Power BI **IQM Reports** Connector User Documentation

Introduction

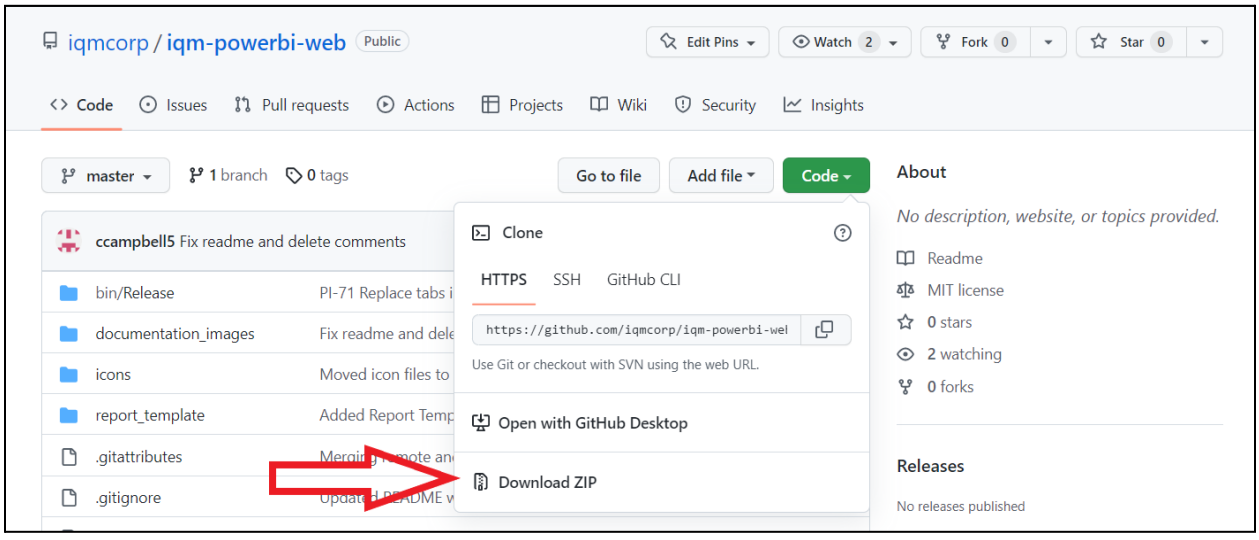
Microsoft Power BI is a data visualization and business intelligence software available for Windows. Power BI can be used to import data, create data models, and build visual reports using data from a variety of web and database connectors. The IQM Reports custom connector for Power BI Desktop allows users to easily access their IQM ad-serving data for running campaigns through the Power BI Desktop application, where it can be transformed into visual reports for sharing and analysis. The IQM Reports connector is available to be downloaded from GitHub: https://github.com/iqmcorp/iqm-powerbi-web.

Prerequisites

Before you use this connector, you must have an IQM account. You must also have the Microsoft Power BI application installed. Power BI Desktop is available as a free download from https://powerbi.microsoft.com/en-us/desktop/. If you are unfamiliar with Power BI, detailed documentation for the application can be found at https://docs.microsoft.com/en-us/power-bi/.

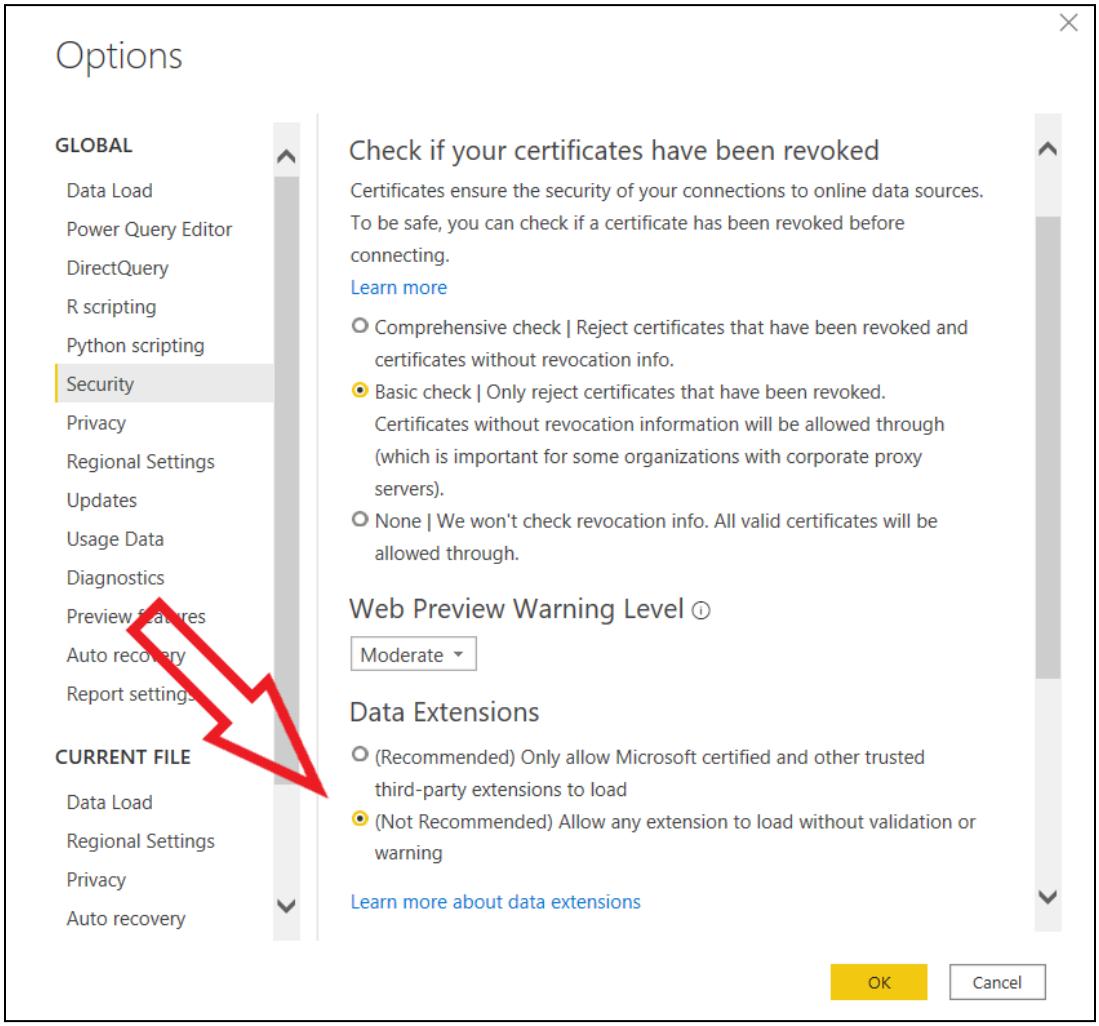
Setup

1. To use the IQM Reports Power BI connector, first download the connector's GitHub repository from https://github.com/iqmcorp/iqm-powerbi-web. In the repository page, select **Code > Download ZIP**.



2. Open or extract the downloaded .zip file. Find the IQM Reports.mez file in the bin\Release directory in the .zip file and place this .mez file into the C:\Users\<User_Name>\Documents\Power BI Desktop\Custom Connectors directory. If this directory does not exist, create it.

3. Open Power BI Desktop and navigate to the Options menu (**File > Options and settings > Options**). In the Security tab, under Data Extensions, check the option "(Not Recommended) Allow any extension to load without validation or warning".

