

# IoT Documentation

## Publish The Source Code

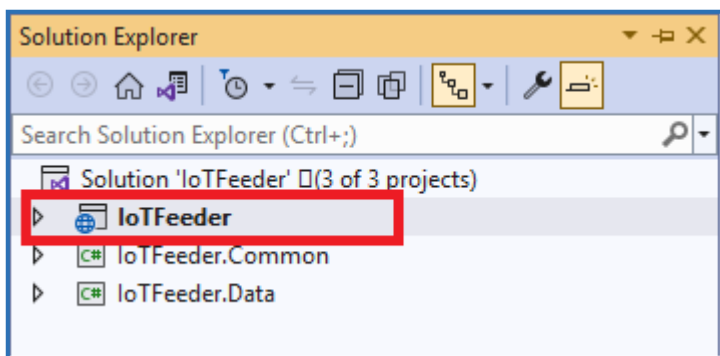
There are three main projects under the IoTFeeder solution.

1. IoTFeeder - admin portal.
2. IoTFeeder.Common - A common library project to manage all common code bases.
3. IoTFeeder.Data - Scheduler for generating random data as required.

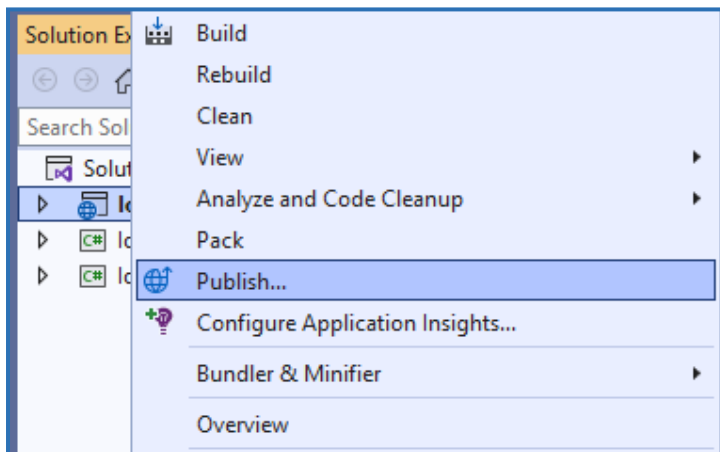
**Steps to follow in order to publish the source code.**

### 1. Publishing Admin Portal source code.

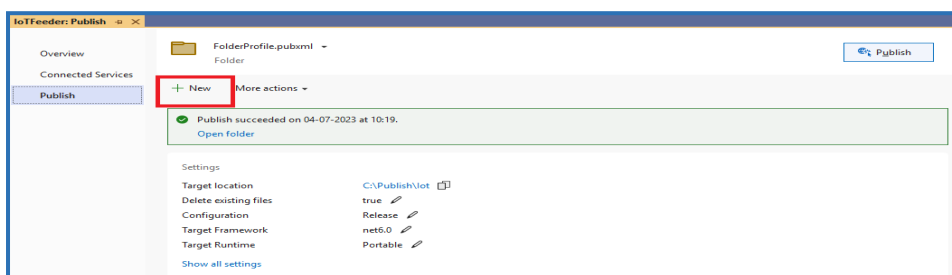
**Step – 1,** Select **IoTFeeder** as the default project.



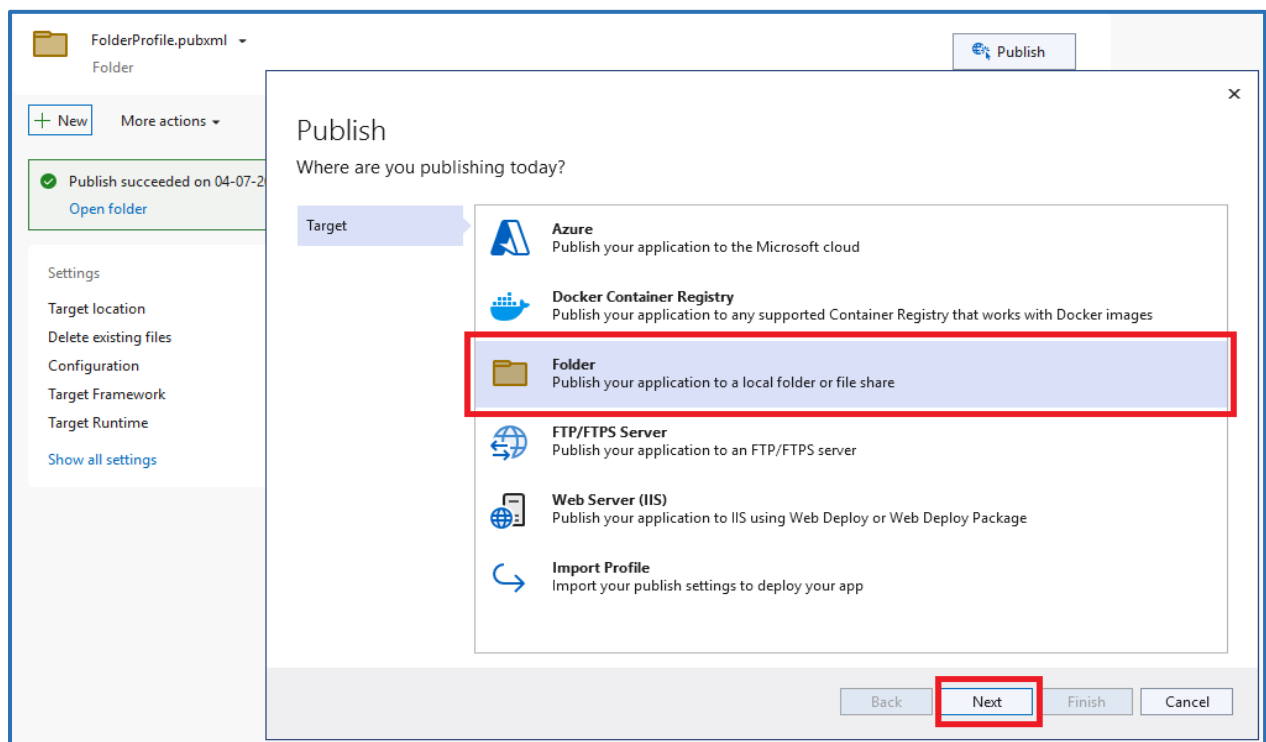
**Step – 2,** Then right-click over it and select publish.



