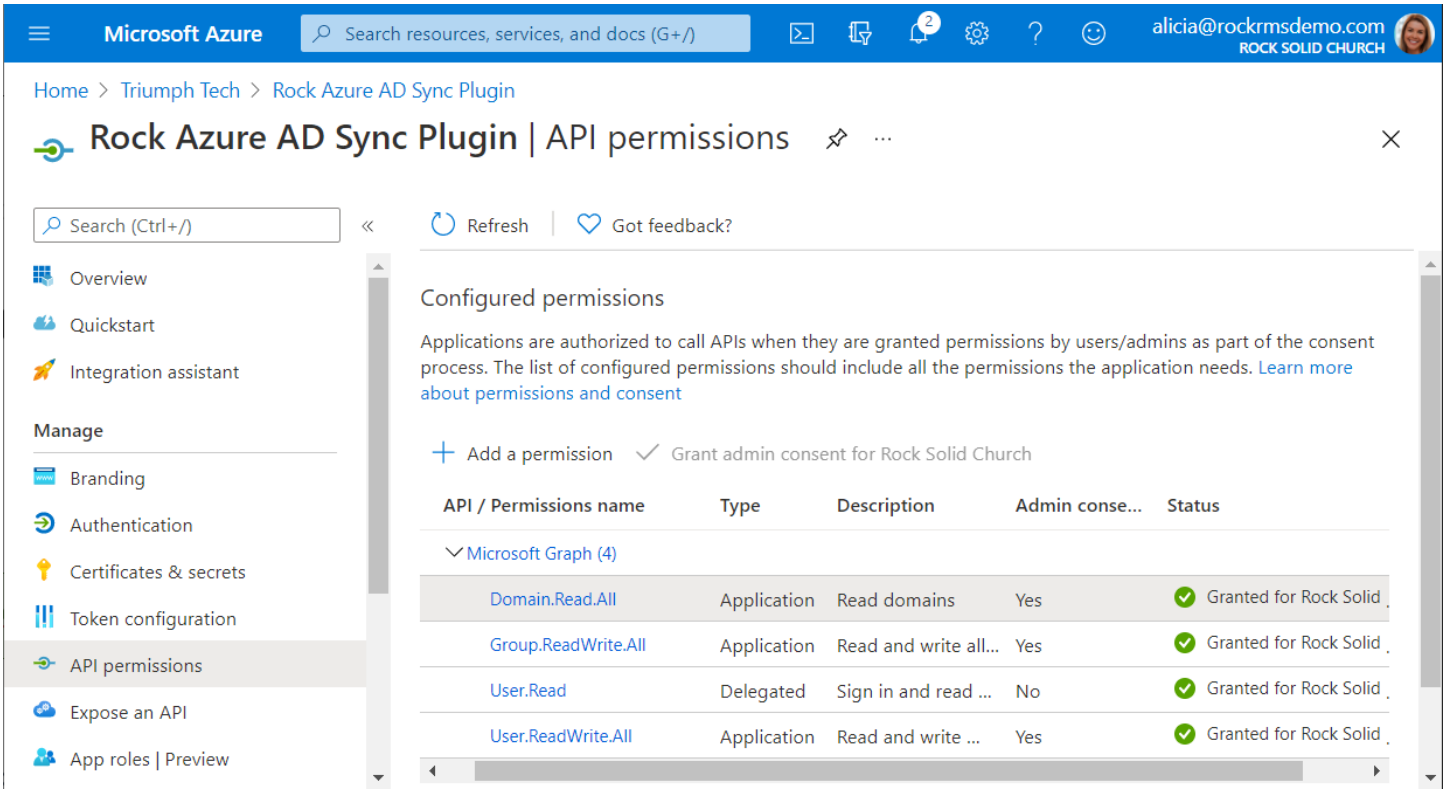
To add a new permission to your application, select the “API permissions” option from the resource management menu on the left, and then click on the button to “Add a permission”. Select the “Microsoft Graph” option and then choose “Application permissions” and add the desired permission. You can add all three at once.



Step 4: Grant Admin consent.

To finalize the permissions you added, you will need to grant admin consent . After you are finished with this step, your API permissions screen should look like the screenshot below.