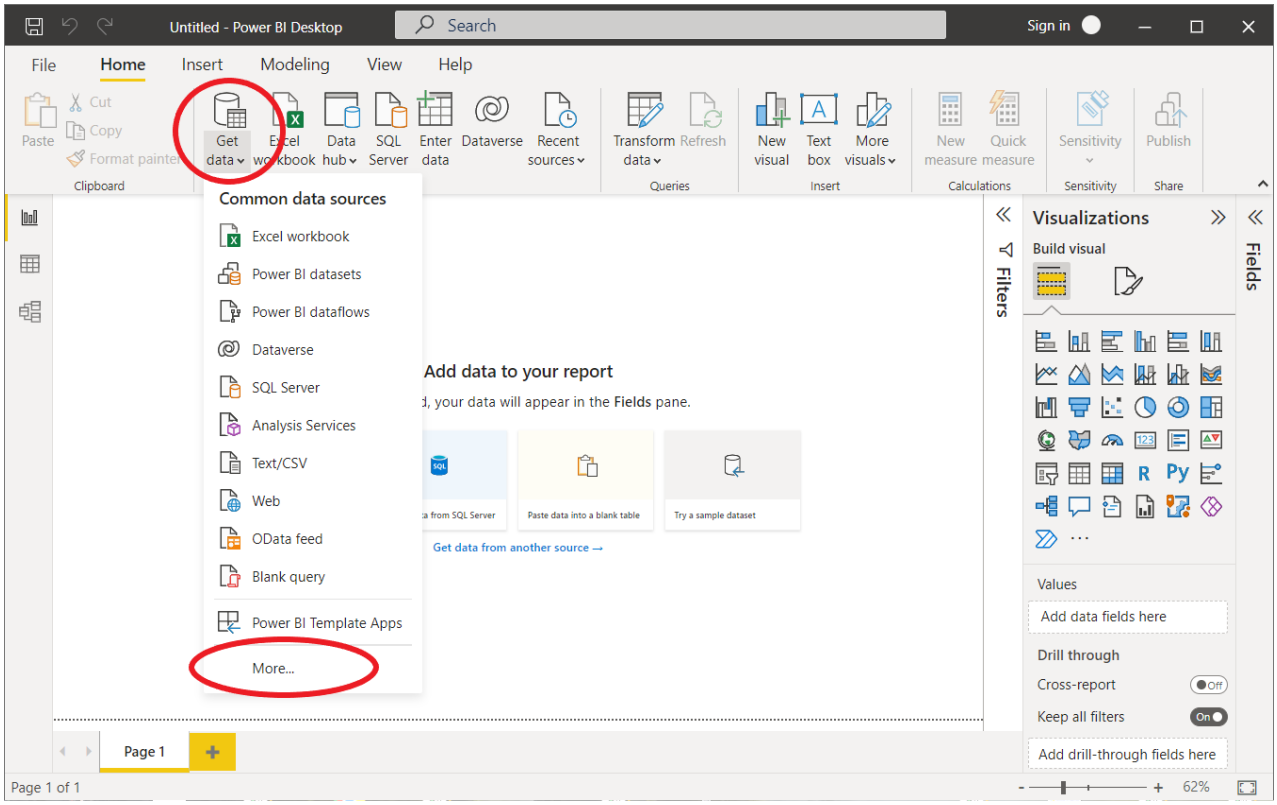


4. Click **OK** and restart Power BI Desktop. The IQM Reports connector should now be available for use in the application.

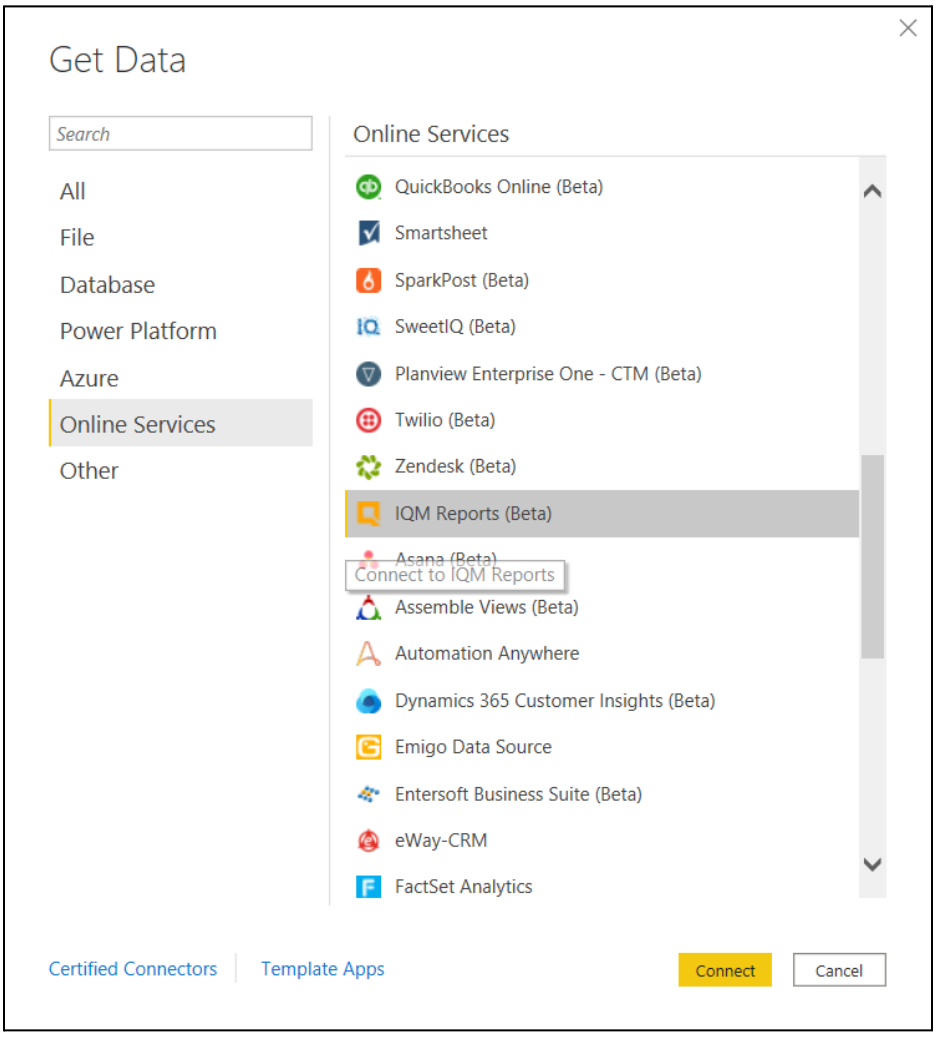
Connect to IQM Reports Data

To retrieve data through the IQM Reports connector for use in Power BI Desktop, follow these instructions:

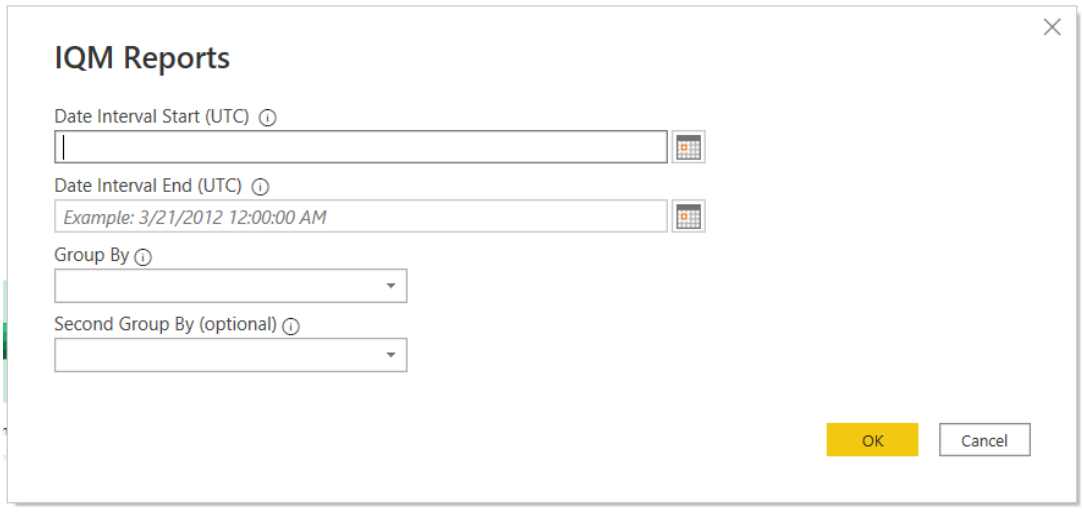
1. In the **Home** tab at the top, click **Get Data > More**. This will open the Get Data dialog, which contains a list of data connectors.



