# Analysing extracted data with PowerBI (Optional)

## Introduction

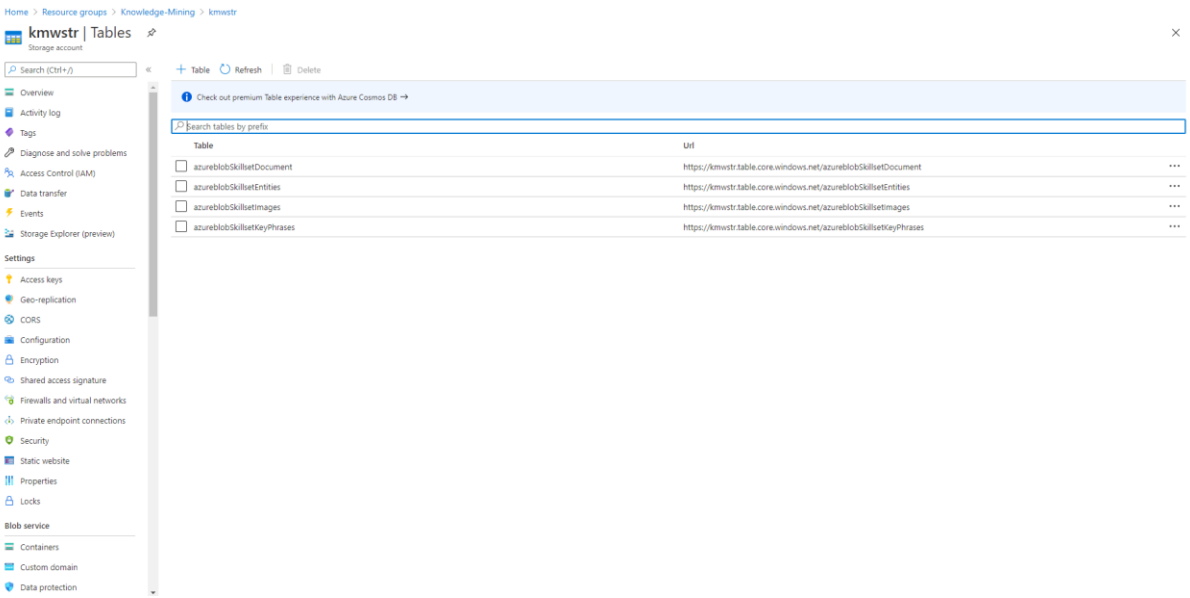
Now that we projected information to the Knowledge Store, this structured data could be useful in scenarios that go beyond Search. In this exercise we'll connect the table projections we created to Power BI and create a few sample graphs with the extracted data.

Let's look at the tables we created when we built the Knowledge Store.

## Exercise 1.- Check table storage content.

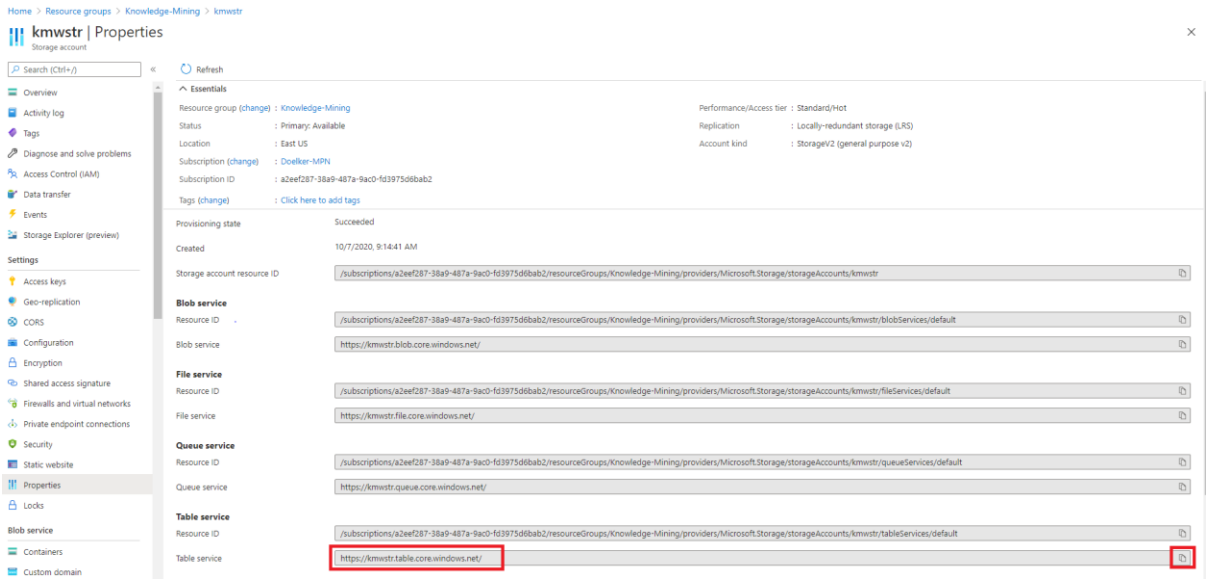
## Task 1. Navigate to your Storage Account.

