MICROSOFT LABS   APRIL 13, 2018
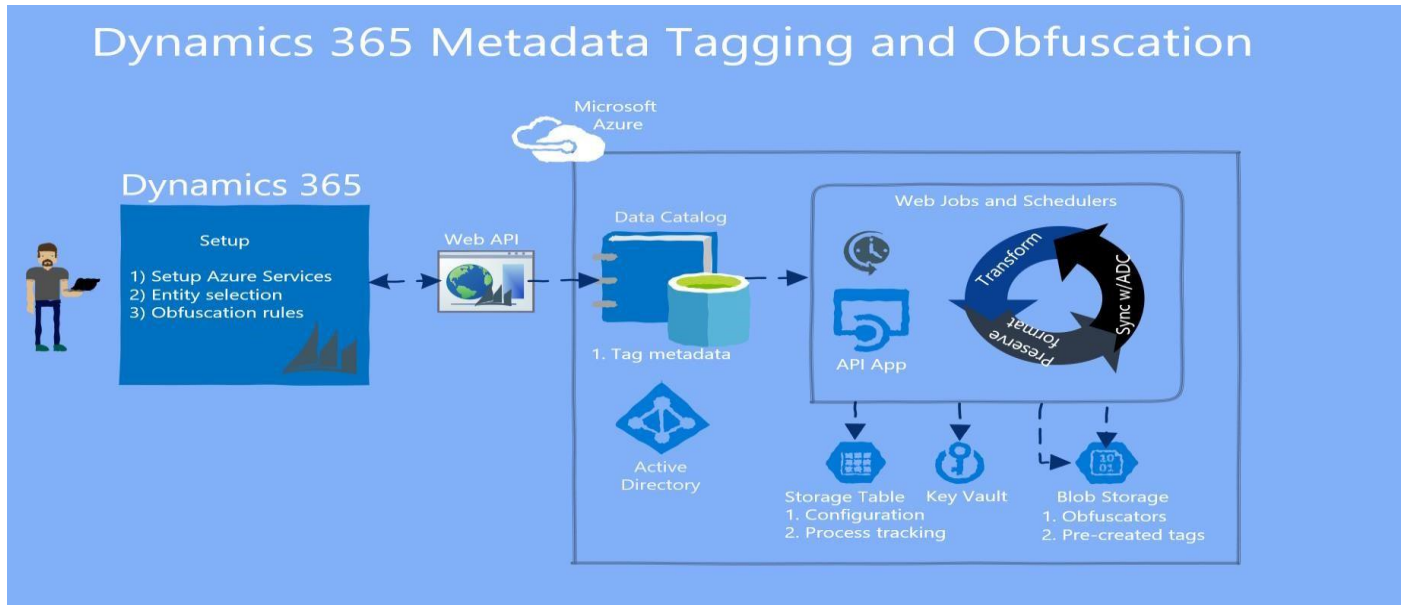
DYNAMICS 365 DATA TAGGING & OBFUSCATION

A tool to add entity into CRM, obfuscate the entity and sync Glossary with Azure table storage and give them a weightage.

Contents

Introduction

Microsoft Dynamics 365 provides several tools for managing data. This tool is for data obfuscation, It look for all available entities in CRM and Obfuscate entity fields based on tagging at Azure Data Catalog and weightage configured in CRM...

Verify Solution Installation

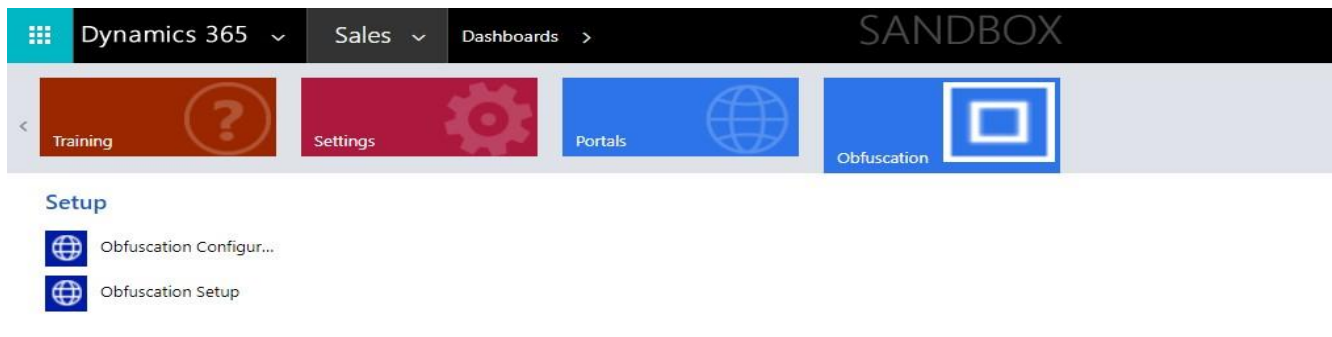Once install the solution from AppSource. Go to **Settings | Solutions** and Check for the solution.

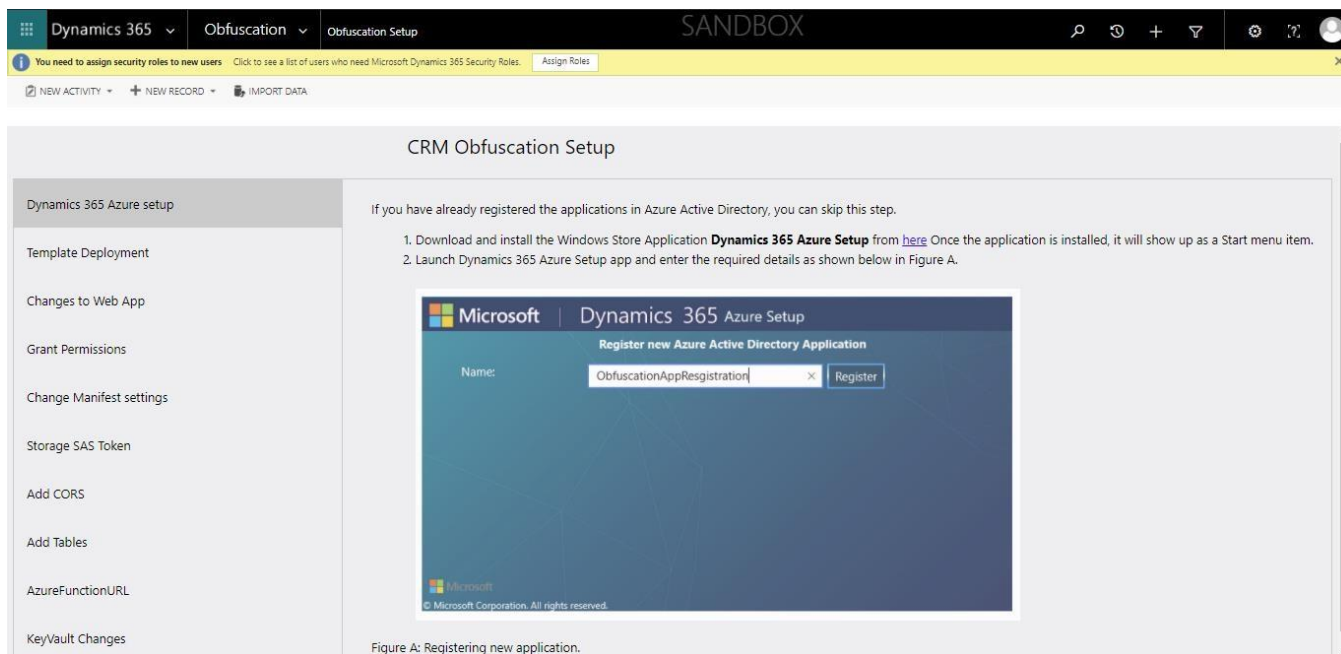Go to Data Obfuscation Site Map Menu Check for Sub menu option
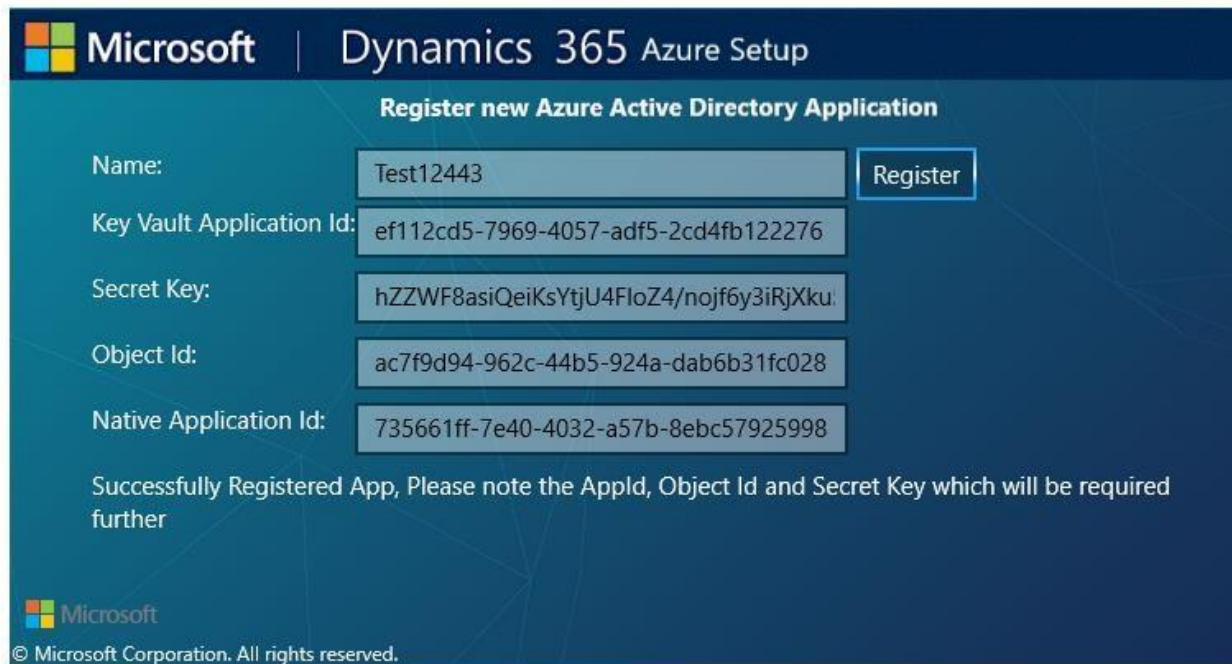
- Obfuscation Configuration
- Obfuscation Setup