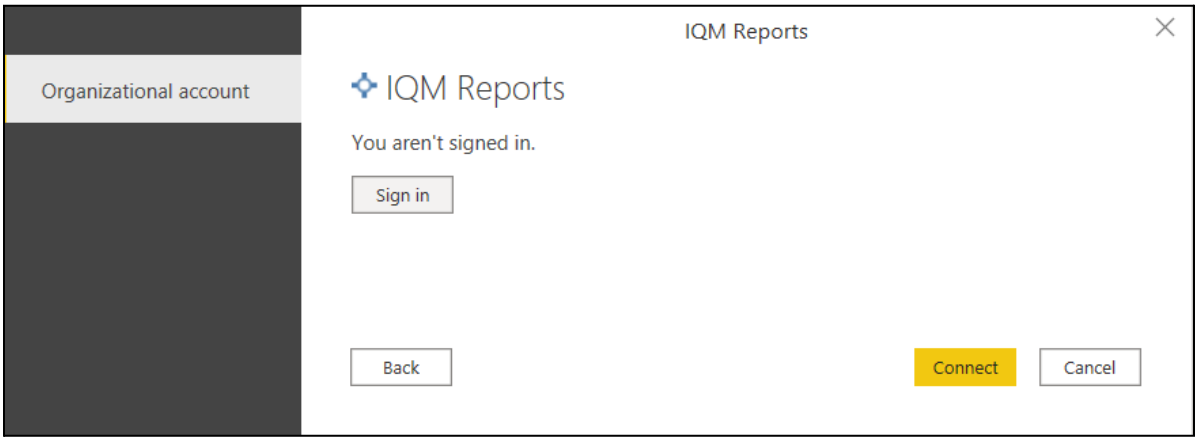
2. In the **Get Data** dialog, select the **Online Services** tab and click on the connector labeled **IQM Reports (Beta)**. Then, click the **Connect** button at the bottom of the dialog.



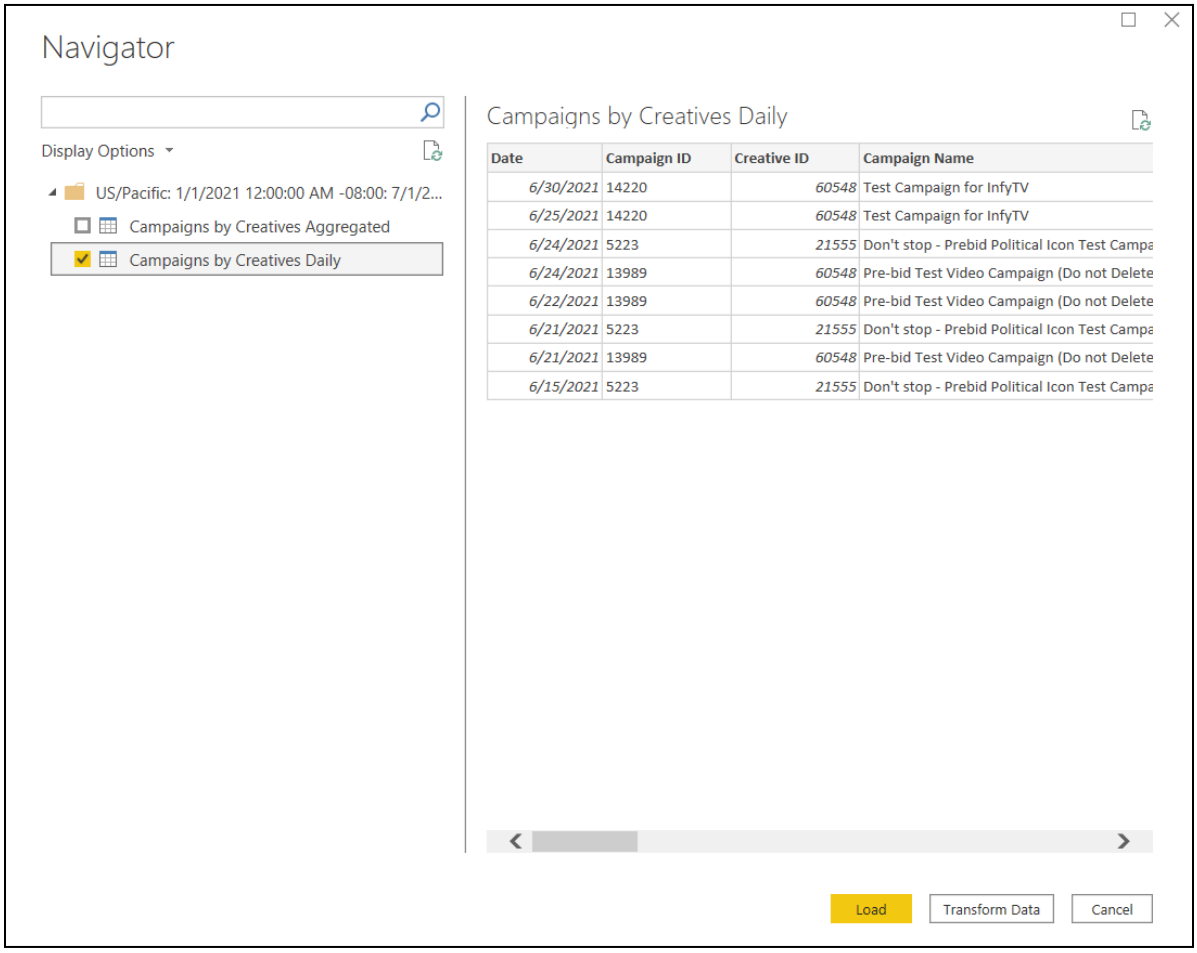
3. Input the required parameters into the IQM Reports dialog and click **OK**. The connector will import the ad-serving data of running campaigns for the time period starting at the date and time specified in **Date Interval Start** and ending at **Date Interval End**. These dates and times are interpreted as UTC, as are all date values imported from the connector. Available **Group By** dimensions include Campaigns and Creatives.



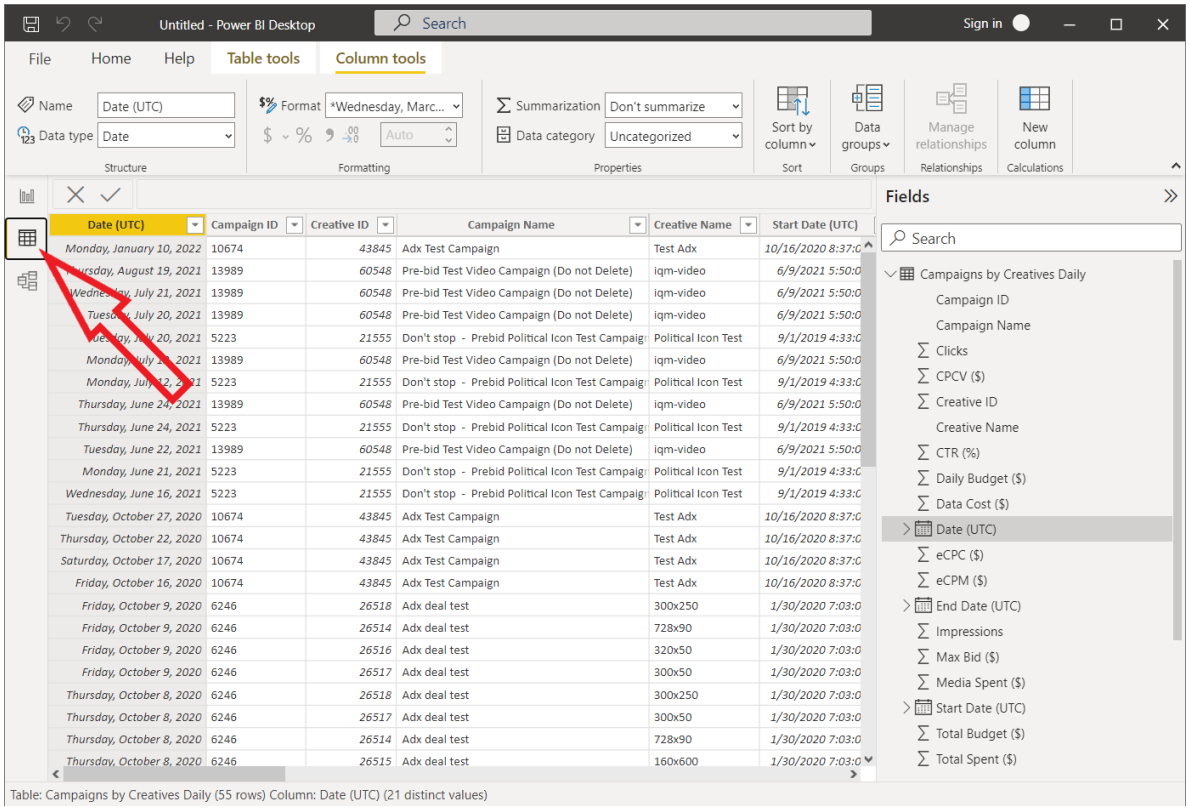
4. Click **Sign in** to authorize the connector to import your IQM ad-serving data. You will be asked for your IQM email and password, and for OAuth approval to allow Power BI to access your IQM data. After signing in and approving the connector for access, click **Connect**.



