Real time streaming

Introduction

In power BI streaming, we can stream data and update dashboards in real-time. Any visual or dashboard that can be created in Power BI can also be created to display and update real-time data and visuals. The devices and sources of streaming data can be factory sensors, social media sources, service usage metrics, or many other time-sensitive data collectors or transmitters.

Need to Implement Power BI Real Time Streaming

Power BI is primarily a decision-making tool that helps to extract valuable insights from the data. In the new age of analytics-driven decision-making, the one who has the latest data typically wins the market. There are also specific IOT based requirements where Real Time data has to be analysed. In all these cases, Power BI's Real Time data Streaming capability is a boon for organizations.

Power BI supports real-time streaming for the following types of datasets:

Push Data Streaming Dataset Pub Nub streaming dataset.

1) Streaming Datasets - streaming datasets allows external data sources to Push data to Power BI through REST APIs. They help you process the Real Time data as and when it comes in. Streaming Datasets do not store the data anywhere and hence are not suitable for cases where historical data analysis is required. They support data retrieval for up to an hour. They can invest up to 5 requests per second with a maximum payload of 15KB. A caveat is that you cannot build reports using a pure Streaming Dataset

2) Push Datasets

Push Datasets are similar to Streaming Datasets except for the fact that they can store data for historical analysis. This ability to store data also helps them to report on the data. They can invest up to 1 request per second with a maximum payload of 16MB.Streaming Datasets

3) Pub Nub streaming Datasets

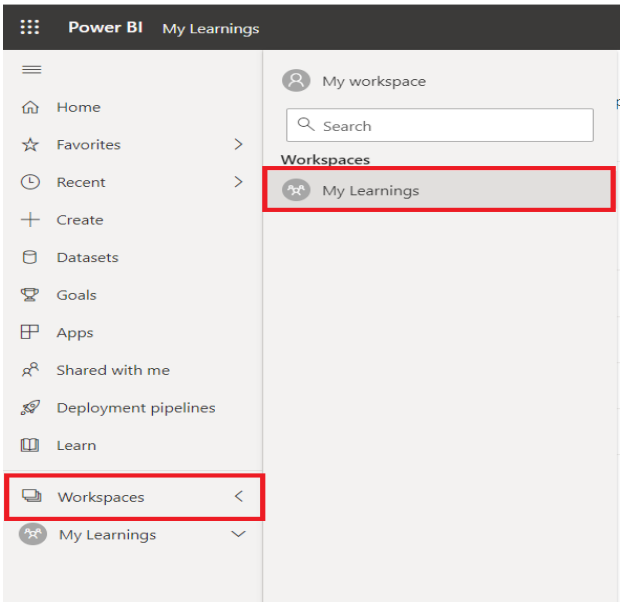
Pub Nub provides an SDK based on which you can implement Real Time communication platforms. Since this is a separate infrastructure as a service product, Power BI does not ingest any data and only displays the data by accessing the streams. Pub Nub will allow users to work around the throughput and request data size limits imposed by Power BI.

In here we will be using the pub nub streaming dataset to create a report and dashboard.

