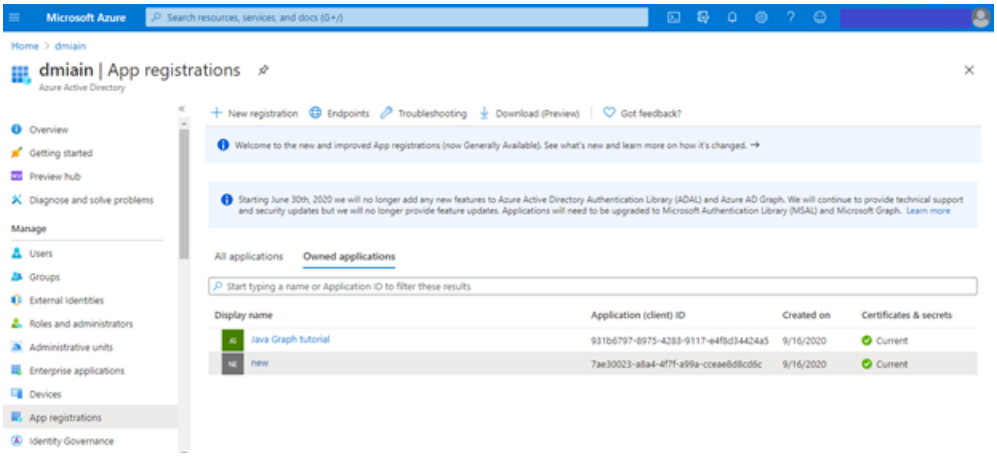
Get an Access Token for Microsoft Graph API

1. Create an **Azure AD Application** in your tenant.
2. Allow some permissions to the application for accessing **Microsoft Graph**.
3. Using an admin account **consent** on behalf of their organization.
4. Create a password (a key) for the app.

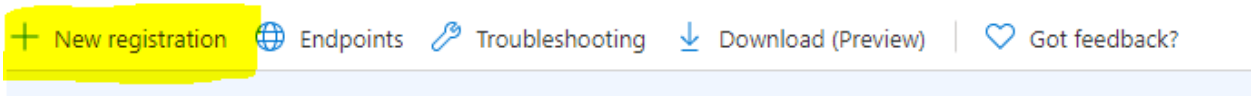
1.Create an Azure AD Application in your tenant.

1. Login to the https://aad.portal.azure.com
2. Registering the Application in the Azure Portal

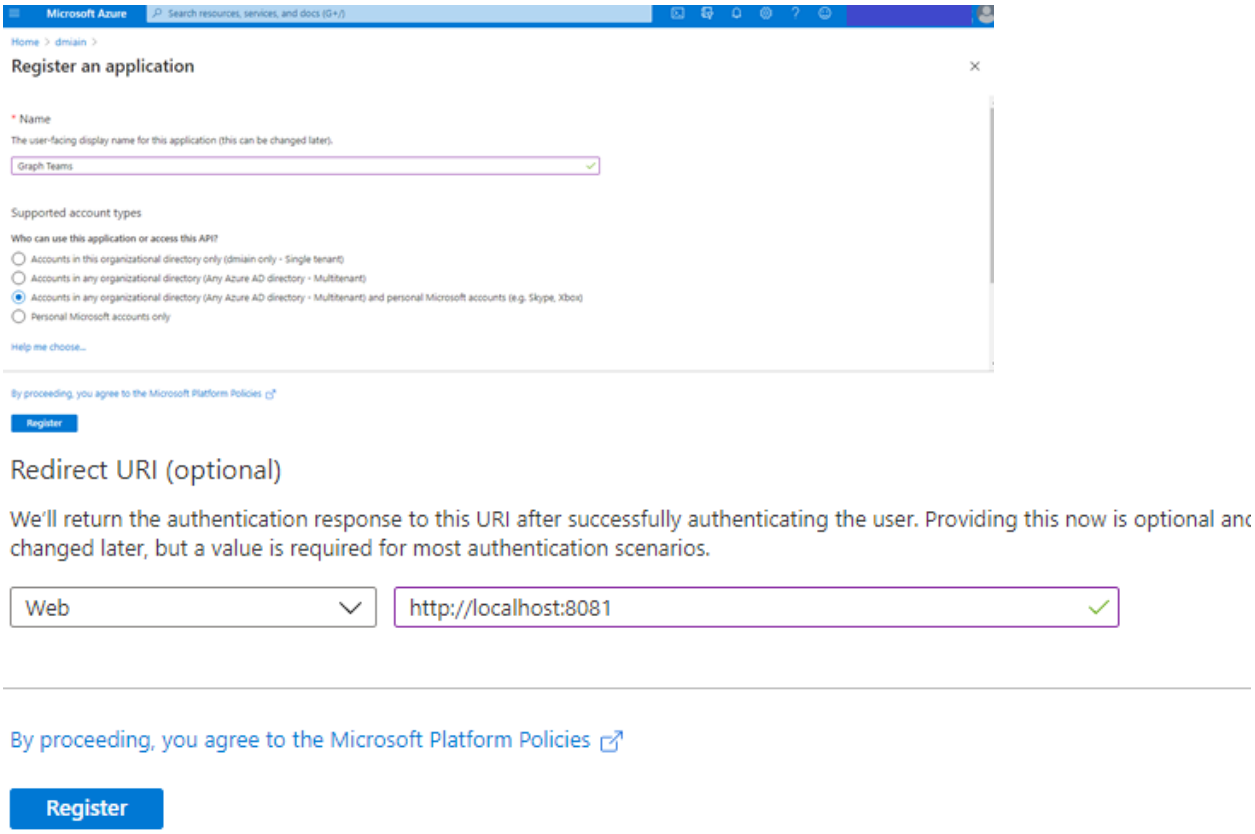
In the left side pane click the label “Azure Active Directory” This will open up the blade for Azure Active Directory. In that screen should see a label “App registrations”. This is the starting point of a registering an Azure AD Application.



