



Mobiliya Fleet Management

Power BI Deployment - Version 1.1.0

May 2018



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1. About this Guide

This guide is an admin guide for Fleet Management solution provided by Mobiliya. This will walk the user through the usage instructions required for deploying Power BI report.

2. Intended Audience

This guide is intended for admin responsible for deploying Power BI.

3. Pre-requisites

- i. Credentials for signing in to <https://app.powerbi.com>
- ii. You need Microsoft Azure account. You need to have resources deployed using ARM template(as mentioned in Deployment document <https://github.com/MobiliyaTechnologies/MobiliyaFleetARMTemplate.git>).
- iii. Power BI Template file.
To get powerbi template files, you need to clone git repository *MobiliyaFleetPowerBI*. (<https://github.com/MobiliyaTechnologies/MobiliyaFleetPowerBI>).
Once cloned, you will get powerbi template files(.pbit) in *Templates* folder.

4. Setup

a. Software Setup

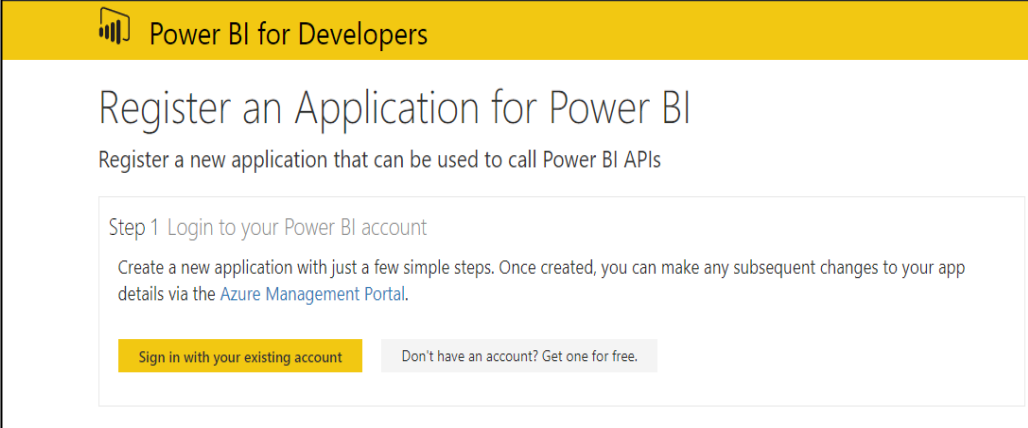
1. Power BI Desktop should be installed.

5. Register with the Power BI App Registration Tool

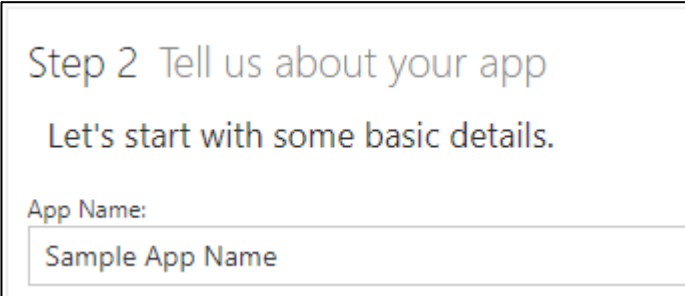
You need to register your web application in Azure Active Directory to establish an identity for your application and specify permissions to Power BI REST resources. Following are the steps to register the application:

- a. Go to <https://dev.powerbi.com/apps>

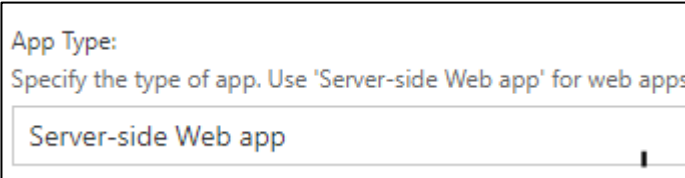
- b. Select Sign in with your existing account and use your Power BI Credentials



- c. Provide an App Name



- d. Choose app type as Server-side Web app



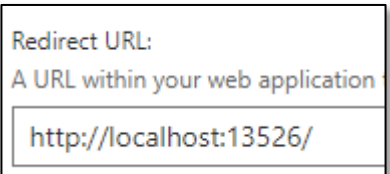
- e. Enter Redirect URL(You can use accelerator portal URL).