5. In the Navigator window, select the data tables to import from the IQM Reports connector by checking the checkboxes next to each table you want to import. Each Group By dimension combination provides a table of aggregated ad-serving data and a table of daily ad-serving data; choose one or both tables. Then, click **Load**.



6. Power BI Desktop will now retrieve ad-serving reporting data according to your inputs and convert them into tables that you can use to build reports. You can view these tables in the **Data** view. The Data view allows you to view and manipulate each table in the data set imported from the IQM Reports connector (and any other connectors you are using), including filtering and sorting. This view also allows you to add columns and measures to your tables, calculated from values in other columns. For more information, see https://docs.microsoft.com/en-us/power-bi/connect-data/desktop-data-view.



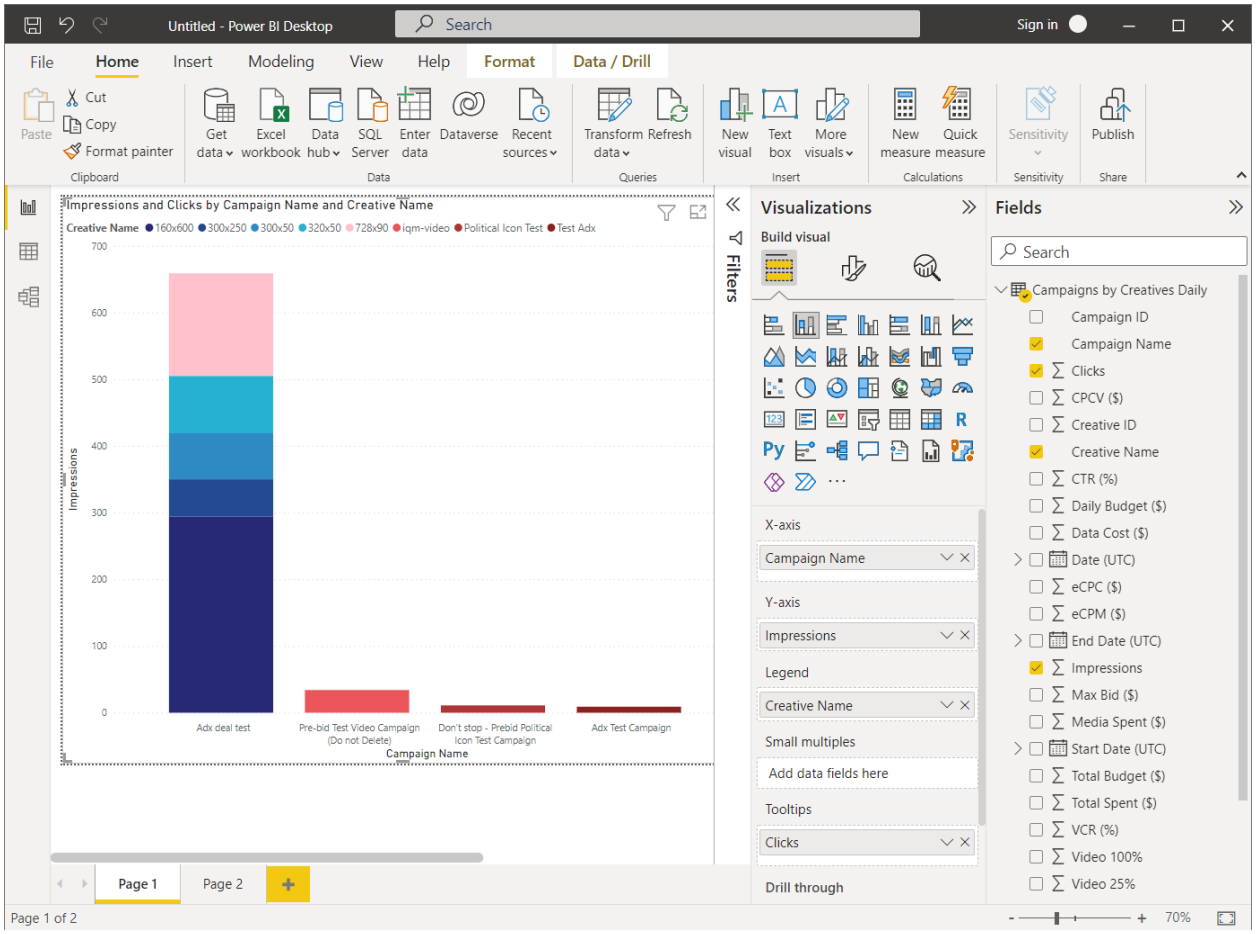
Date (UTC)	Campaign ID	Creative ID	Campaign Name	Creative Name	Start Date (UTC)
Monday, January 10, 2022	10674	43845	Adx Test Campaign	Test Adx	10/16/2020 8:37:0
Thursday, August 19, 2021	13989	60548	Pre-bid Test Video Campaign (Do not Delete)	iqm-video	6/9/2021 5:50:0
Wednesday, July 21, 2021	13989	60548	Pre-bid Test Video Campaign (Do not Delete)	iqm-video	6/9/2021 5:50:0
Tuesday, July 20, 2021	13989	60548	Pre-bid Test Video Campaign (Do not Delete)	iqm-video	6/9/2021 5:50:0
Tuesday, July 20, 2021	5223	21555	Don't stop - Prebid Political Icon Test Campaig	Political Icon Test	9/1/2019 4:33:0
Monday, July 19, 2021	13989	60548	Pre-bid Test Video Campaign (Do not Delete)	iqm-video	6/9/2021 5:50:0
Monday, July 12, 2021	5223	21555	Don't stop - Prebid Political Icon Test Campaig	Political Icon Test	9/1/2019 4:33:0
Thursday, June 24, 2021	13989	60548	Pre-bid Test Video Campaign (Do not Delete)	iqm-video	6/9/2021 5:50:0
Thursday, June 24, 2021	5223	21555	Don't stop - Prebid Political Icon Test Campaig	Political Icon Test	9/1/2019 4:33:0
Tuesday, June 22, 2021	13989	60548	Pre-bid Test Video Campaign (Do not Delete)	iqm-video	6/9/2021 5:50:0
Monday, June 21, 2021	5223	21555	Don't stop - Prebid Political Icon Test Campaig	Political Icon Test	9/1/2019 4:33:0
Wednesday, June 16, 2021	5223	21555	Don't stop - Prebid Political Icon Test Campaig	Political Icon Test	9/1/2019 4:33:0
Tuesday, October 27, 2020	10674	43845	Adx Test Campaign	Test Adx	10/16/2020 8:37:0
Thursday, October 22, 2020	10674	43845	Adx Test Campaign	Test Adx	10/16/2020 8:37:0
Saturday, October 17, 2020	10674	43845	Adx Test Campaign	Test Adx	10/16/2020 8:37:0
Friday, October 16, 2020	10674	43845	Adx Test Campaign	Test Adx	10/16/2020 8:37:0
Friday, October 9, 2020	6246	26518	Adx deal test	300x250	1/30/2020 7:03:0
Friday, October 9, 2020	6246	26514	Adx deal test	728x90	1/30/2020 7:03:0
Friday, October 9, 2020	6246	26516	Adx deal test	320x50	1/30/2020 7:03:0
Friday, October 9, 2020	6246	26517	Adx deal test	300x50	1/30/2020 7:03:0
Thursday, October 8, 2020	6246	26518	Adx deal test	300x250	1/30/2020 7:03:0
Thursday, October 8, 2020	6246	26517	Adx deal test	300x50	1/30/2020 7:03:0
Thursday, October 8, 2020	6246	26514	Adx deal test	728x90	1/30/2020 7:03:0
Thursday, October 8, 2020	6246	26515	Adx deal test	160x600	1/30/2020 7:03:0

7. To create a visual report, navigate to the Report view. Reports consist of one or more pages, each of which can contain one or more visualizations (charts, tables, etc). To add a visualization, click on an option in the **Visualizations** sidebar. Power BI offers a variety of built-in visualization types; see https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-visualization-types-for-reports-and-q-and-a for a list explaining each type.