A button on the top “New registration”. Let’s click on that button to create a new application.

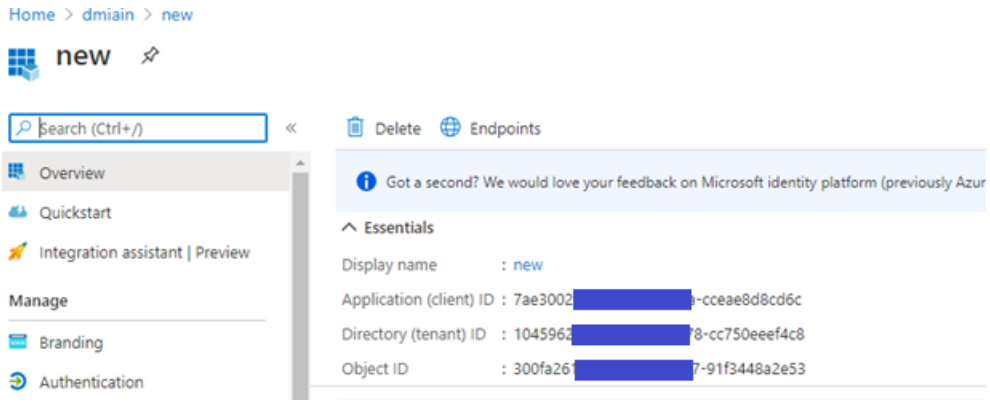


Now we will see the new application registration blade.



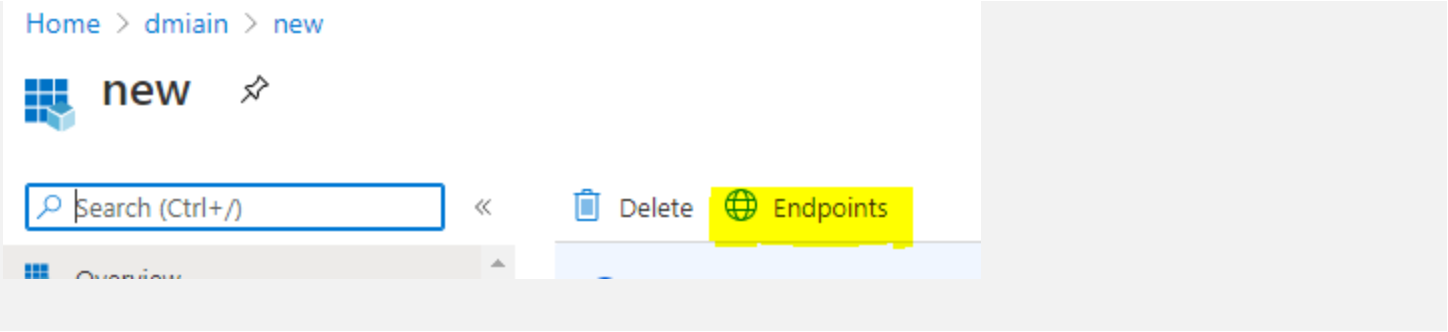
We have to note down few things here. We will be using these to build the application.