1. Open your browser and go to the **Azure Portal**.
2. Select the **Main Menu** on the top left corner, and inside the **Favourites** menu select **Resource Groups**.
3. Inside the **Resource Groups** blade, click on the **Resource Group** available.
4. Locate the storage account called **xxxstr** based on your initials.
5. On the **Overview** blade from the storage account, locate the **Tables** service.
6. Inside the Tables Service, you will see 4 tables available. This service functions as a NoSQL data store. To know more about the Table Storage check: Table Storage.

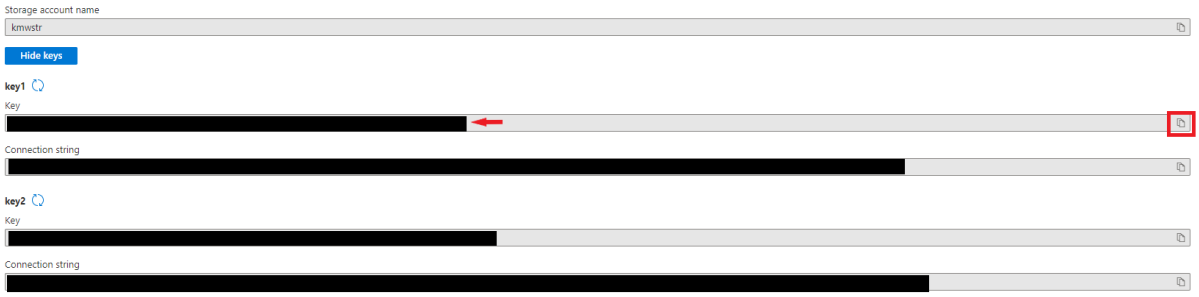


# Task 2. Get Access Keys.

1. From the **Tables** service, go to the menu on your left and under **Settings**, select **Properties**.
2. Inside the Properties blade, locate the Table Service.
3. Locate the **Table Service URL** and copy and paste it on a notepad.




4. From the left menu, under **Settings**, locate **Access Keys**.
5. Inside the **Access Keys blade**, locate the **Key 1** and copy and paste it on your notepad.

