

## Lab 12. Calling the Microsoft Graph

**Learning objective:** create a Flow that will create a Team by using the Graph API.

**Prerequisites:** calling the Microsoft Graph requires a Premium connector.

**Duration:** 35 minutes

Scenario: you will create a button Flow that will take the Team name as a parameter. The Flow will create a group and will attach a Team to this group.

First, you need to identify the Graph API you need.

Create a group:

- Documentation: <https://docs.microsoft.com/en-us/graph/API/group-post-groups?view=graph-rest-1.0&tabs=http>
- API: <https://graph.microsoft.com/v1.0/groups>
- permissions: Group.ReadWrite.All, Directory.ReadWrite.All

Attach a team to a group:

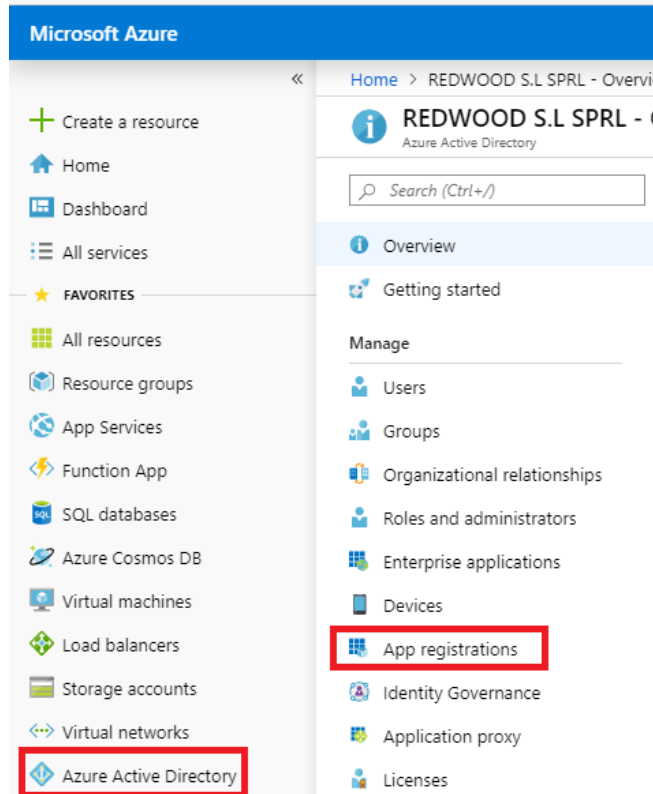
- Documentation: <https://docs.microsoft.com/en-us/graph/API/team-put-teams?view=graph-rest-1.0&tabs=http>
- API: <https://graph.microsoft.com/v1.0/groups/{id}/team>
- permissions: Group.ReadWrite.All

Add a group owner

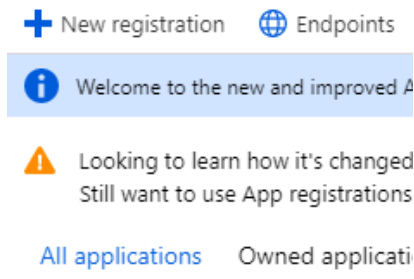
- Documentation: <https://docs.microsoft.com/en-us/graph/API/group-post-owners?view=graph-rest-1.0&tabs=http>

### Tasks:

1. Go to **Azure.com** portal, go to **Azure Active Directory**; click **Apps registrations**:



2. Click **New registration**:



3. Name the application **FlowCreateTeam**:

## Register an application

### \* Name

The user-facing display name for this application (this can be changed later).

FlowCreateTeam

### Supported account types

Who can use this application or access this API?

- ☒ Accounts in this organizational directory only (REDWOOD S.L SPRL only - Single tenant)
- ☐ Accounts in any organizational directory (Any Azure AD directory - Multitenant)
- ☐ Accounts in any organizational directory (Any Azure AD directory - Multitenant) and personal Microsoft accounts (e.g. Skype, Xbox)

[Help me choose...](#)

- Click **Register**.
- Now we will assign some permissions to this application.  
Click **API permissions**:

[Home](#) > [REDWOOD S.L SPRL - App registrations](#) > FlowCreateTeam - API permissions

FlowCreateTeam - API permissions

Search (Ctrl+/)

Overview

Quickstart

Manage

Branding

Authentication

Certificates & secrets

**API permissions**

Expose an API

Owners

Roles and administrators (Previous)

Manifest

Support + Troubleshooting

Troubleshooting

New support request

API permissions

Application permissions

+ Add

API permissions

These are the permissions that are available for this application.