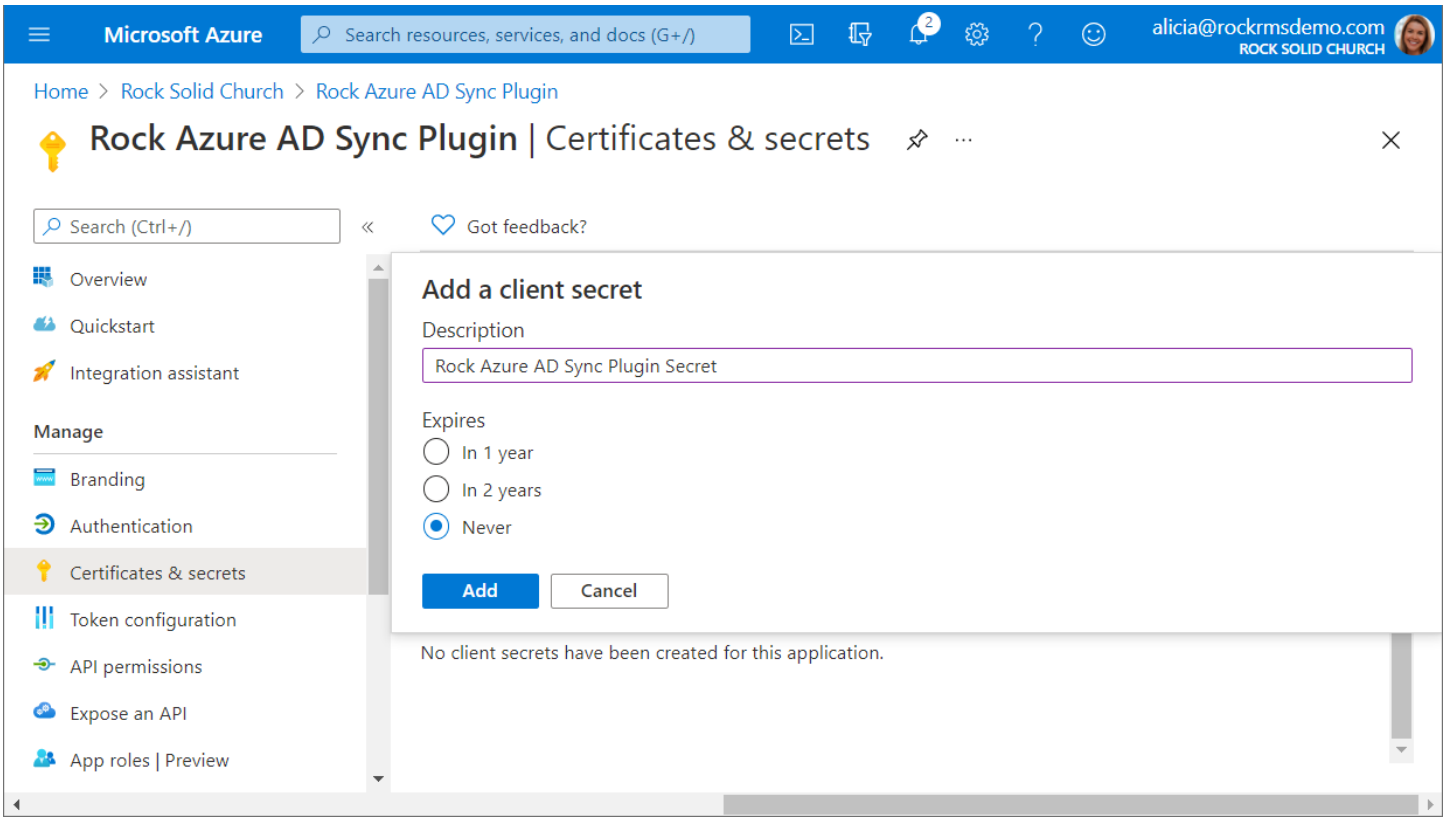
TIP: You must have administrative privileges in your Azure AD tenant to grant admin consent.



Step 5: Create a client secret.