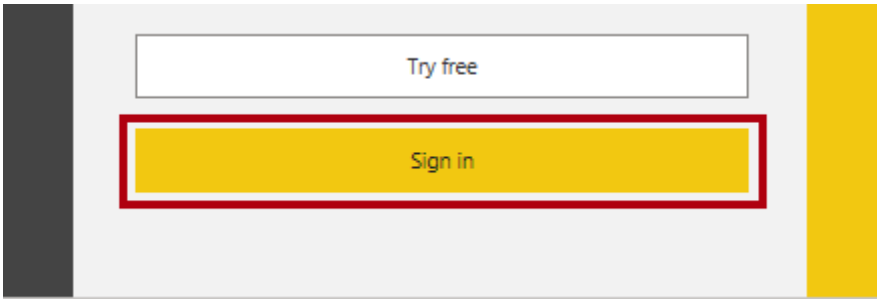


# Exercise 2.- Analyse Data in Power BI Desktop

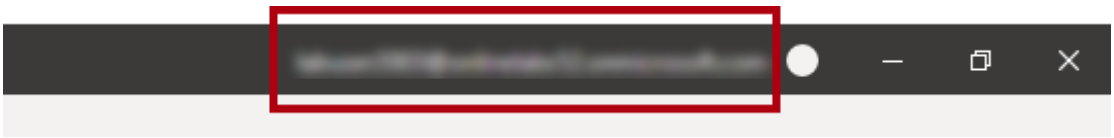
## Task 1. Open Power BI Desktop

1. To open the Power BI Desktop, on the taskbar, click the Microsoft Power BI Desktop shortcut.

2. When prompted, click **Sign In**.



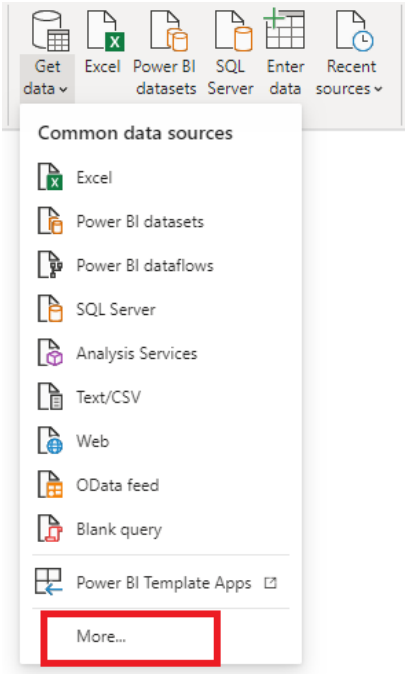

3. You can use any Microsoft account or Work Account.
4. In Power BI Desktop, at the top-right corner, verify that you see your account.



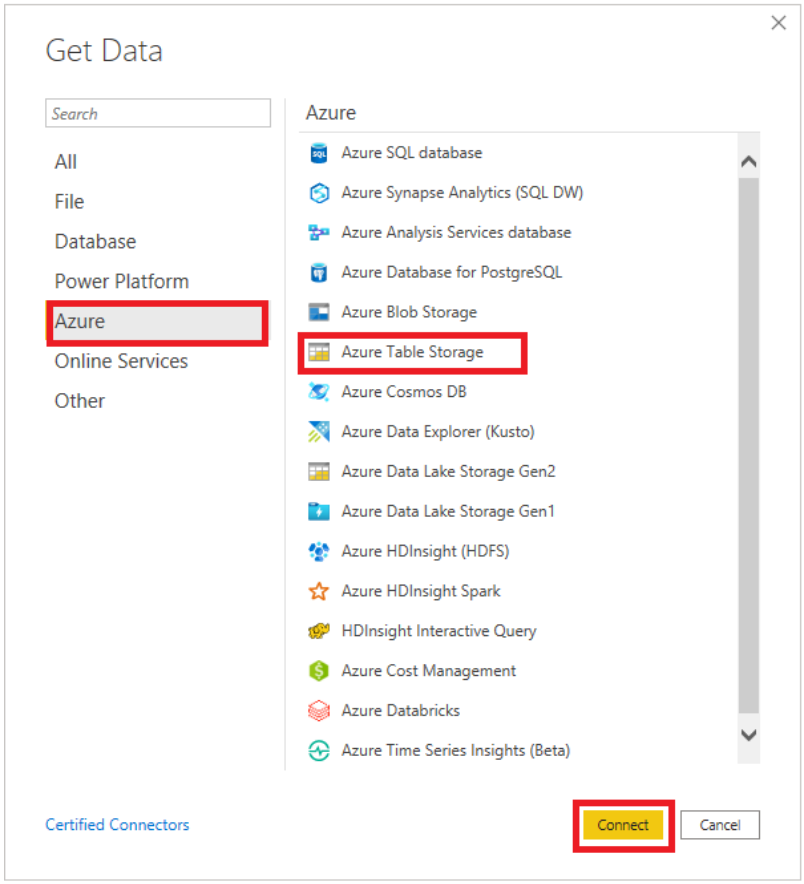
5. In Power BI Desktop, click the File ribbon tab to open the backstage view.
6. Select **Save.**
7. In the **Save As** window, navigate to the destination folder.
8. In the **File Name** box enter **Search Analysis** and click **Save**.

## Task 2.- Get Search Data

1. On the Home ribbon tab, from inside the Data group, click **Get Data**.
2. Select from the Common Data Sources, select more at the bottom.

