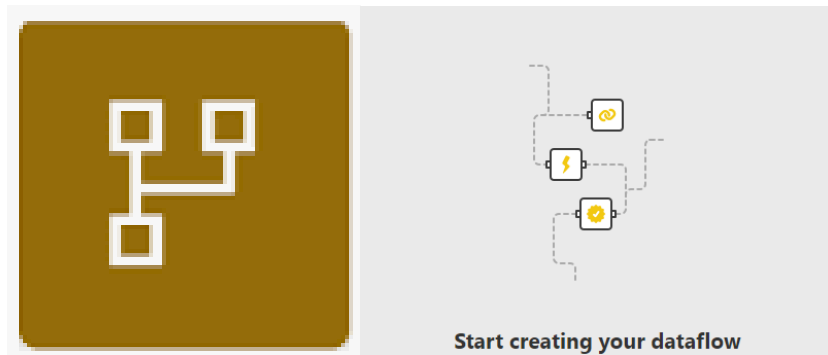


Dataflow a Cloud ETL tool for Power BI



Dataflow, a Power Query online

In this article, we are going to understand what a Power BI Dataflow is, how to create it and use it.

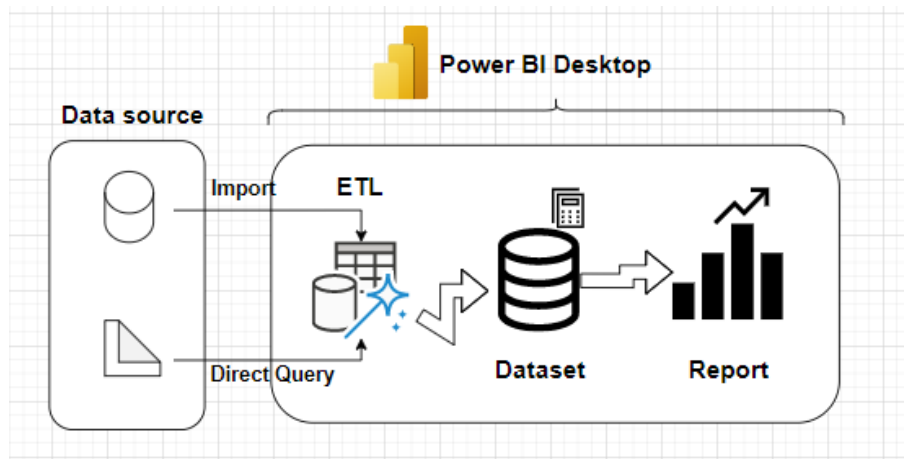
To understand Power BI Dataflow, we need to take look at Power BI Architecture itself.

Power BI is a Microsoft Business Intelligence suite for building a self BI end-to-end solution.

As a suite Power BI has three main tools:

- ETL capability (Power Query)
- Data Modeling (Dataset)
- Reporting (Visualizations)

These three tools in one Software make Power BI a BI tool.



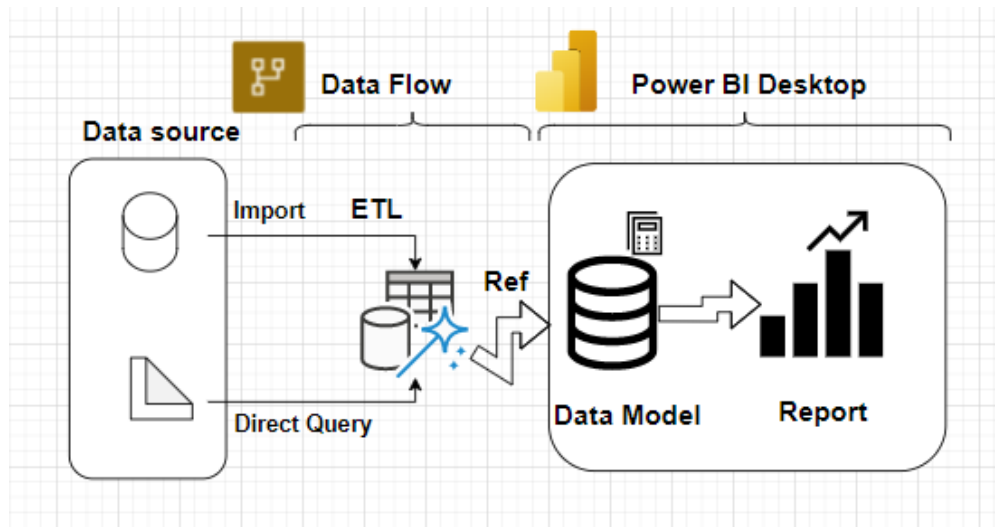
Power BI Desktop Architecture

Now let's turn back to our main subject, Power BI Dataflow.

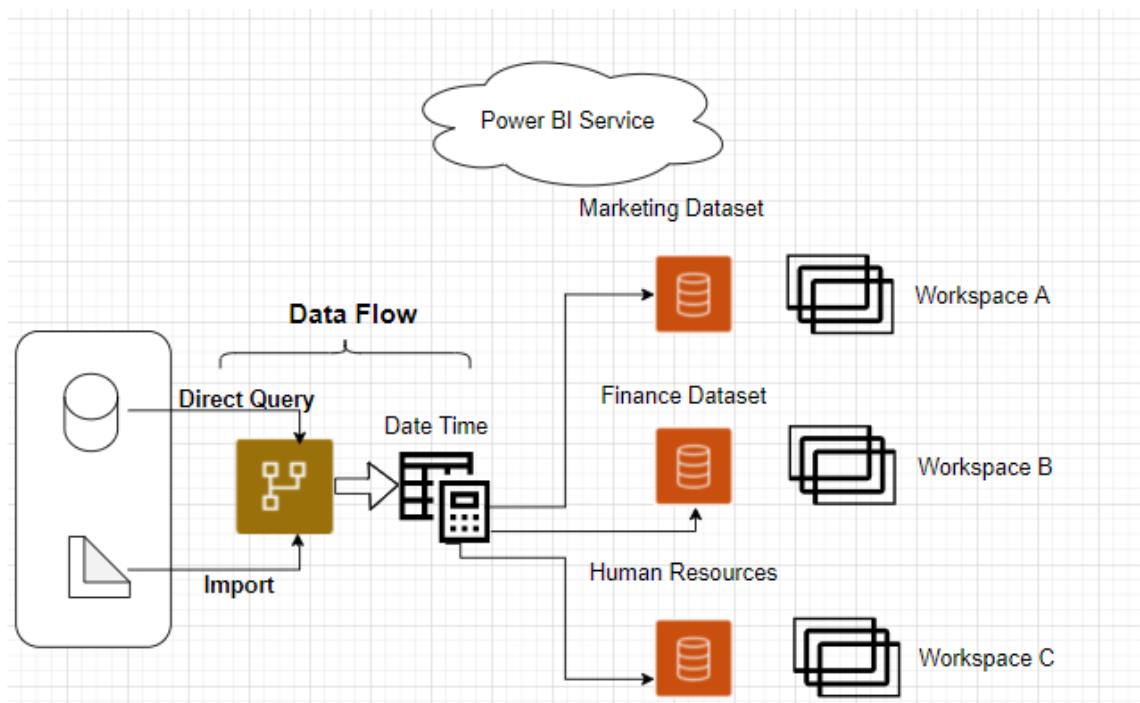
A Dataflow is a Cloud base software (Power Query online) capable of connecting to a different type of data source, ingesting, make transformations on this data before storing it into a destination. The result of this process is data exposed in an Azure Data Lake Gen 2 as a CSV file.