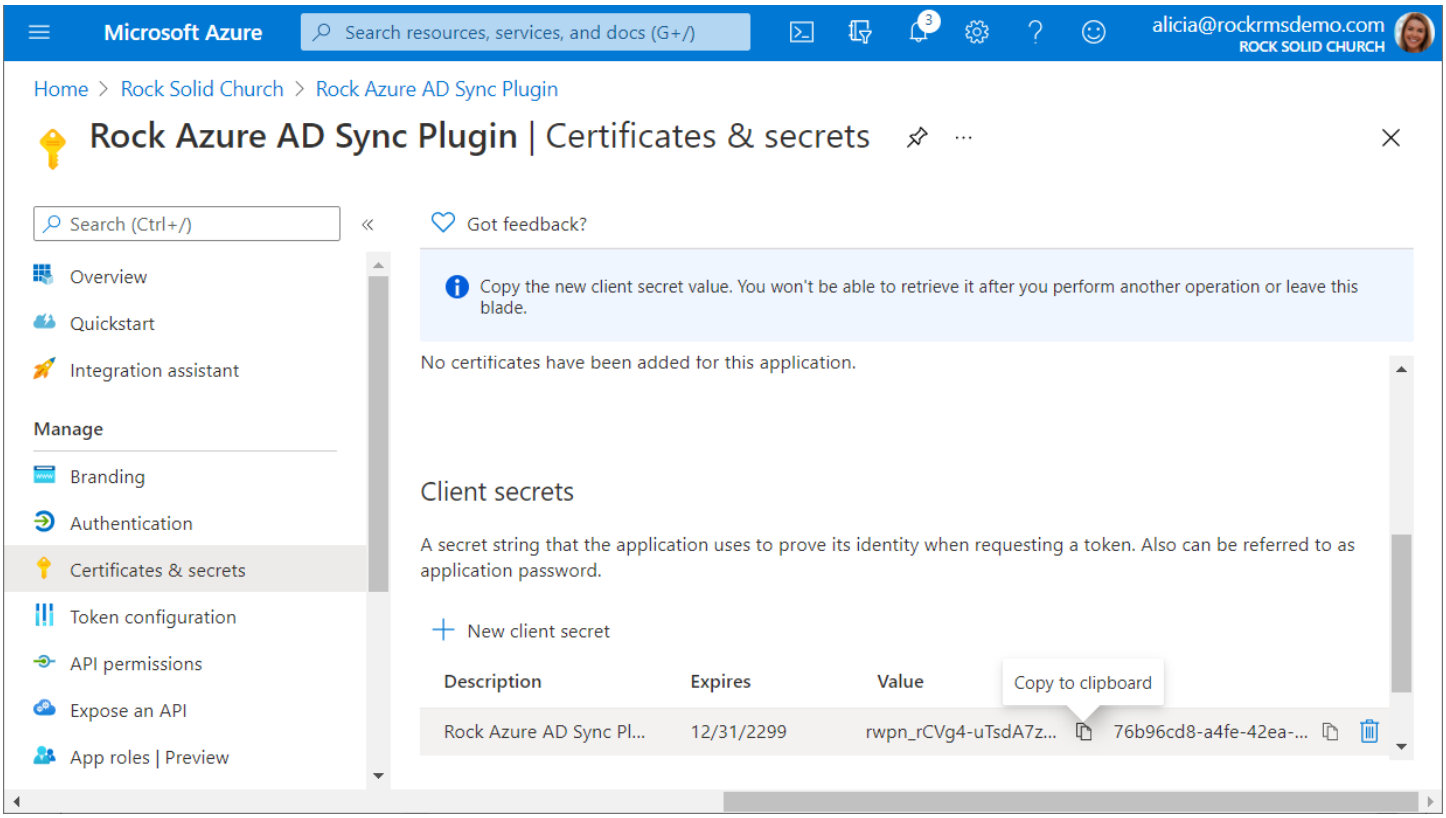
The plugin uses a client secret to authenticate itself to your Azure Active Directory. This secret is like a password, and anyone with the secret has the permissions you have granted to the application registration resource in the previous steps, so you should treat this value as highly sensitive exactly like you would a password.

To create a new client secret, select the “Certificates & secrets” option from the resource management blade (you should still be viewing the app registration you created). Scroll down to the “Client secrets” section and click the button to add a new client secret. You can name the secret anything you like, but as with the app registration, we recommend that you use a name that makes the purpose of the secret obvious. We recommend you choose the “Never” expiration option. Choosing a different expiration timeline means you will have to create a new secret and enter it into your plugin configuration when the old secret expires.


Microsoft Azure
Search resources, services, and docs (G+/)
alicia@rockrmsdemo.com
ROCK SOLID CHURCH
Home > Rock Solid Church > Rock Azure AD Sync Plugin
Rock Azure AD Sync Plugin | Certificates & secrets
Search (Ctrl+/)
Got feedback?
Overview
Quickstart
Integration assistant
Manage
Branding
Authentication
Certificates & secrets
Token configuration
API permissions
Expose an API
App roles | Preview
Add a client secret
Description
Rock Azure AD Sync Plugin Secret
Expires
In 1 year
In 2 years
Never
Add
Cancel
No client secrets have been created for this application.

After creating your secret, you can copy the value. You will need to record the value at this point, as you will not be able to retrieve it again later. If you need this value later and you did not capture it at this point, you will need to create a new secret and use that, instead.