Application (client) ID → The id of your application
Directory (tenant) ID → The Azure AD tenant id

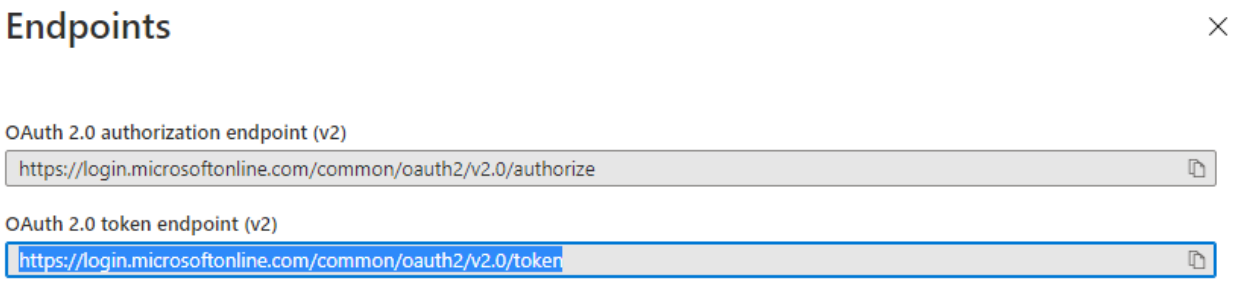


Next step is to get the token endpoint. This end point will generate the token for you. Generated token from this endpoint will be used to access Microsoft Graph API calls.

Click on the “Endpoints” button on the top of the screen.



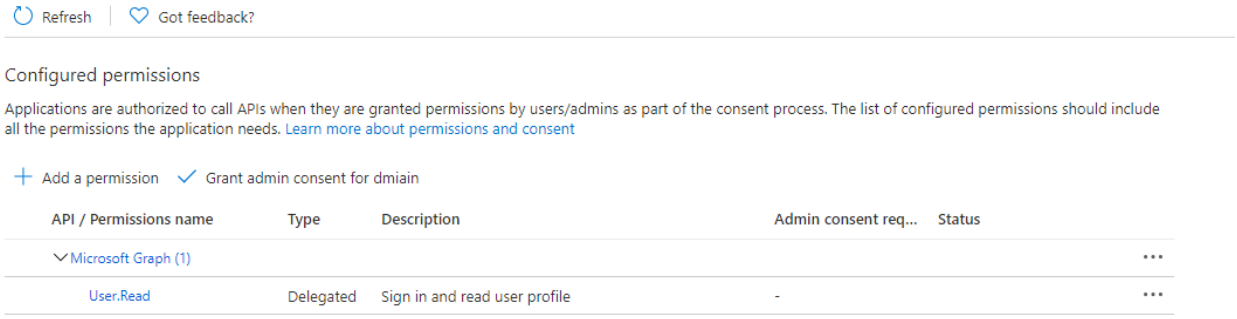
This will get all the endpoints for your application. Make sure you copy down the endpoint for **OAuth 2.0 token endpoint (v2)**



2.Allowing permissions for Microsoft Graph API

In the “Registered app” application blade, click on the “API permissions” label.

Azure has already given “User. Read” delegated permissions for the application. This permission will allow us to read user information for a logged in user. These are Microsoft Graph API permissions, in other hand we can call them as “Scopes”.

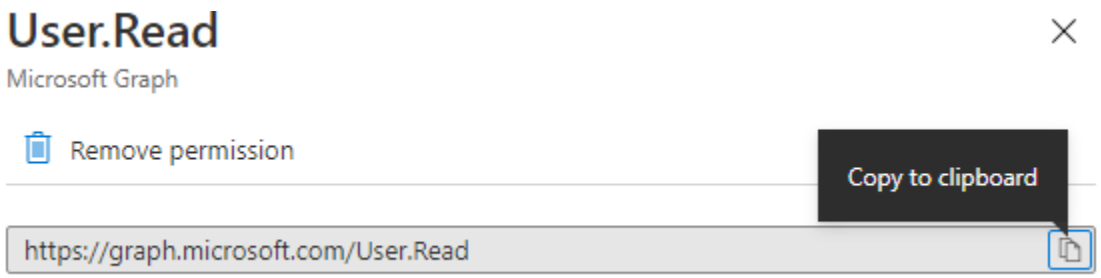


As mentioned before there are two methods of permission types can be used with an Azure AD application.