Example: <http://localhost:13526/>.

You can get accelerator portal service URL using azure portal (<https://portal.azure.com>).

Open portal in browser and go to

<Resource-group-name> -> < accelerator-portal-service-name> -> Overview-> Web App URL



- f. Enter HomePage URL(You can use accelerator portal URL).

Home Page URL:
The URL for the home page of your application.

<https://powerbiapp.contoso.com>

- g. Choose all the APIs and select Register App

Step 3 Choose APIs to access

Select the APIs and the level of access your app needs.

Dataset APIs	Report and Dashboard APIs	Other APIs
<input checked="" type="checkbox"/> Read All Datasets	<input checked="" type="checkbox"/> Read All Dashboards	<input checked="" type="checkbox"/> Read All Groups
<input checked="" type="checkbox"/> Read and Write All Datasets	<input checked="" type="checkbox"/> Read All Reports	<input checked="" type="checkbox"/> Create Content
	<input checked="" type="checkbox"/> Read and Write All Reports	

- h. Keep the generated Client ID and Client Secret safe as it is required in further steps.

Client ID:

[469875f6-e410-4181-8fcd-77bb1f261783](#)

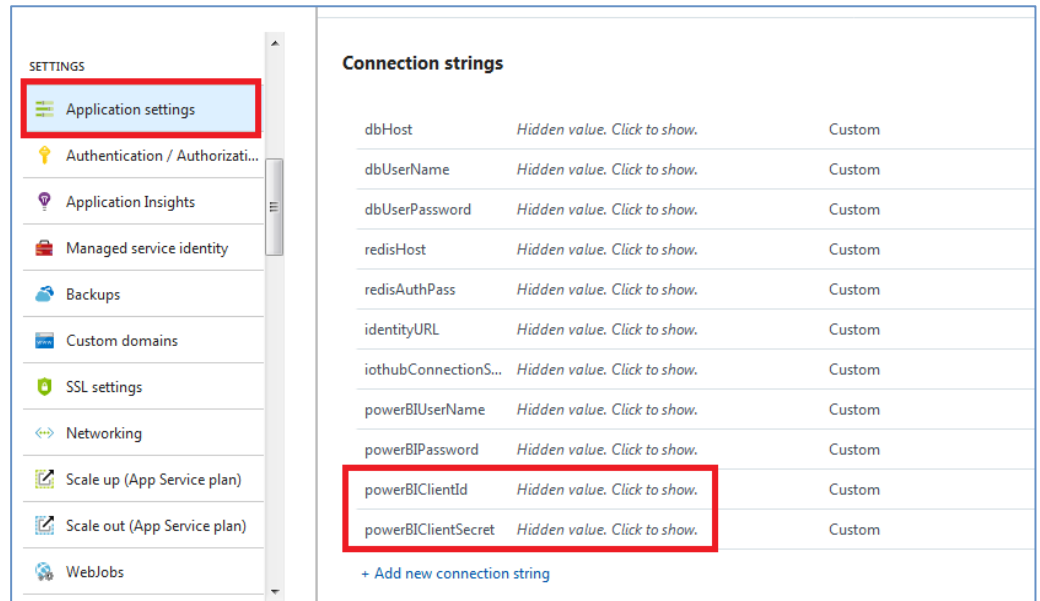
Client Secret:

[vnGJT9lr4c0JkExLKssUbpPWXIoJyxi1souZxW5B0sM=](#)

Note: You need to update *Client ID* and *Client Secret* in *fleet service*.(Refer below)