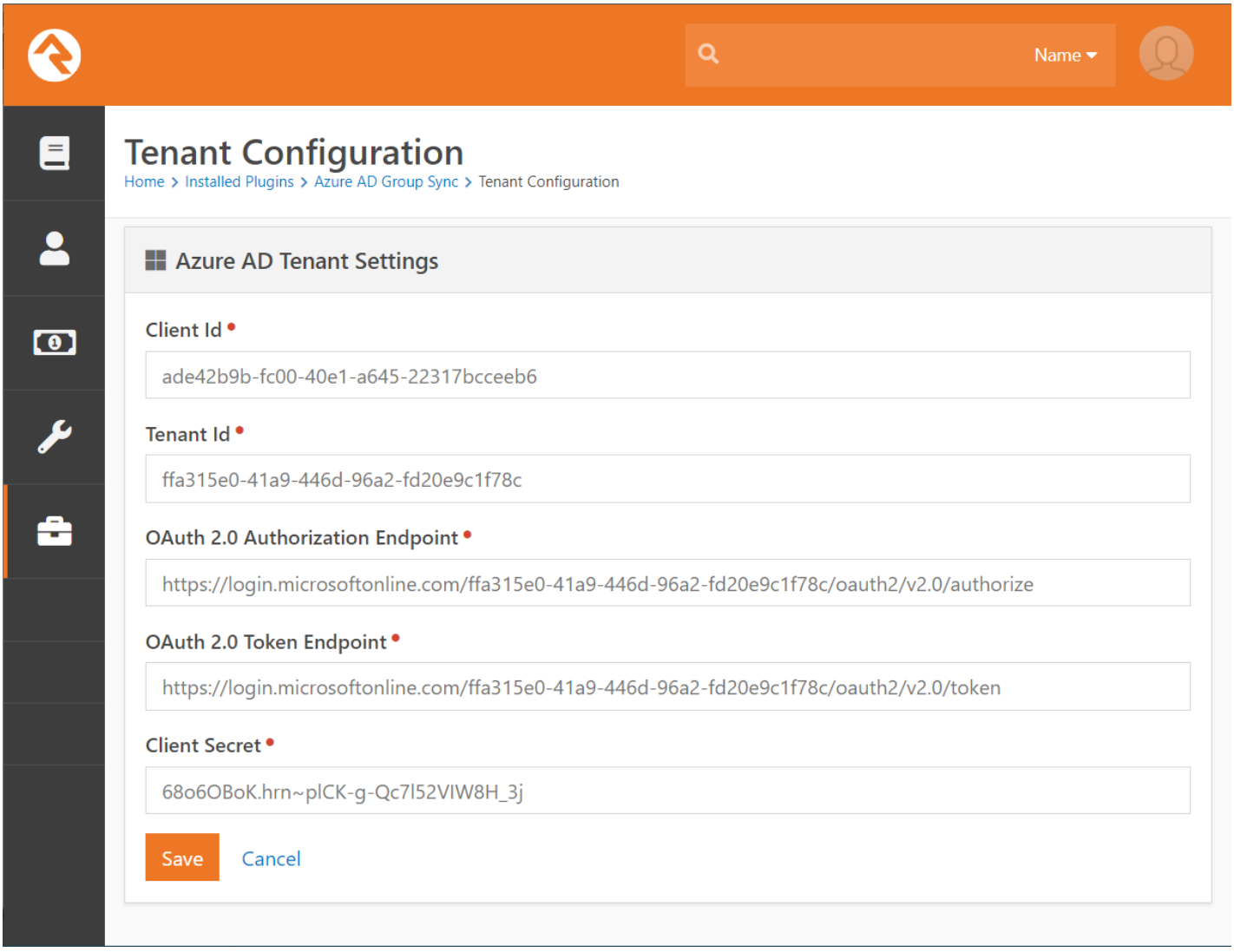
TIP: Make sure you note the value of the client secret before proceeding past this screen.



Configure the Azure AD Sync Plugin Authentication Settings

Now that your Azure Active Directory tenant is configured and ready to go, it is time to configure the plugin. If you have not already installed the plugin, you will want to do that from the Rock Shop, now. You will also need the configuration information you recorded in Step 2 of the Pre-Installation Setup and the client secret you created in Step 5.