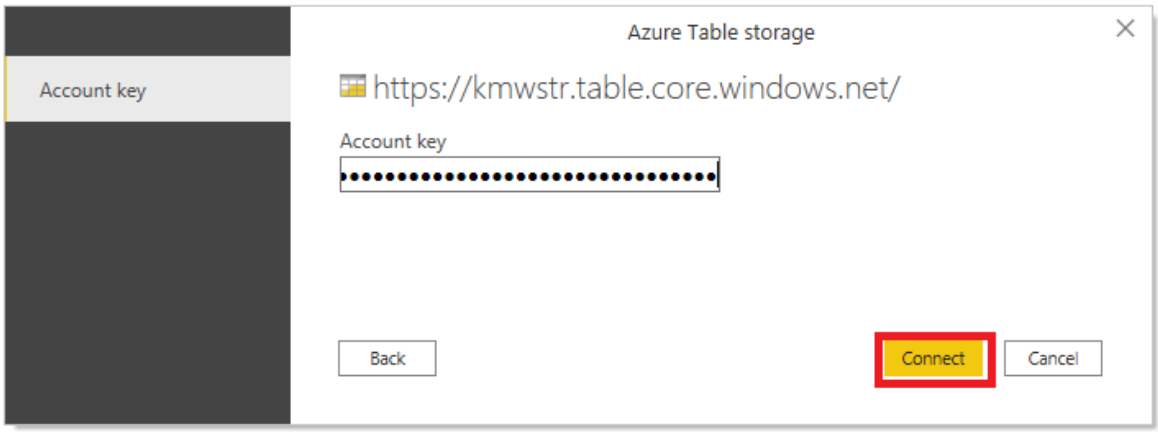



3. From the **Get Data** menu, select **Azure**, and then click on the **Azure Table Storage** option. Finally click **Connect**.