   Additional visualization types can be downloaded from Microsoft AppSource, which can be opened by clicking on **More visuals > From AppSource** in the **Home** tab.

To add data to a visualization, click and drag the desired fields from the **Fields** sidebar to the desired visualization component in the Visualizations sidebar, or directly onto the visualization in the report preview. The Fields sidebar lists each table imported from queries, along with their columns (fields).

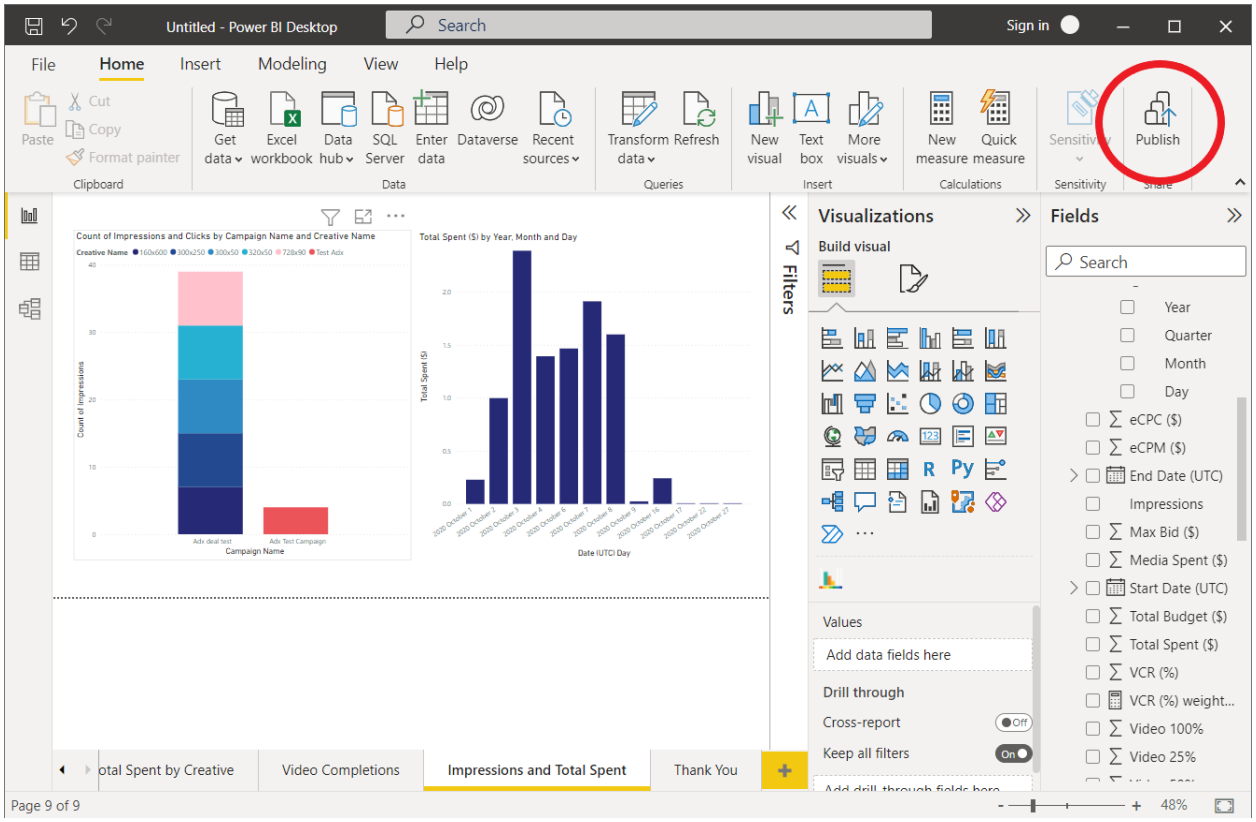
In the example below, a Stacked Column Chart is selected from the Visualizations sidebar. For this visualization type, values from the Fields sidebar can be added to the X Axis, Y Axis, Legend, Small Multiples, or Tooltips in the Visualizations sidebar. The following visual was created by clicking and dragging Campaign Name to X Axis, Impressions to Y Axis, Creative Name to Legend, and Clicks to Tooltips.



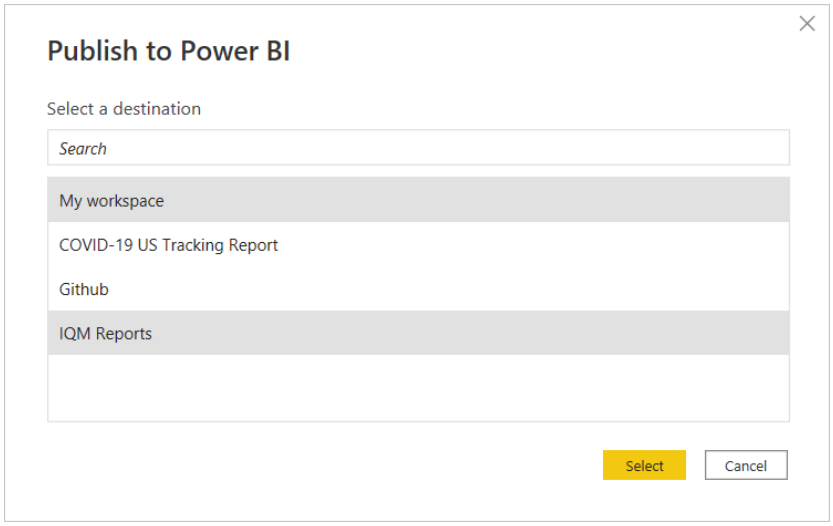
For detailed information on how to transform datasets into visual reports, see the Power BI documentation here: https://docs.microsoft.com/en-us/power-bi/visuals/power-bi-report-visualizations.

Publishing Reports

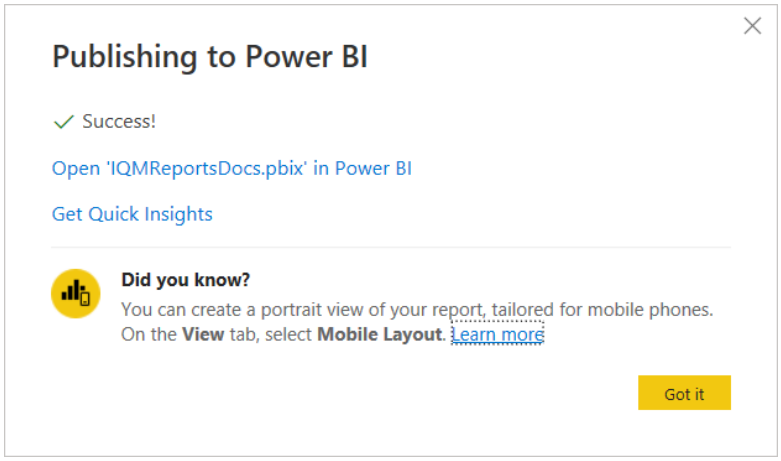
For users with a Power BI Pro or Premium Per User (PPU) license, reports created in Power BI Desktop can be shared via the Power BI Service at https://app.powerbi.com/. The Power BI Service allows you to easily share reports and data and collaborate over Microsoft Teams for data analysis. To share a report on the Power BI Service, first save the report in Power BI Desktop (**File > Save As**). Then, select the **Publish** option in the Home tab of the Report view.



If you are not already signed in to the Power BI Service, Power BI Desktop will prompt you to do so. Follow the instructions to log in, then select the workspace you want to publish the report to. Note that this will upload both the visual report and the underlying data set (i.e. the tables) to the Power BI Service.