Grant permissions

As an administrator, you can grant permissions to this application.

Grant permissions

- Click **Add Permission**
- Select **Microsoft APIs**, click **Microsoft Graph**:

## Request API permissions

Select an API

Microsoft APIs

[APIs my organization uses](#)

[My APIs](#)

### Commonly used Microsoft APIs

#### Microsoft Graph

Take advantage of the tremendous amount of data in Office 365, Enterprise Mobility + Security, and Windows 10. Access Azure AD, Excel, Intune, Outlook/Exchange, OneDrive, OneNote, SharePoint, Planner, and more through a single endpoint.

8. Choose **application permissions**.

9. In the Groups, select **Group.ReadWrite.All**:

#### ▼ Group (1)

<input type="checkbox"/>	Group.Read.All Read all groups ⓘ	Yes
<input checked="" type="checkbox"/>	Group.ReadWrite.All Read and write all groups ⓘ	Yes

10. Click **Add permissions**

11. Follow the same steps to add the Directory permissions:

#### ▼ Directory (1)

<input type="checkbox"/>	Directory.Read.All Read directory data ⓘ	Yes
<input checked="" type="checkbox"/>	Directory.ReadWrite.All Read and write directory data ⓘ	Yes

12. Click **Add permissions**

13. Click **Grant Consent for** <your tenant name>

## API permissions

Applications are authorized to call APIs when they are granted permissions by users/admins as all the permissions the application needs.

<a href="#">+ Add a permission</a>		
API / PERMISSIONS NAME	TYPE	DESCRIPTION
▼ Microsoft Graph (3)		
<a href="#">Directory.ReadWrite.All</a>	Application	Read and write directory data
<a href="#">Group.ReadWrite.All</a>	Application	Read and write all groups
<a href="#">User.Read</a>	Delegated	Sign in and read user profile

These are the permissions that this application requests statically. You may also request user callable permissions dynamically through code. [See best practices for requesting permissions](#)

## Grant consent

As an administrator, you can grant consent on behalf of all users in this directory. Granting admin consent will not be shown a consent screen when using the application.

Grant admin consent for

14. Confirm: yes.

✓ Successfully granted admin consent for the requested permissions.

## API permissions

Applications are authorized to call APIs when they are granted permissions by users as all the permissions the application needs.

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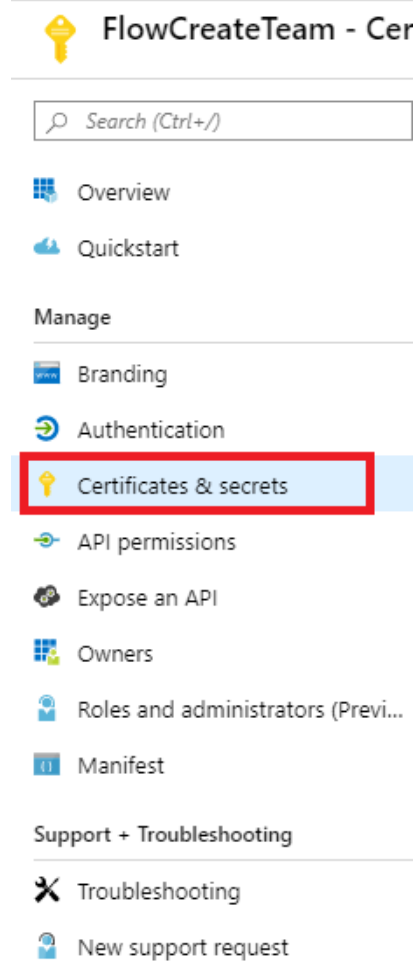
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## Grant consent

As an administrator, you can grant consent on behalf of all users in this directory. Granting admin consent will not be shown a consent screen when using the application.