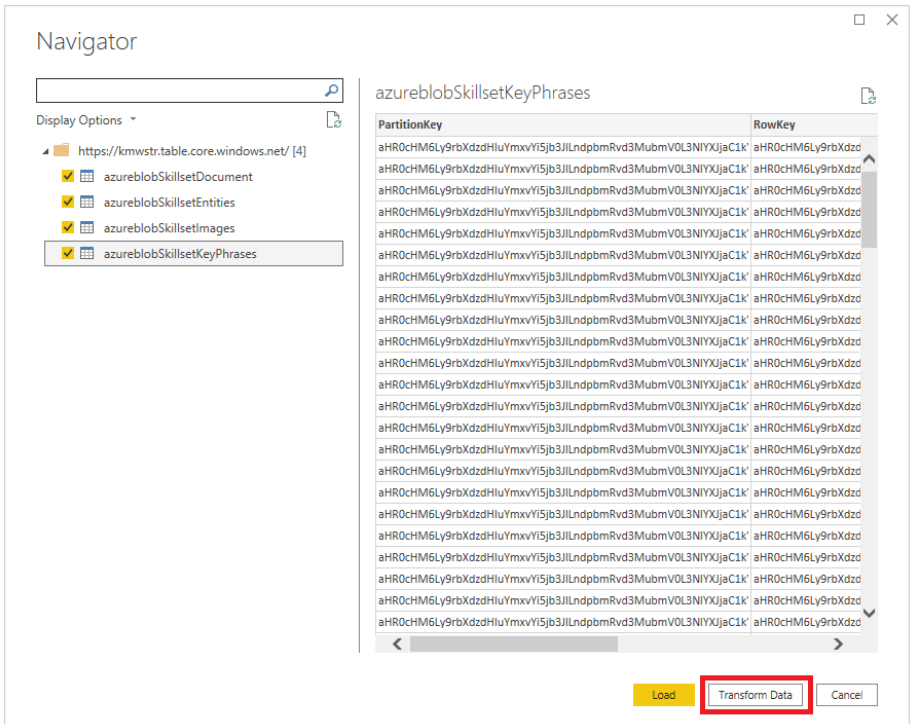


4. In the **Azure Table Storage** box, copy and paste the table storage **URL** from your notepad.

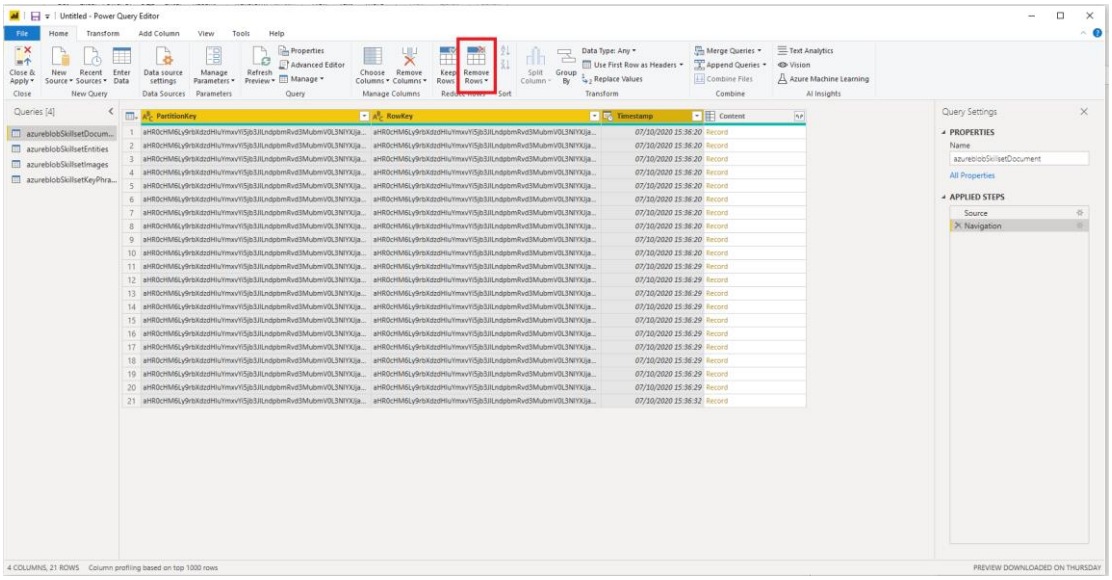

5. Then copy and paste the **Key 1** you collected earlier on your notepad.



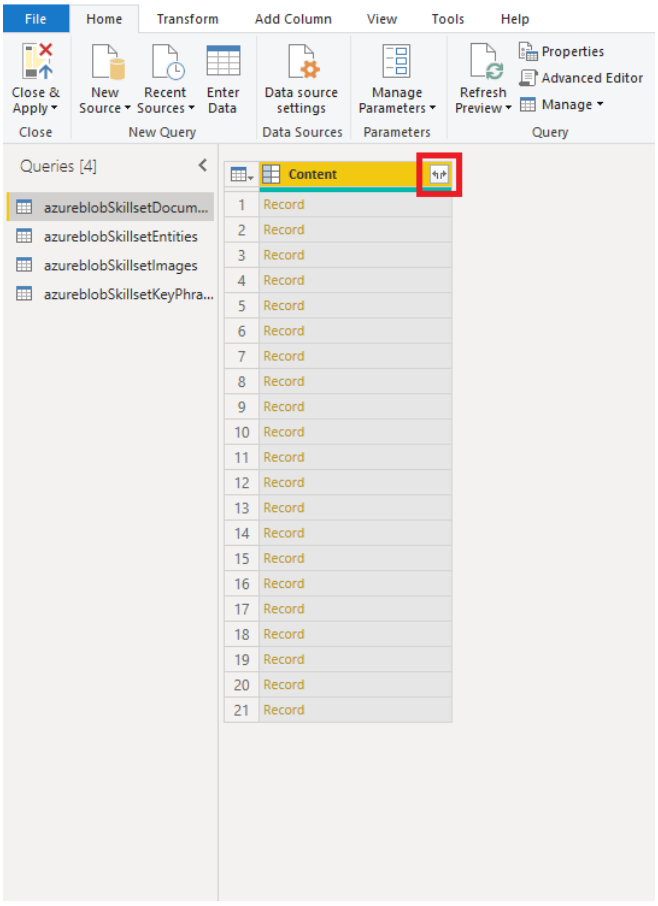

6. From the **Navigator** menu, check all the boxes next to the available tables. You will get a preview of the record information. At the bottom click on **Transform Data**.