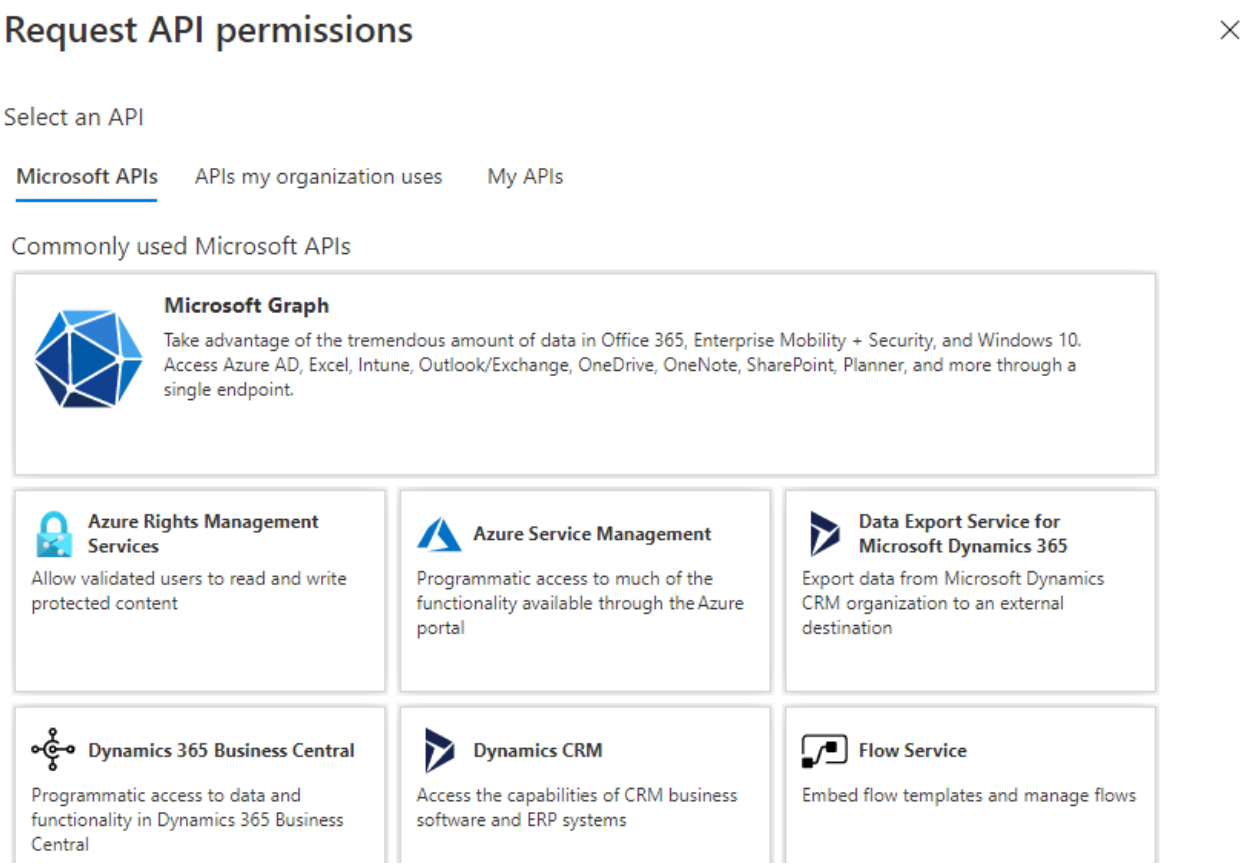
1. Delegated
   we will use this application on behalf of a user. For an example, if we logged in using my Work or School account, we are allowing this application to use my credentials on behalf of user.