Dataflows are shareable across the entire organization Dataset as entities also can be useful when it comes to building what is saying conformed table in the BI world.

For example, a Date table can be created as a dataflow, exposed to the different departments as an Entity. An entity may have different meanings depending on how department business logic transforms it. The marketing department can apply their logic, the Finance department may have a different one.



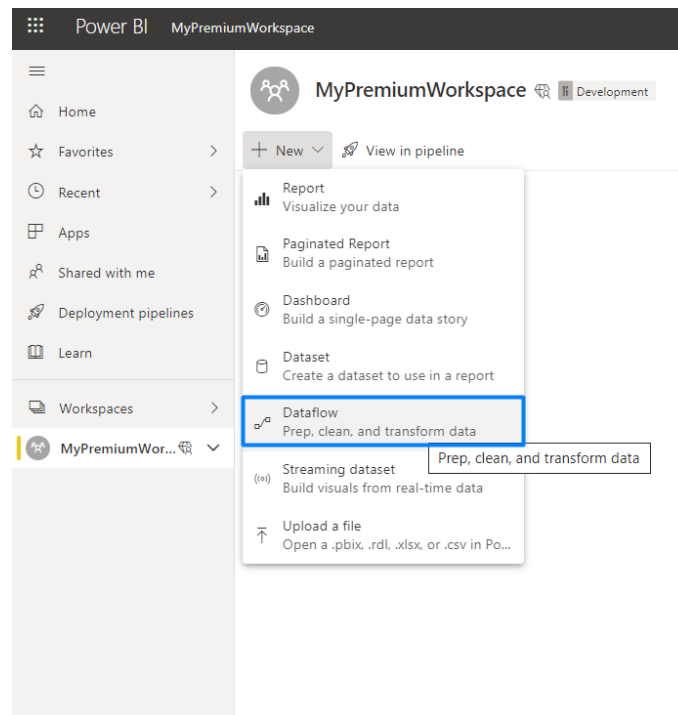
Power BI Dataflow as a Power BI Desktop data source.



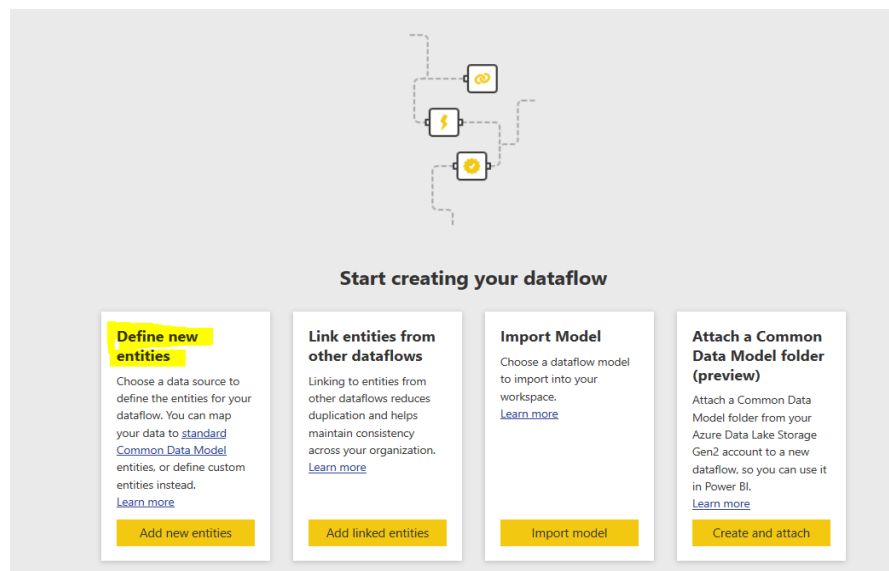
Usage of Dataflow in Power BI Service

How can we create and use a Power BI Dataflow?

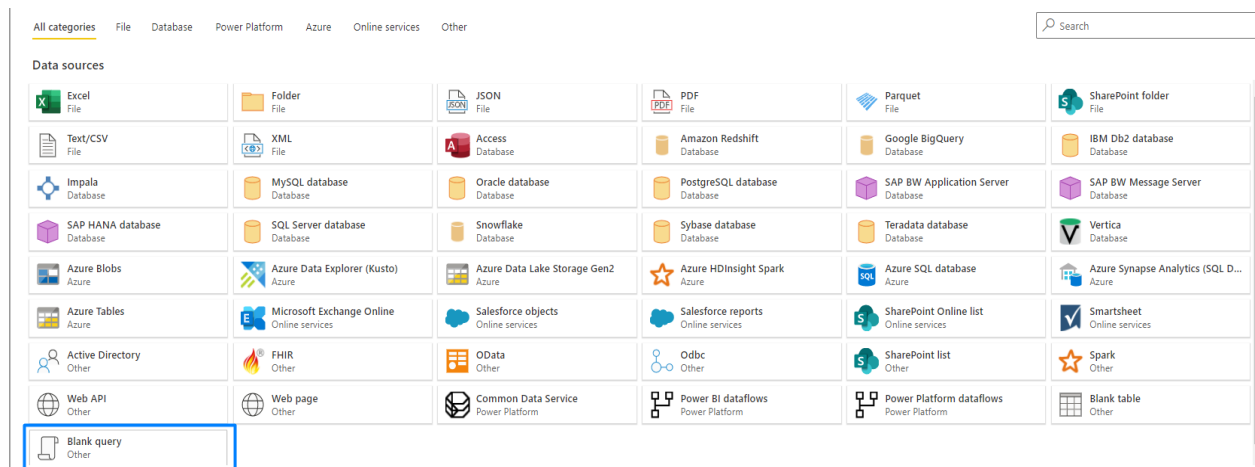
- 1- You can create a Dataflow from your workspace by selecting **New -> Dataflow**
 - a) Click **Dataflow**