Obfuscation Set-up

Dynamics 365 Azure setup

Go to **Obfuscation | Obfuscation Setup** | **Dynamics 365 Azure setup**

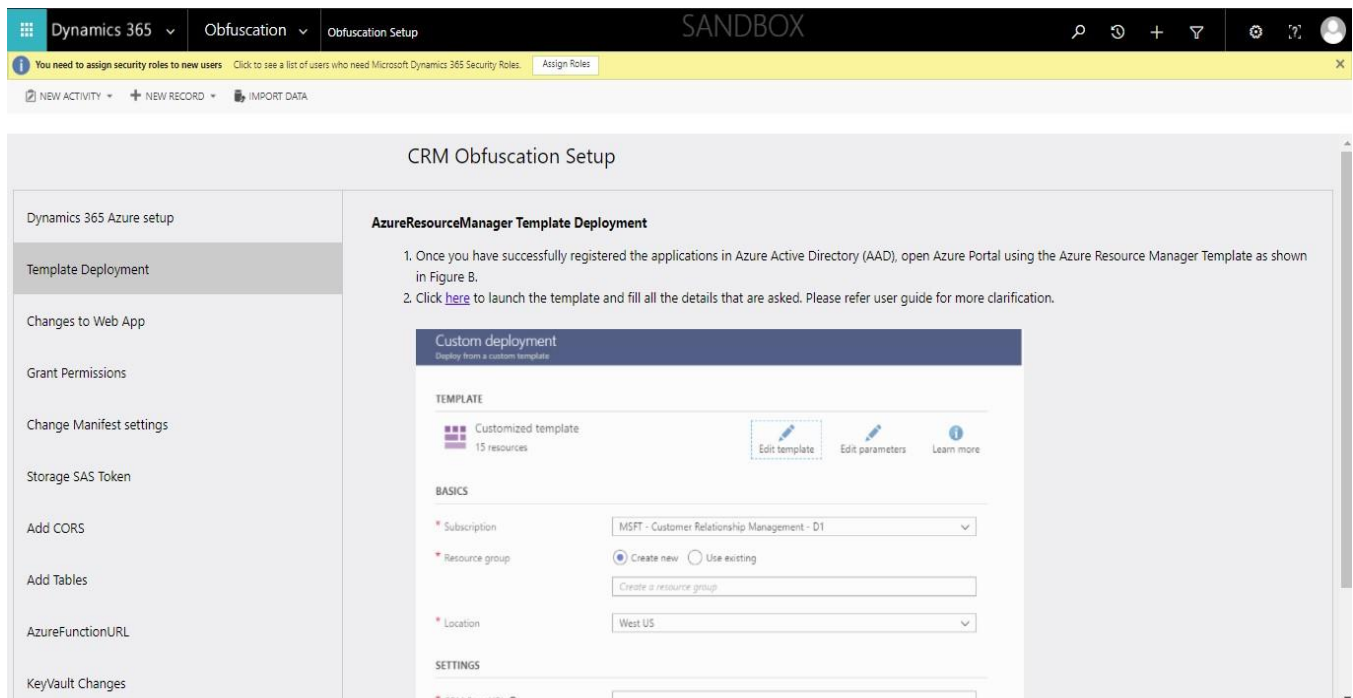After Register the application, below is the snap shot for Keys

Template Deployment

Go to **Sales|Obfuscation|Obfuscation Setup |Template Deployment**

Filling Custom Deployment Template:

Launch the custom deployment template and fill the details:

Field	Value
* Web API Object Id	
* Native Client Id	
* Data Catalog Client Id	
* Data Catalog Name	
* Data Catalog Secret	
* Data Catalog Tenant Id	
* Stakeholder Object Ids	
* Stakeholder Upns	
Web Site Name	ObfuscationWebApp
Key Vault Name	obskeyvault
Storage Account Name	obfuscationstorageacc
Storage Account Type	Standard_LRS
Function App Name	ObfuscationFunctionApp
Hosting Plan Name	ObfuscationAppServicePlan
Sku Name	S3
Sku Capacity	1
CRMAPI Version	v8.2

TERMS AND CONDITIONS

Azure Marketplace Terms | Azure Marketplace

By clicking "Purchase," I (a) agree to the applicable legal terms associated with the offering; (b) authorize Microsoft to charge or bill my current payment method for the fees associated the offering(s), including applicable taxes, with the same billing frequency as my Azure subscription, until I discontinue use of the offering(s); and (c) agree that, if the deployment involves 3rd party offerings, Microsoft may share my contact information and other details of such deployment with the publisher of that offering.

☐ I agree to the terms and conditions stated above

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Azure Resource Manager Template Properties

- **Subscription**: Select the correct subscription from the dropdown list.

- **Resource Group**: Please note the following option choices... o **First Time setup**: Be sure to select **Create new** option and add a unique resource group name. **Important**: Save the resource group name for future references.
  - o **for any upgrades**: Select the **Use existing** option to use the existing resource group name.

- **Location**: Select the correct location from the dropdown list.
- **CRM Base URL:** CRM instance URL
- **CRM Username**: Use the CRM logged in user name (email address) with Admin privileges.
- **CRM Password**: Implied.
- **Web API Client Id**: Paste the existing Key Vault Application Id
- **Web API Secret Id**: Paste the existing Secret Id
- **Web API Object Id:** Paste the existing Object Id
- **Native Client Id:** Paste the existing Native Application Client Id
- **Data Catalog Client Id**: Get the Data Client Id from Azure Data catalog
- **Data Catalog Name**: Get from Azure data catalog
- **Data Catalog Secret**: Get from Azure data catalog
- **Data Catalog Tenant Id**: Get from Azure data catalog
- **Stake Holder Object Id:** Get from Azure data catalog
- **Stake Holder Upns**: Get from Azure data catalog
- **Web Site Name**: Any unique website name with contiguous characters.
- **Key Vault Name**: Any unique KV name. **Important**: Please use contiguous lowercase letters only.
- **Database Account Name**: Alphanumeric Cosmos account name.
- **Storage Account Name**: Alphanumeric storage account name.
- **Storage account Type**: Select the correct value from the dropdown list.
- **Function App Name**:
- **Hosting Plan Name**: Use only unique contiguous lowercase characters.
- **Sku Name**: Select the correct value from the dropdown list.
- **Sku Capacity**: Suggest using the Default value of 1.
- **CRM Web APIVersion**: Select the correct value from the dropdown list.
-

Agree the **Terms and Conditions** and click on the **Purchase** button.