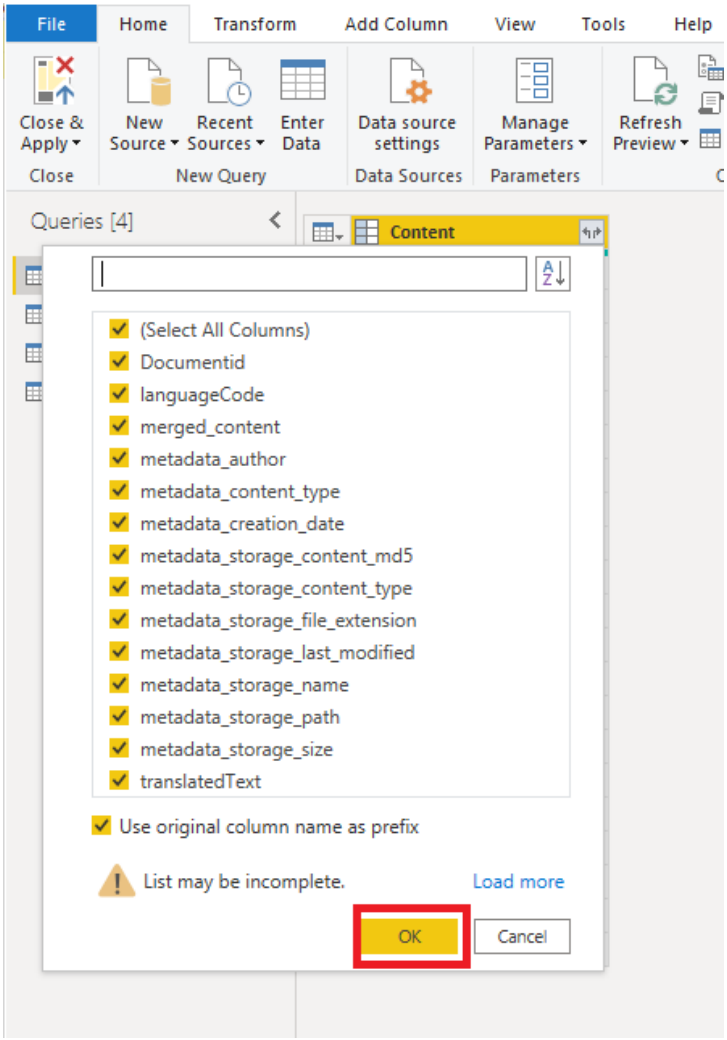
7. The **Power Query Editor** is now being shown. Here is where you are going to open the content of the records in order to analyse the data.
8. In the Power Query Editor window, select the first Query from the queries Pane located to your left.
9. Select the first two columns and then from the Manage Columns ribbon, click remove columns.



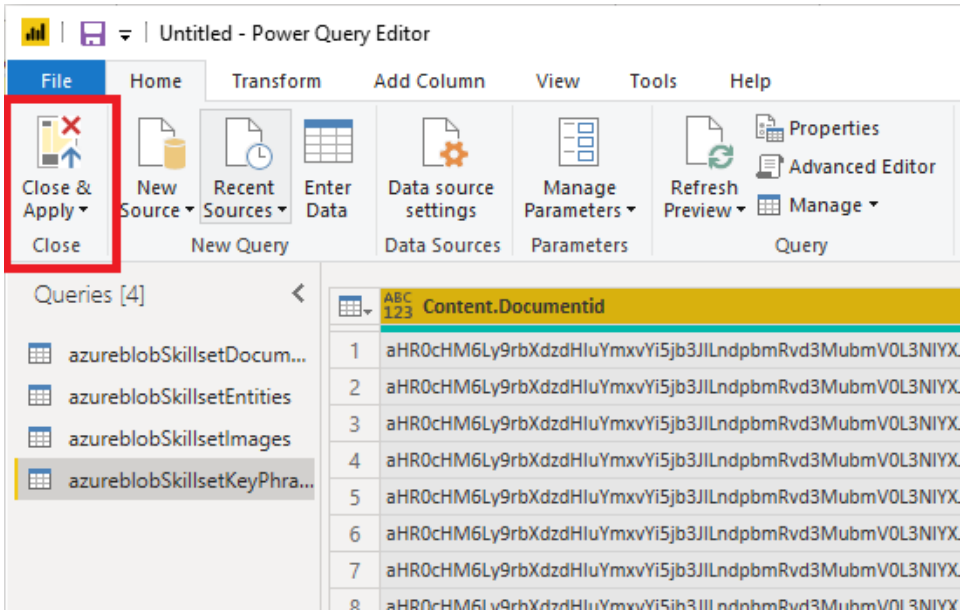
10. Now you have one column called content. On the top right corner of the clumn, you will find and expand icon. Click on it in order to reveal the content.