2. Application
   We give the permission to this specific app. No user is required.

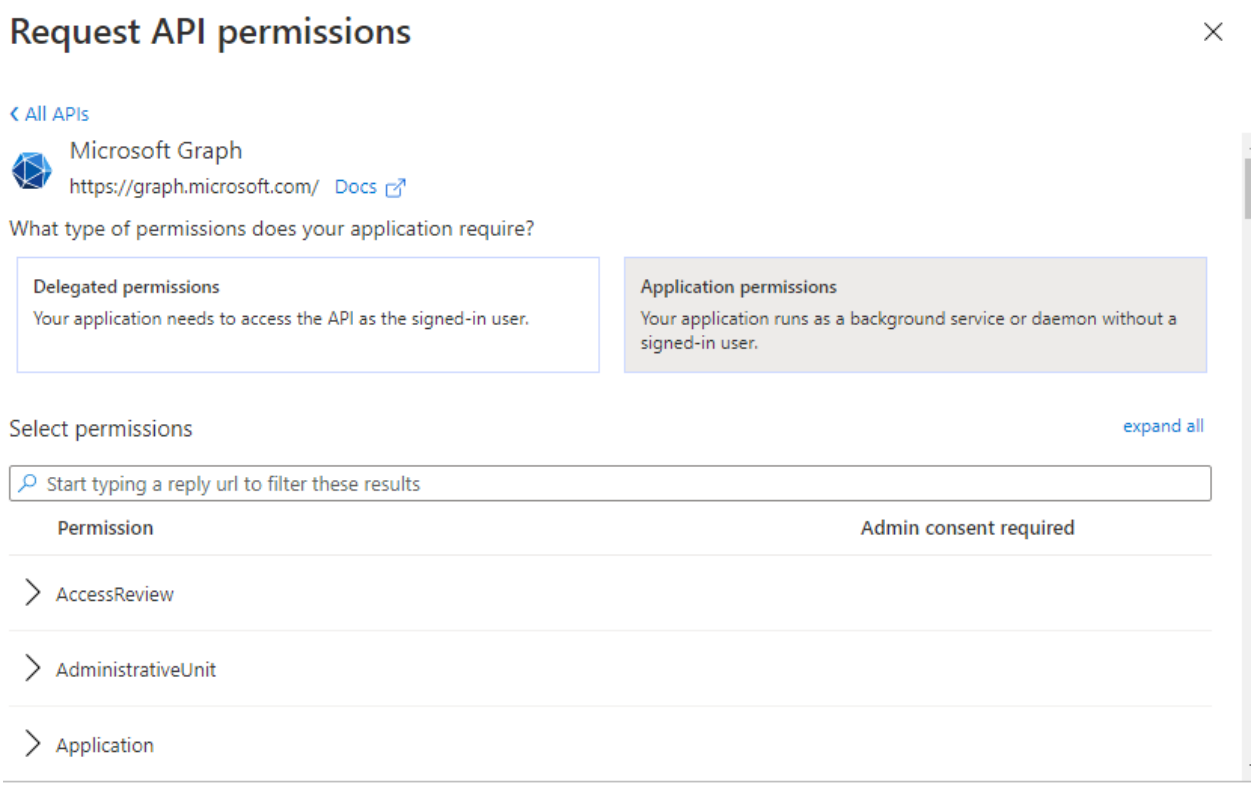
"Application" permissions are required for the app we registered. Select on the available "User. Read" permission and delete it.



