Azure Application Permissions

Last Modified on 06/12/2019 7:09 pm AEDT

ReadiNow API Callouts can connect to Microsoft Azure APIs by using OAuth 2.0 authentication.

Azure offers two permission models:

- Application - where a software application such as ReadiNow connects to an API service on its own behalf
- Delegated - where a software application is connecting to an API service on behalf of a specific end user

This page describes how to configure API Callouts to connect using the **Application** model, which is the recommended approach. However, certain APIs may only be made accessible via the delegated model. See Azure Delegated Permissions for details on configuring delegated permissions.

Additional information can also be found in the Microsoft Azure reference at: Configuring a client application to access web APIs

Overview

The following sample demonstrates how to:

- configure Azure to receive connections using the application permission model
- configure ReadiNow API Callouts to authenticate with Azure

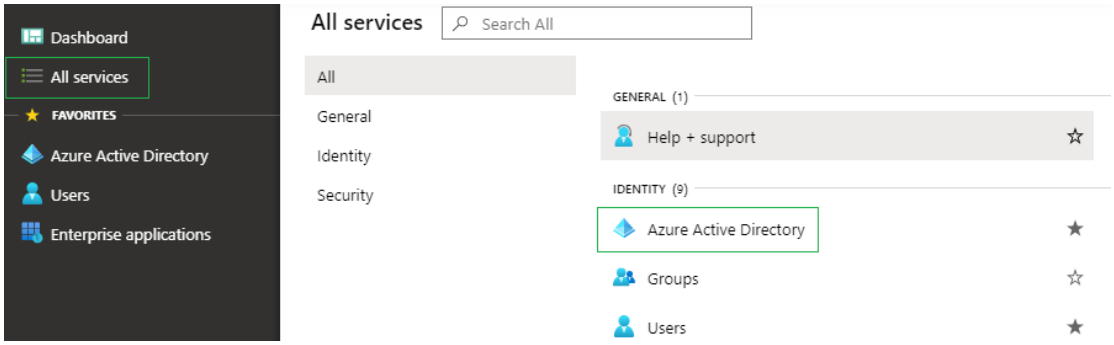
Once complete, refer to Connecting to Azure APIs to extend the sample to set up specific API endpoints and call them using a workflow.

> Note: the following is provided as an example to illustrate connecting to the Azure APIs in general, and use the Azure 'users' API as an example. If you wish to achieve automatic provisioning, then use the single-sign-on provisioning mechanism.