Once the deployment Completed Below are the Azure components

After Deployment Pls. follow below manual steps to complete the Deployment

Changes to Web App

Go to **Sales|Obfuscation|Obfuscation Setup |Changes to Web App** and change the necessary settings to Web App.

Grant Permissions

Go to **Sales|Obfuscation|Obfuscation Setup |Grant Permissions** and check the necessary setting for granting permission.

Change Manifest Settings

Go to **Sales|Obfuscation|Obfuscation Setup |Check Manifest Settings** and check the necessary manifest settings.

Storage SAS Token

Go to **Sales|Obfuscation|Obfuscation Setup |Storage SAS Token** and generate the SAS token of Azure storage.

Add CORS

Go to **Sales|Obfuscation|Obfuscation Setup |Add CORS** to create CORS rules.

Add Tables

Go to **Sales|Obfuscation|Obfuscation Setup |Add Tables** and create tables.

AzureFunctionURL

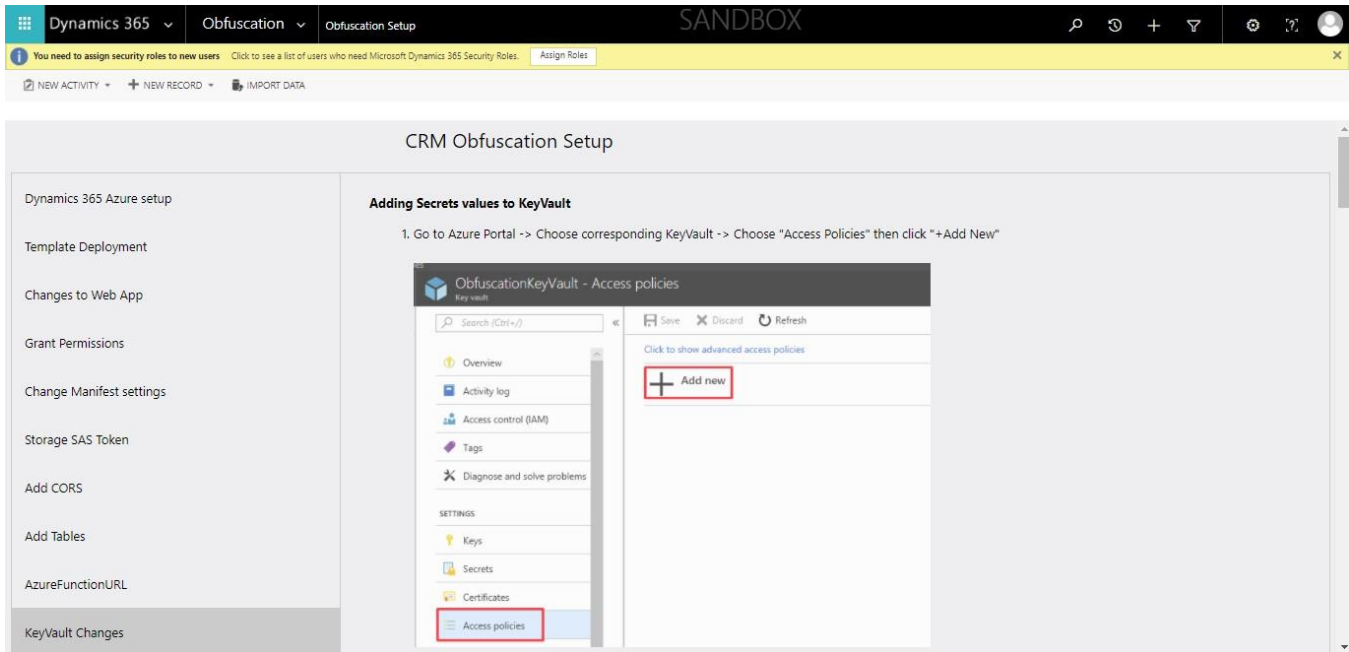Go to **Sales|Obfuscation|Obfuscation Setup |AzureFunctionURL** to create and save the azure function URL.
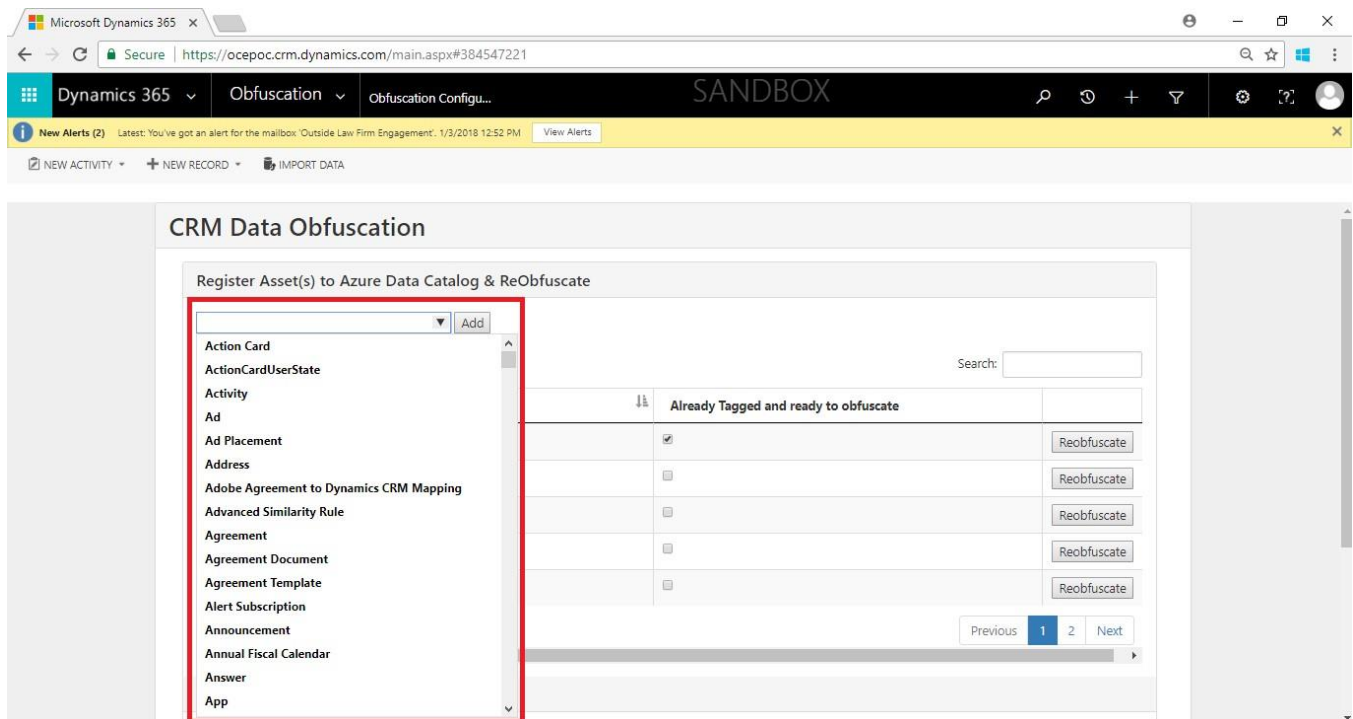
Key Vault Manual Steps