Grant admin consent for REDWOOD S.I SPRL

15. Go to the application panel and click **Certificates & secrets**:



16. Click **New client secret**.

17. Fill in the secret form and select **Expires: Never**

Add a client secret

Description

FlowcreateTeamsecret

Expires

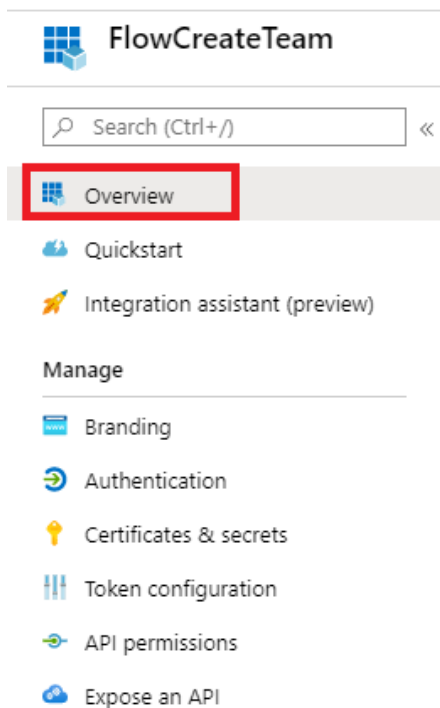
☐ In 1 year

☐ In 2 years

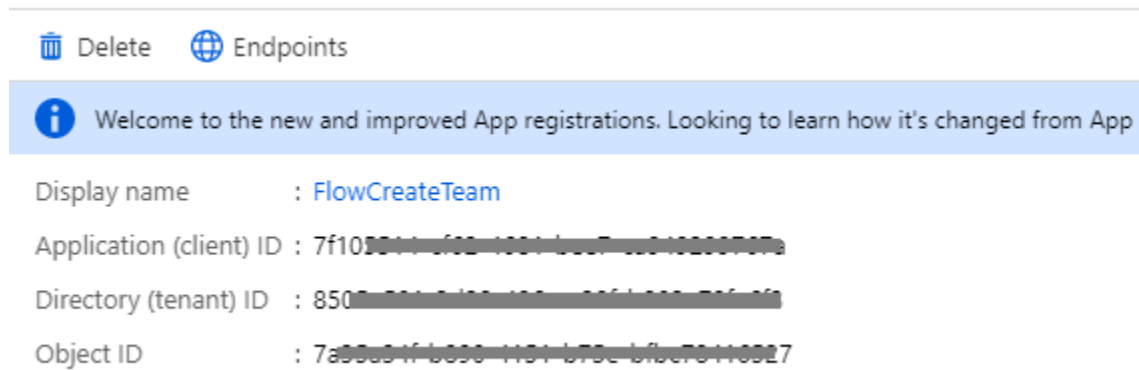
☒ Never

Add Cancel

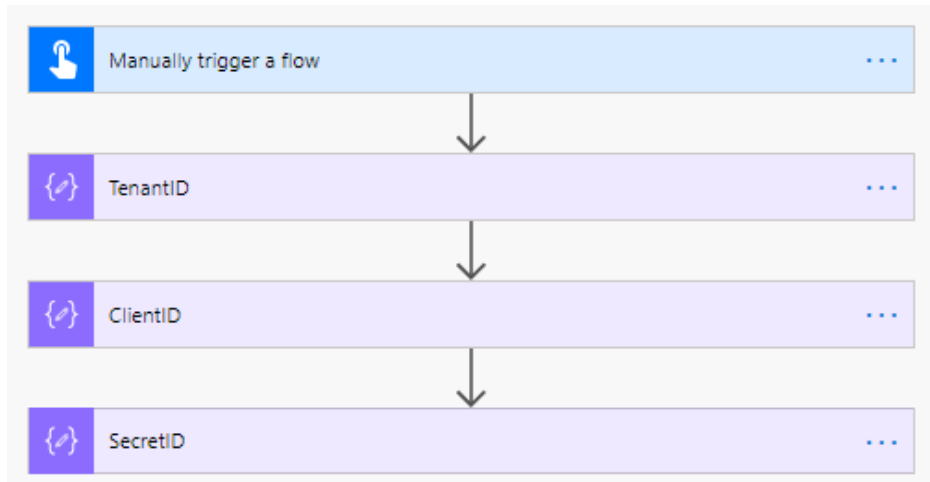
18. Click **Add**.
19. Copy the secret value in notepad.
20. Go back to **Overview**:



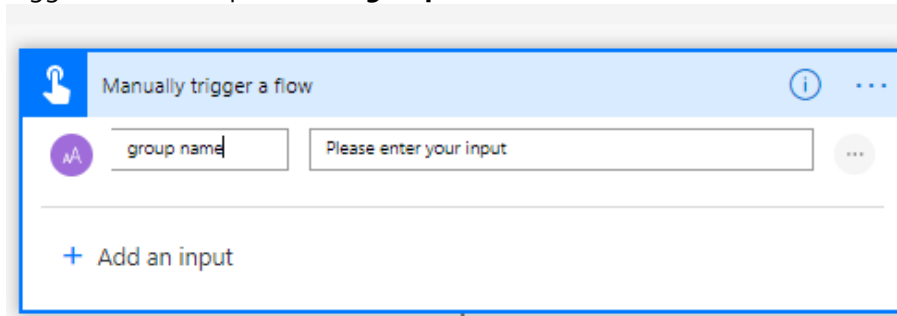
21. Copy the application ID and the Tenant ID into Notepad:



22. Create a Flow starting from a button, create 3 Compose actions Named **TenantID**, **ClientID**, and **SecretID** and store your values in these actions:



23. In the trigger define an input named **group name**:



24. Add an HTTP (premium action) and define its properties like this:



The screenshot shows an HTTP client interface with the following fields:

- Method \***: POST
- URI \***: http://graph.microsoft.com/v1.0/groups
- Headers**: A table with columns "Enter key" and "Enter value".
- Queries**: A table with columns "Enter key" and "Enter value".
- Body**: A text area containing a JSON object:
 

```
{
    "description": "group name",
    "displayName": "group name",
    "groupTypes": [
      "Unified"
    ],
    "mailEnabled": true,
    "mailNickname": "group name",
    "securityEnabled": false,
    "visibility": "Public"
  }
```
- Cookie**: A text field labeled "Enter HTTP cookie".
- Show advanced options**: A link with a dropdown arrow.

You can adapt the Body by reusing the following code:

```
{
  "description": "",
  "displayName": "",
  "groupTypes": [
    "Unified"
  ],
  "mailEnabled": true,
  "mailNickname": "",
  "securityEnabled": false,
  "visibility": "Public"
}
```

25. Click **Show Advanced options**.
26. For the **Authentication** field, select **Active Directory OAuth**.
27. Pass the TenantID, ClientID and SecretID
28. **Authority** should be: <https://login.microsoftonline.com>

29. **Audience** should be: <https://graph.microsoft.com>

30. Define the body as follows:

The screenshot shows the configuration for an HTTP action in a flow tool. The interface is titled "HTTP" and includes several sections for configuring the request:

- Method \***: A dropdown menu set to "POST".
- URI \***: A text field containing "https://graph.microsoft.com/v1.0/groups".
- Headers**: A table with two columns, "Enter key" and "Enter value".
- Queries**: A table with two columns, "Enter key" and "Enter value".
- Body**: A text area containing a JSON object:

```
{
  "description": "group name",
  "displayName": "group name",
  "groupTypes": [
    "Unified"
  ],
  "mailEnabled": true,
  "mailNickname": "group name",
  "securityEnabled": false,
  "visibility": "Public"
}
```
- Cookie**: A text field labeled "Enter HTTP cookie".
- Authentication \***: A dropdown menu set to "Active Directory OAuth".
- Authority**: A text field containing "https://login.microsoftonline.com".
- Tenant \***: A dropdown menu set to "Outputs".
- Audience \***: A text field containing "https://graph.microsoft.com".
- Client ID \***: A dropdown menu set to "Outputs".
- Credential Type \***: A dropdown menu set to "Secret".
- Secret \***: A dropdown menu set to "Outputs".