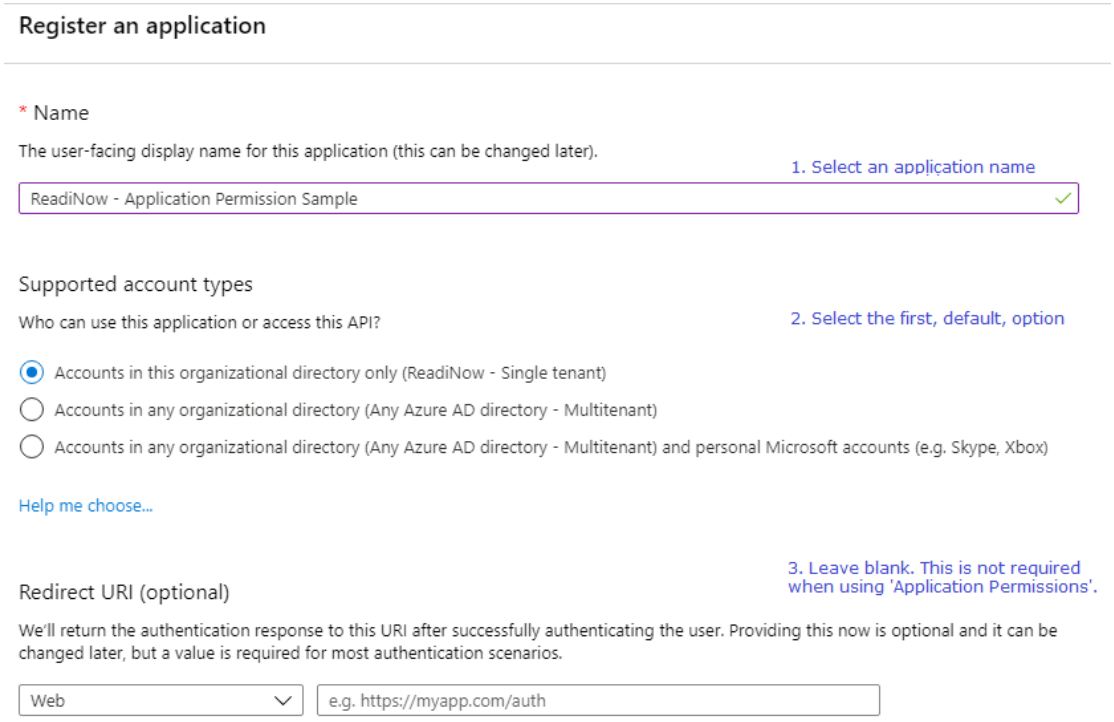
Configure Azure

The following steps will configure Azure to receive a connection from the ReadiNow platform, and grant sufficient permission for the ReadiNow API Callout to request information about users.

1. Register an application
    1. Log into the Azure portal
    2. Select **Azure Active Directory** on left, or locate it under **All services**



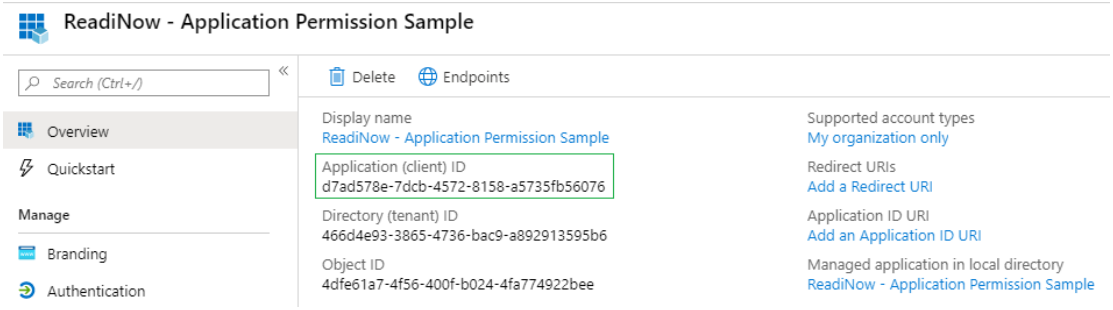
    3. Select **App Registrations**
    4. Click the **New Application Registration** button
    5. Enter a name for the application registration, such as "ReadiNow - Application Permission Sample"



    6. Leave **Supported account types** and **Redirect URI** as their default and blank options respectively.

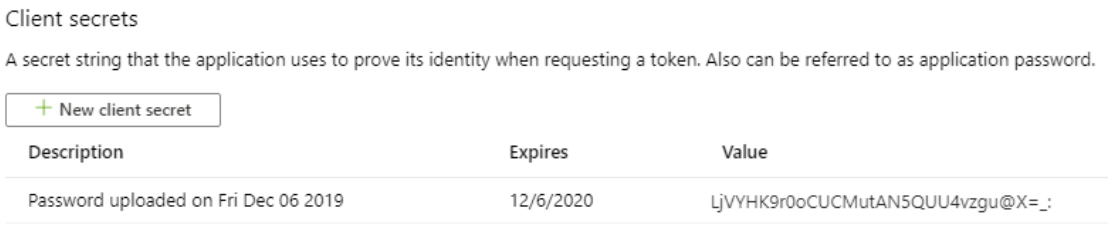
7. Click the **Register** button at the bottom of the screen