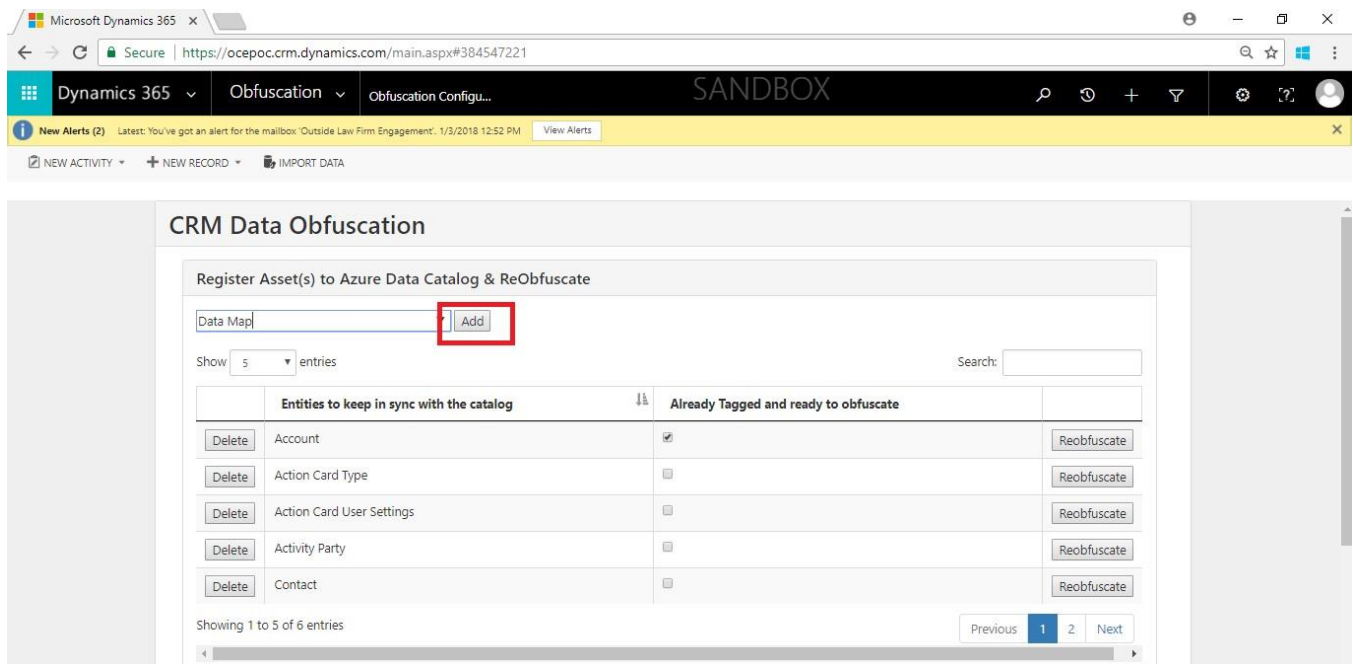Go to **Sales|Obfuscation|Obfuscation Setup |Key Vault Manual Steps** and add secrets under key vault.

Obfuscation Configuration in CRM

Adding Entity for Obfuscation

1. Go to Obfuscation Configuration page and click on the drop down under register Asset(s) to Azure Data Catalog & ReObfuscate. All available entity will appear in the drop down.

2. Click on Entity name which you want to register and Click on Add Button.

3. Selected Entity gets added into the grid. Entity can be deleted or Reobfuscate.
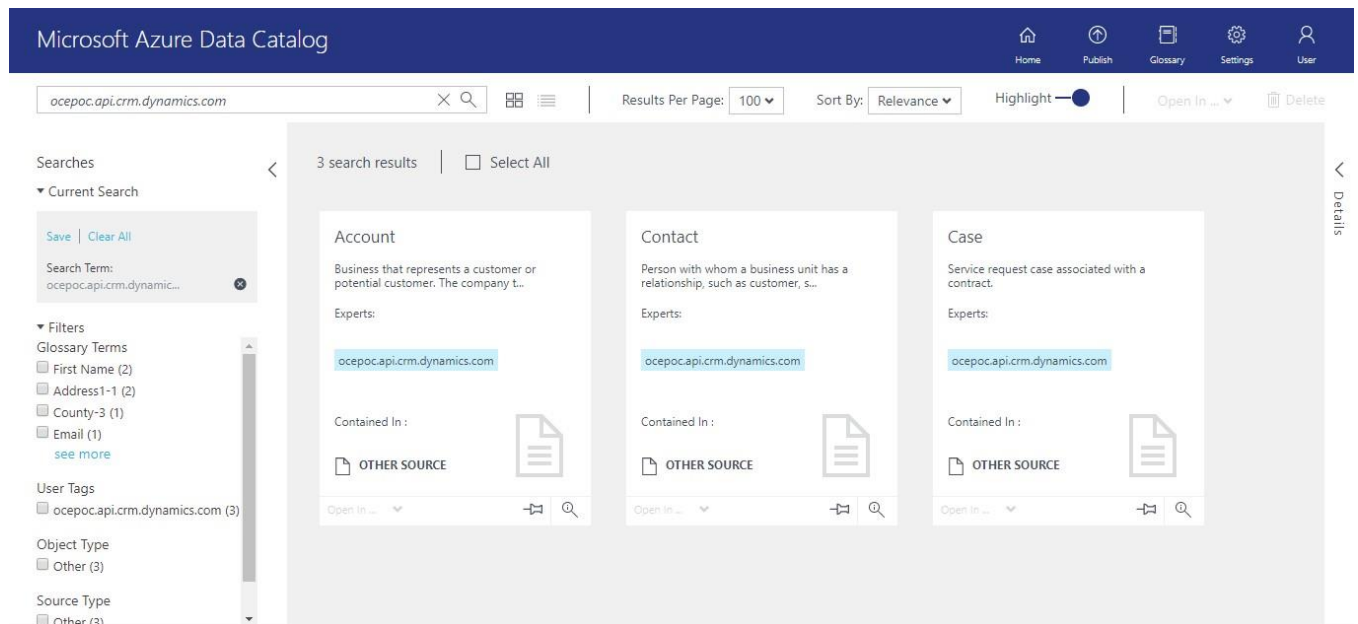   **Delete:** Deletes the entity from the list
   Reobfuscate: Clicking on this button will Re-Obfuscate the previously Obfuscated entities.

4. Navigate to Azure data catalog to add tags to the Selected entity. Enter the org name in the format of *'org.api.crm.dynamics.com'* to find out the listed entities in Azure Catalog. Pls. note that this entity related information must be pushed by the sync job. **By default, Web Job Sync**
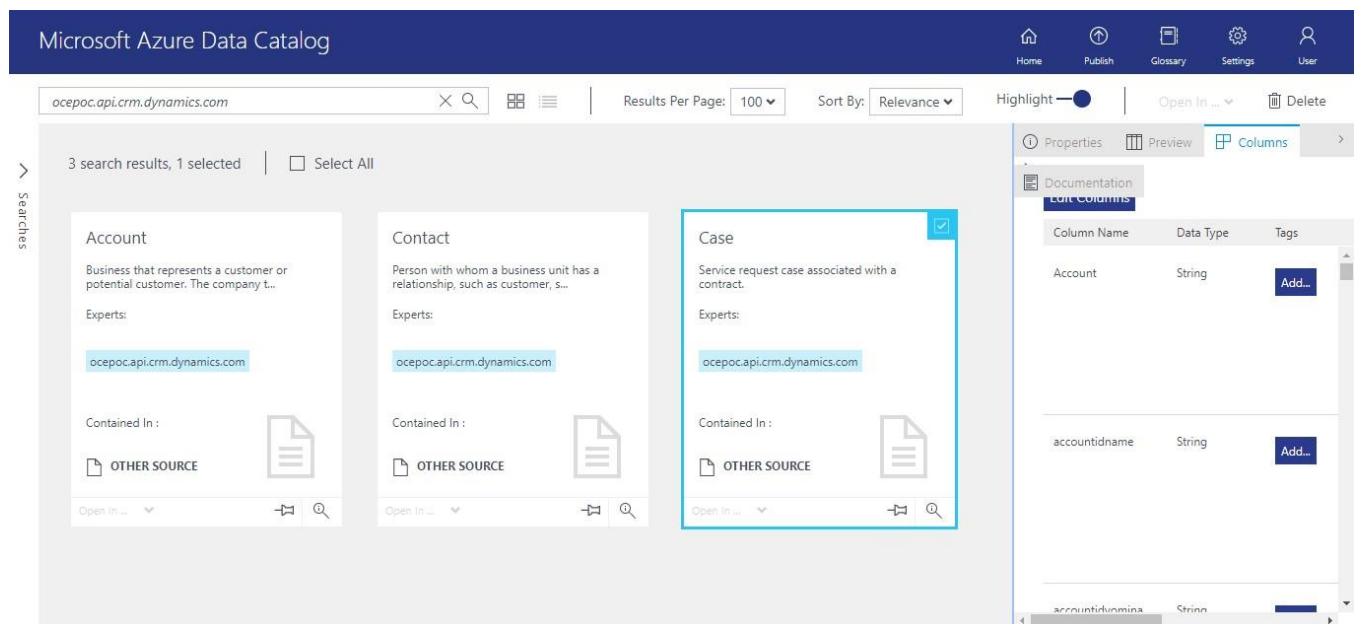
data between Azure Data Catalog and CRM will run on first minute in every hour and web job Obfuscation starts every 30th minute of every hour.