Power BI Desktop will then upload the report to the chosen workspace. Click on **Open….in Power BI** to view the report in the Power BI Service.



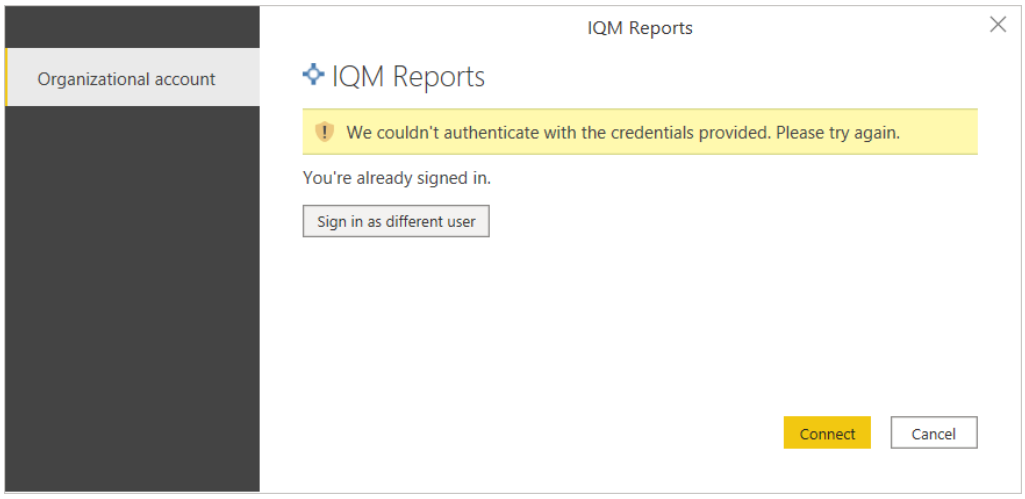
From the Power BI Service, you can share your reports and data sets, collaborate with Microsoft Teams, build reports with uploaded data sets, and more.

Using the Report Template and Editing Queries

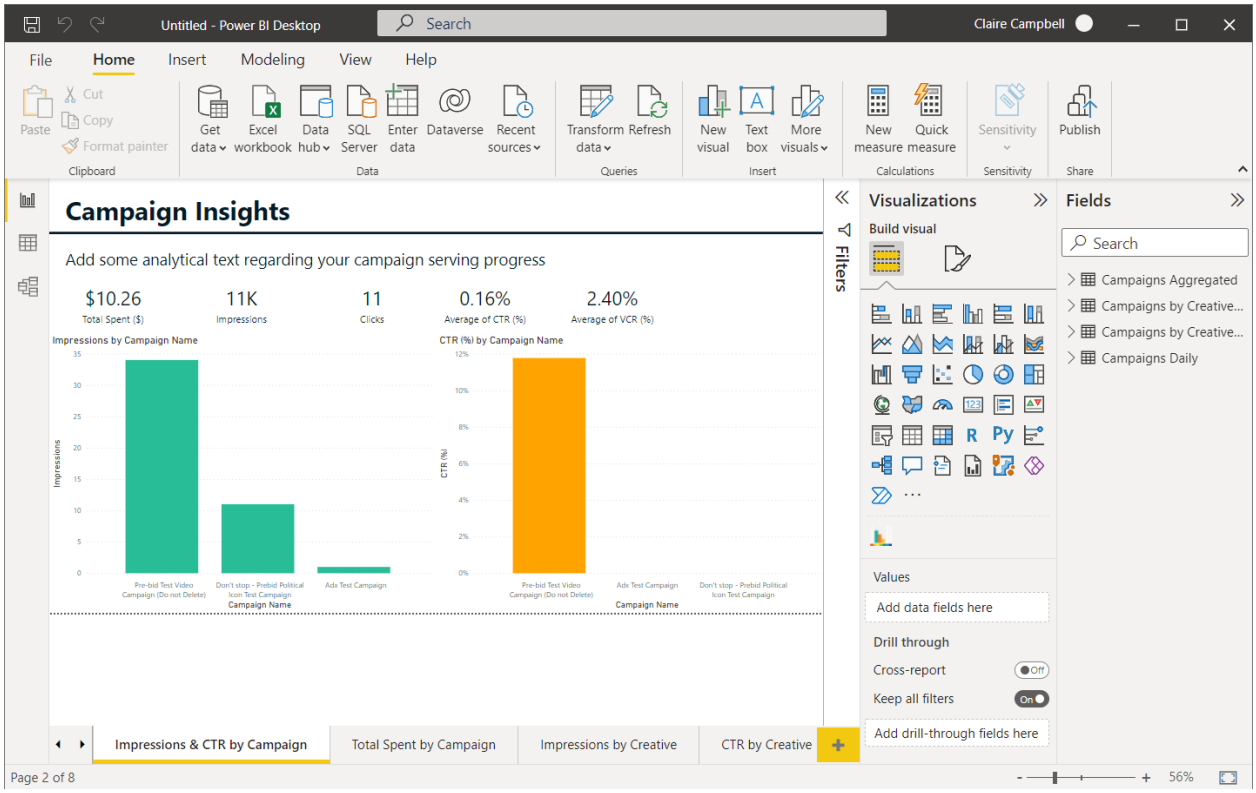
In the IQM Reports GitHub repository, the report_template directory contains a Power BI report template file, IQM_Report_Template.pbit. This file is an editable template for a visual report that uses the IQM Reports connector, showing an example of how the connector might be used.

To use this template, extract the repository .zip file if it is not already extracted. Then, open Power BI Desktop and select **File > Import > Power BI template**. Navigate to the directory where the repository was extracted and select the IQM_Report_Template.pbit file to open it.

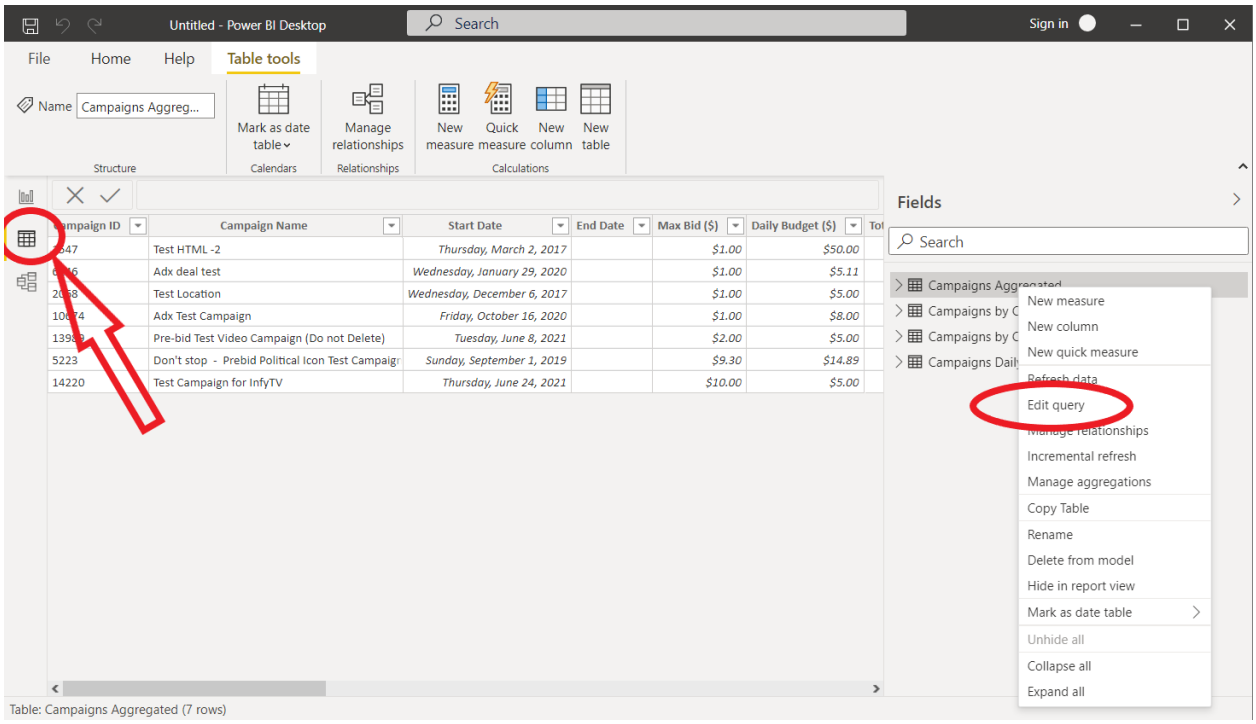
Upon opening the template, Power BI will attempt to use the IQM Reports connector to import data from IQM. If you are not already logged in, Power BI will prompt you for your login credentials. In this case, click **Sign in as different user** and enter your IQM account credentials to use the report template.