- Open <https://portal.azure.com> in browser.
- Navigate to <Resource-group-name> -> <Fleet-service-name>

iii. Update necessary fields in Application Settings(Left Panel) as shown below:



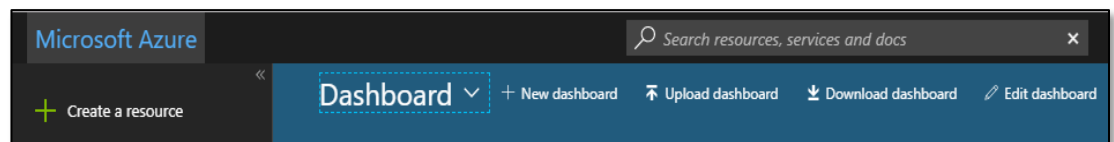
The screenshot shows the Azure Application Settings interface. On the left, the 'SETTINGS' panel has 'Application settings' selected. On the right, the 'Connection strings' table lists various settings. The 'powerBIClientId' and 'powerBIClientSecret' rows are highlighted with a red box.

Setting Name	Value	Type
dbHost	Hidden value. Click to show.	Custom
dbUserName	Hidden value. Click to show.	Custom
dbUserPassword	Hidden value. Click to show.	Custom
redisHost	Hidden value. Click to show.	Custom
redisAuthPass	Hidden value. Click to show.	Custom
identityURL	Hidden value. Click to show.	Custom
iothubConnectionS...	Hidden value. Click to show.	Custom
powerBIUserName	Hidden value. Click to show.	Custom
powerBIPassword	Hidden value. Click to show.	Custom
powerBIClientId	Hidden value. Click to show.	Custom
powerBIClientSecret	Hidden value. Click to show.	Custom