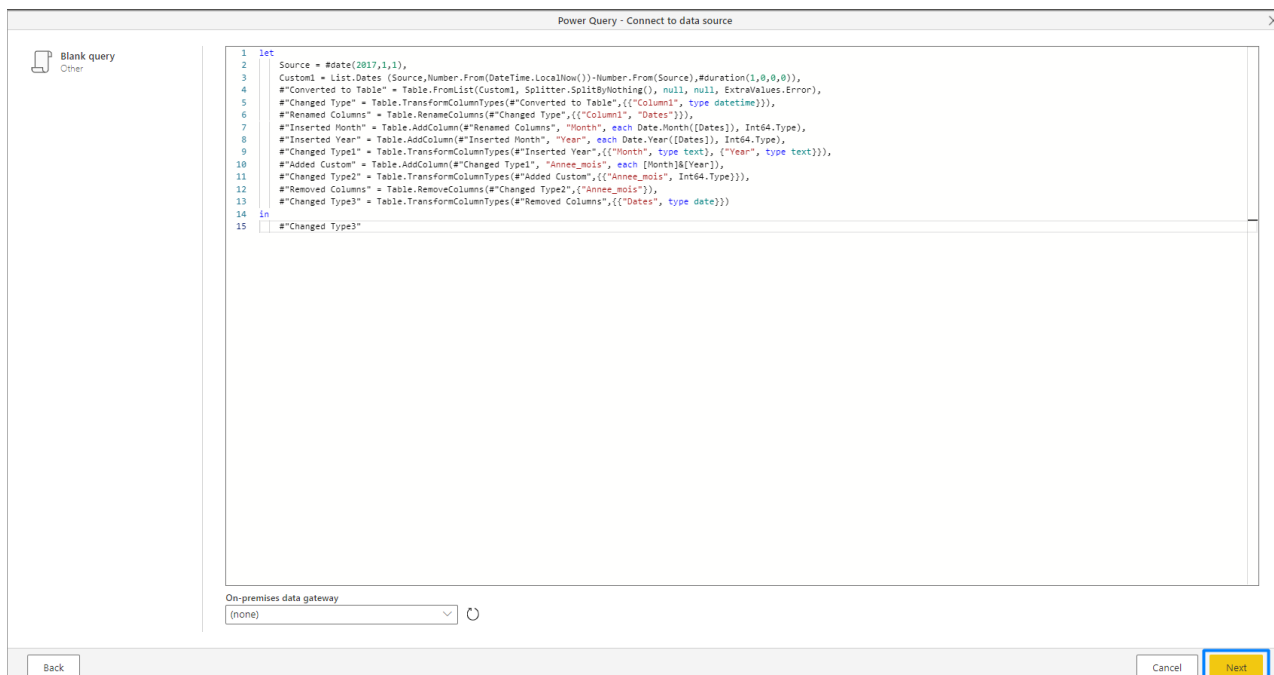
- b) Click **add new entities** then you can access the step of choosing a data source for your base view.



- c) Select the source you want to use for your Dataflow. In my case, I chose a blank M query from the data sources list to make some M scripts to build a Date table

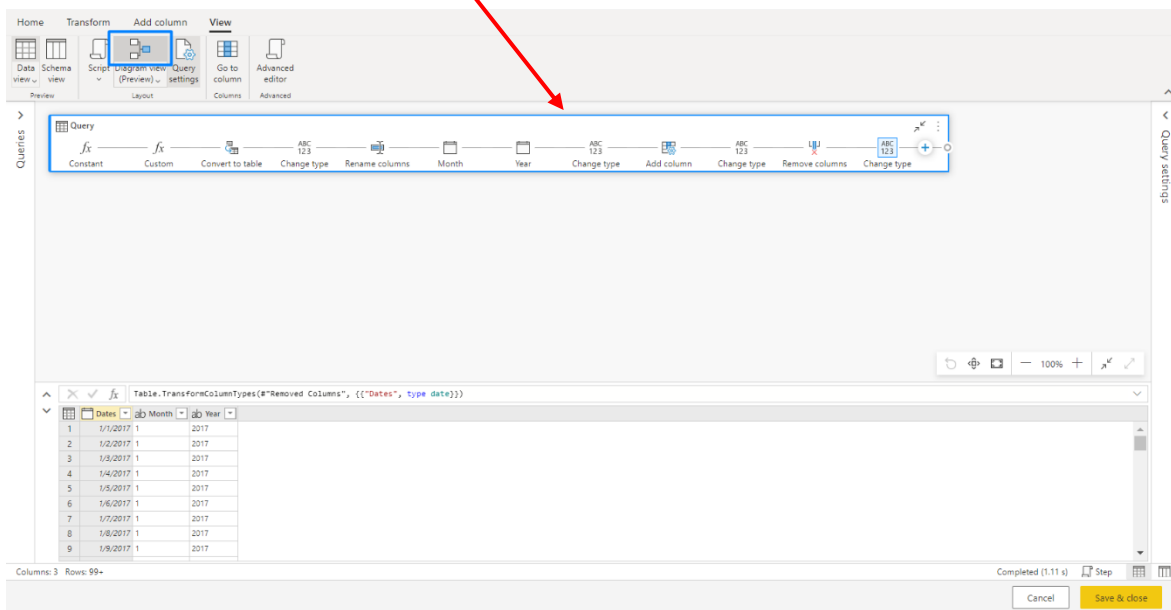
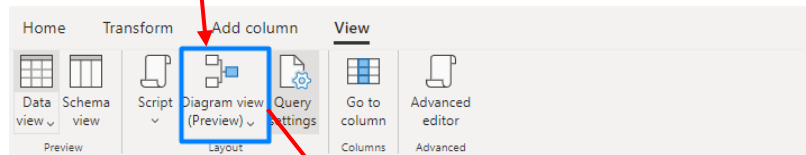
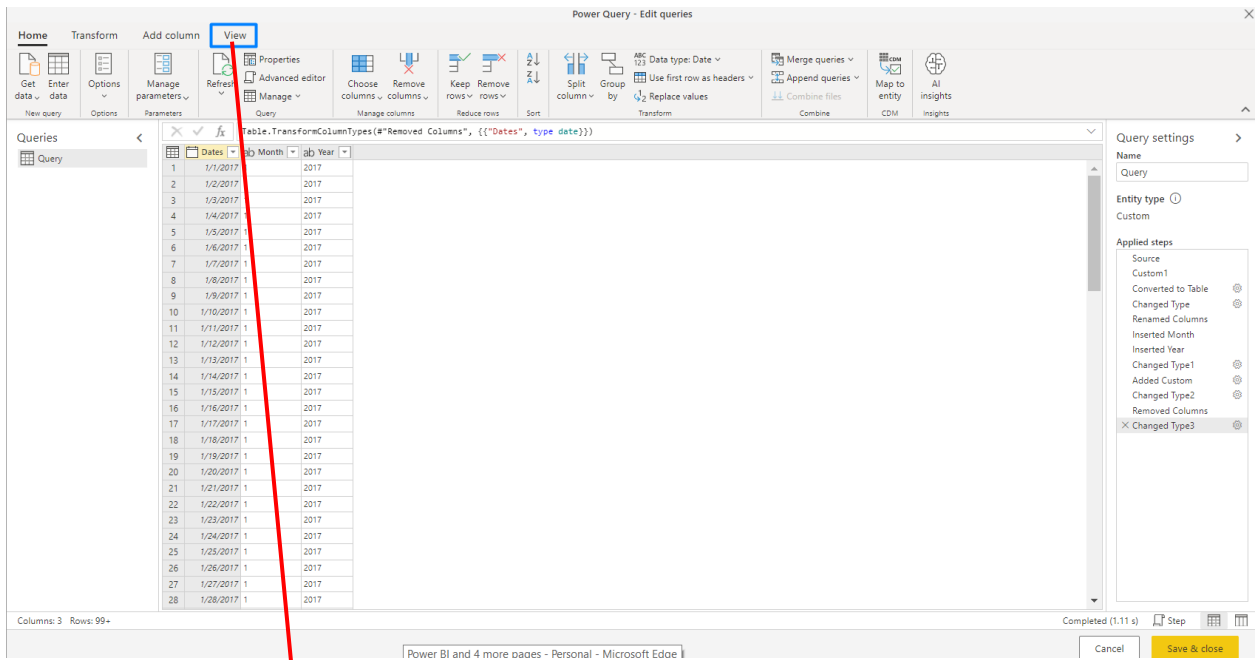