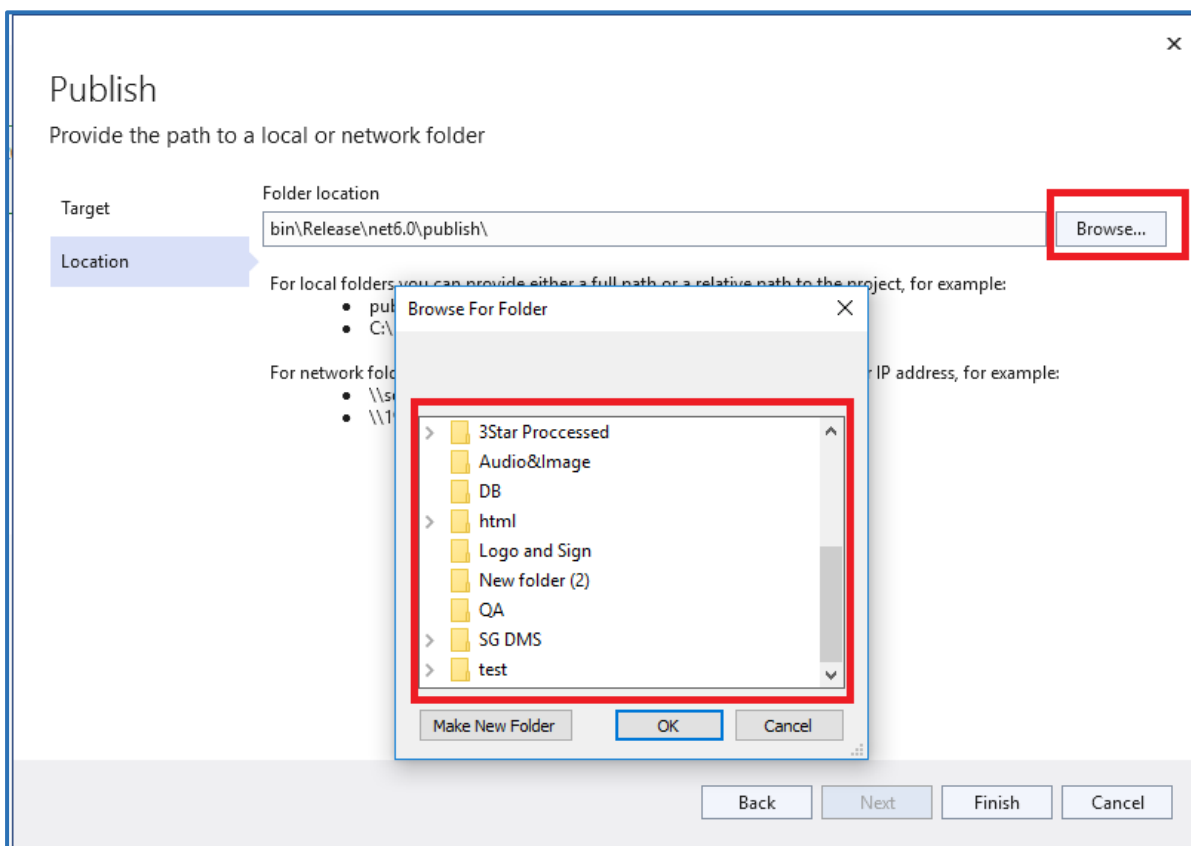
**Step – 3,** Click on the new button to define the publishing path.



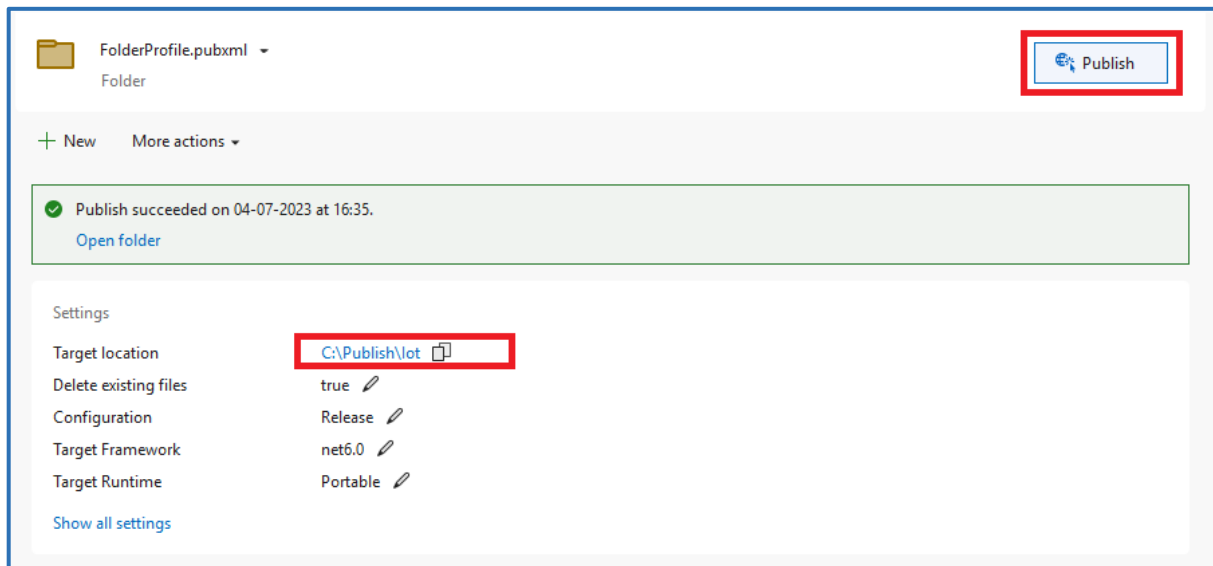
**Step – 4,** Select the folder and define the publishing path.