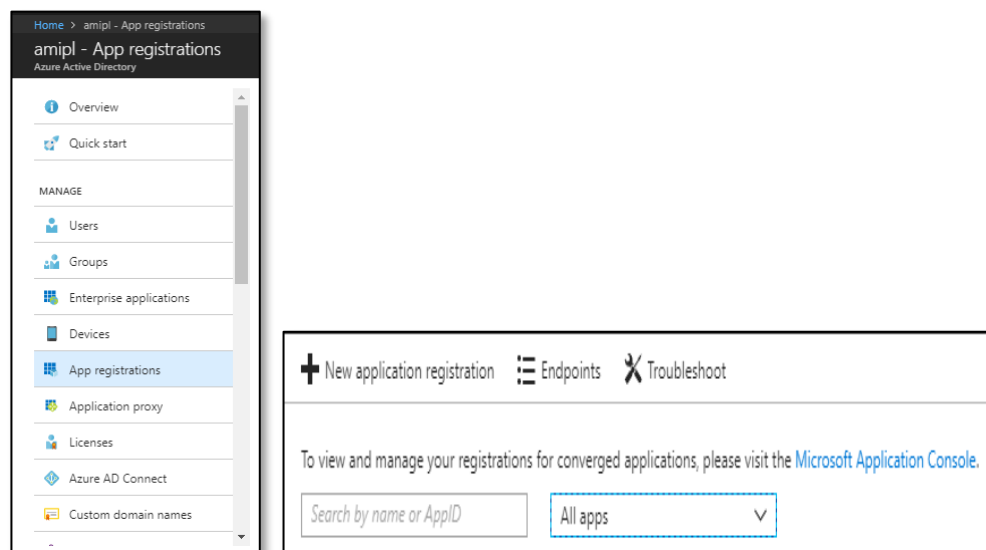
+ Add new connection string

6. Apply Permissions to your application within Azure AD

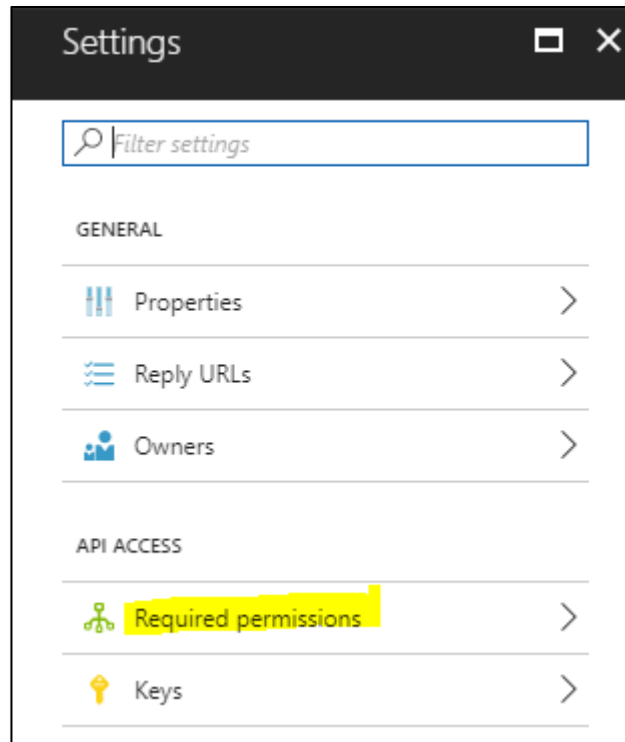
- Go to <https://portal.azure.com> and sign in with your azure portal (the one where you are creating resources like web apps, database servers etc) credentials used to register the web app in previous step.



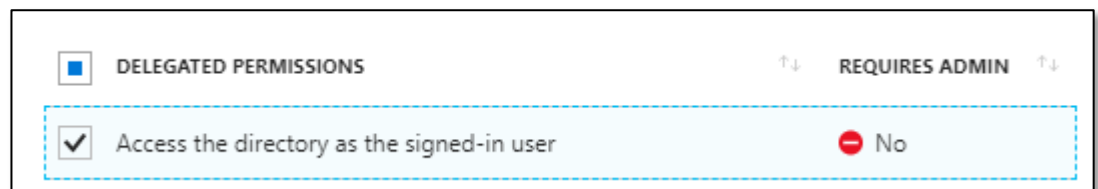
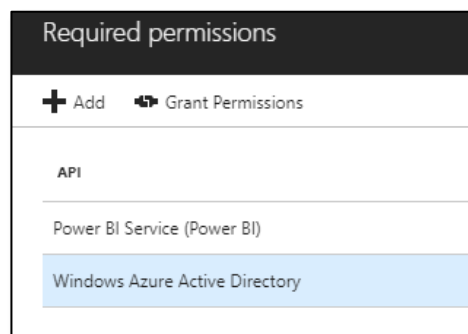
- Go to **Active Directory** and browse to **App registrations**, choose **All Apps** and search for the app created in Step 5.



- c. Select the App, click on **Settings** and click on **Required Permissions** under **API Access**.



- d. Select **Windows Azure Active Directory** and then make sure **Access the directory as the signed-in user** is selected. Select **Save**.



- e. Within **Required permissions**, select **Power BI Service (Power BI)**.

Required permissions

+ Add

↔ Grant Permissions

API

Power BI Service (Power BI)

- f. Select required permissions under **Delegated Permissions**. Please **unselect** permissions that requires **admin access** if you are not admin. Select **Save** when done.

<input checked="" type="checkbox"/>	DELEGATED PERMISSIONS	↑↓	REQUIRES ADMIN	↑↓
<input checked="" type="checkbox"/>	View all datapools		<input type="radio"/> No	
<input checked="" type="checkbox"/>	Read and write all datapools		<input type="radio"/> No	
<input checked="" type="checkbox"/>	Read and Write all Reports		<input type="radio"/> No	
<input checked="" type="checkbox"/>	View users Groups		<input type="radio"/> No	
<input checked="" type="checkbox"/>	View all Groups		<input type="radio"/> No	
<input checked="" type="checkbox"/>	View all Reports (preview)		<input type="radio"/> No	
<input checked="" type="checkbox"/>	Create content (preview)		<input type="radio"/> No	
<input checked="" type="checkbox"/>	View content properties (preview)		<input type="radio"/> No	

- g. Within **Required permissions**, select **Grant Permissions**.