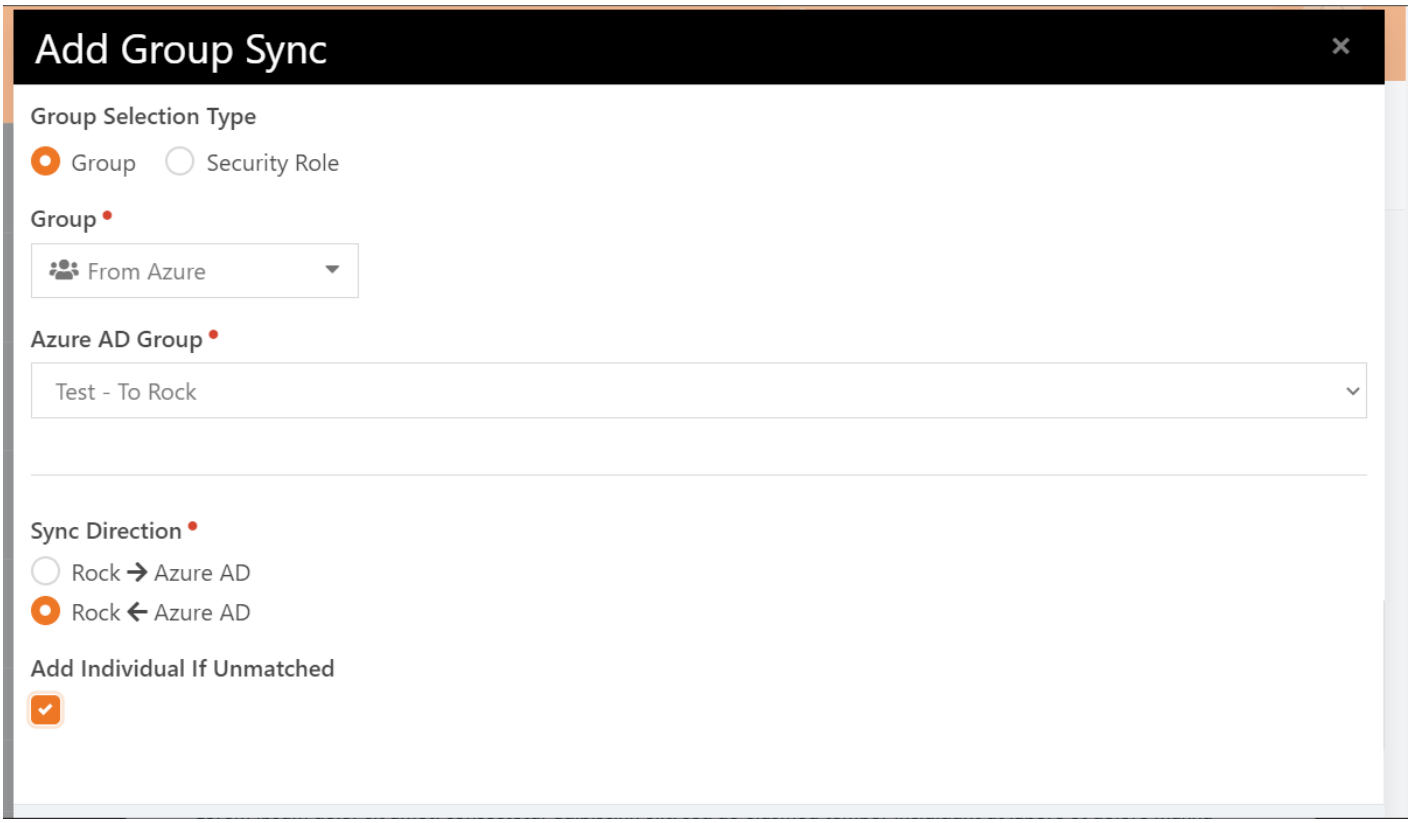
Navigate to Admin Tools > Installed Plugins and select the Azure AD Group Sync option. Then click on the Azure Credentials button on the top right and enter the configuration values from the previous steps.



Configure Groups to Sync

The plugin synchronizes members of groups in Rock or Azure AD, so you will need to create groups in both systems. To configure the synchronization settings, navigate to Admin Tools > Installed Plugins > Azure AD Group Sync and click on the button to add a new entry. You will be given the following configuration options:

- **Group Selection Type –** This determines whether you'll be selecting a Rock Security Role, or a normal group.
- **Group –** The Rock group or security role.
- **Azure AD Group –** The Azure AD security role or group. These groups must be created in the Azure AD portal first.
- **Sync Direction -** This controls whether Rock or Azure is the destination system.
- **Add Individual If Unmatched –** This will add the individual to Rock or Azure AD if no matching record are found. Note: Adding the person in Azure will not create licenses or add mailboxes.



TIP: If you want new users to be added to the destination system, make sure to check "Add Individual If Unmatched".

Manually Sync a Group

After configuring your groups for synchronization, you can sync them manually by pressing the “sync” button next to the group.

[Optional] Configure the Automated Sync Job

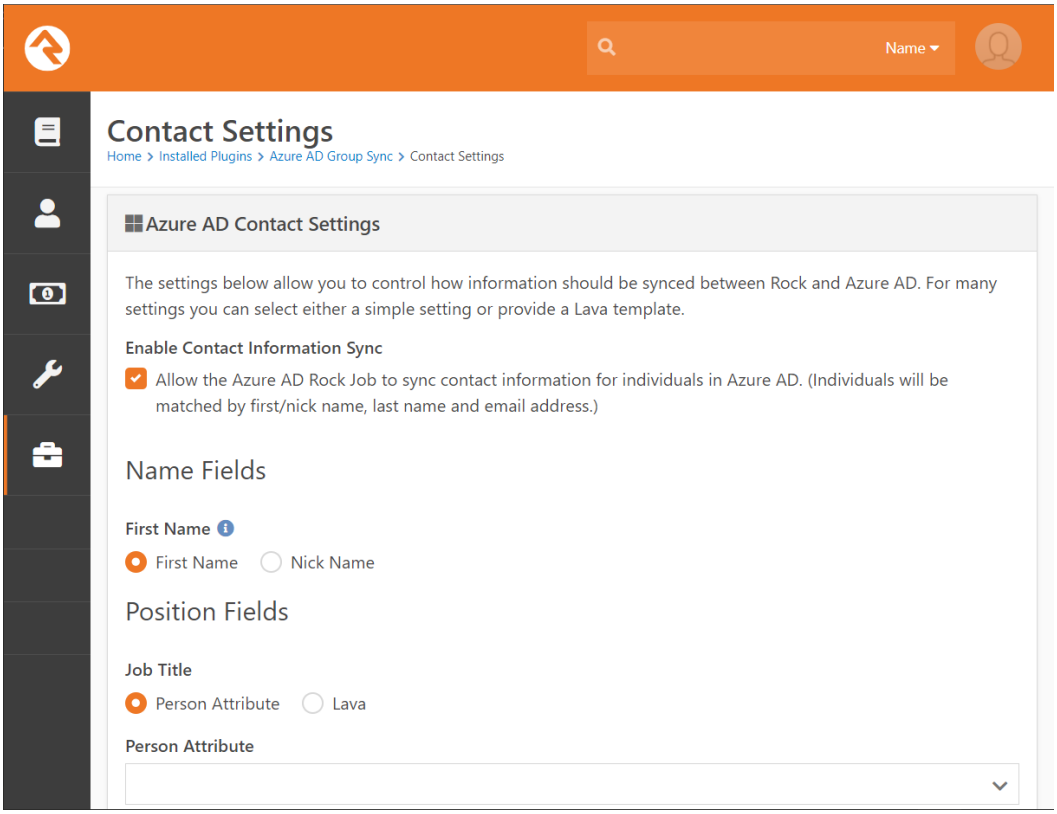
The plugin includes an automated job which can be scheduled to synchronize your groups. To enable this, navigate to Admin Tools > System Settings > Jobs Administration and add a new job. On the Scheduled Job Detail screen, select “Sync Azure AD (Plugin)” as the Job Type.