**Step – 5,** Here you have to browse the path for publishing path.



**Step – 6,** Once the publishing path is set, you must click on publish, which will publish the code.  
Once published successfully, you have to click on the next button as shown in below image.



## IoTFeeder - appsettings.Json

**Step – 7,** For the database connection string, you have to pass the “**Server IP address**”, “**Database**”, “**Id**”, and “**Password**”.



**Step – 8,** If you have to change the Azure **Kusto URL**, **Client Id**, **Client Secret**, **TenantId**, or, **Database Name** you need to write the Update command.

**Update CommonSettings set kustoUri = 'new kusto uri'**

**Update CommonSettings set clientId = 'new client id'**

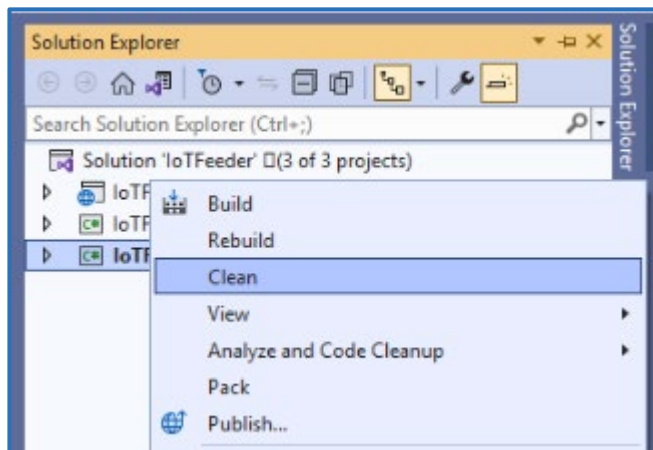
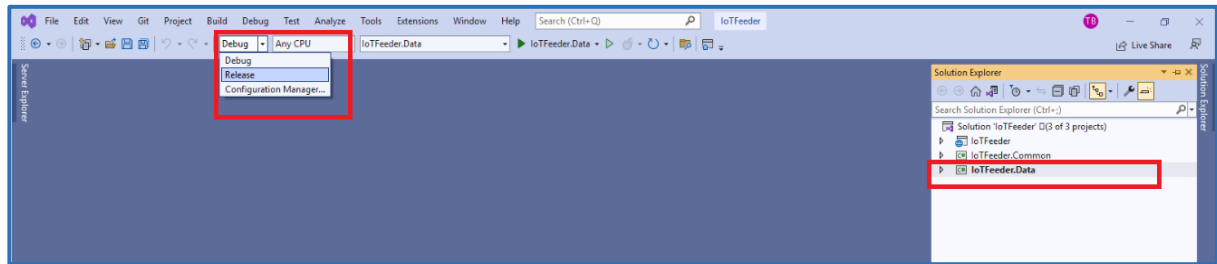
**Update CommonSettings set clientSecret = 'new client secret'**

**Update CommonSettings set databaseName = 'new database name'**

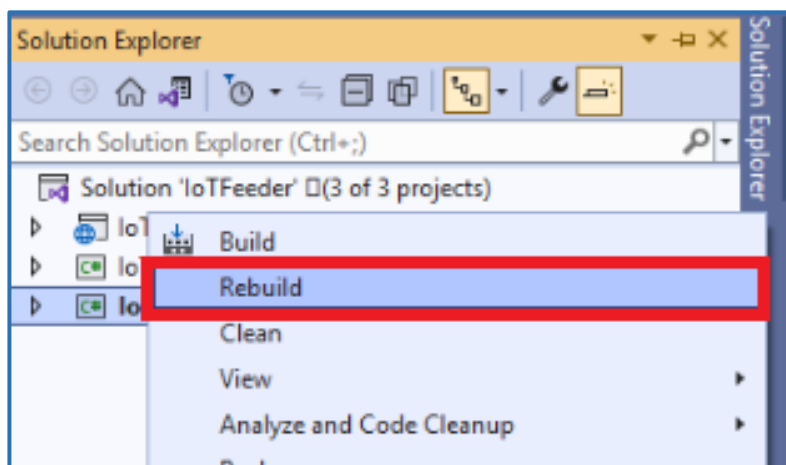
```
Update CommonSettings set kustoUri = 'new kusto uri'
Update CommonSettings set clientId = 'new client id'
Update CommonSettings set clientSecret = 'new client secret'
Update CommonSettings set databaseName = 'new database name'
```