2. Configure the application
    1. An application information screen such as the following will be presented



    2. Make a note of the **Application (client) ID -** you will need this in a later step

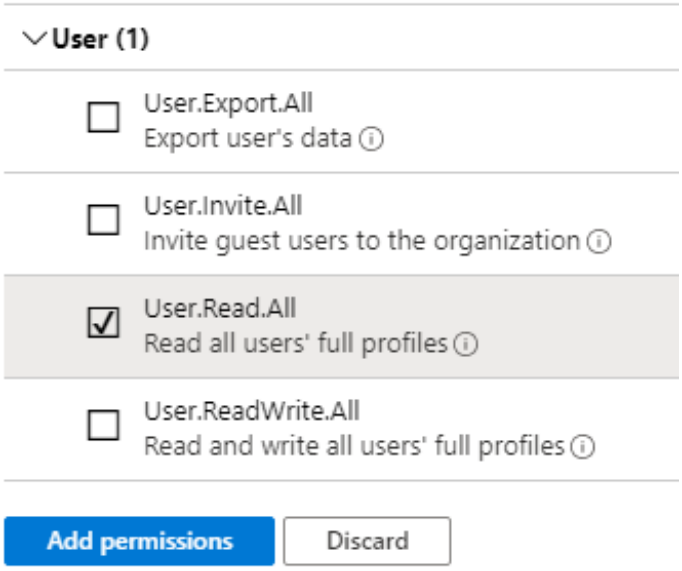
3. Configure a Client Secret
    1. A *client secret* can be thought of as a password for an application, such as the ReadiNow platform, rather than a person.
    2. Click **Certificates & secrets** on the left hand margin
    3. Click the **New Client secret** button
    4. Select an expiry date and click the **Add** button
    5. A new value will appear such as: LjVYHK9r0oCUCMutAN5QUU4vzgu@X=_: in the client secrets table



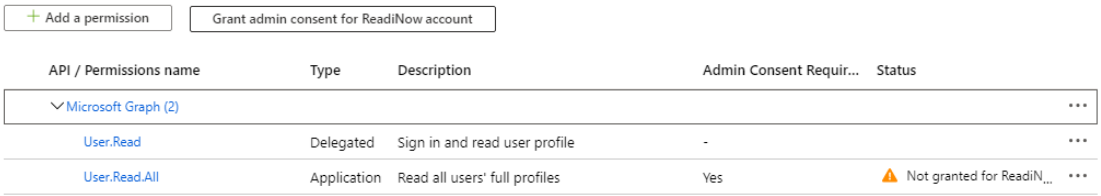
    6. Immediately copy it to a notepad document, or similar. This is the OAuth*client secret*. It cannot be recovered later.

4. Configure permissions that are needed to access the API
    1. Click on **API permissions** in the left margin
    2. Click the **Add a permission** button
    3. Click on the **Microsoft Graph** tile (or whichever API service you wish to access via ReadiNow API Callouts)
    4. Select **Application permissions**
    5. Locate and enable the **User.Read.All** permission (or whichever permissions

are required for the API you intend to call)



6. Click the **Add permissions** button at the bottom of the panel
7. The new permission will appear in the permissions table
8.