[Optional] Configure Contact Information Synchronization

The plugin can be configured to synchronize contact information from Rock to Azure AD whenever it synchronizes a group (this will occur whether the group is synchronized manually or by the automated job, and these settings will affect all synchronized groups, as long as the sync direction is going from Rock to Azure).

> NOTE: The options in this section affect all your synchronized groups that push data from Rock into Azure.

To enable this feature and configure the settings, navigate to Admin Tools > Installed Plugins > Azure AD Group Sync and click the “Contact Settings” button in the top right corner.



NOTE: You cannot configure any of the options on this screen until you enable them by checking the "Enable Contact Information Sync" option.

Configuration Options:

- **Enable Contact Information Sync -** This option must be selected to enable synchronization of contact information.
- **First Name -** The first name field in Azure will be matched to either the first name or the nickname field in Rock. This setting controls which one.
- **Job Title -** This setting is only effective when data is being sent from Rock to Azure AD. It will have no effect when the synchronization happens in the other direction. You can select either a Person Attribute value or a Lava expression to control the value that is sent to Azure AD.
- **Department -** This setting is only effective when data is being sent from Rock to Azure AD. It will have no effect when the synchronization happens in the other direction. You can select either a Person Attribute value or a Lava expression to control the value that is sent to Azure AD.
- **Office -** This setting is only effective when data is being sent from Rock to Azure AD. It will have no effect when the synchronization happens in the other direction. You can select either a Person Attribute value or a Lava expression to control the value that is sent to Azure AD.

- **Company -** This setting is only effective when data is being sent from Rock to Azure AD. It will have no effect when the synchronization happens in the other direction. You can select either a Person Attribute value or a Lava expression to control the value that is sent to Azure AD.

- **Office Phone Type -** This setting controls which Rock phone type is used to synchronize to the office/business phone in Azure AD.

- **Mobile Phone Type -** This setting controls which Rock phone type is used to synchronize to the mobile phone in Azure AD.

NOTE: The Position Fields (Job Title, Department, Office, and Company) can only be configured to synchronize data from Rock to Azure AD. They do not have any effect when data is being synchronized from Azure AD to Rock.

IMPORTANT NOTE: The Microsoft Graph API does not allow you to modify the phone numbers of a user who has administrative privileges in your Azure AD tenant. This is an intentional limitation for security reasons (those phone numbers can be used for account recovery). If you enable the synchronization for those fields and this condition occurs, those fields will not be modified in Azure AD (but the rest of the person's information will sync correctly).

A Warning About Group Configurations and Contact Information Sync

TIP: We recommend avoiding situations where the same individual record is synchronized in both directions.

It is possible to configure groups in a manner that results in an individual being synchronized in both directions by having them in multiple group sync configurations. In other words, the same user might be in a group that you have configured to push data from Rock into Azure and another group that you have configured to pull data from Azure into Rock. We recommend that you avoid this situation, but there may be situations where you configure the sync this way intentionally. In that case, if you have configured the contact information sync, the data in Rock will become the "master record" because contact information is only synchronized in that direction. This will mean that changes you might make directly in Azure AD will be overwritten and you should make any changes to the individual's contact information in Rock.

There is one exception to this rule, which is that the Microsoft Graph API does not permit updating an administrator's phone numbers (office phone and home phone) in Azure AD. This limitation is because those values are used in the Azure AD account recovery process and allowing external changes to them could block administrators from being able to recover their account and result in locking them out and may present a security risk if the external application is compromised.

[Optional] Configure Single Sign On (SSO)

Configuring the single sign on feature of the plugin will allow users to log in to Rock with their Azure Active Directory credentials. To enable this feature, you must configure an app redirect in your Azure AD App registration. For details on doing that, review Step 1 of the Pre-Installation Setup at the beginning of this document. It is okay if you did not enter the URL when you first set up the plugin, you can add it when you are ready by editing the configuration of your App registration.