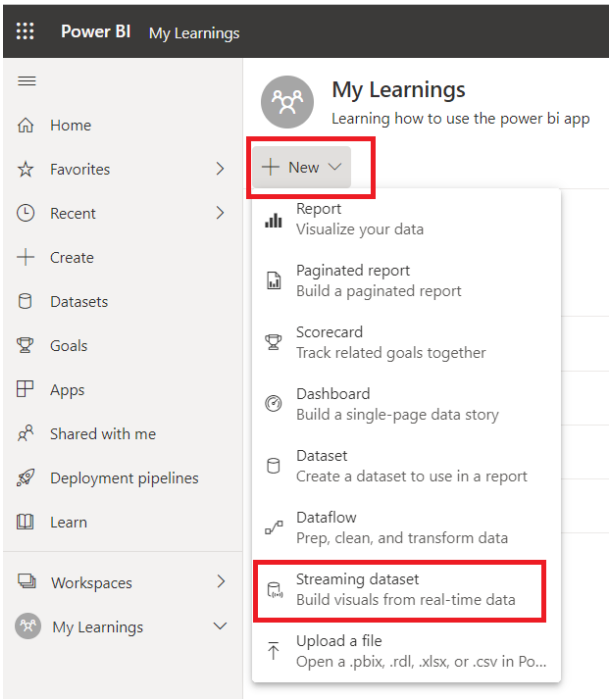
Steps in creating the dashboard

1. You need to login to power BI service in order to create a streaming dataset report and dashboards.

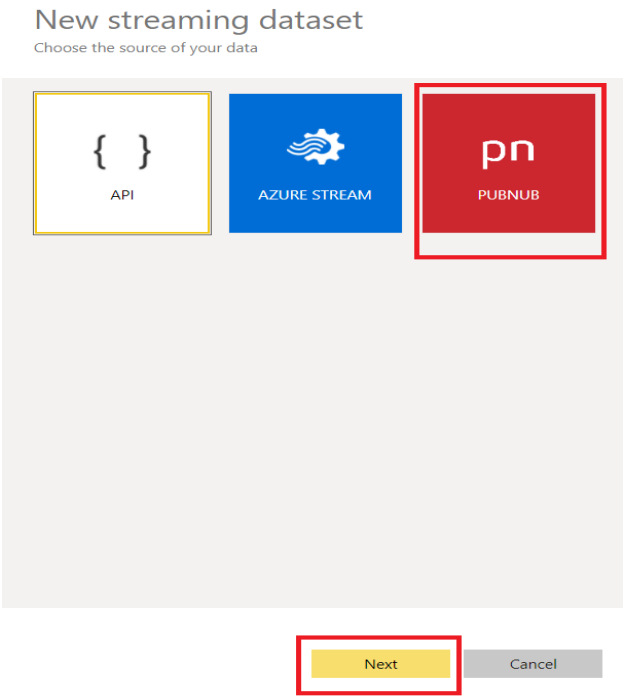
2. Once you are logged in select the workspace wherein you want to create the report. (In my case I have selected my learning in the workspace that I have created).



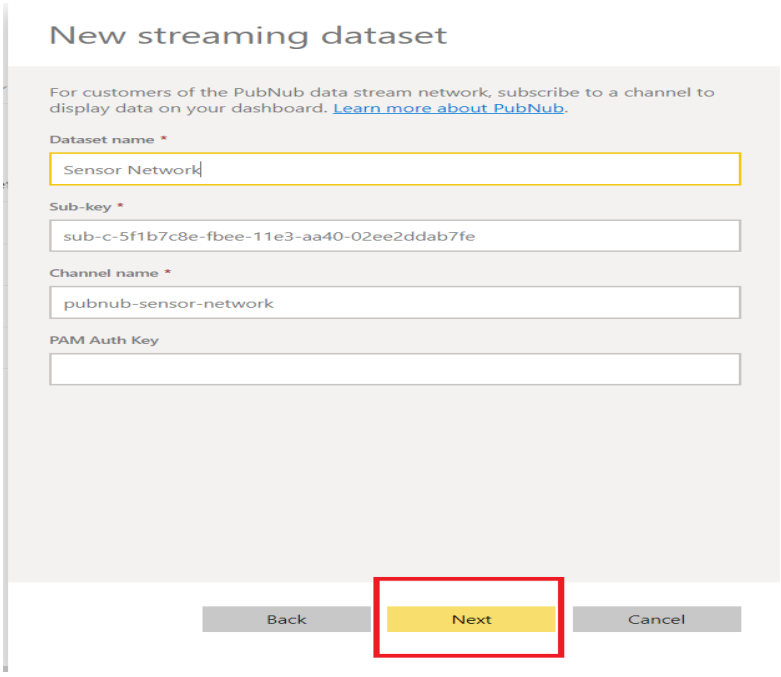
3. Click on my learning or else you can create a new workspace as well. Go to the new option and select the streaming dataset



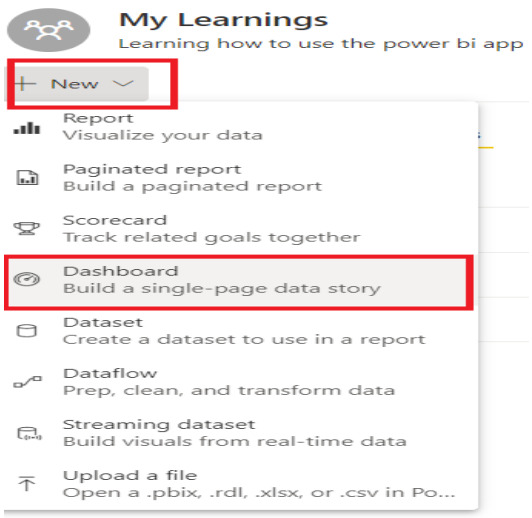
4. As you select the streaming dataset you get three options to choose the source of our streaming data, in our case we are choosing the pub nub option