After you log in, navigate to the **Report** tab to view the report template. The report template consists of several visualizations that are now pre-filled with your IQM ad-serving data according to the predefined connector inputs present in the template file. You probably want to customize the date range (Date Interval Start and Date Interval End) for the report data.

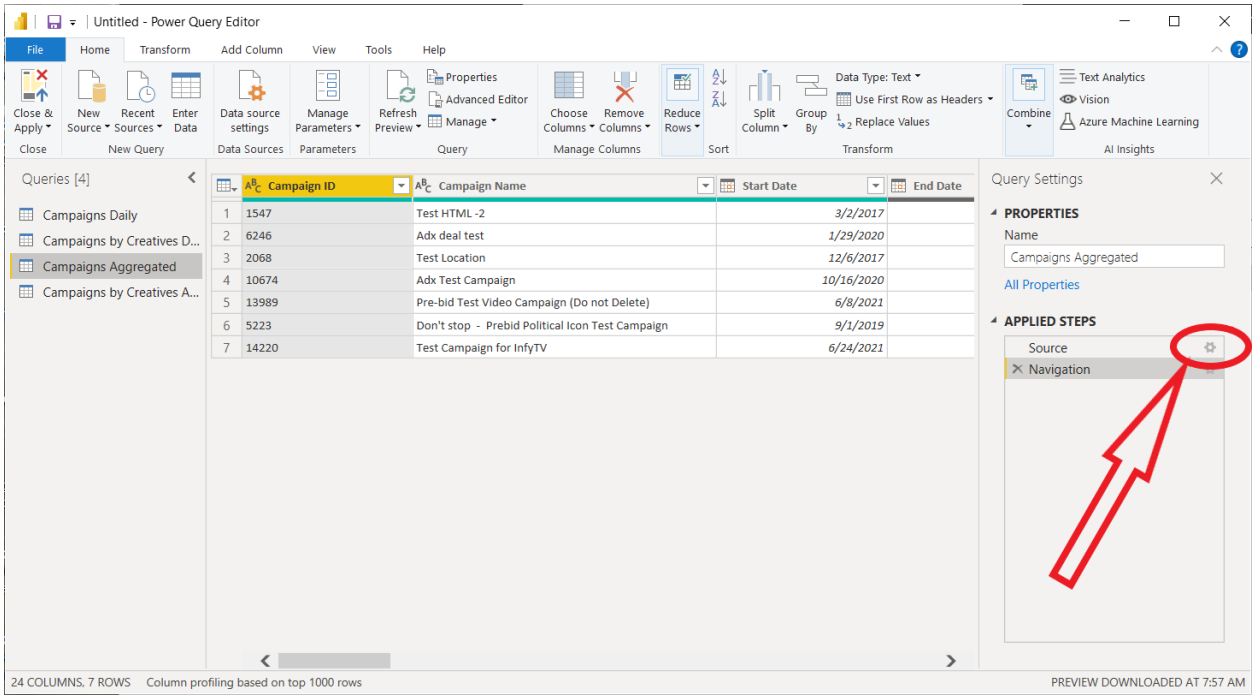


To modify the connector input values and set the desired report date range, click on the **Data** tab (circled) and right-click on the table whose date range you want to adjust, then select **Edit query**.

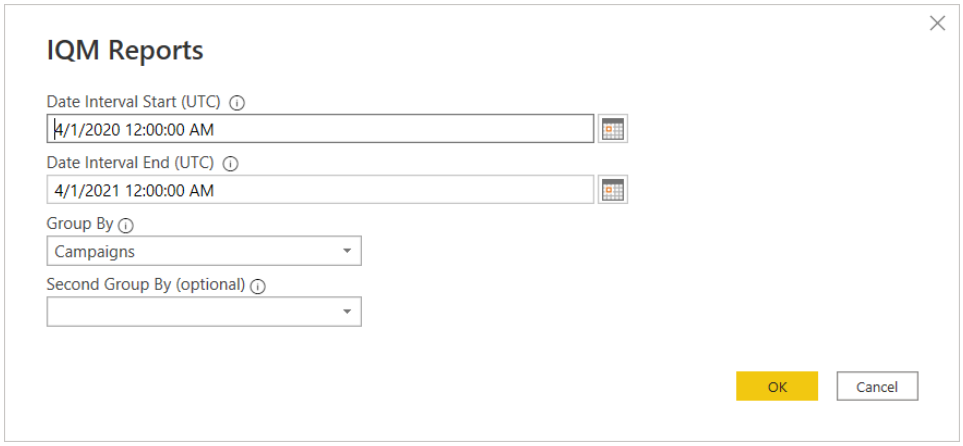


This will open the Power Query Editor window (shown below), which allows you to connect to data sources and transform imported data sets to generate the data sources in the Model tab and the tables in the Data tab (above). The Power Query Editor window provides many powerful tools for transforming data, including filtering rows, calculating new columns, joining queries, and more. For more information on the Power Query Editor, see https://docs.microsoft.com/en-us/power-query/power-query-ui.

Next, locate the **Applied Steps** section in the sidebar. This section lists all the steps and transformations applied to the data set imported from the query selected under **Queries** (on the left), and allows for the editing of these transformations. Right now, only two steps are applied: **Source**, which represents the connector that the query retrieves data from, as well as the parameters passed to the connector; and **Navigation**, which represents the tables that are selected to be imported from the connector in the Navigator window shown when connecting to a connector. Under **Applied Steps**, click the gear icon next to **Source**.