Required permissions

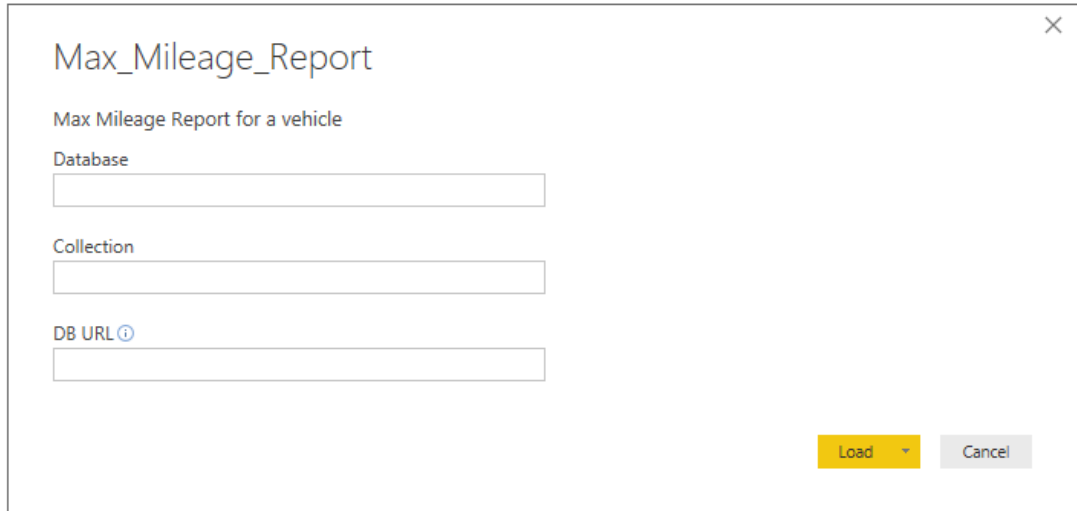
+ Add

↔ Grant Permissions

7. Publish Power BI Report

Go to the folder you have cloned in prerequisites.
MobiliyaFleetPowerBI-> Templates

- Open the Power BI template file.
- Enter details to connect back-end with the report and click on **Load**.



Max_Mileage_Report

Max Mileage Report for a vehicle

Database

Collection

DB URL ⓘ

Load Cancel

Note:

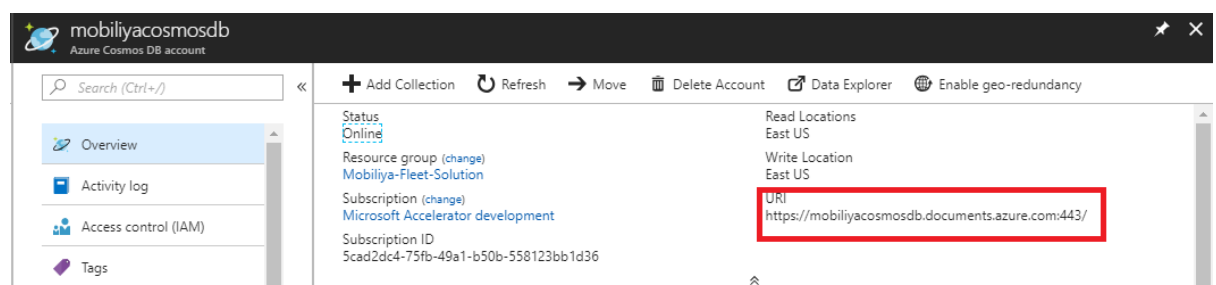
Database name is of format '**fleet_<your_tenant_id>_db**'. (For database name, please visit <https://portal.azure.com>). Copy sql database name having prefix "**fleet**" as shown in above format.