- d) In the M query Editor dialogue box, I pasted M code to build a basic Date table.

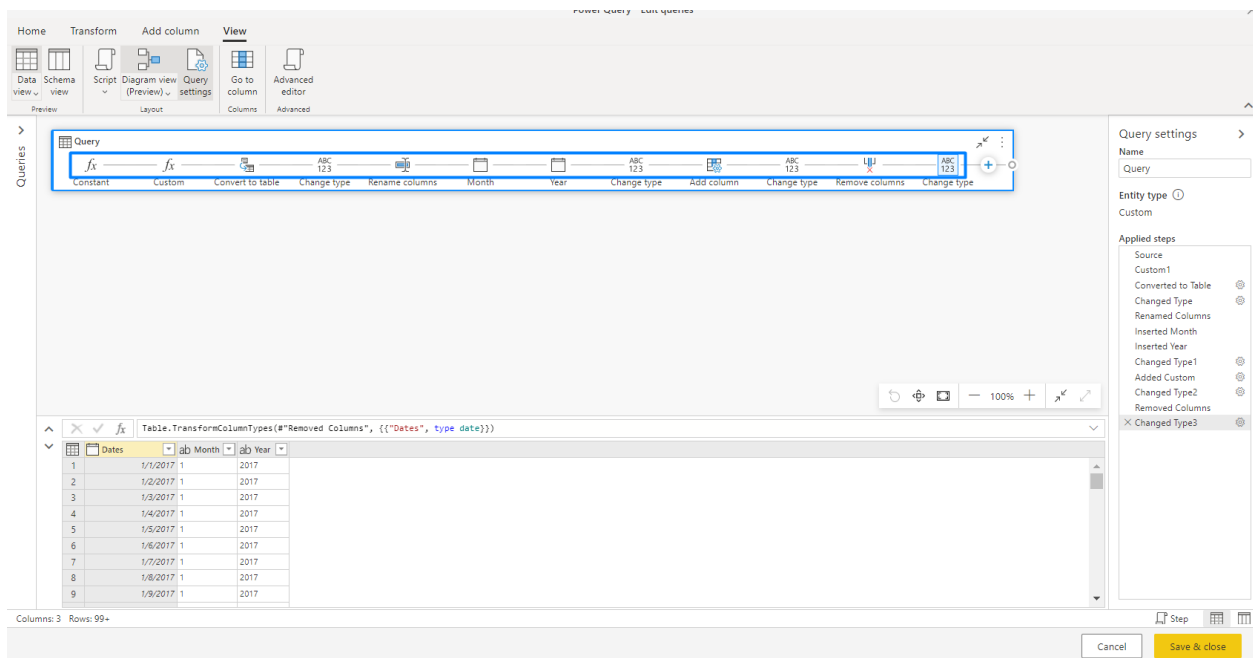


Clique **Next** to access Power Query Editor

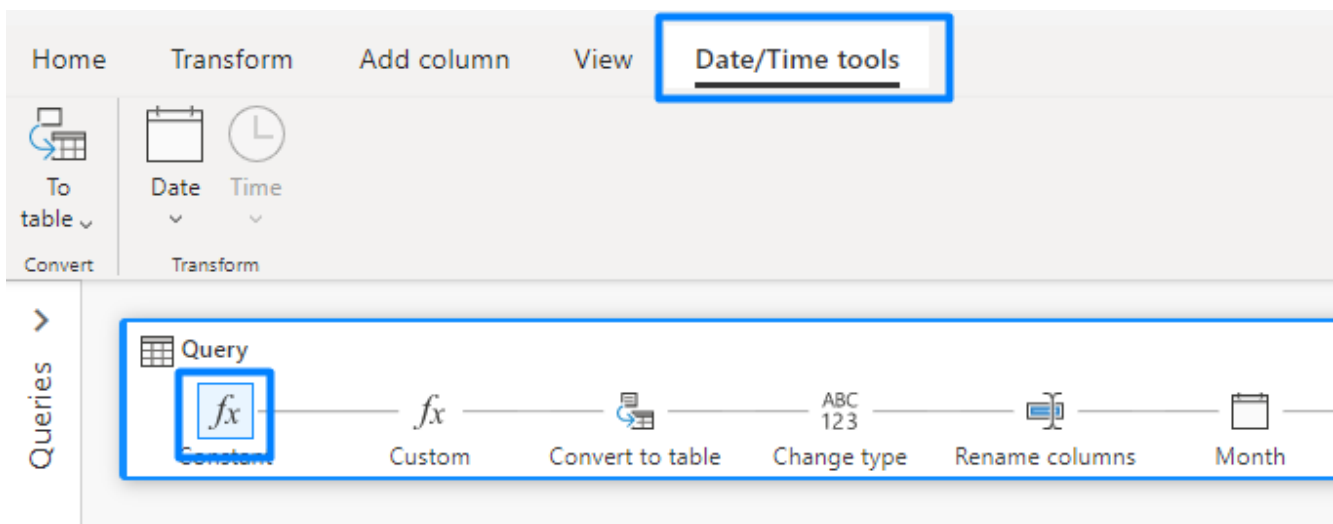
- e) Go to the View tab to enable Diagram view by selecting '**Diagram View**' within the '**View**' tab in the ribbon to have a graphic view of your script.



