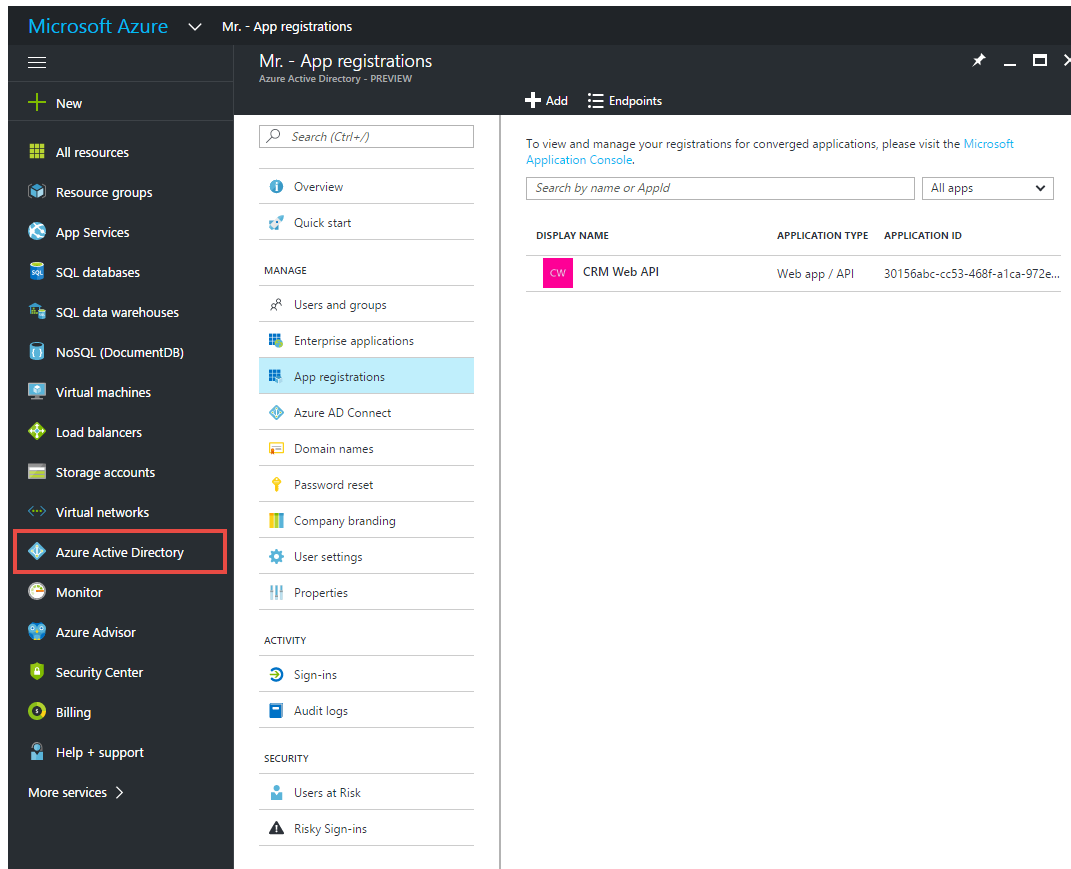# Azure Active Directory Authentication (using adal.js) and CRUD Implementation using Dynamics CRM 365 Web API

1. Azure Active Directory Authentication using adal.js
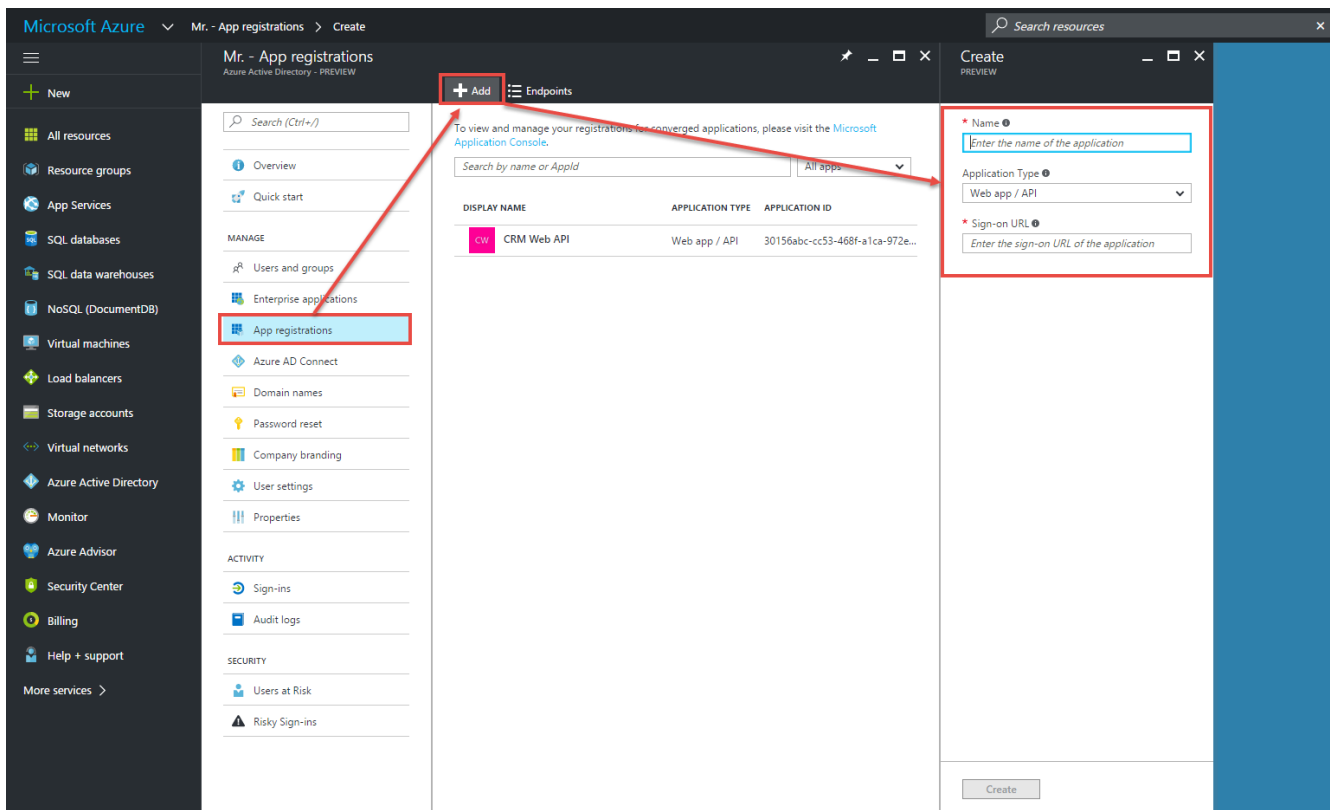
1.1.   Register Application in Azure Active Directory