This is configurable in Resource groups | Select the Resource Group | Select App Service | Select App Settings | Change Sync Schedule or Obfuscation schedule (chronic expression)

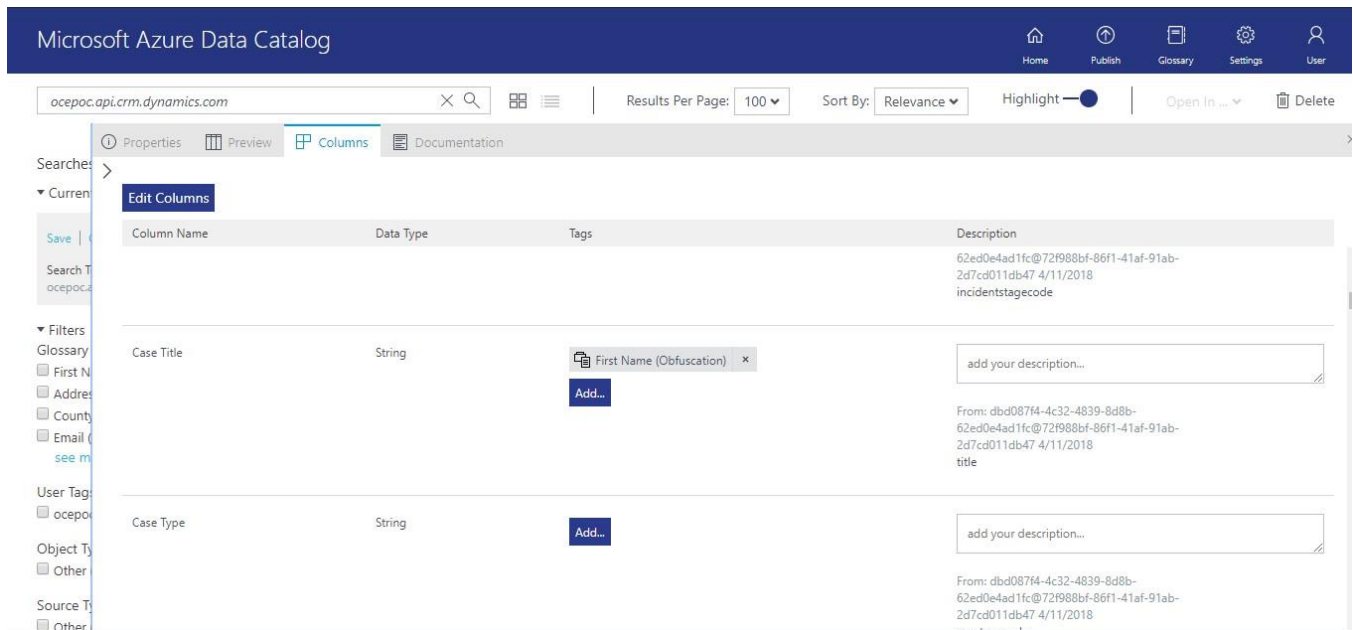Click on the displayed entity to add the tags

Select the entity and click on right side top 'Columns'
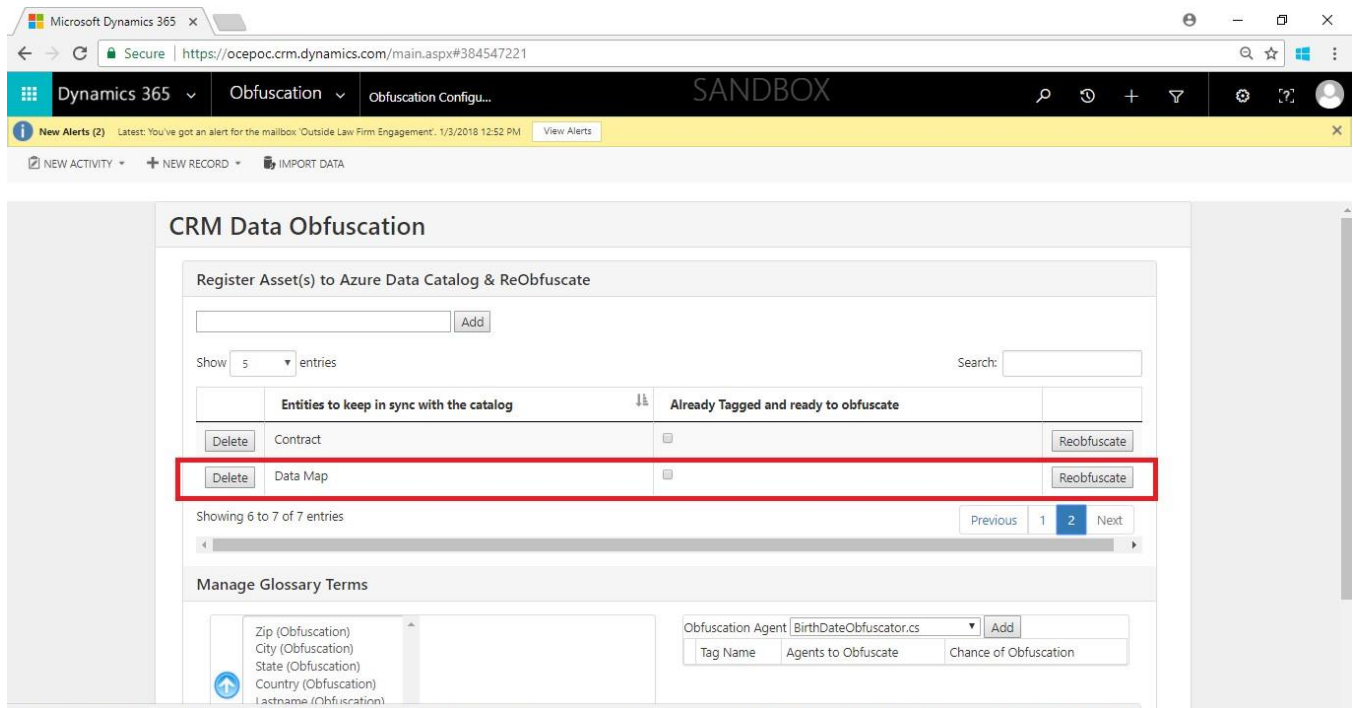
Add the catalog. In the below example We have added First Name Tag to Case Title column of Case entity.
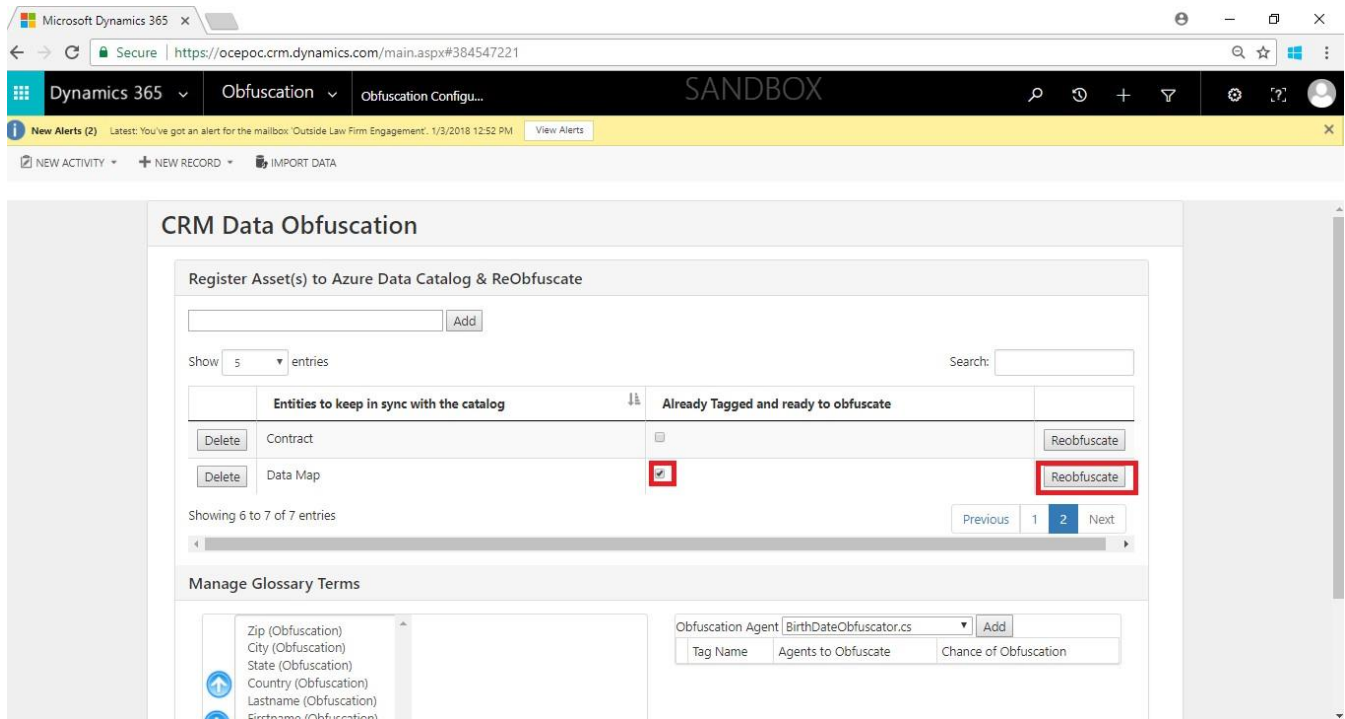