## 2. Steps to follow in order to publish the source code of Scheduler.

**Step – 1**, Select **Release**, then right-click on **IoTFeeder.Data** and click on **Clean**.



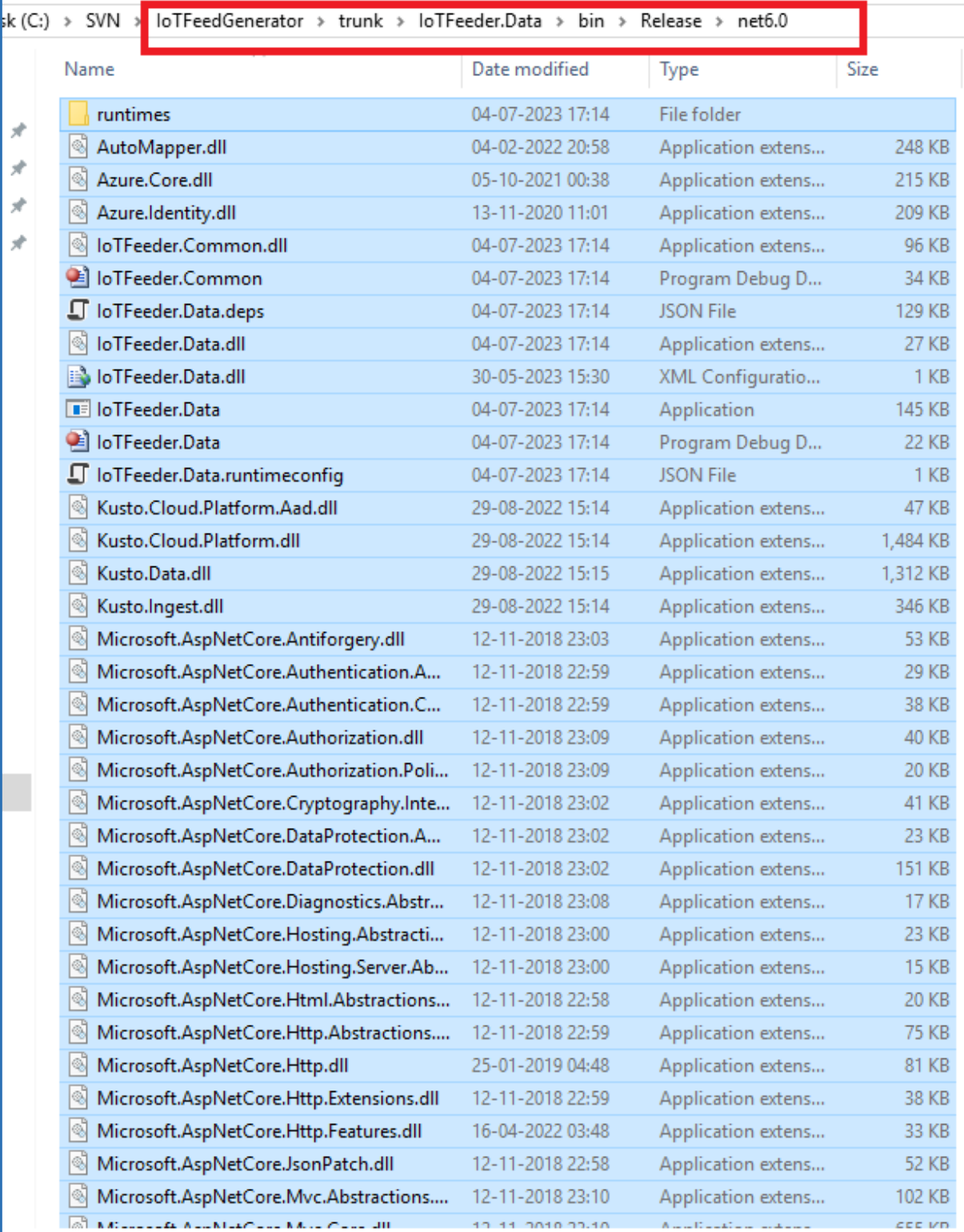
**Step – 2**, Then again, right-click on **IoTFeeder.Data** and click on **Rebuild** as shown in the below image.



**Step – 3,** Then again right-click on **IoTFeeder.Data** and click on **Open Folder in file explorer.**

Click on the **Bin** folder, then click on the **Release** folder, then click on the **net6.0**

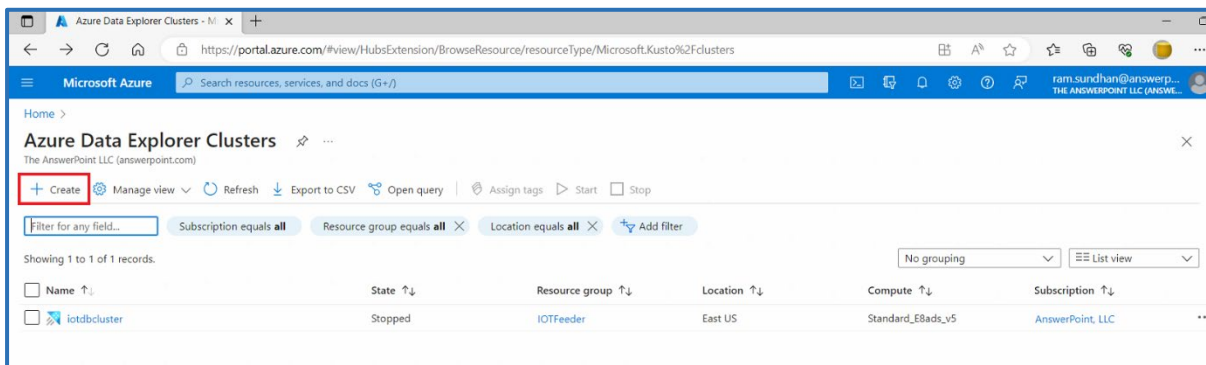
**Bin -> Release -> net6.0** Select all files and folders then Press **ctrl + c (copy)** and then **deploy on the server.**