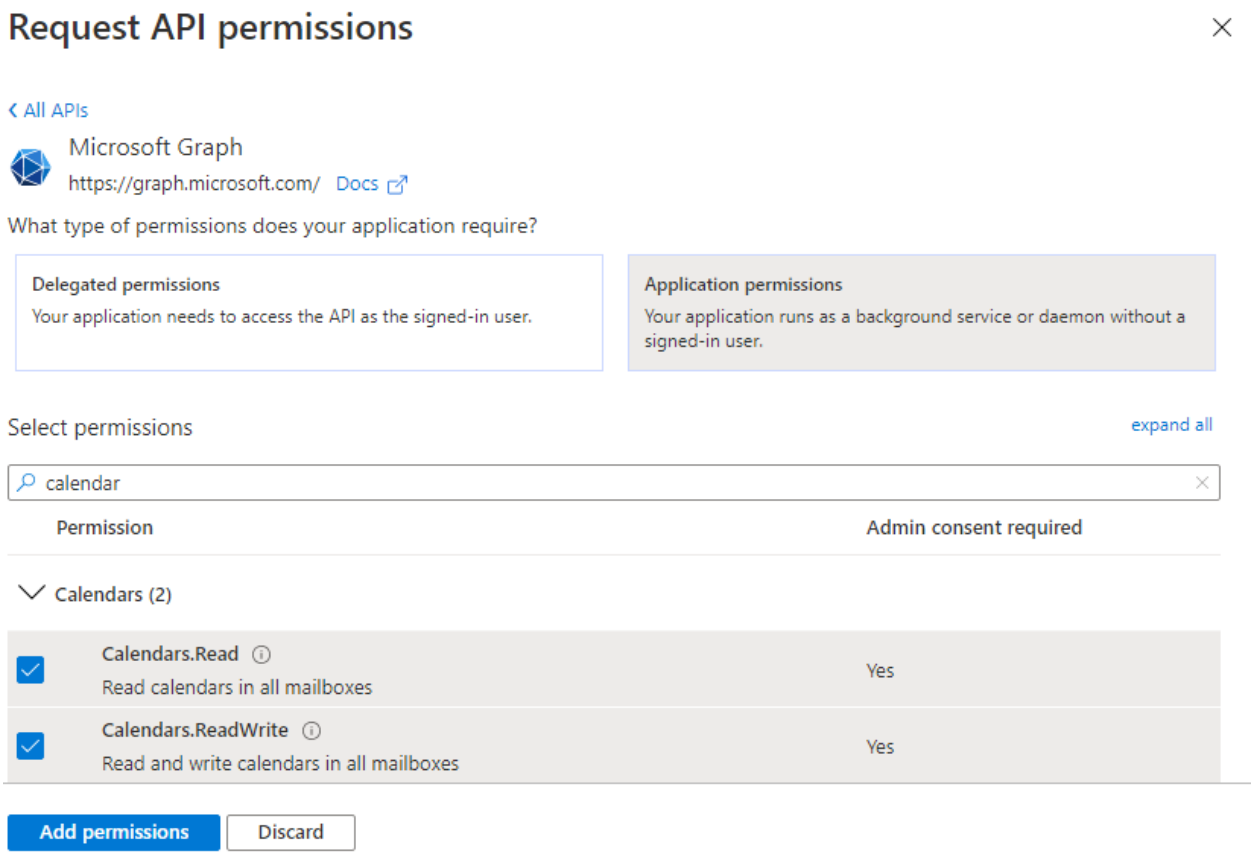
Now, click on "+ Add a permission" button and select "Microsoft Graph"



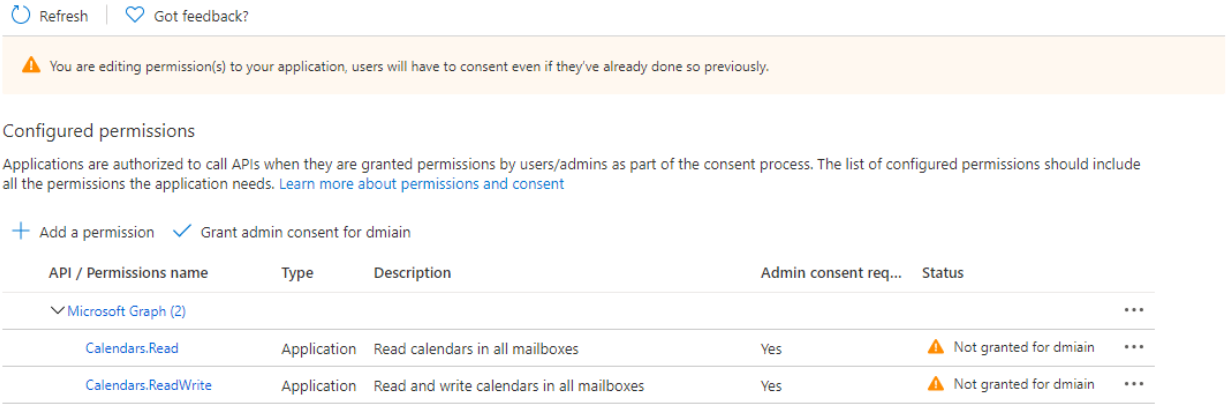
Click on "Application permissions". Now the see a list of permissions available for Microsoft Graph API.



Select calendar permission & one or more (depending on need), click “Add permissions” button.