First, access to Azure portal (https://portal.azure.com) and go to Azure Active Directory

From App Registrations, Add new application with **Application Type = Web app / API**

Put Sign-on URL as our home page (e.g http://localhost:61950/Portal/Sample.html)

After Application is registered, select on that app, select Manifest file and download this file

Open Manifest file and update **"oauth2AllowImplicitFlow"** value to **true**

Upload Manifest file to your application

```json
{
    "appId": "02333733-e589-428b-a39f-14e721b297cd",
    "appRoles": [],
    "availableToOtherTenants": false,
    "displayName": "Demo CRM Web API",
    "errorUrl": null,
    "groupMembershipClaims": null,
    "homepage": "http://localhost:61950/Portal/Sample.html",
    "identifierUris": [
      "https://phuongtvn2.onmicrosoft.com/20ccb38f-e9d1-4b9d-9faf-692658315402"
    ],
    "keyCredentials": [],
    "knownClientApplications": [],
    "logoutUrl": null,
    "oauth2AllowImplicitFlow": true,
    "oauth2AllowUrlPathMatching": false,
    "oauth2Permissions": [
      {
        "adminConsentDescription": "Allow the application to access Demo CRM Web API on behalf of the
        "adminConsentDisplayName": "Access Demo CRM Web API",
        "id": "a995c510-2249-45c9-9d53-5720cc9fade5",
        "isEnabled": true,
        "type": "User",
        "userConsentDescription": "Allow the application to access Demo CRM Web API on your behalf."
        "userConsentDisplayName": "Access Demo CRM Web API",
        "value": "user_impersonation"
      }
    ],
    "oauth2RequiredPostResponse": false,
    "objectId": "9076420e-1e31-4f20-a980-2915ce58c825",
    "passwordCredentials": [],
    "publicClient": false,
    "supportsConvergence": false,
    "replyUrls": [
      "http://localhost:61950/Portal/Sample.html"
    ],
    "requiredResourceAccess": [
```

From application, add permission for user to access your Dynamics CRM App

Settings PREVIEW

🔍 Filter settings

GENERAL

Properties
Reply URLs
Owners

API ACCESS

Required permissions
Keys

Required permissions PREVIEW

+ Add

API	APPLICATION PER...	DELEGATED PERM...
Windows Azure Active Directory	0	1

Add API access PREVIEW

1 Select an API
Dynamics CRM Online

2 Select permissions

Done

Select an API PREVIEW

Search for other applications with Service Principal name

Windows Azure Active Directory
Office 365 Exchange Online
Microsoft Graph
Office 365 SharePoint Online
Dynamics CRM Online
Power BI Service
Windows Azure Service Management API
Office 365 Management APIs

Select

Settings PREVIEW

🔍 Filter settings

GENERAL

Properties
Reply URLs
Owners

API ACCESS

Required permissions
Keys

Required permissions PREVIEW

+ Add

API	APPLICATION PER...	DELEGATED PERM...
Windows Azure Active Directory	0	1

Add API access PREVIEW

1 Select an API
Dynamics CRM Online ✓

2 Select permissions
0 role, 1 scope

Done

Enable Access PREVIEW

☐ APPLICATION PERMISSIONS   REQUIRES ADMIN

No application permissions available.

☑ DELEGATED PERMISSIONS   REQUIRES ADMIN

☑ Access CRM Online as organization users   ⛔ No

Select

1.2. Authentication for web application using adal.js

Base on library from https://github.com/Scaleable-solutions/WebAPIAuthFromJavaScript, I fixed some issued that happened when losing cookie or token expired and updated into **util.js**

We need to update configuration for our application before using Dynamics CRM 365 Web API

```javascript
var organizationURI = "https://<ORG_NAME>.api.crm5.dynamics.com"; // TODO: Add your
organizationURI
...
var tenant = "b5101e80-6255-4e07-afed-380b2d3bdd51"; // TODO: add your tenant
var clientId = "30156abc-cc53-468f-a1ca-972e1c3b02d6"; // TODO: Add your Client Id
var pageUrl = "http://localhost:61950/Portal/Sample.html";// TODO: Add your Reply URL
```

ClientId: Your Application ID when you register your app into Azure AD

TenanID: Your Directory ID (in Azure Active Directory) – see image below