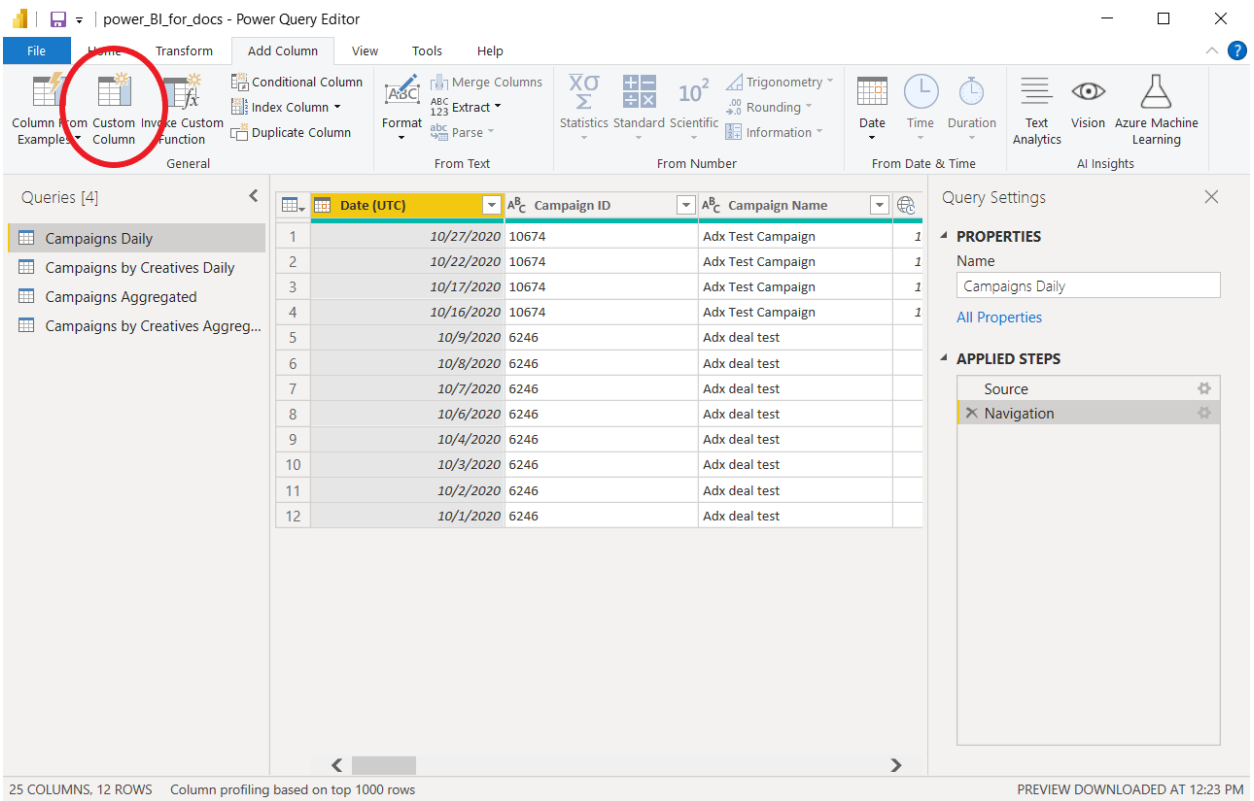


A popup window will then allow you to edit the parameters to the connector. If you are using the report template, or have visualizations using the data set from the query, avoid changing the **Group By** and **Second Group By** fields; this may break the visualizations that use the queries. After you are done modifying the connector inputs, click **OK.** This will cause subsequent executions of the query to use the new connector parameters. Repeat this process for each query in the **Queries** sidebar whose parameters you want to modify.

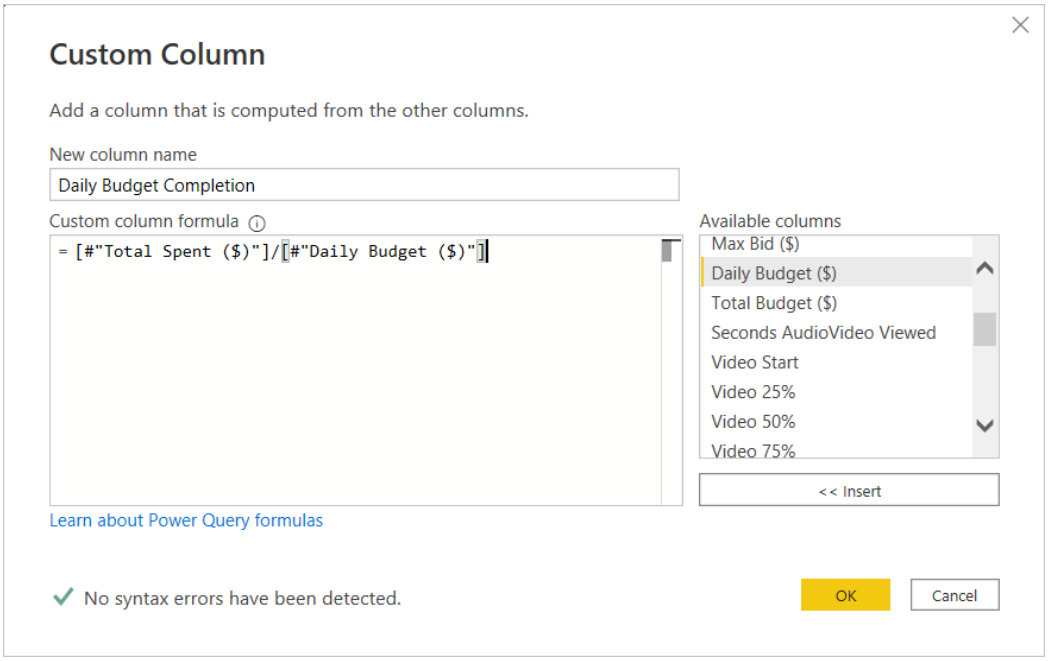


As mentioned before, the Power Query Editor provides a diverse set of tools for transforming query data. For example, you can add new columns to the tables generated by the queries. The following steps add a new column to a table containing daily ad-serving data that shows the percentage of the daily budget that was spent each day:

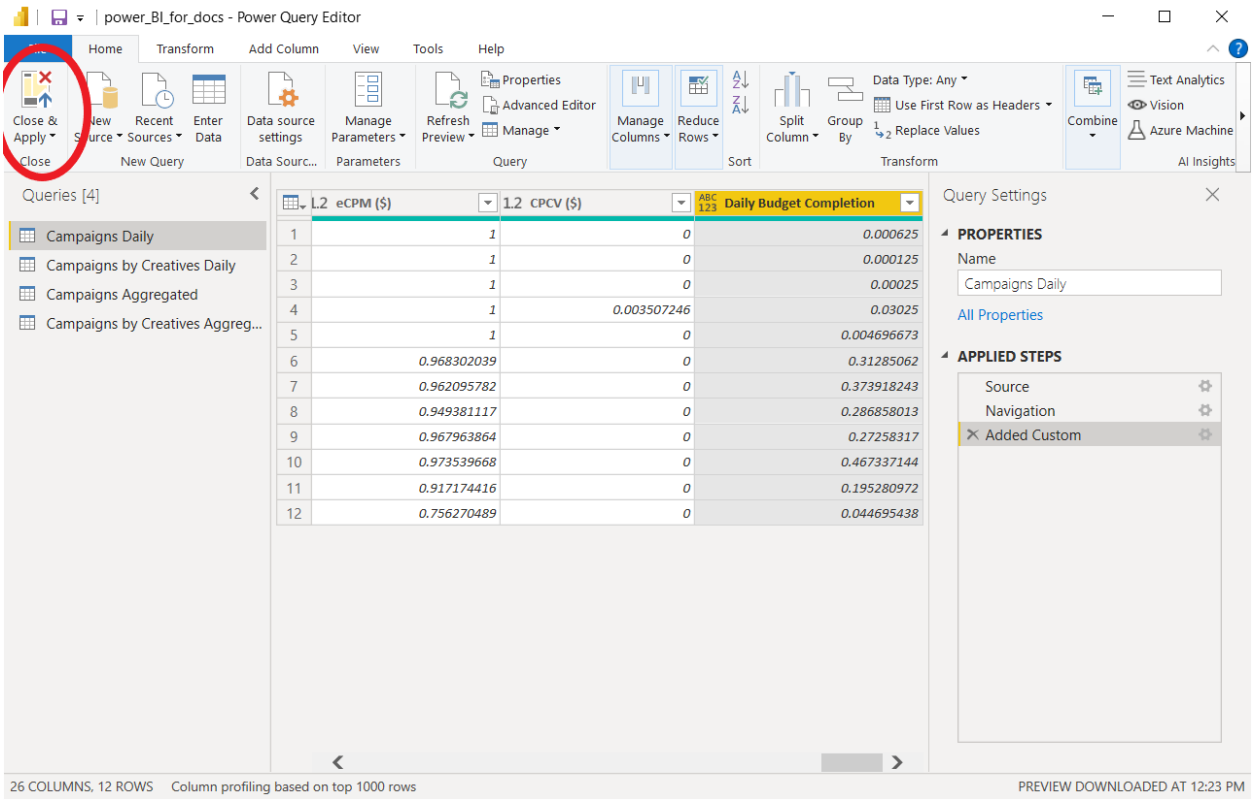
1. Create or select a query that imports daily ad-serving data grouped by campaigns. Then, in the **Add Columns** tab, select **Custom Column**.



2. In the **Custom Column** window, enter the name of the new column and the formula to use to calculate the value of the column. This can be a simple expression or a Power Query M formula (see https://docs.microsoft.com/en-us/powerquery-m/). Column names can be selected from the **Available Columns** list on the right. After clicking **OK**, this column will be added to the table generated by the query, and a new step will be added to the **Applied Steps list.**



3. To finalize the changes to the edited queries, click **Close & Apply** under the **Home** tab. This will save the changes to the queries and reload the ad-serving data from the connector.



After making changes in the Power Query Editor, navigate back to the **Report** tab to view and edit the updated report.

Power BI has many more features for transforming data and creating reports. You can read about the full set of features in the Microsoft documentation here: https://docs.microsoft.com/en-us/power-bi/.