Now Switch back to CRM to select the tag in Manage Glossary Terms.

Agent.Cs : These are the actual agents written in C# to use obfuscation on the selected obfuscator column.
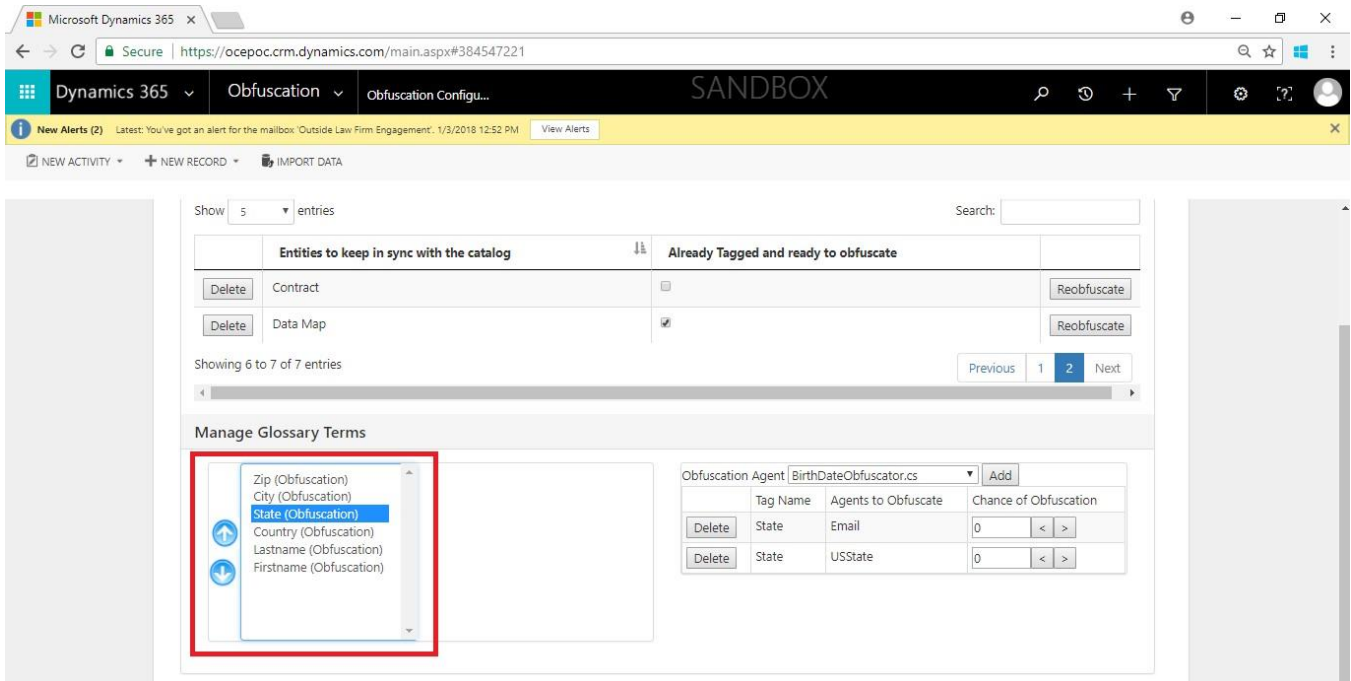

5. For ReOfuscation, checked Already Tagged and ready to obfuscate check box and Click on ReObfuscate button.
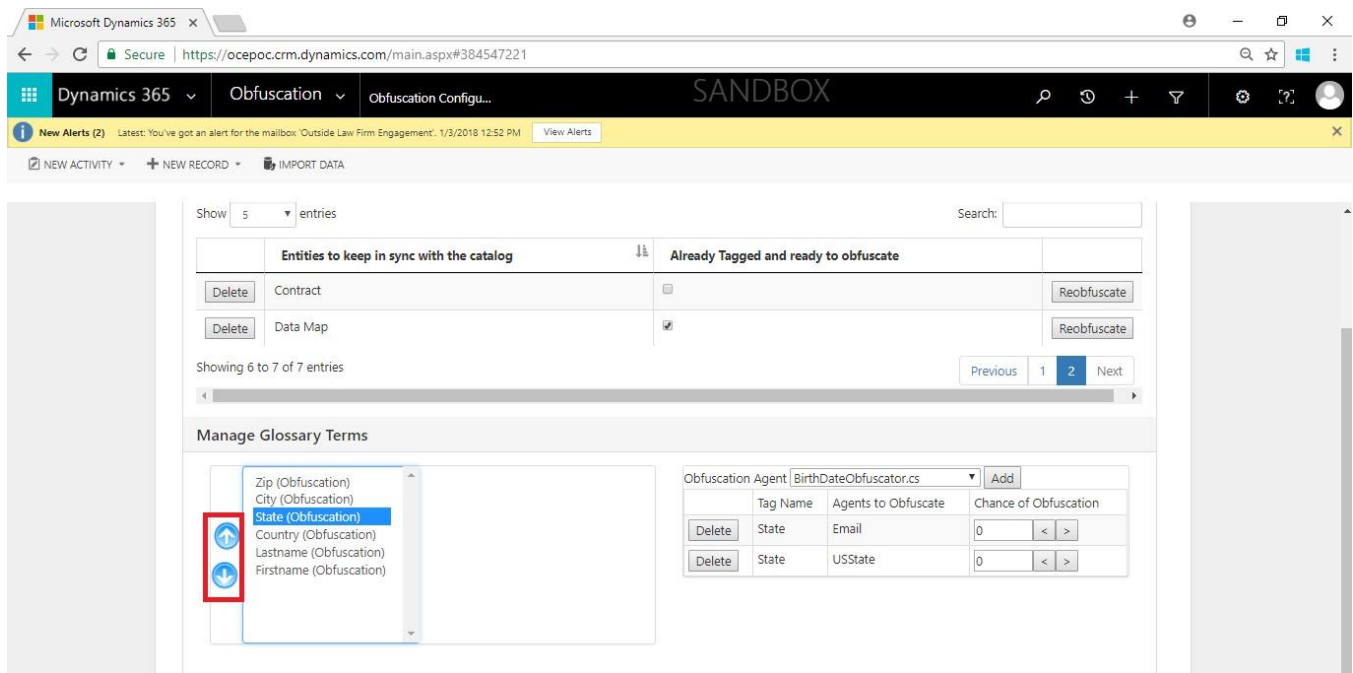
Glossary Term Execution Order