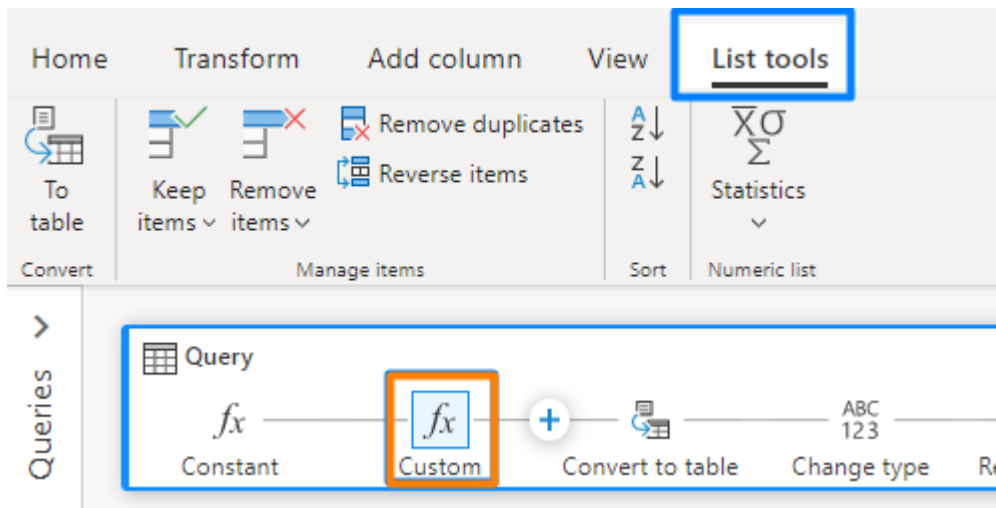
- f) By selecting the View button, you can see the hall steps graphically from the beginning of the transformation to the end.



Select one step, to access the **contextual tab** associated with it. For example, the date step gives us access to **Date/Time tools** contextual tab.



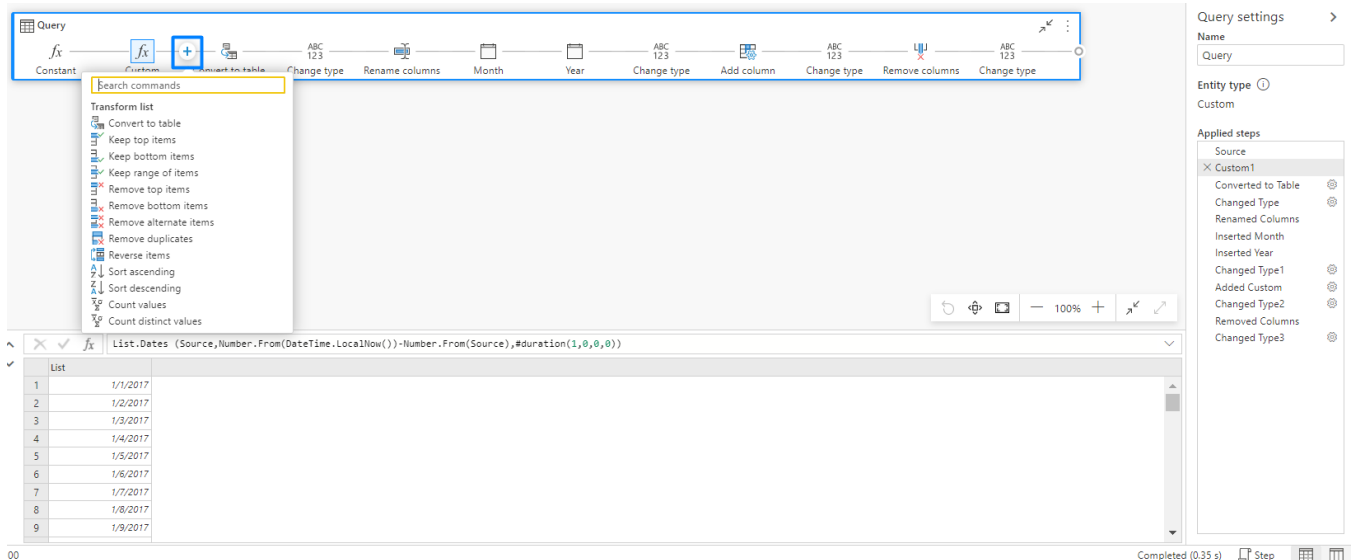
Select the next step to see the contextual tab **List tools** Tab