11. Make sure all boxes are checked and then click OK at the bottom.

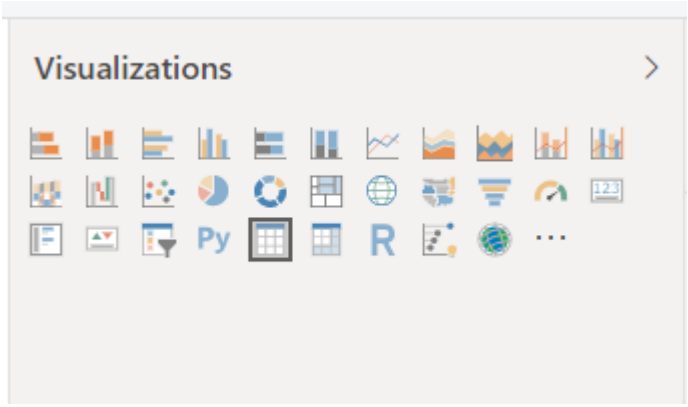



12. Repeat the steps 8 to 11 an all remaining queries.
13. Once you have all data properly expanded, then, from the Home ribbon, click on **Close & Apply** to load the data into the final model.

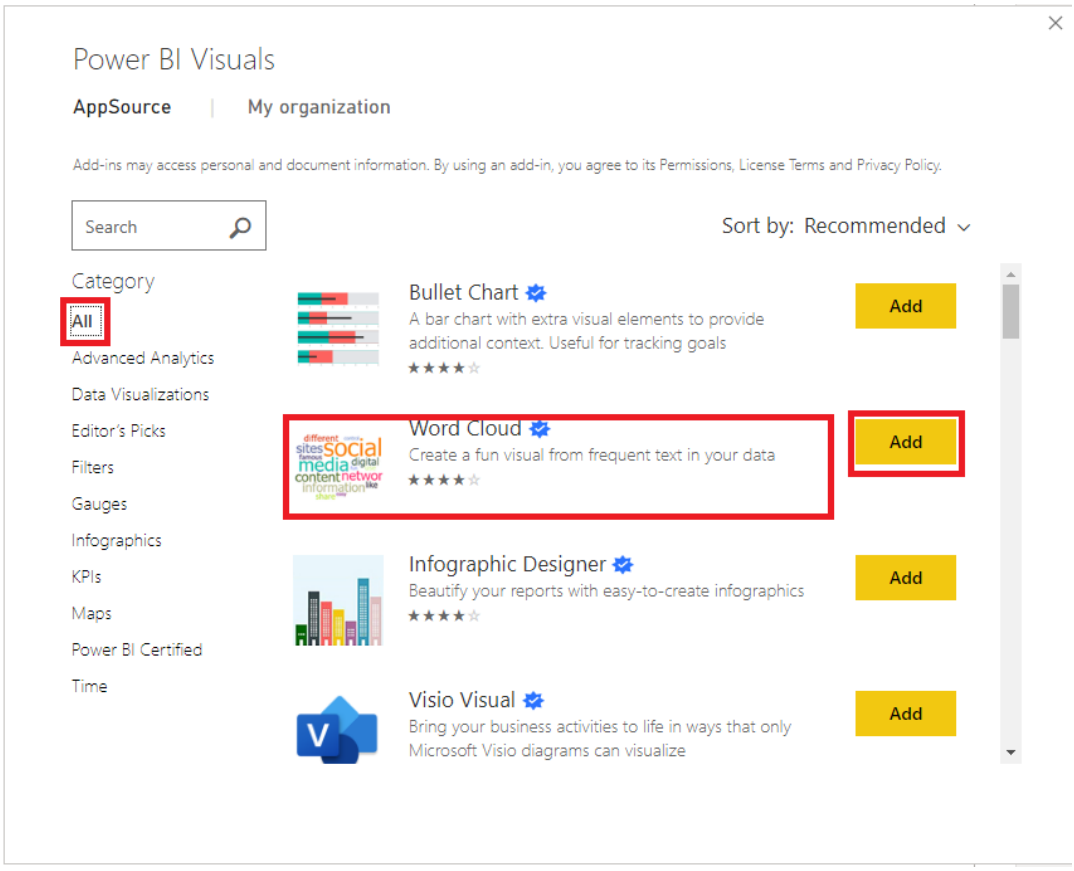


Task 3. Create a Report.