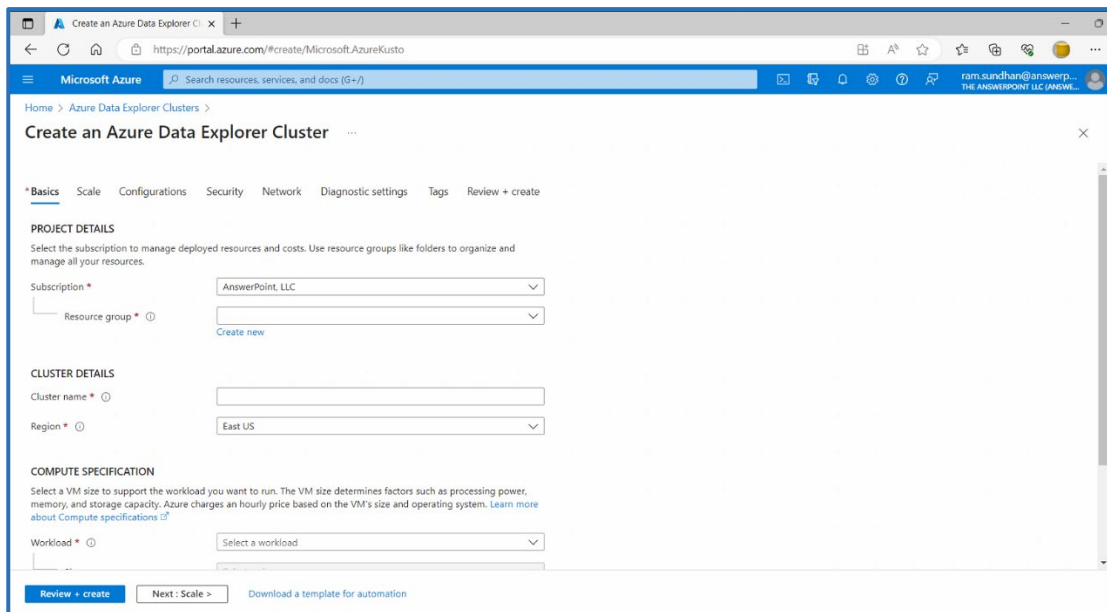
Name	Date modified	Type	Size
runtimes	04-07-2023 17:14	File folder	
AutoMapper.dll	04-02-2022 20:58	Application extens...	248 KB
Azure.Core.dll	05-10-2021 00:38	Application extens...	215 KB
Azure.Identity.dll	13-11-2020 11:01	Application extens...	209 KB
IoTFeeder.Common.dll	04-07-2023 17:14	Application extens...	96 KB
IoTFeeder.Common	04-07-2023 17:14	Program Debug D...	34 KB
IoTFeeder.Data.deps	04-07-2023 17:14	JSON File	129 KB
IoTFeeder.Data.dll	04-07-2023 17:14	Application extens...	27 KB
IoTFeeder.Data.dll	30-05-2023 15:30	XML Configuratio...	1 KB
IoTFeeder.Data	04-07-2023 17:14	Application	145 KB
IoTFeeder.Data	04-07-2023 17:14	Program Debug D...	22 KB
IoTFeeder.Data.runtimeconfig	04-07-2023 17:14	JSON File	1 KB
Kusto.Cloud.Platform.Aad.dll	29-08-2022 15:14	Application extens...	47 KB
Kusto.Cloud.Platform.dll	29-08-2022 15:14	Application extens...	1,484 KB
Kusto.Data.dll	29-08-2022 15:15	Application extens...	1,312 KB
Kusto.Ingest.dll	29-08-2022 15:14	Application extens...	346 KB
Microsoft.AspNetCore.Antiforgery.dll	12-11-2018 23:03	Application extens...	53 KB
Microsoft.AspNetCore.Authentication.A...	12-11-2018 22:59	Application extens...	29 KB
Microsoft.AspNetCore.Authentication.C...	12-11-2018 22:59	Application extens...	38 KB
Microsoft.AspNetCore.Authorization.dll	12-11-2018 23:09	Application extens...	40 KB
Microsoft.AspNetCore.Authorization.Poli...	12-11-2018 23:09	Application extens...	20 KB
Microsoft.AspNetCore.Cryptography.Inte...	12-11-2018 23:02	Application extens...	41 KB
Microsoft.AspNetCore.DataProtection.A...	12-11-2018 23:02	Application extens...	23 KB
Microsoft.AspNetCore.DataProtection.dll	12-11-2018 23:02	Application extens...	151 KB
Microsoft.AspNetCore.Diagnostics.Abstr...	12-11-2018 23:08	Application extens...	17 KB
Microsoft.AspNetCore.Hosting.Abstracti...	12-11-2018 23:00	Application extens...	23 KB
Microsoft.AspNetCore.Hosting.Server.Ab...	12-11-2018 23:00	Application extens...	15 KB
Microsoft.AspNetCore.Html.Abstractions...	12-11-2018 22:58	Application extens...	20 KB
Microsoft.AspNetCore.Http.Abstractions...	12-11-2018 22:59	Application extens...	75 KB
Microsoft.AspNetCore.Http.dll	25-01-2019 04:48	Application extens...	81 KB
Microsoft.AspNetCore.Http.Extensions.dll	12-11-2018 22:59	Application extens...	38 KB
Microsoft.AspNetCore.Http.Features.dll	16-04-2022 03:48	Application extens...	33 KB
Microsoft.AspNetCore.JsonPatch.dll	12-11-2018 22:58	Application extens...	52 KB
Microsoft.AspNetCore.Mvc.Abstractions...	12-11-2018 23:10	Application extens...	102 KB
Microsoft.AspNetCore.Mvc.Core.dll	12-11-2018 23:10	Application extens...	555 KB

## Azure Portal:

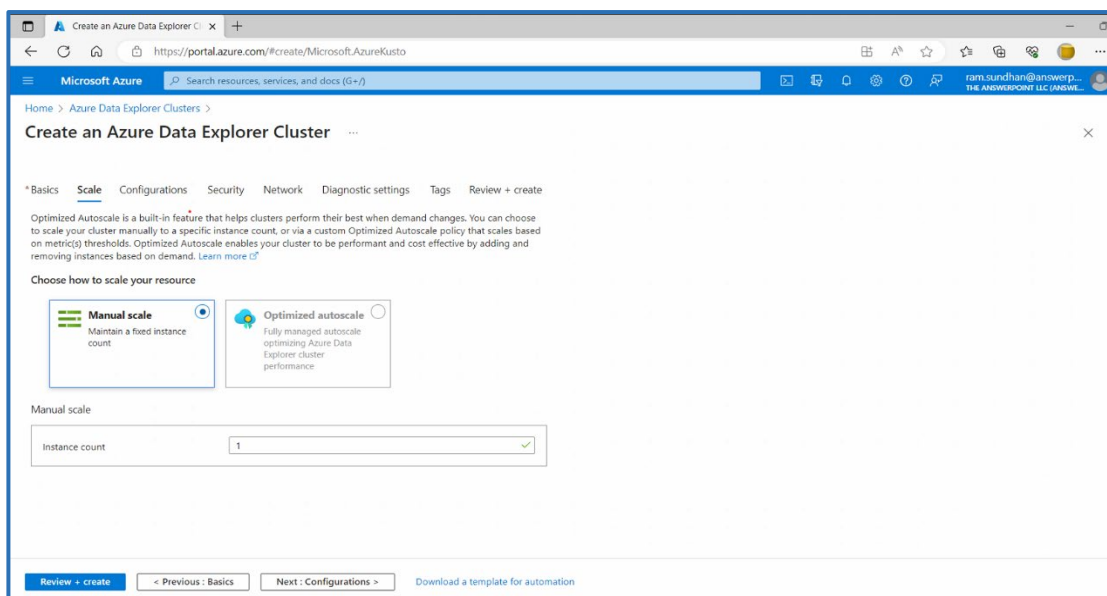
1. Please follow the below steps to create a Data Cluster: click on create as shown in the below screenshot.