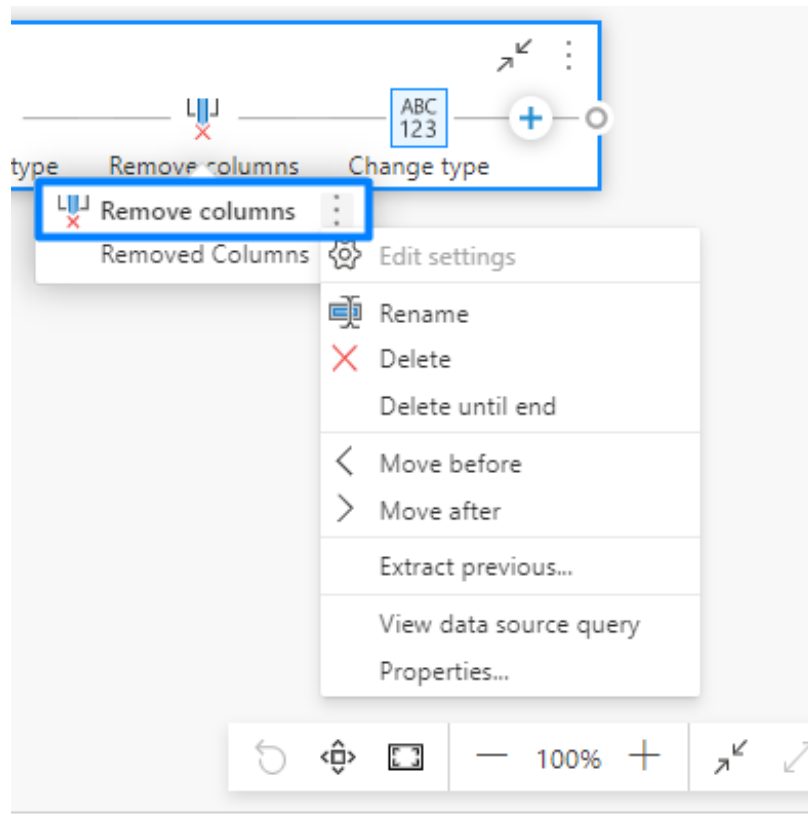


By using the “+” button

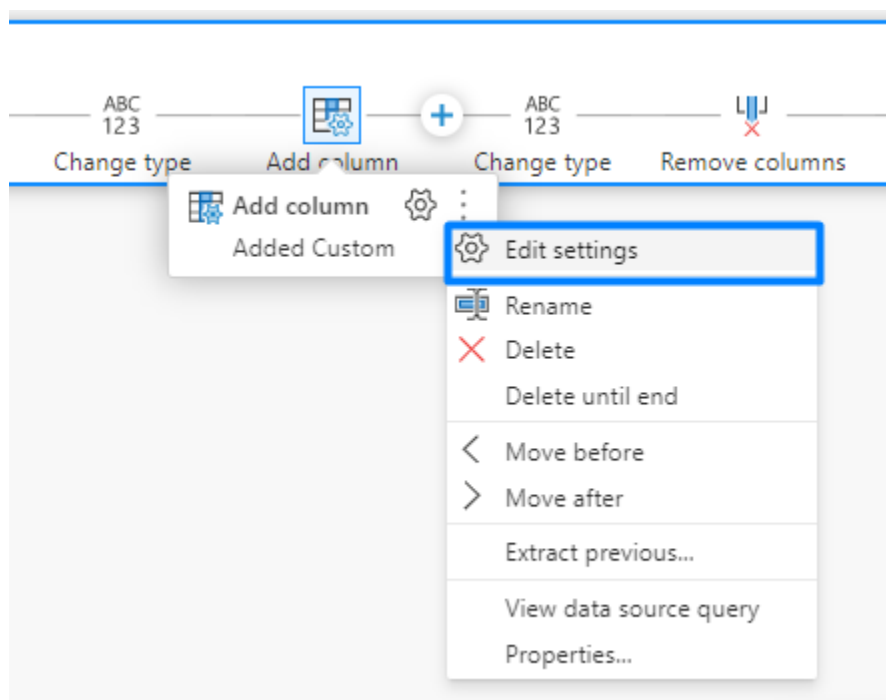
You can add a new step within their query, after or before the currently selected step, also choose a transform function from the list or search for it from the menu.

Notice that these transformations are the same transforms you find within the ribbon online and desktop versions.





From column steps, you can access the list properties, modify settings, add custom columns, etc...



Custom column

Add a column that is computed from other columns or values.

New column name

Custom column formula ①

= [Month] & [Year]

Available column(s)

Dates
Month
Year

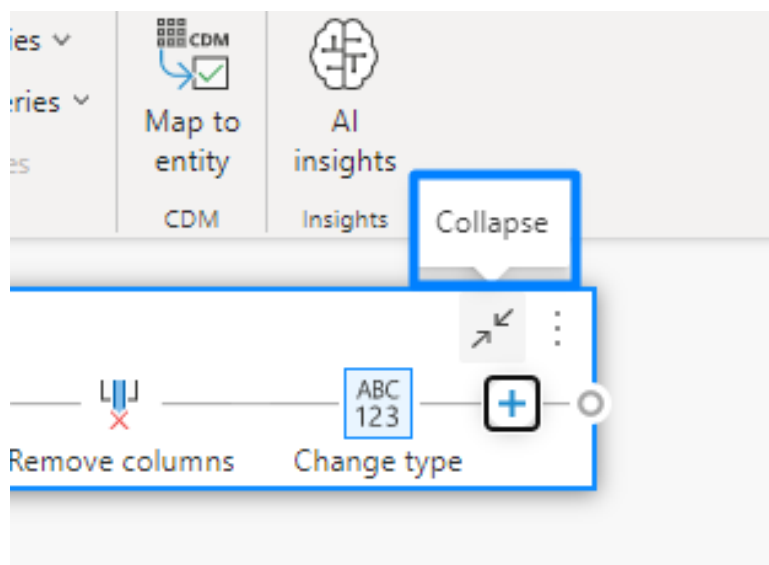
Insert column

[Learn more about Power Query formulas](#)

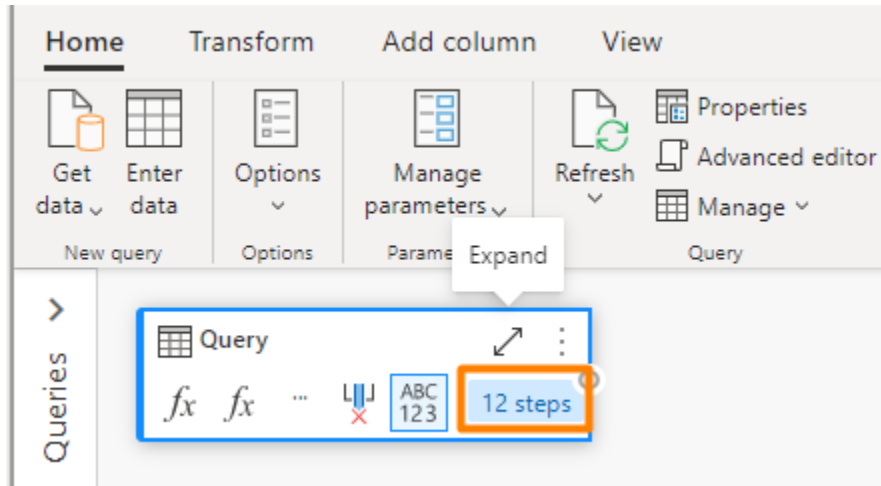
OK

Cancel

It is also possible to Collapse the steps by clicking on the collapse button.