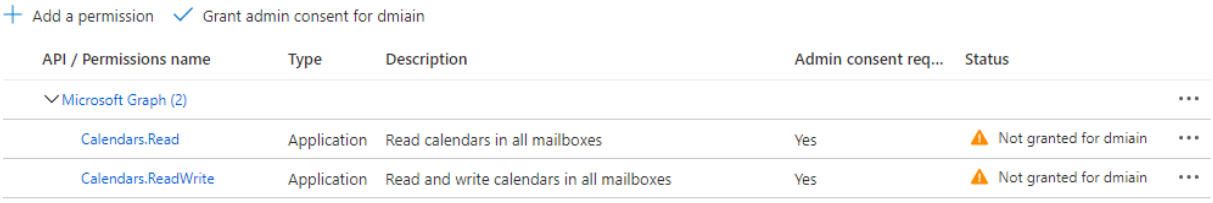


3.Grant admin consent



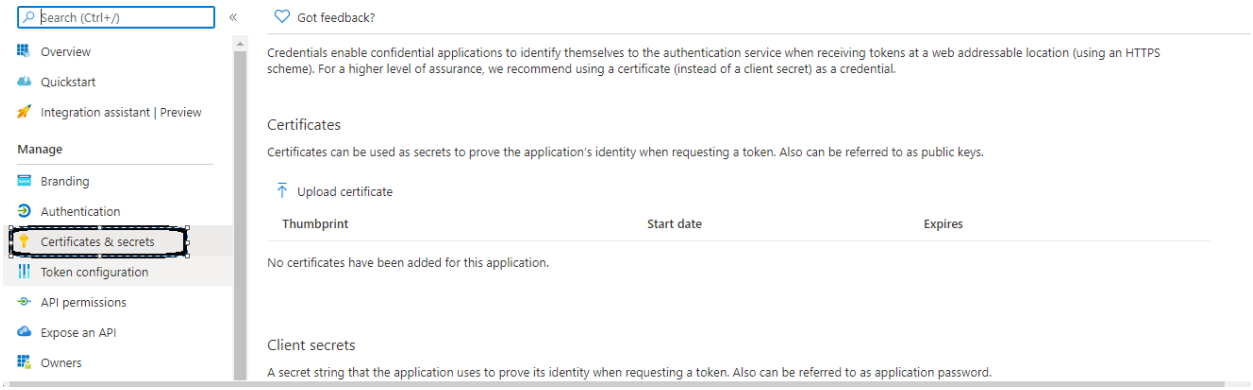
an admin of the organization must allow this application to access the selected permission on behalf of the users.

Now click “Grant admin consent for <orgname>” button.