At the bottom, there is a link "Hide advanced options" with an upward arrow.

31. Rename the HTTP action to **Create Group**.

32. Save the Flow, run it, pass a group name (add your name in the group name to make sure it is unique)

33. Check the Azure Active Directory; your new group should have been created:




Home > REDWOOD S.L SPRL > Groups - All groups

## Groups - All groups

REDWOOD S.L SPRL - Azure Active Directory

« + New group Delete Refresh Columns Got feedback

Search groups x Add filters

NAME	OBJECT ID	GROUP TYPE
 Demoguests	d1ee0047-a473-46cf-a1c2-4...	Office
 groupx	f6024094-376e-4877-a7c2-...	Office
 teamcollab	13341317-fa3f-401d-9f80-1d...	Office

Settings

- General
- Expiration
- Naming policy

34. Add Compose action, rename it **GroupID** and grab the id value returned by the Create Group action:

HTTP - Create Group

+

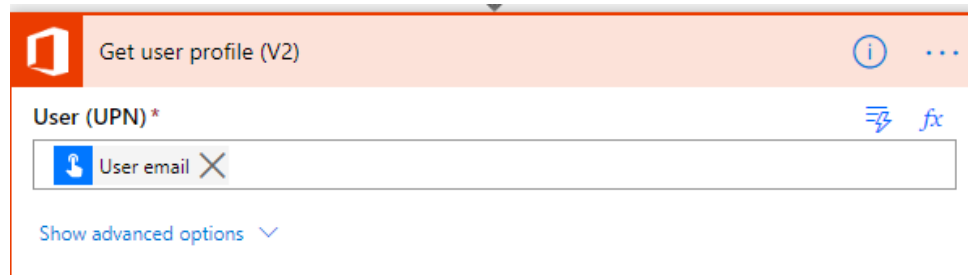
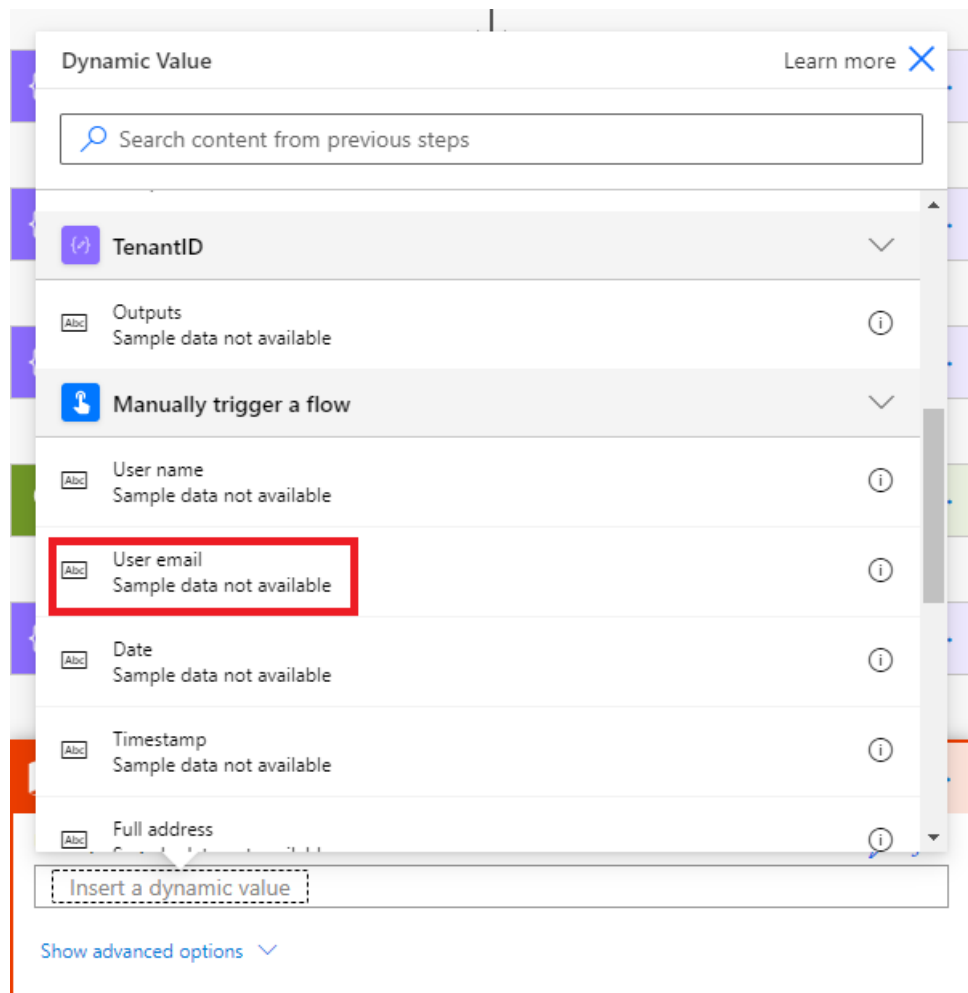
{ } GroupID