And get information on how many steps you have in your dataflow

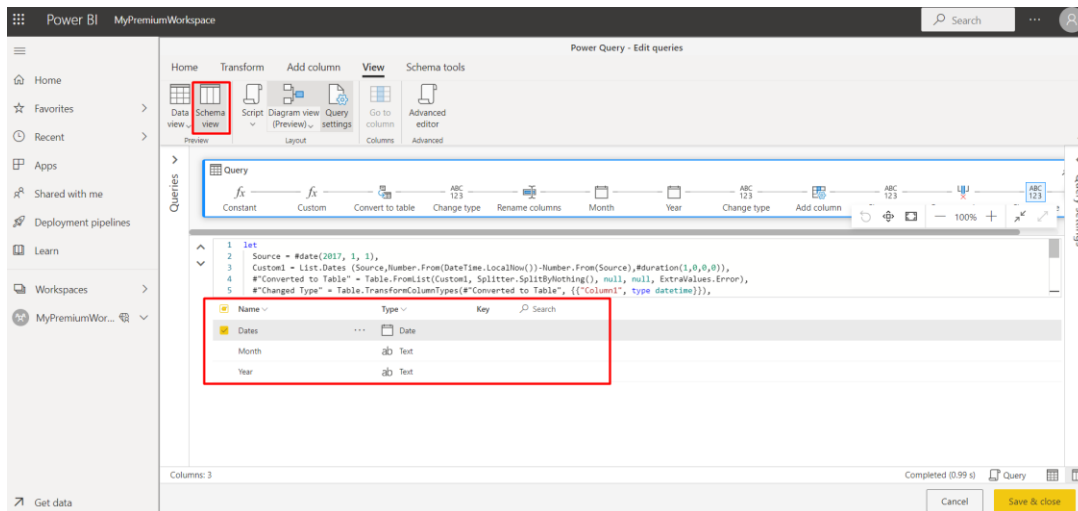


12 steps ...

You can also continue to add new data preparation steps.

g) Schema view

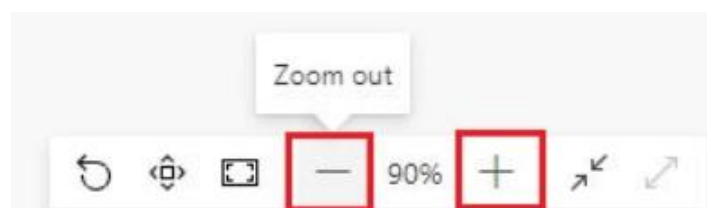
One of the features is the schema option that gives you the schema of your dataflow.



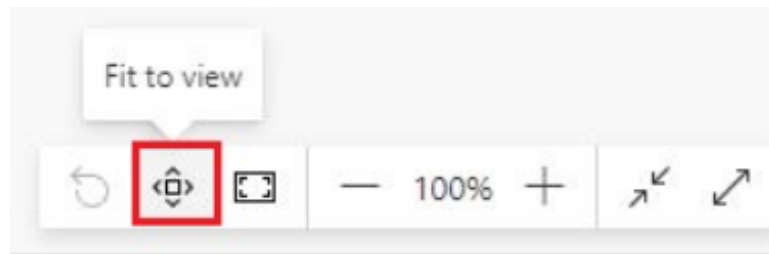
h) At the Layout option

There are four layouts' options available within the Diagram View:

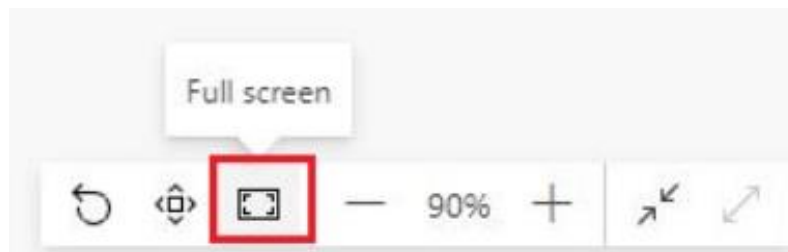
Zoom out/in:



Fit to view:



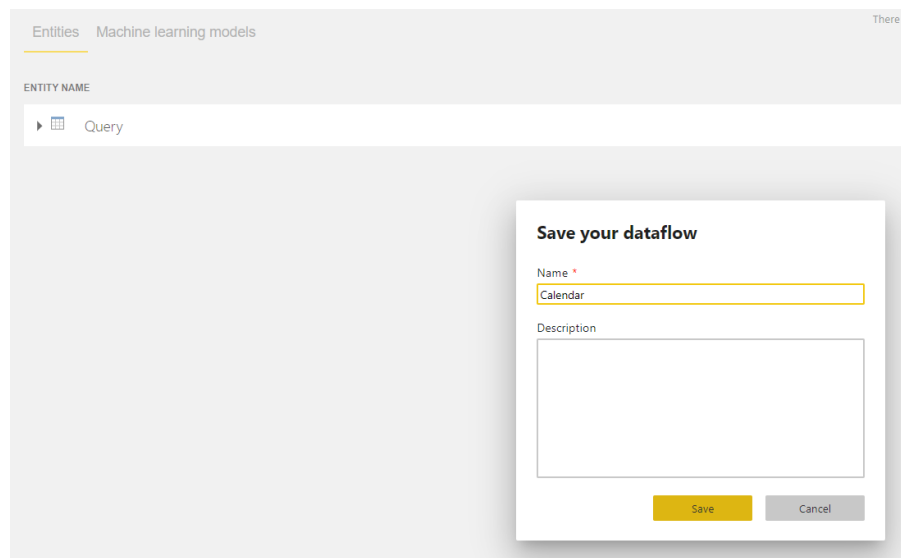
Fullscreen:



Reset:



After finishing your dataflow, you can name it and save it on your workspace.



Saving dataflow dialogue box and refreshing and schedule automatic refresh

MyPremiumWorkspace Development

+ New View in pipeline

View Filters

All Content Datasets + dataflows

Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity	Include in app
Calendar	Dataflow	Amadou HAMM	—	N/A	—	—	

✓ Success!

Your dataflow has been saved. To keep your data up to date, you need to set a refresh schedule.

Refresh now Set a refresh schedule

Name	Type	Owner
Calendar	Dataflow	Amadou HAMM

Schedule refresh

Time zone (UTC-08:00) Pacific Time (US and Canada)

Time

10 00 PM X

[Add another time](#)

☒ Send refresh failure notifications to the dataflow owner

Apply Discard

Enhanced compute engine settings

Configure enhanced compute engine settings for this dataflow.

☐ Disabled

Turn off the enhanced compute engine for this dataflow.

☒ Optimized

We'll turn on the enhanced compute engine only when this dataflow is linked to another one, which will enhance performance.

☐ On

Turn on the enhanced compute engine for this dataflow.

Apply

Discard

Endorsement (preview)

Help coworkers find your quality content by endorsing this dataflow. [Learn more](#)

☐ None

This dataflow will appear in search results but isn't endorsed.

☒ Promoted

When you're ready to distribute the dataflow to your coworkers, promote it to let them know.

☐ Certified

Certify your dataflow to show coworkers that it's been reviewed and meets your org's certification criteria. [How do I get my dataflow certified?](#)

Apply

Discard

In preview, you have an Endorsement option for dataflow. You can promote, certified... it.