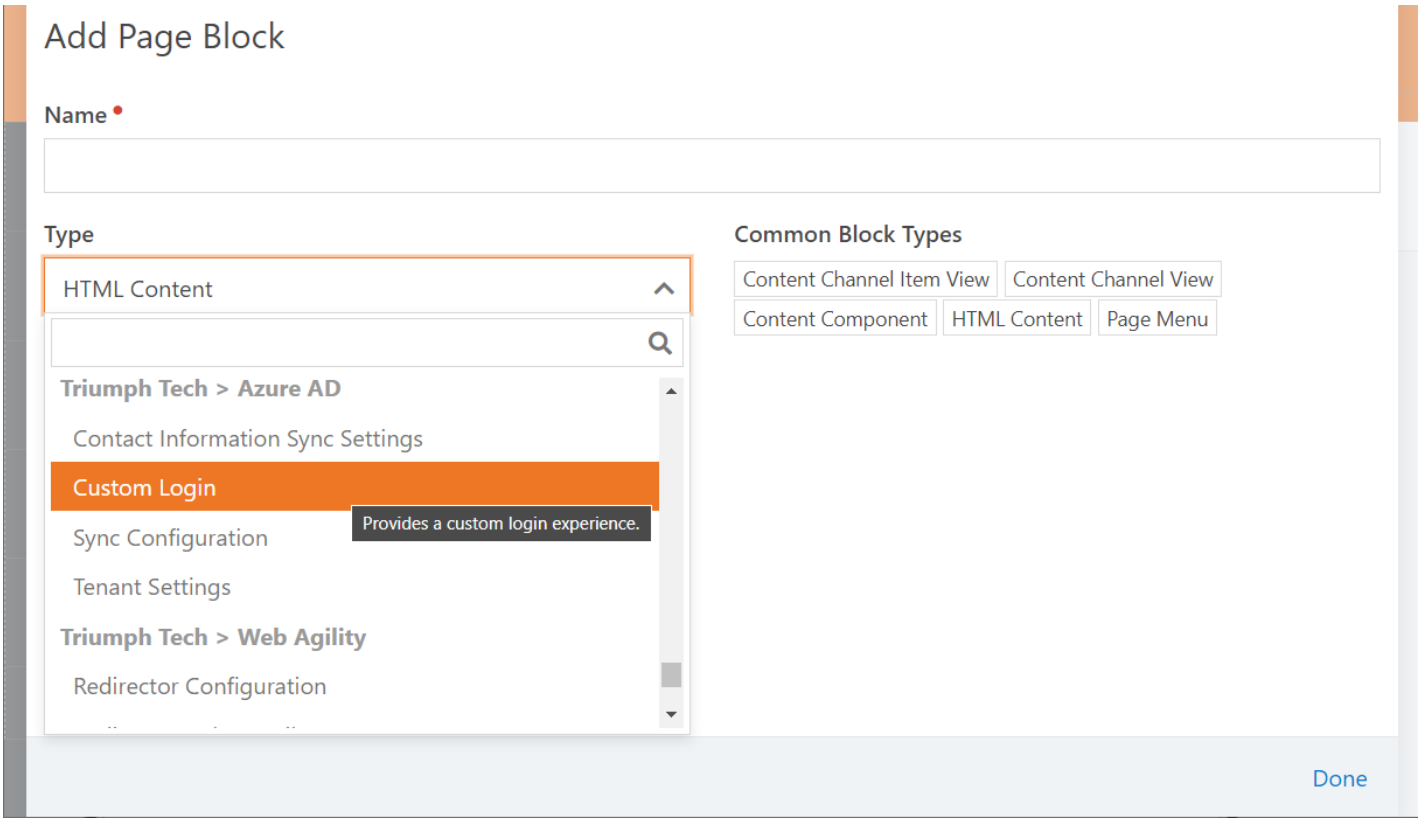
Activate the Azure AD Authentication Provider

The first thing you need to do is enable the Azure AD authentication provider (in Rock) that is installed by the plugin. Navigate to Admin Tools > Security > Authentication Services, select the "Azure AD" provider and change the Active property to "Yes".