Inputs\*

body(...)

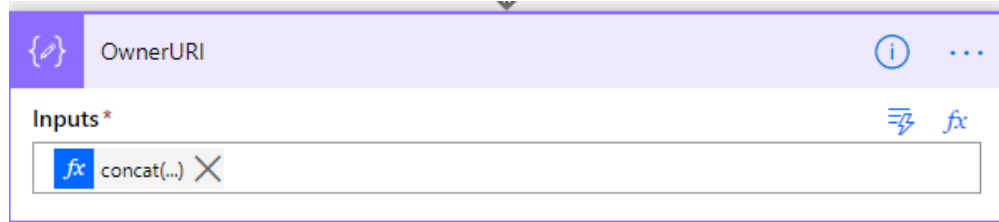
body("HTTP\_-\_Create\_Group")?['id']

35. A group must have an owner; the owner will be the user starting the Flow. We must find his e-mail and its object id in AAD.
36. Add an action Get User Profile (V2) and define the expression to retrieve the current user e-mail address:




37. Add a Compose action, name it **OwnerURI** and use the following expression:

```
concat(concat('https://graph.microsoft.com/v1.0/groups/', outputs('GroupID')), '/owners/$ref')
```





38. Add an **HTTP action** to add the owner to the group; in the body, pass the id field of the **Get user profile** action. Use the settings defined in our previous HTTP action (**secretID**, **tenantID**,...)

 HTTP - Add Owner to group ...

**Method \***  

POST


**URI \***  

 Outputs 

Headers

Enter key


Enter value






Queries

Enter key

Enter value



**Body**    

```
{
  "@odata.id": "https://graph.microsoft.com/v1.0/users/ Id"
}
```

**Cookie**  

Enter HTTP cookie



**Authentication \***  

Active Directory OAuth

**Authority**  

https://login.microsoftonline.com



**Tenant \***  

 Outputs 

**Audience \***  

https://graph.microsoft.com



**Client ID \***  

 Outputs 

**Credential Type \***  

Secret

**Secret \***  




 Outputs 

[Hide advanced options](#) ^


39. Use another HTTP action to create the Team, make sure the Method is PUT and pass the previous compose action Id value into the group URL.

You can adapt the Body by reusing the following code:



```
{
  "memberSettings": {
    "allowCreateUpdateChannels": true
  },
  "messagingSettings": {
    "allowUserEditMessages": true,
    "allowUserDeleteMessages": true
  },
  "funSettings": {
    "allowGiphy": true,
    "giphyContentRating": "strict"
  }
}
```

 HTTP - Create Teams  

**Method \***  

PUT 


**URI \***  

https://graph.microsoft.com/v1.0/groups/ Outputs  /team

Headers

Enter key


Enter value



Queries

Enter key

Enter value




**Body**  

```
{
  "memberSettings": {
    "allowCreateUpdateChannels": true
  },
  "messagingSettings": {
    "allowUserEditMessages": true,
    "allowUserDeleteMessages": true
  },
  "funSettings": {
    "allowGiphy": true,
    "giphyContentRating": "strict"
  }
}
```

**Cookie**  

Enter HTTP cookie

[Show advanced options](#) 

40. Run the Flow, pass a group/team name, and connect to <http://teams.microsoft.com> to check your team.