MyPremiumWorkspace

Development

Create app

+ New

View in pipeline

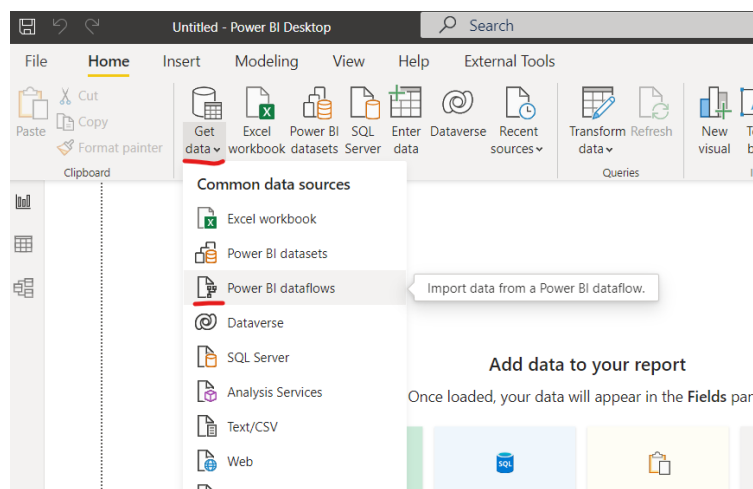
ViewFiltersSettingsAccessSearch

AllContentDatasets + dataflows

Name	Type	Owner	Refreshed	Next refresh	Endorsement	Sensitivity	Include in app
<div>Calendar</div>	Dataflow	Amadou HAMMA M...	11/17/20, 10:01:35 PM	11/17/20, 10:30:00 PM	<div>Promoted</div>	—	

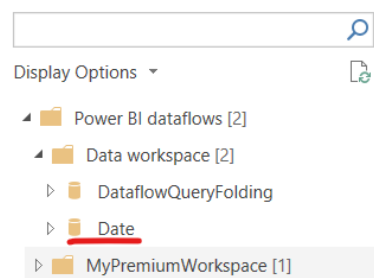
Now that we create a Date Dataflow let's see how to use it as a Power BI desktop data source.

- a) First, you need to launch your Power BI Desktop application and then select the Get data button from the Data section.



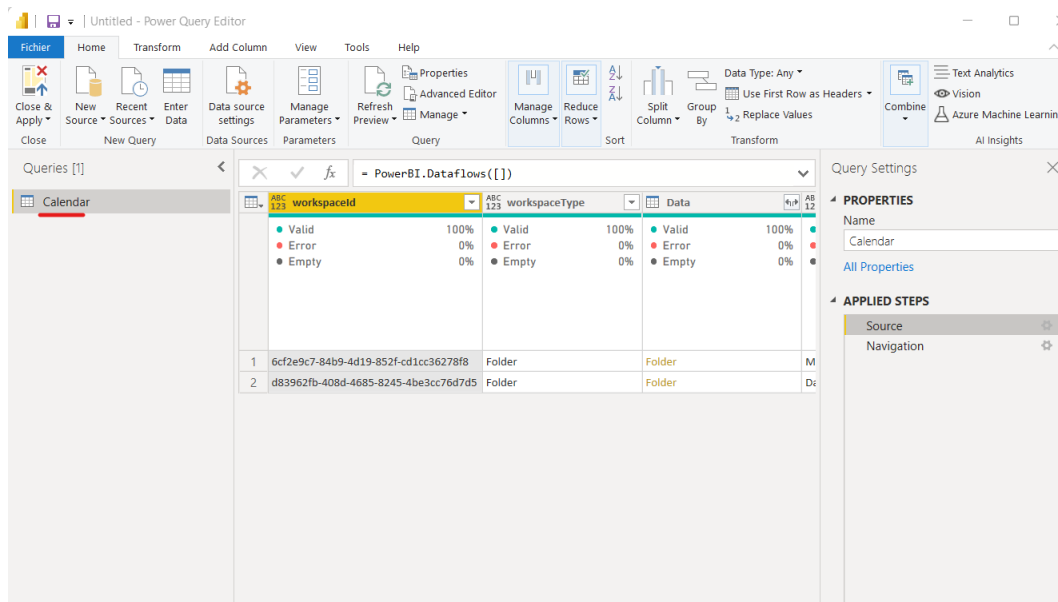
- b) Select from the list Above Power BI dataflow and select the Date Dataflow

Navigator

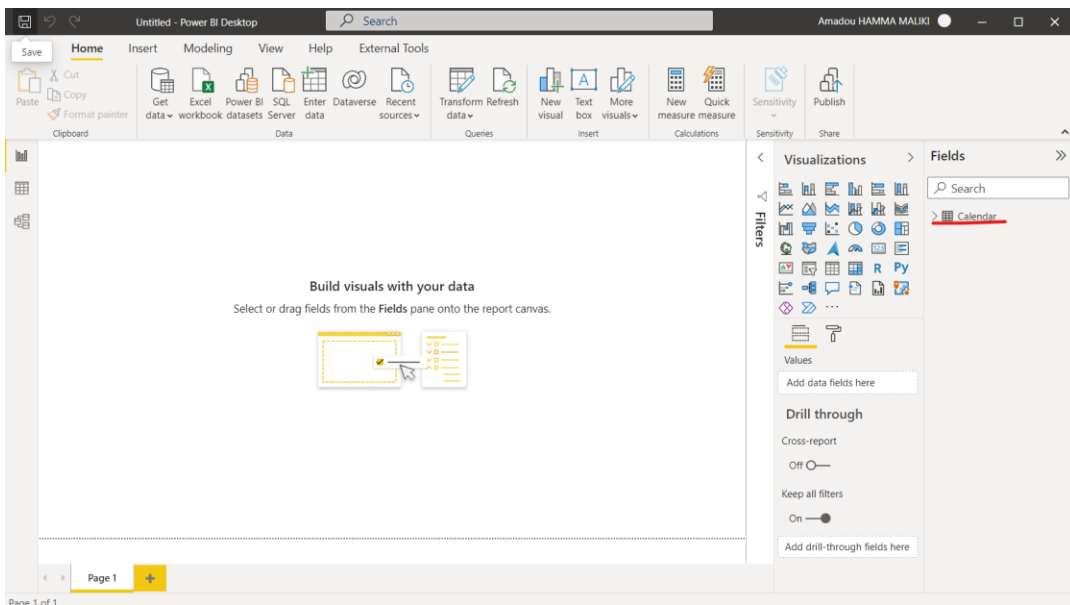


No items s

- c) And then select transform data from the Navigation dialogue box to get access to Power Query Editor.



- d) Finally, the dataflow Calendar table is loaded in the Desktop solution



In this article, we have seen an overview of what a dataflow is, how to create it and use it. The Power BI Dataflows is a huge and very interesting subject when it comes to handling a large dataset, building an Enterprise solution, or putting a data governance framework for Power BI in place.