**Step -1,** Fill all the details and select your resource group and select all other details based on your cluster requirement.



**Step – 2,** Select cluster scale based on your requirement.



**Step – 3,** Leave as it is if you don't want to change the configuration.

The screenshot shows the 'Create an Azure Data Explorer Cluster' page in the Microsoft Azure portal, specifically the 'Configurations' tab. The page title is 'Create an Azure Data Explorer Cluster'. Below the title, there are tabs for 'Basics', 'Scale', 'Configurations', 'Security', 'Network', 'Diagnostic settings', 'Tags', and 'Review + create'. The 'Configurations' tab is selected. Under the 'Configurations' section, there is a heading 'Enable/disable the following Azure Data Explorer capabilities to optimize cluster costs and performance.' followed by three settings: 'Streaming ingestion' (On/Off), 'Enable purge' (On/Off), and 'Auto-Stop cluster' (On/Off). All three settings are currently set to 'Off'. At the bottom, there are buttons for 'Review + create', '< Previous : Scale', 'Next : Security >', and a link 'Download a template for automation'.

**Step – 4,** Leave as it is if you don't want to change the security.

The screenshot shows the 'Create an Azure Data Explorer Cluster' page in the Microsoft Azure portal, specifically the 'Security' tab. The page title is 'Create an Azure Data Explorer Cluster'. Below the title, there are tabs for 'Basics', 'Scale', 'Configurations', 'Security', 'Network', 'Diagnostic settings', 'Tags', and 'Review + create'. The 'Security' tab is selected. Under the 'Security' section, there is a heading 'Configure the security settings for your cluster.' followed by three settings: 'Double encryption' (On/Off), 'Disk encryption' (On/Off), and 'Define tenants permissions' (My tenant only, All tenants, Specify tenants). All three settings are currently set to 'Off'. At the bottom, there are buttons for 'Review + create', '< Previous : Configurations', 'Next : Network >', and a link 'Download a template for automation'.

**Step – 5,** Choose your cluster connectivity method.

The screenshot shows the 'Create an Azure Data Explorer Cluster' page in the Microsoft Azure portal, specifically the 'Network' tab. The page title is 'Create an Azure Data Explorer Cluster'. Below the title, there are tabs for 'Basics', 'Scale', 'Configurations', 'Security', 'Network', 'Diagnostic settings', 'Tags', and 'Review + create'. The 'Network' tab is selected. Under the 'Network' section, there is a heading 'Network (East US)' followed by a sub-heading 'Configure the network settings for your cluster.' and a setting 'Connectivity method' (Public endpoints (all networks), Private endpoint). The 'Public endpoints (all networks)' option is selected. A note below the options states 'All networks will have access to your Azure Data Explorer cluster.' At the bottom, there are buttons for 'Review + create', '< Previous : Security', 'Next : Diagnostic settings >', and a link 'Download a template for automation'.

**Step – 6,** Diagnostic setting, enable this if you want to diagnose your cluster.

The screenshot shows the 'Create an Azure Data Explorer Cluster' page in the Microsoft Azure portal, specifically the 'Diagnostic settings' tab. The page has a navigation bar with tabs: Basics, Scale, Configurations, Security, Network, Diagnostic settings (selected), Tags, and Review + create. Below the navigation bar, there is a section titled 'Monitoring with diagnostic settings.' which explains that enabling diagnostic settings sends platform logs and metrics to a Log Analytics workspace. A purple callout box titled 'What you get with diagnostic settings' lists benefits: a broader view of cluster performance and health, and saving time on diagnosing issues. Below this, there is a toggle switch for 'Enable Diagnostic Settings' which is currently set to 'Off'. At the bottom, there are buttons for 'Review + create', '< Previous : Network', 'Next : Tags >', and a link to 'Download a template for automation'.

**Step – 7,** Add your custom tag if you want your custom tag for the cluster.

The screenshot shows the 'Create an Azure Data Explorer Cluster' page in the Microsoft Azure portal, specifically the 'Tags' tab. The page has a navigation bar with tabs: Basics, Scale, Configurations, Security, Network, Diagnostic settings, Tags (selected), and Review + create. Below the navigation bar, there is a section titled 'Tags are name/value pairs that enable you to categorize resources and view consolidated billing by applying the same tag to multiple resources and resource groups. Learn more >'. Below this, there is a table with three columns: Name, Value, and Resource. The 'Resource' column contains the text 'Azure Data Explorer Cluster'. At the bottom, there are buttons for 'Review + create', '< Previous : Diagnostic settings', 'Next : Review + create >', and a link to 'Download a template for automation'.

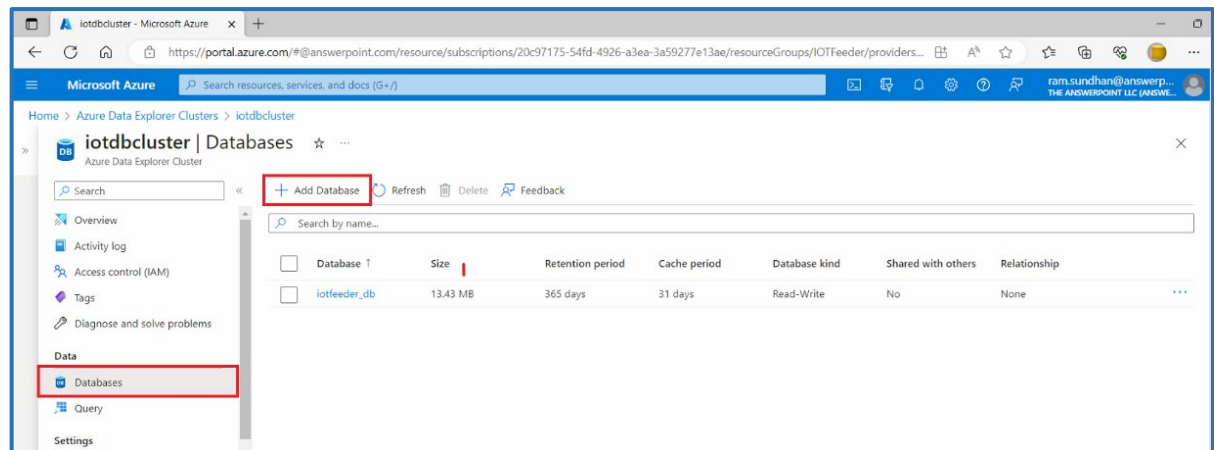
**Step – 8,** As the last step, go over your selections and configurations and then click on 'Create' to form the cluster.