Collection name can be one of the following based on what reports you are generating:

- Faultdatas (For *fault_codes* report)
- Vehiclehistories (for all reports except *fault_codes* and *Dashboard_Inventory_Report*)

DB URL : you can retrieve cosmosdb URL from portal. Visit <https://portal.azure.com>

Go to <Resource-group> -> <cosmosdb-account-name>. (Refer below image)

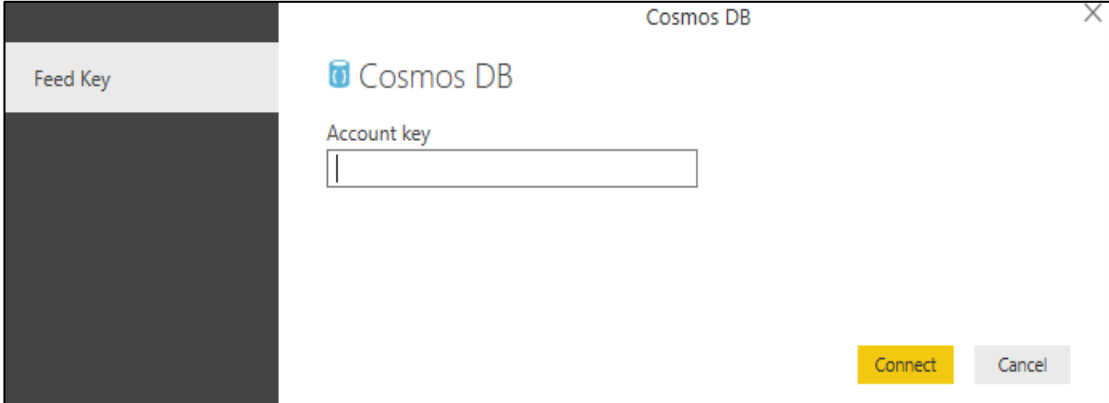


You can then copy **PRIMARY PASSWORD** from **Connection Strings** and use it as "**Account key**" in below steps. (refer image)



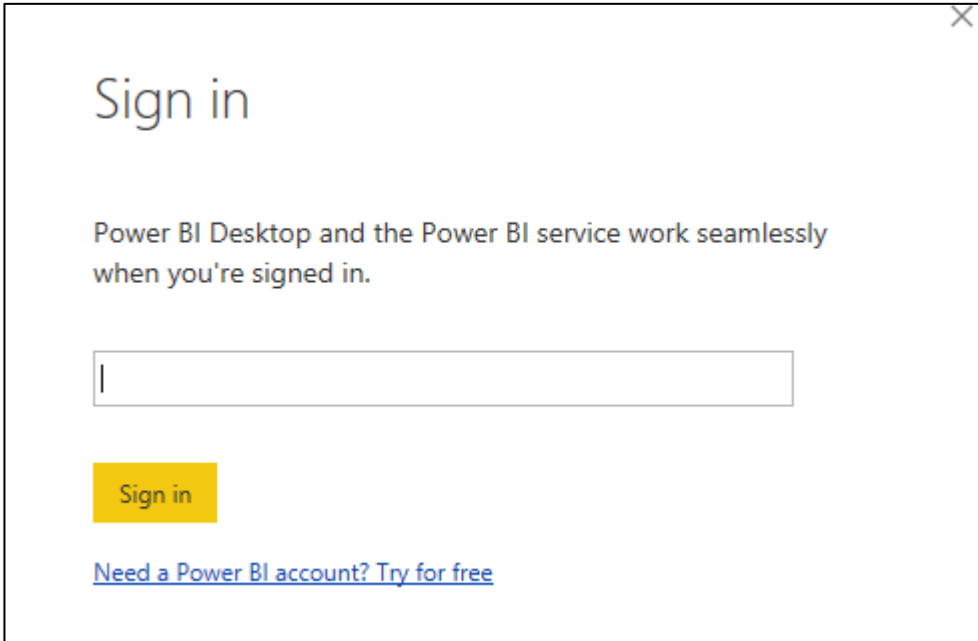
For *Dashboard_Inventory_Report.pbix* file, you need to follow same steps to retrieve **DB URL**, **Database Name** and **Account Key** for sql server as above.