1. Glossary term combo box appearing under Manage Glossary Term can be set with a sequence number by moving it up or down on a specific position.
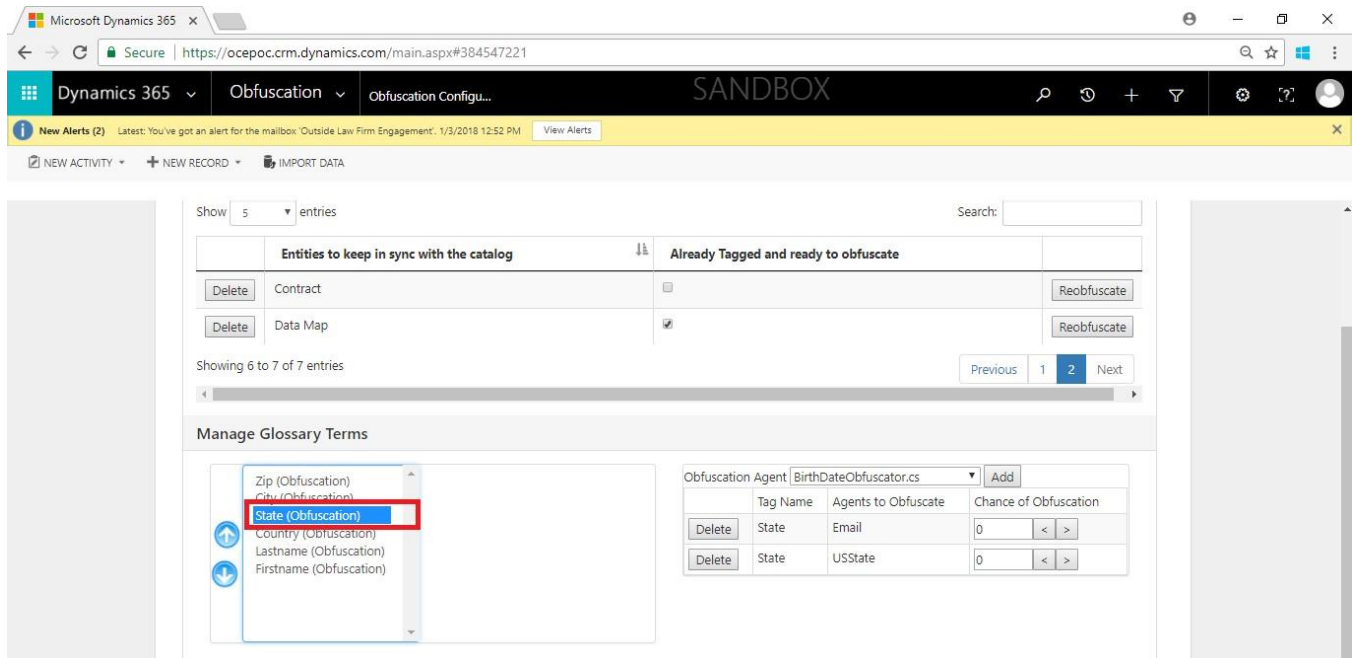

2. Clicking on Move Up or Move down will move up or down the glossary and set the execution order as per the sequence number of combo box.
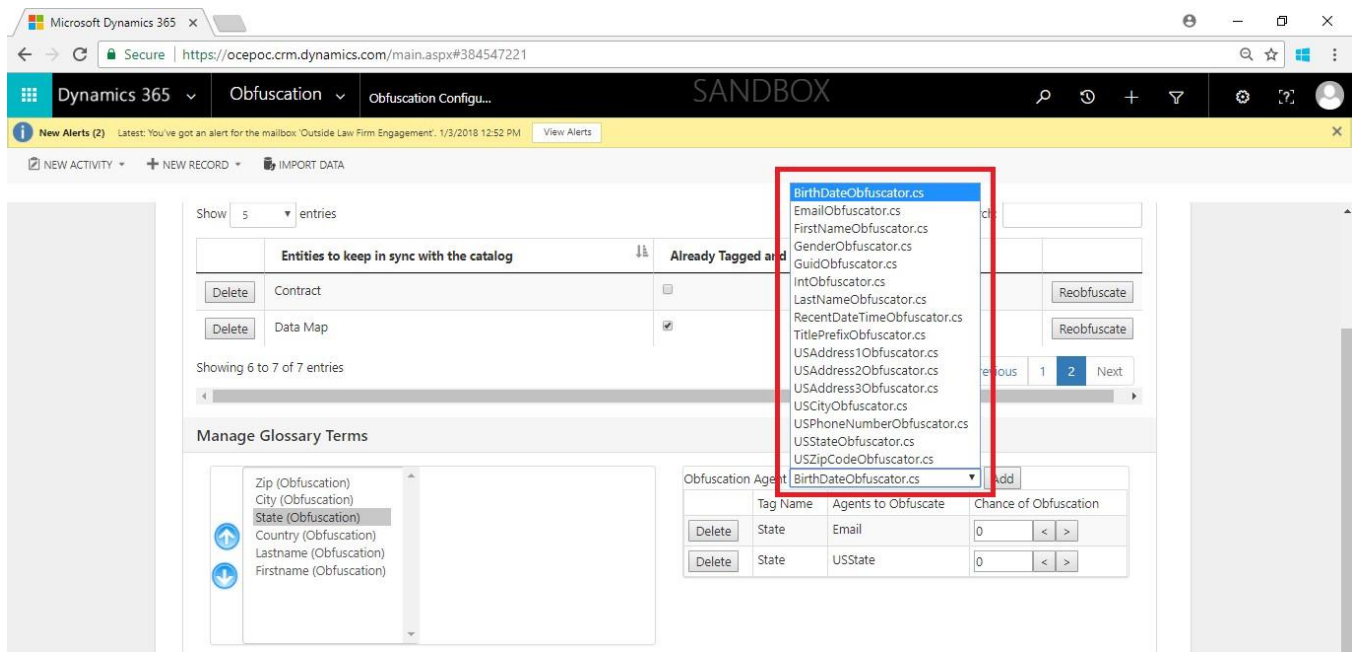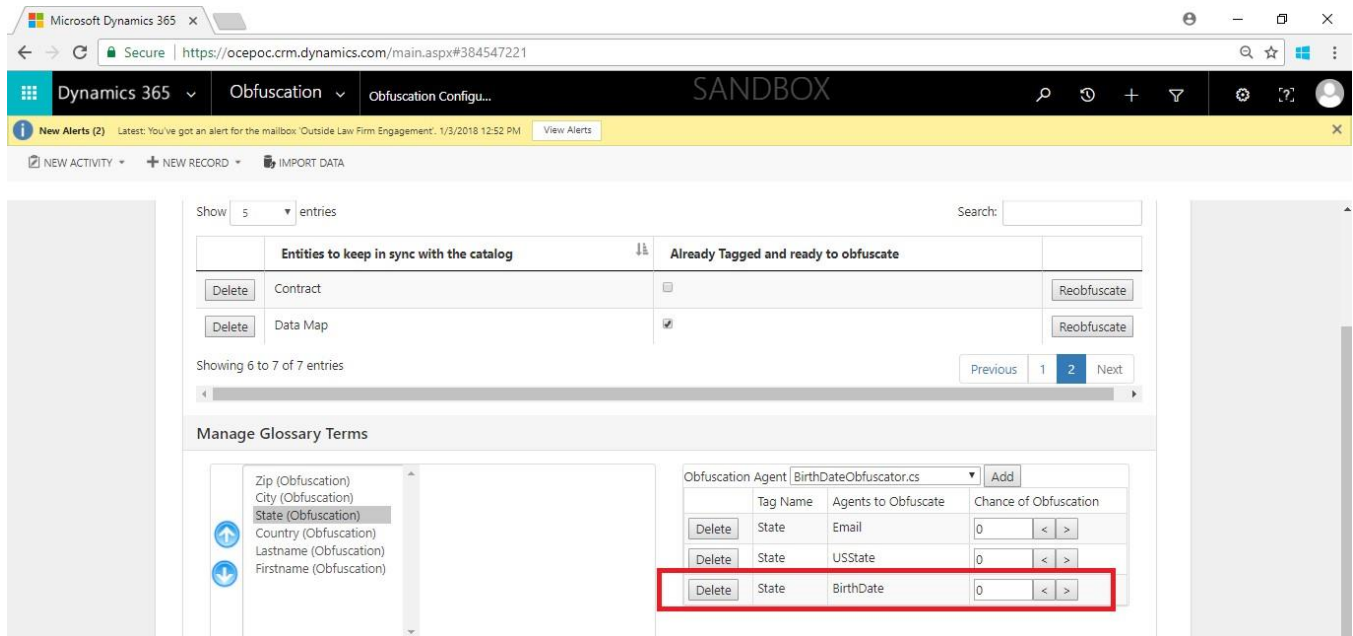
Adding a new Glossary – Obfuscation Agent