The screenshot shows the 'Create an Azure Data Explorer Cluster' page in the Microsoft Azure portal, specifically the 'Review + create' tab. The page has a navigation bar with tabs: Basics, Scale, Configurations, Security, Network, Diagnostic settings, Tags, and Review + create (selected). Below the navigation bar, there is a section titled 'Validating...'. Below this, there is a table with two columns: Configuration and Value. The table is organized into three sections: Basics, Compute specifications, and Scale. The 'Basics' section includes Subscription (AnswerPoint, LLC), Resource group (IoTFeeder), Region (East US), Availability zones (On), and Cluster name (testclusteriotaz). The 'Compute specifications' section includes Workload (Dev/test), Size (Extra Small), and Compute (Dev/No SLA)\_Standard\_E2a\_v4. The 'Scale' section includes Scaling method (Manual scale) and Instance count (1). At the bottom, there is a 'Create' button, a '< Previous : Tags' button, and a link to 'Download a template for automation'.

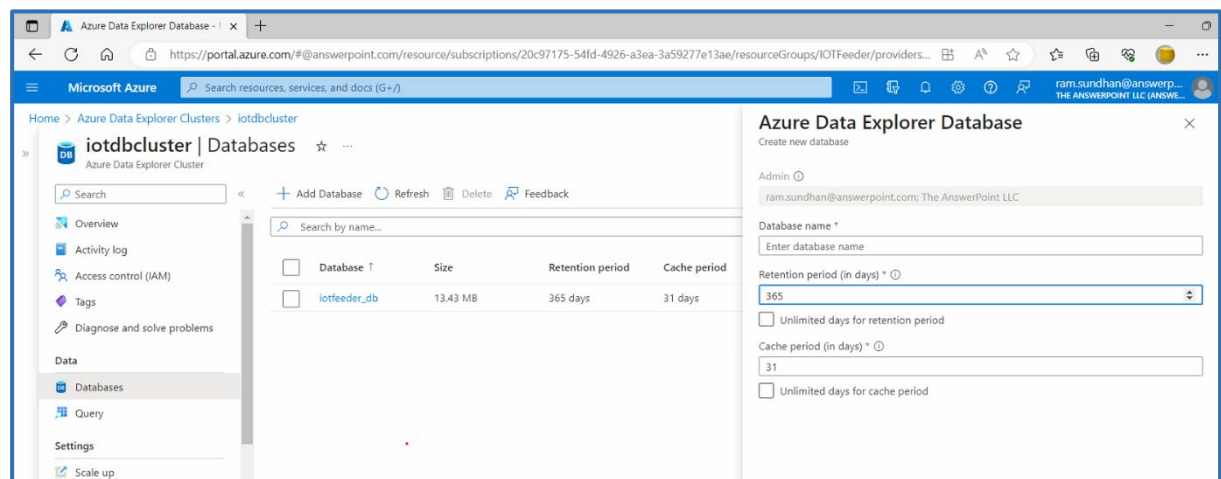


2. After successfully creating the cluster, open the cluster and create the database following the below step.

**Step – 1,** Open the cluster and select the database.



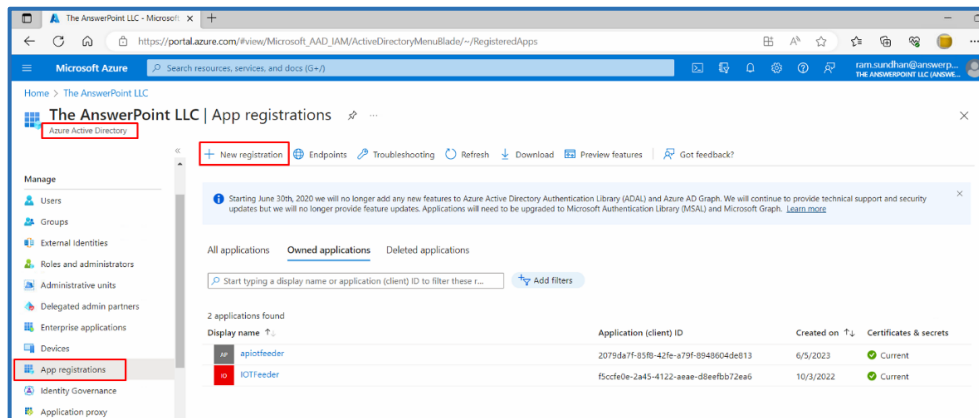
**Step – 2,** Enter the database name, select retention period and cache period, or leave it with the default value.