1. Back on the Report tab we will create a few visualizations. Let's start by creating a table that shows all the entities types. Click the table icon, and then drag entitytypes into the Values field.



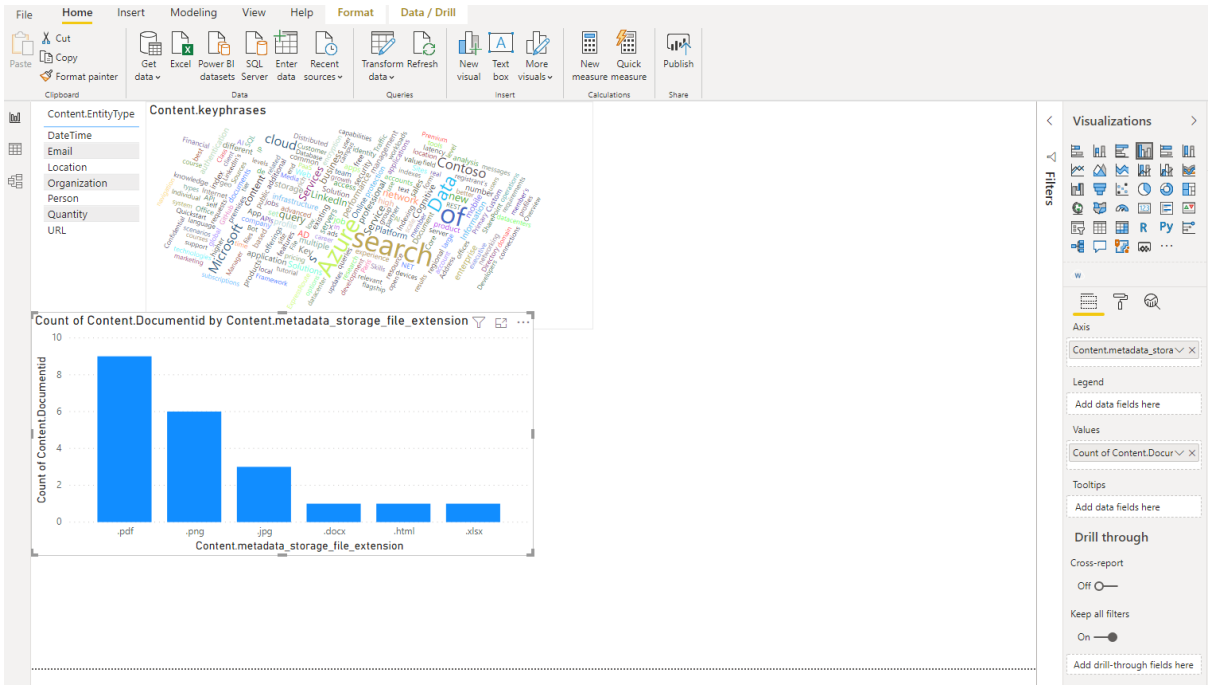

2. From the **Visualizations pane**. Click on the ellipsis to reveal a menu and select **Get more visuals**.
3. From the **Category** list, select **ALL** and locate the **Word Cloud** visualization and click on **ADD**.




4. Select from the Visualization Pane the Word Cloud visual so it places itself over the report canvas.
5. Drag it next to the table you just recently created.

6. From the visualization pane, on the fild tab, drag and drop the keyphrases field from the Keyphrases table.
7. Expand the visual so the content is visible.


8. From the visualization menu, select the **clustered columns chart**.
9. Drag it under the order to visualizations and expand it.
10. Inside the fields tab for the visualization, under the Axis box, drag and drop the **metadata_sotrage_file_extension** from the skillset document table.
11. From the skillset document table, drag and drop the **documntid** inside the values box.




Congratulations! You just experienced how the data generated through your search service can be further analysed using a reporting tool like Power BI.

We encourage you to try other visualizations so you can find to valuable insights.