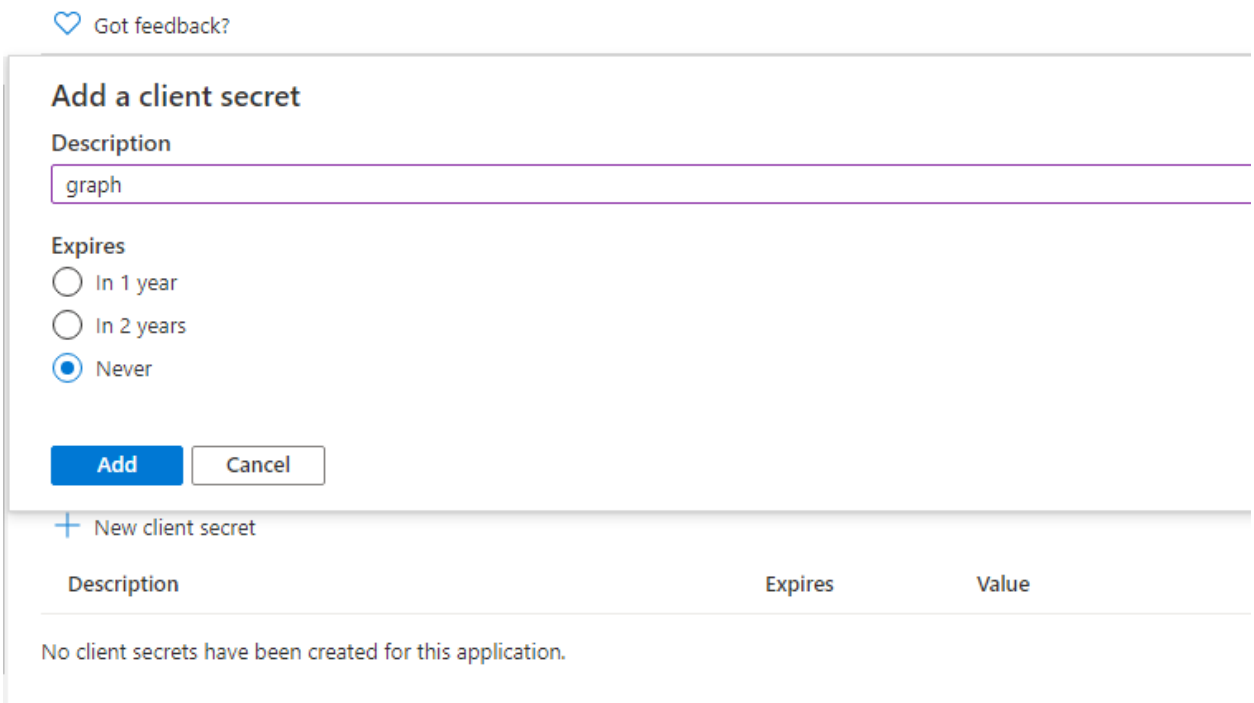


4.Create a key (password) for the application

Create a key for the application. Since we are not going to interact with any of the users. We need this key. Let's create one. Click on the "Certificates & secrets"



Now click on the "+ New client secret" and give a name and select an expiration period.



And click "Add", and make sure you have copied the key down. When we go away from this screen. Azure doesn't allow to see this key again.

Client secrets

A secret string that the application uses to prove its identity when requesting a token. Also can be referred to as application password.

+ New client secret

Description	Expires	Value
graph	12/31/2299	Q33[redacted]YTv5g4A~~se4rr4N~D~f

Spring Boot Configuration:

In Application.properties file replace the below value

Please refer 1st section to obtain this value

```
teams.client_id = Application (Client) id
teams.tenant_id = Directory (Tenant) id
```

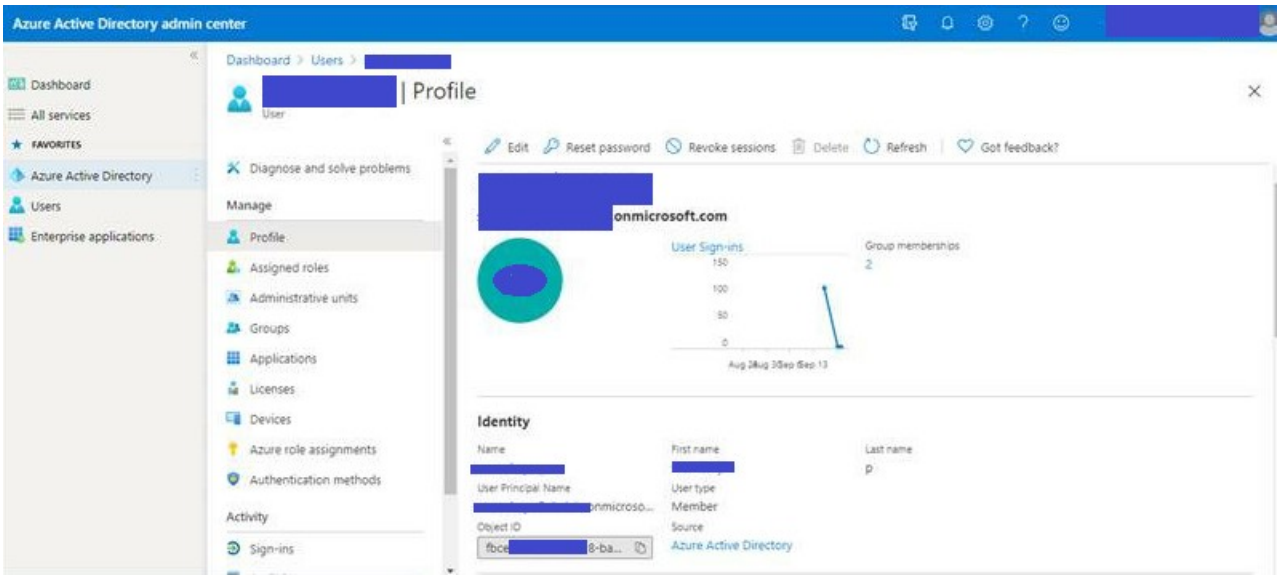
Please refer 4th section to obtain this value

```
teams.client_secret = refer client secret image

teams.scope =https://graph.microsoft.com/.default
teams.grant_type =client_credentials
```

Graph URLs for applications:

All URLs will need to have endpoints like user/object id to access teams using application token and if you are using URL endpoints with /me then you will end up in some errors



https://graph.microsoft.com/v1.0/users/{object id or userPrincipalName}/

In Azure portal, if you open your profile you can find both object id and `userPrincipalName`. Use can use either of then to call your API