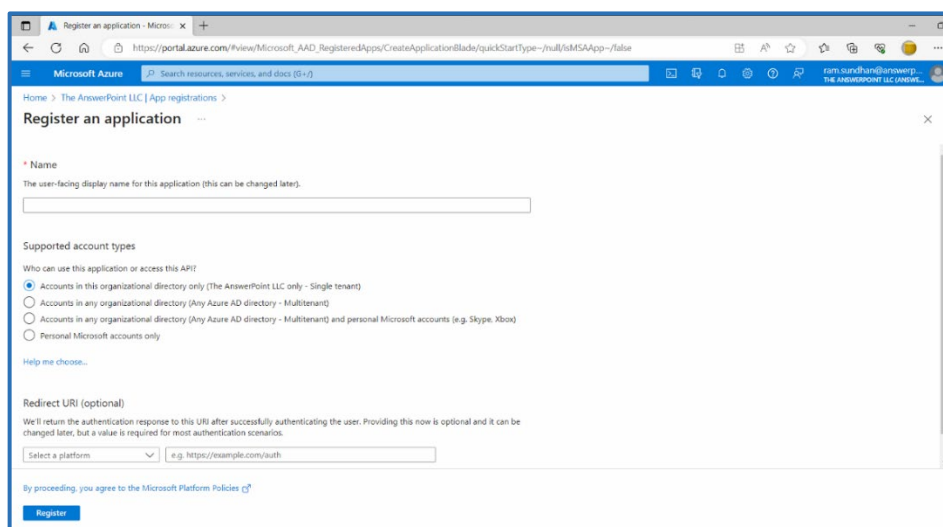
**Step – 3,** After successfully creating the database, open the database.

### 3. Register a new app under the Azure active directory.

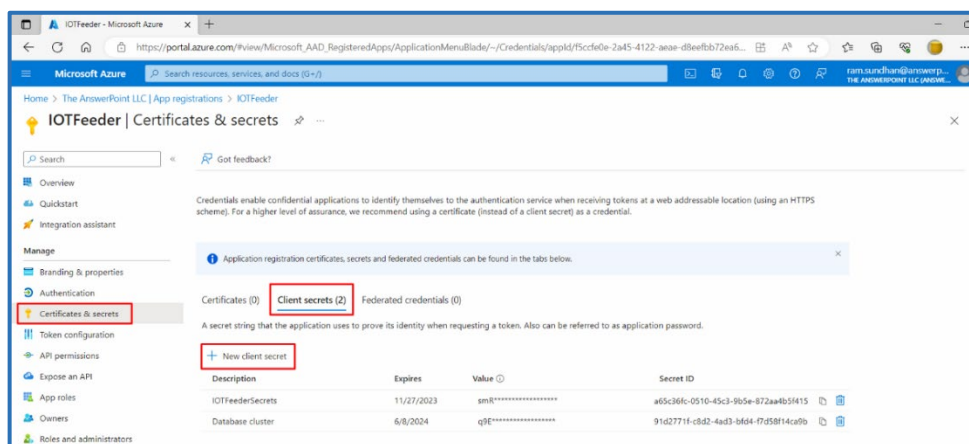
**Step – 1,** Go to the active directory page and select the ‘App registrations’ menu from the left side panel.



**Step – 2,** Enter the app name you want and select account type ‘Single tenant’ but if you want to choose a different type, redirect URL is not required, and then click the ‘Register’ button.



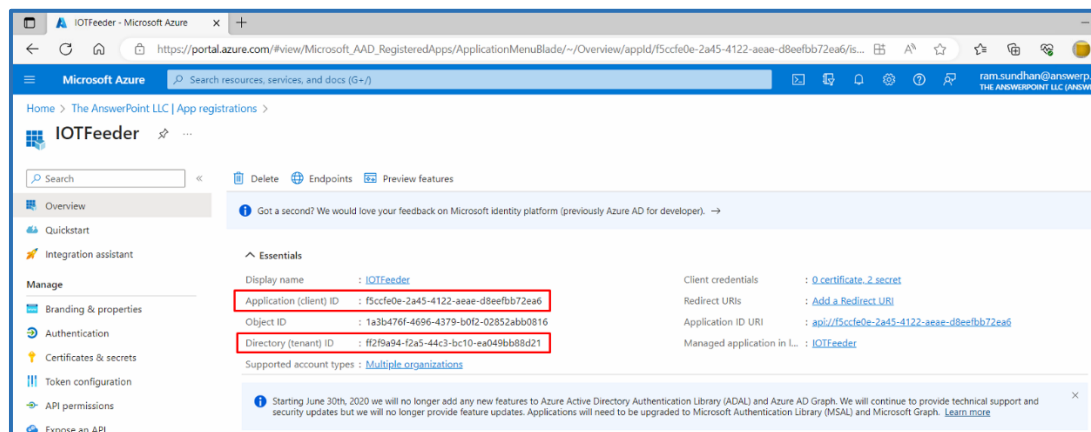
**Step – 3,** After successfully registering the app, open created app and select ‘Certificates & secrets’ from the left side panel and click on ‘New client secret’.



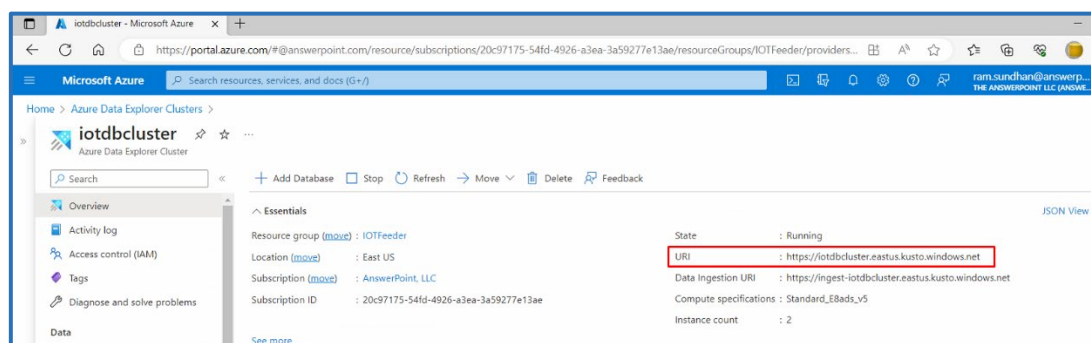
**Step – 4,** After successfully creating the client secret, one popup appears with the client secret value. Copy that value and store it somewhere before closing that popup. Client Secret value appears only once when you create.

#### 4. For the Azure data cluster to C# application connection, we need below details are required.

**Step – 1,** Tenant ID and Client Id, These IDs you can find under the registered app.



**Step – 2,** Kusto URL, This URL you can find under the newly created 'Data Cluster'.



**Step – 3,** Now, You must enter the client secret value that we have saved for you after creating the client secret successfully.

**Thank you!**