- c. You will be prompted for **Account Key** of **Cosmos DB**, enter the key and click on **Connect**.



The image shows a dialog box titled "Cosmos DB" with a close button (X) in the top right corner. On the left, there is a dark sidebar with a "Feed Key" button. The main area of the dialog box has the "Cosmos DB" logo and the text "Account key" above a text input field. At the bottom right, there are two buttons: "Connect" (yellow) and "Cancel" (gray).

- d. After the data has loaded successfully, click on File > Save and give any name to the file.
- e. Now click on **Publish**. You will be prompted to enter the Power BI account credentials. Enter the same and choose a workspace where you want the report to be. Default is **My Workspace** if you have not created any.



The image shows a "Sign in" dialog box with a close button (X) in the top right corner. The title "Sign in" is at the top. Below it, the text reads: "Power BI Desktop and the Power BI service work seamlessly when you're signed in." There is a text input field for the email address. Below the input field is a yellow "Sign in" button. At the bottom, there is a blue link that says "Need a Power BI account? Try for free".

8. Retrieve Report ID of the published report

- a. Go to <https://app.powerbi.com> and sign in using your credentials.

- b. Go to reports section and open the report which was published in Step 7.
- c. Note down the Report ID shown in the browser URL window. Report ID starts after **../reports/** and before **/ReportSection**

<https://app.powerbi.com/groups/me/reports/19fea1c9-a304-4ba9-9491-8acff5097794/ReportSection>

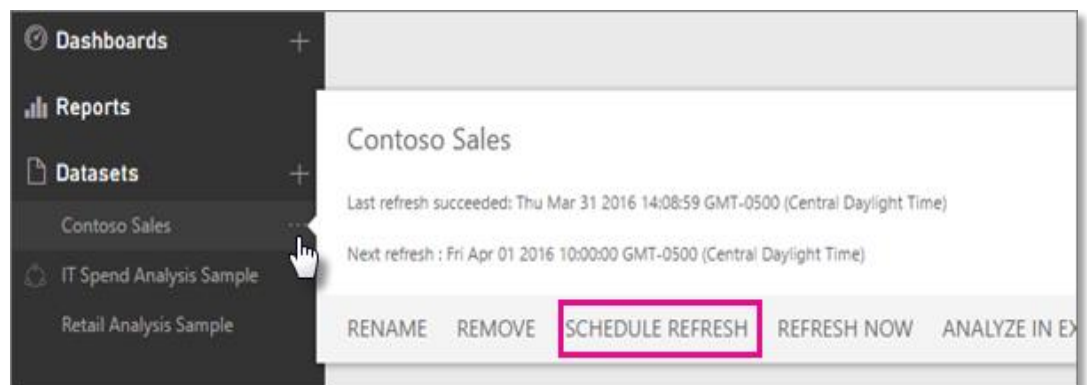
- d. Final URL which is used to **embed** the report has the following structure:
<https://app.powerbi.com/reportEmbed?reportId=<Your Report ID>>

Note: You have to insert the report Id generated in above step in SQL Database(Detailed steps mentioned in document *Mobiliya_Fleet_Management_DeploymentGuide.pdf* step 5.2. PowerBI Reports)

9. Schedule Refresh

To get to the schedule refresh screen, you can do the following.

- a. Log in to <https://app.powerbi.com>
- b. Select the ellipsis (...) next to a dataset listed under Datasets.
- c. Select Schedule Refresh.



- d. Choose the schedule as per the requirement.

Note: Data in report is updated every 3 Hours at minimum.