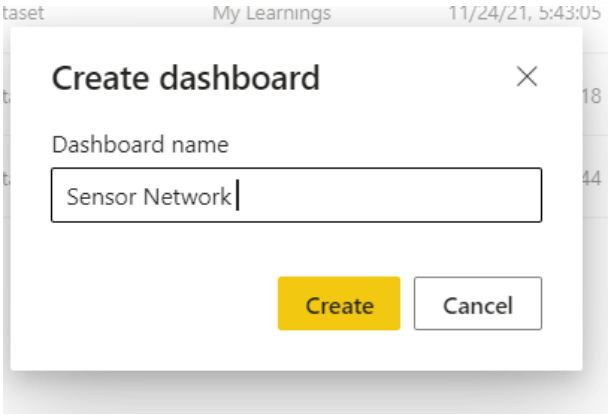


5. A new window pops up where in we need to enter the dreaming dataset details such as the name, subkey, channel name which can be fetched from the below attached link [Sensor Network Real-time Data Stream | Pub Nub]

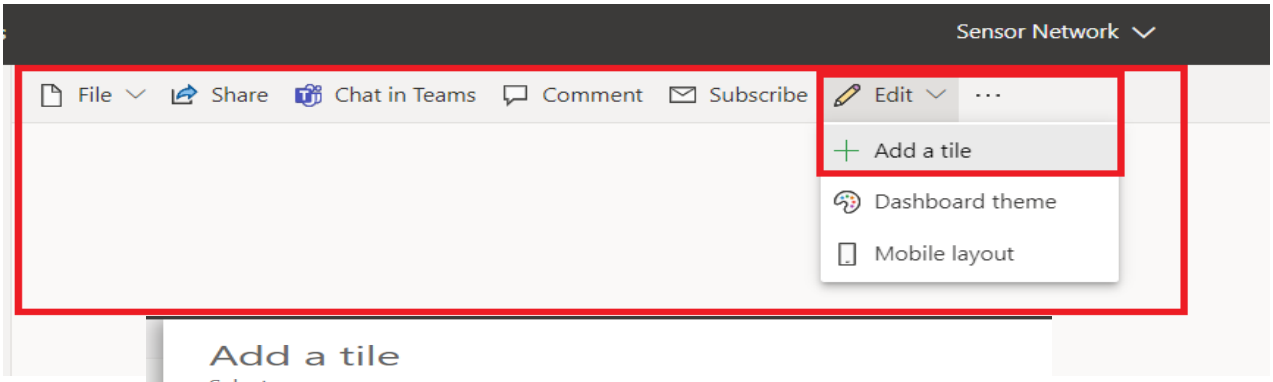


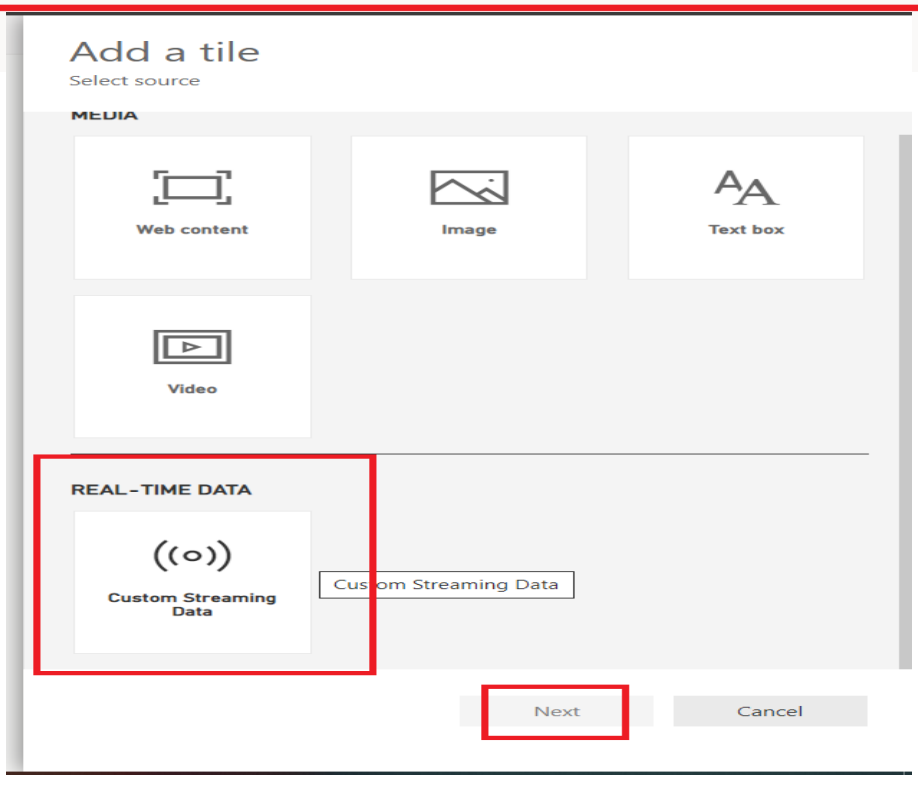
6. So, as we now have the data lets build the dashboard. Go to new this time select dashboard