1. Select any Glossary Term.

2. Select any Obfuscation Agent that is not exist in the grid below to Agent drop down. If you try to add the combination which is already exist, it will not allow you to add the same.
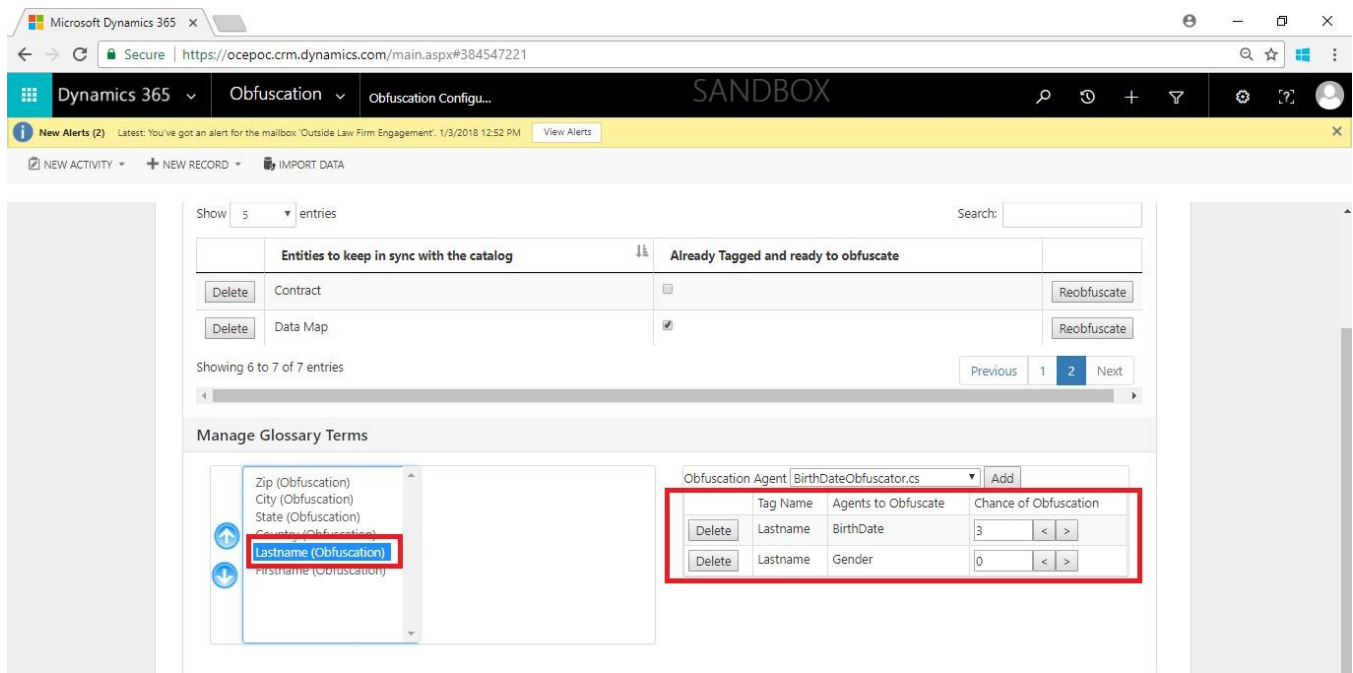
3. Click on the Add button. It will add a new row in the grid with weight as 0.

Edit a Glossary term – Obfuscation Agent combination

1. Select Glossary term and the grid will start showing all Obfuscation Agent with their respective weight.

2. You can update the weight by increase/decrease it or directly entering into weight textbox. The same can be deleted by clicking on Delete button.
   This means: User have a choice to increase or decrease the obfuscation of the selected column values in the entity. If 100 selected, the agent will obfuscate all the values in the selected columns.

Least Permissions required to access Obfuscation area

This section describes providing minimal security settings permissions required for users to access **Dynamics 365 Data Tagging & Obfuscation.**

Users should be having **Read Permissions** (Least Permissions) on **ObPrivilege** entity to access Dynamics 365 Data Tagging & Obfuscation area in Sitemap. The steps to provide the minimal security settings needed on the custom entity are:

1. Login to CRM and go to **Settings | Security Roles | Select A Role**
2. Go to "**Custom Entities**" tab, **ObPrivilege** Entity, and provide Read Permissions.

End User Experience

**In this section will obfuscate the Contact entity - First Name.**

Below are the steps:

1. Through Advance Find Query, select the Contact entity – First Name values. This can be used to compare after Obfuscation.
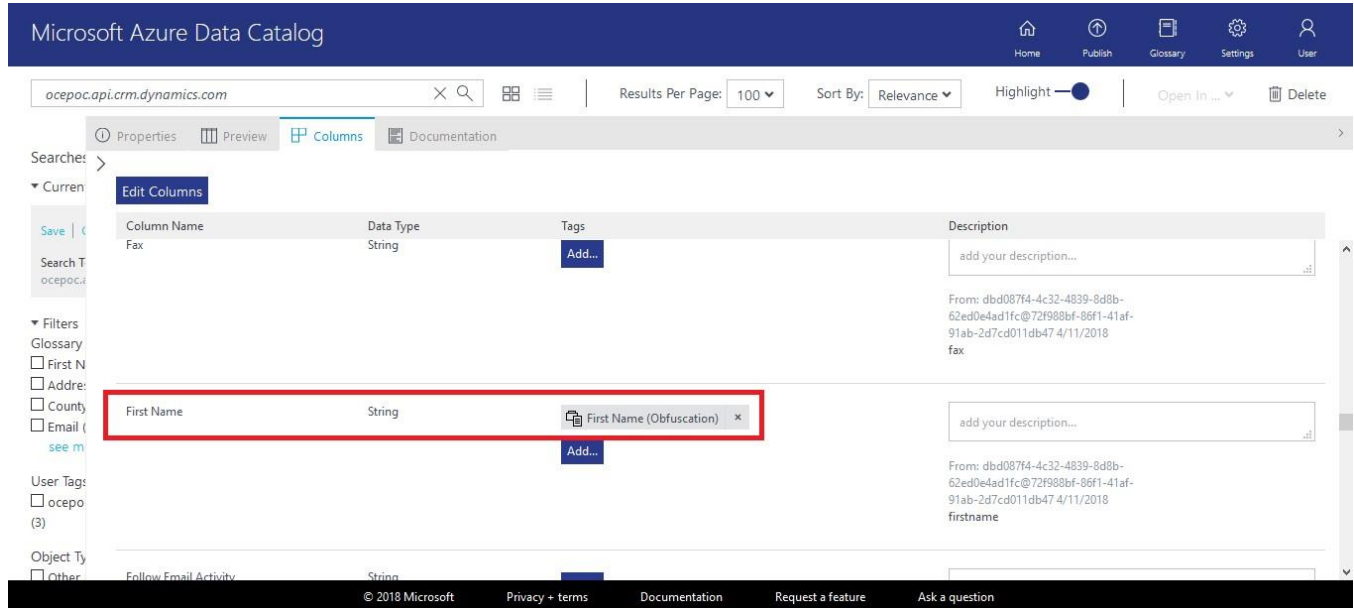
2. Add Contact entity in Obfuscation | Configuration page as shown below

3. Tag Contact entity | First Name field in Azure Data catalog

Go to Azure Catalog | Type in Org name | Select the Contact entity | Add the 'First Name(Obfuscation) to First Name column.

Note: This column tags will be added only when obfuscation web job runs.

Wait for Obfuscation Web Job to run (Job runs on schedule).

Go to Resource Groups | Select the resource group | Select the Web App

Select Web Job to make sure, Job is running

After running the Web job on its own schedule, below are the results with obfuscated contact entity
First Name values

✓	First Name	Full Name ↑
	Abram	Abram Gizewski, Ted M (TEDGI)
	Ada	Ada Botner
	Adalberto	Adalberto Shogren
	Adelia	Adelia Ashburn
	Adriene	Adriene Holman, Heidi L (HEIDIH)
	Afton	Afton Galarza Rosario, Nydia R (NYGALARZ)
	Ai	Ai Boxer
	Aida	Aida Pullano
	Ailene	Ailene Benafield
	Aja	Aja Galligan, John W (JOGALLIG)
	Alan	Alan Haniuk, Kathryn L (KATHAN)
	Alana	Alana Kinkade
	Alejandro	Alejandro Hilliard, Michael R (MIHIL)
	Alessandra	Alessandra Garlington
	Ali	Ali Vivo
	Alicia	Alicia Trybala

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