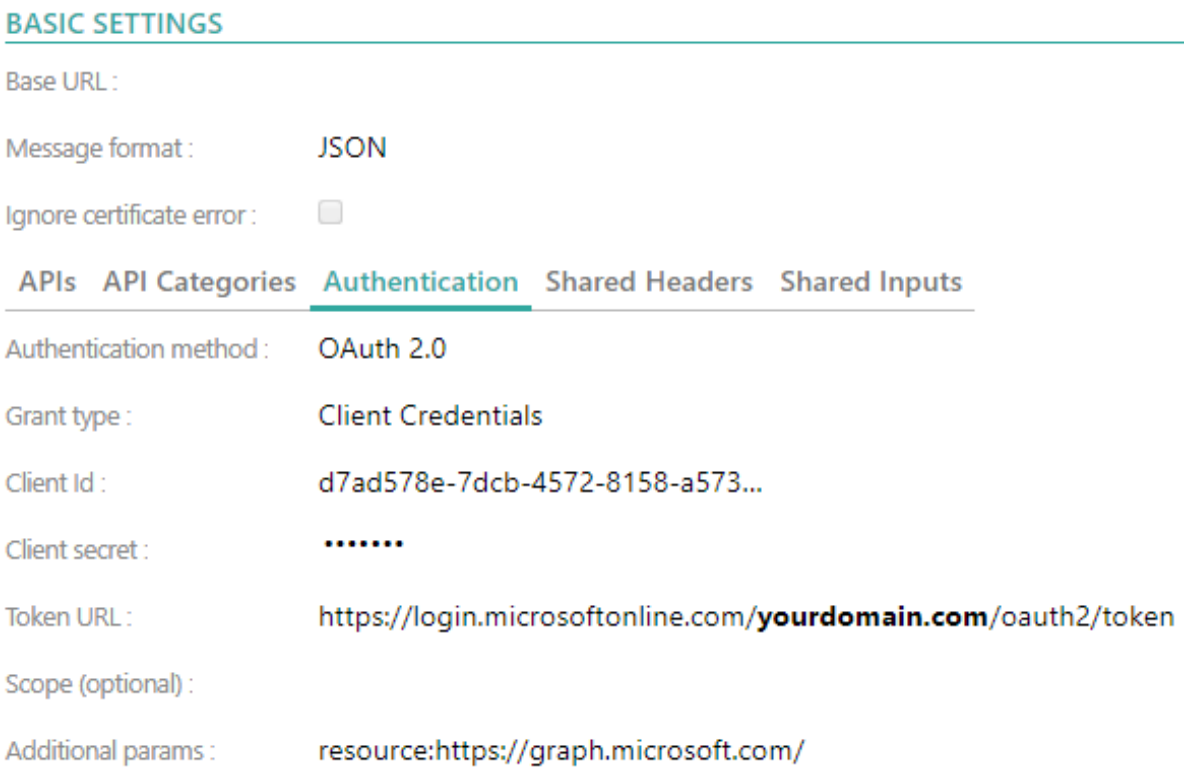
9. The new permission will have a status of not granted. It must be explicitly given consent because it is an Application permission granted to a software system (namely the ReadiNow API Callouts) rather than a delegated permission acting on behalf of a person.
10. Click the **Grant admin consent for account** button
11. A Microsoft login window will appear
12. Login, review the permissions granted, and click the **Accept** button

Configure ReadiNow API Callouts

The following steps will start to prepare a new API Callout library in ReadiNow to connect to Azure.

1. Log into ReadiNow

2. Go to Administration / Integration / API Callouts
3. Create a new API Callout
4. Name it "Azure" or similar
5. Leave the **Base URL** blank
6. Set the message format to JSON
7. On the Authention tab, set the **Authentication method** to **OAuth 2.0**
8. Ensure that the **Grant Type** is set to **Client Credentials** - this corresponds to the Azure 'Application permission' type



9. Set the **Client ID** to the **Application (client) ID** value provided by Azure above
10. Set the **Client Secret** to the value provided by Azure above
11. Set the **Token URL** to: https://login.microsoftonline.com/yourdomain.com/oauth2/token (where yourdomain.com is your ActiveDirectory domain, such as company.com)
12. Set the **Additional params** to: resource:https://graph.microsoft.com/ This indicates to Azure which Azure API service the authentication token will be allowed to access.

Next Steps

Azure and ReadiNow are now both configured so that ReadiNow callouts can connect to Azure.

Continue with Connecting to Azure APIs to extend the sample to:

- create a API Callout endpoint to request user details
- create a workflow that uses the API Callout and processes results