Setting Up the SSO Redirect Page

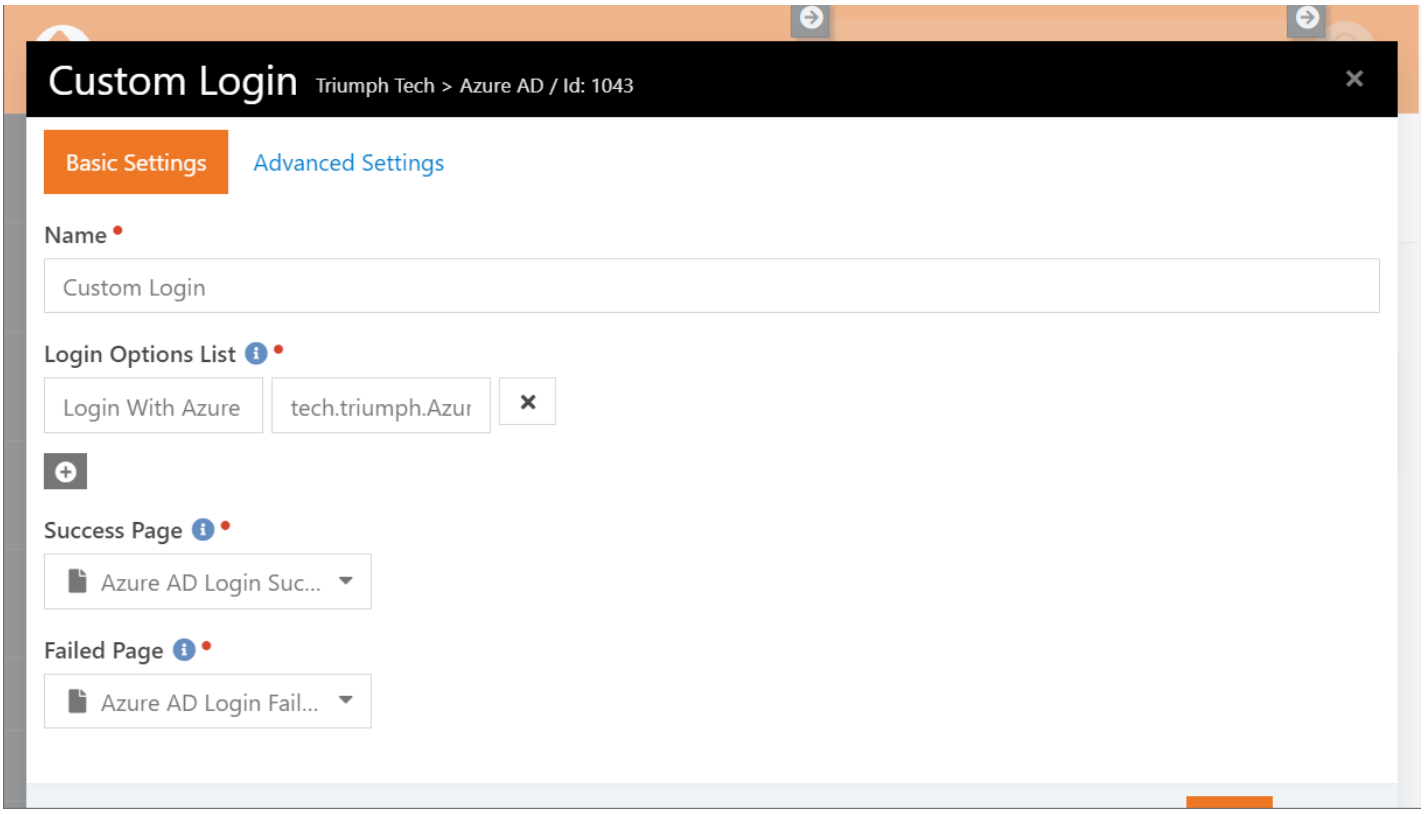
The second thing you need to do is create a new page in Rock (Admin Tools > CMS Configuration > Pages), and you will probably want to make a Route for it, as well (Admin Tools > CMS Configuration > Routes) so that you can refer to it by a friendly URL (like http://my.church/sso) instead of the default page URL. For the purposes of this document, we will assume you know how to do this part, but you can always review the Rock documentation if you need a refresher. Specifically, we recommend starting with the CMS Configuration section of the Rock Admin Hero Guide for a brief overview, or you can dive into the full details in Designing and Building Websites Using Rock.

Once you have created your Page and the Route, you will need to add the Custom Login block to the page, which you will find in the Triumph Tech > Azure AD category.


Add Page Block
Name
Type
HTML Content
Triumph Tech > Azure AD
Contact Information Sync Settings
Custom Login
Provides a custom login experience.
Sync Configuration
Tenant Settings
Triumph Tech > Web Agility
Redirector Configuration
Common Block Types
Content Channel Item View
Content Channel View
Content Component
HTML Content
Page Menu
Done

After you add the block to your page, you need to configure the following settings on the block:

- **Login Options List**
    - This option allows you to set up multiple login options by specifying the button text (on the left) and either entering a URL or the type name of an authentication provider (on the right). To enable users to log in through Azure AD, you will need to enter the full type name of the Azure AD authentication provider, which is “tech.triumph.AzureAD.Security.Authentication.AzureAD”.
- **Success Page**
    - This is where users are redirected after a successful login. Please note that users will always be redirected to this page after logging in (unlike the standard login which will return them to their original location).
- **Failed Page**
    - This is where users are redirected after a failed login.



NOTE: This block has been designed to work with other login methods, but we are only using Azure AD, here.