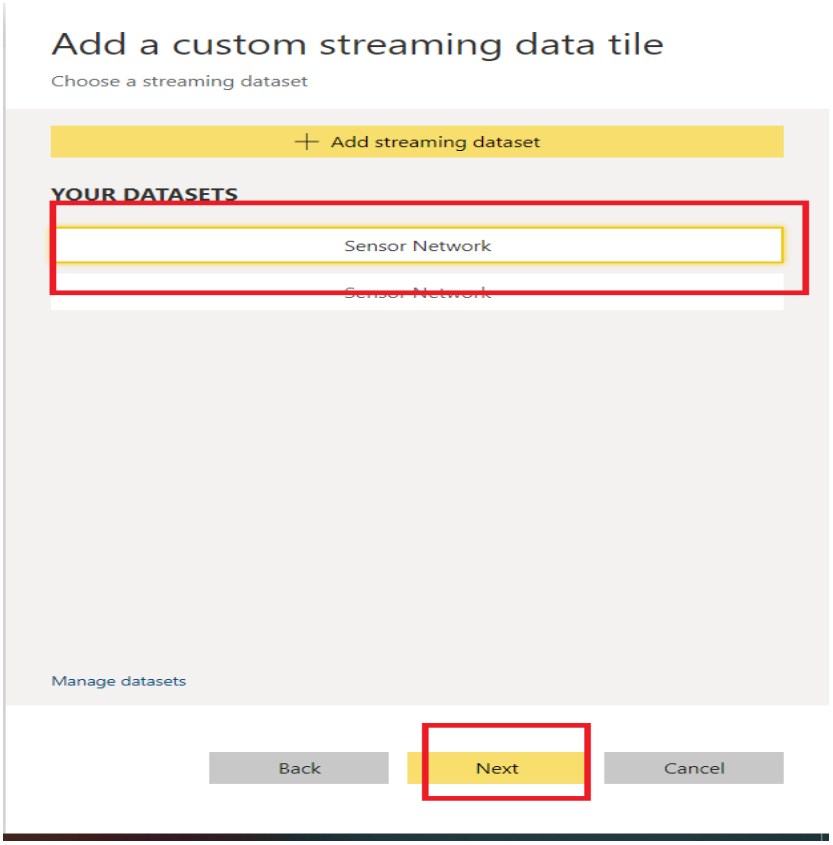


7. Go to edit select add a tile and select the real time data option

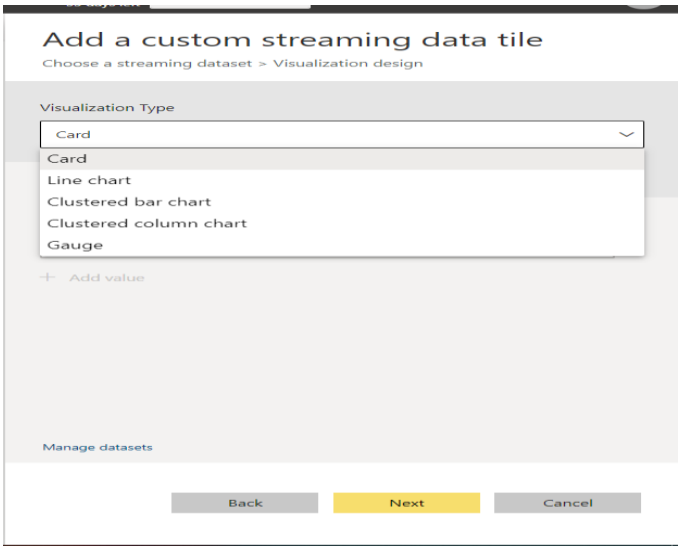




8. select the dataset that you have fetched from pub nub



9. Choose the visualisation that your intent to use and create the dashboard. We can use other isolations and create a dynamic dashboard as we intent to.



10. The dashboard I created using the pub nub streaming dataset is