YSOFT SAFEQ®

YSOFT SAFEQ 6
Power BI Template Documentation

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1 INTEGRATE YSOFT SAFEQ WITH POWER BI

1.1 PREREQUISITES

- Downloaded and installed Power BI Desktop: https://www.microsoft.com/en-us/download/details.aspx?id=45331
- Enterprise Reporting is enabled and configured, see more Enterprise Reporting Configuration for more detail.

2 OPTION 1: IMPORT Y SOFT TEMPLATE

To enjoy the full potential of Power BI, one will need to develop a Power BI template for the organizations specific enterprise reporting requirements. However, to get a head-start on such an effort, Y Soft has developed a set of Power BI templates. You can find full description of template import in Power BI Desktop - Import Template article.

3 OPTION 2: CREATE YOUR OWN REPORT

1. Import data from a SQL Server database.

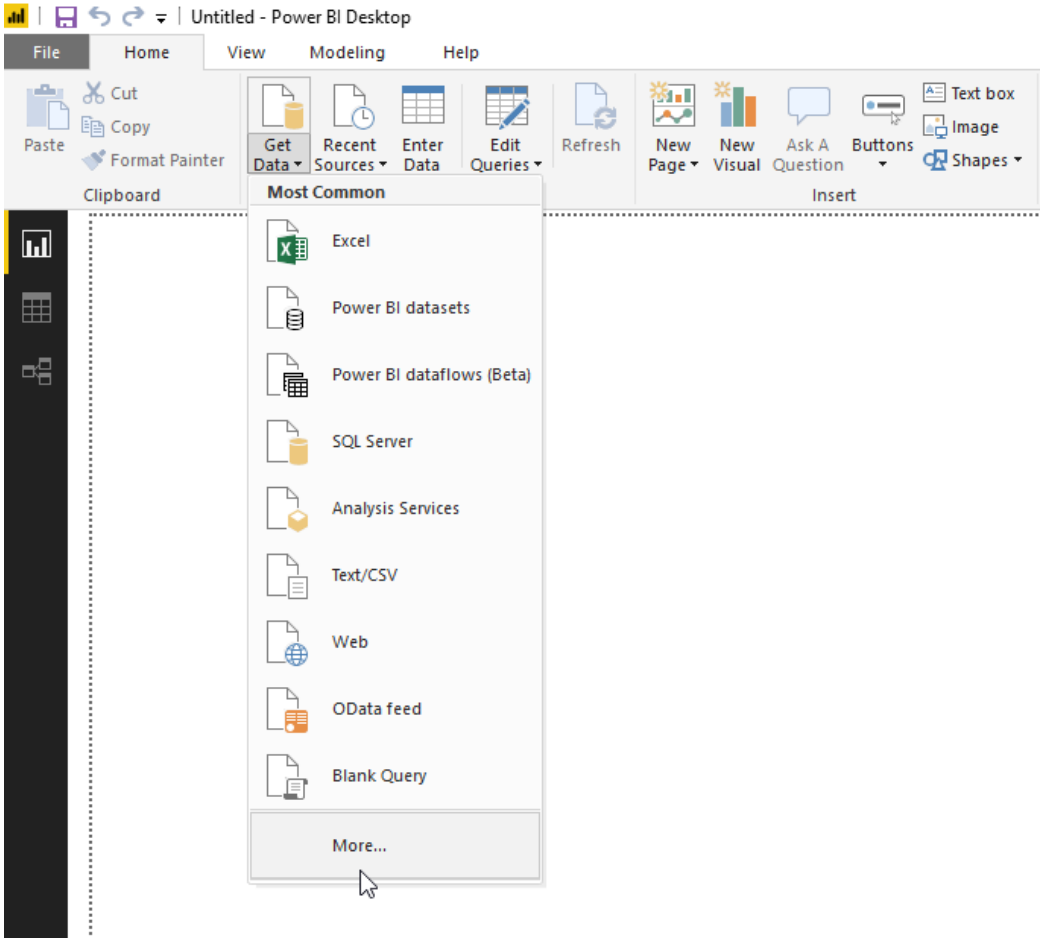
- **PostgreSQL server database engine**:

1.

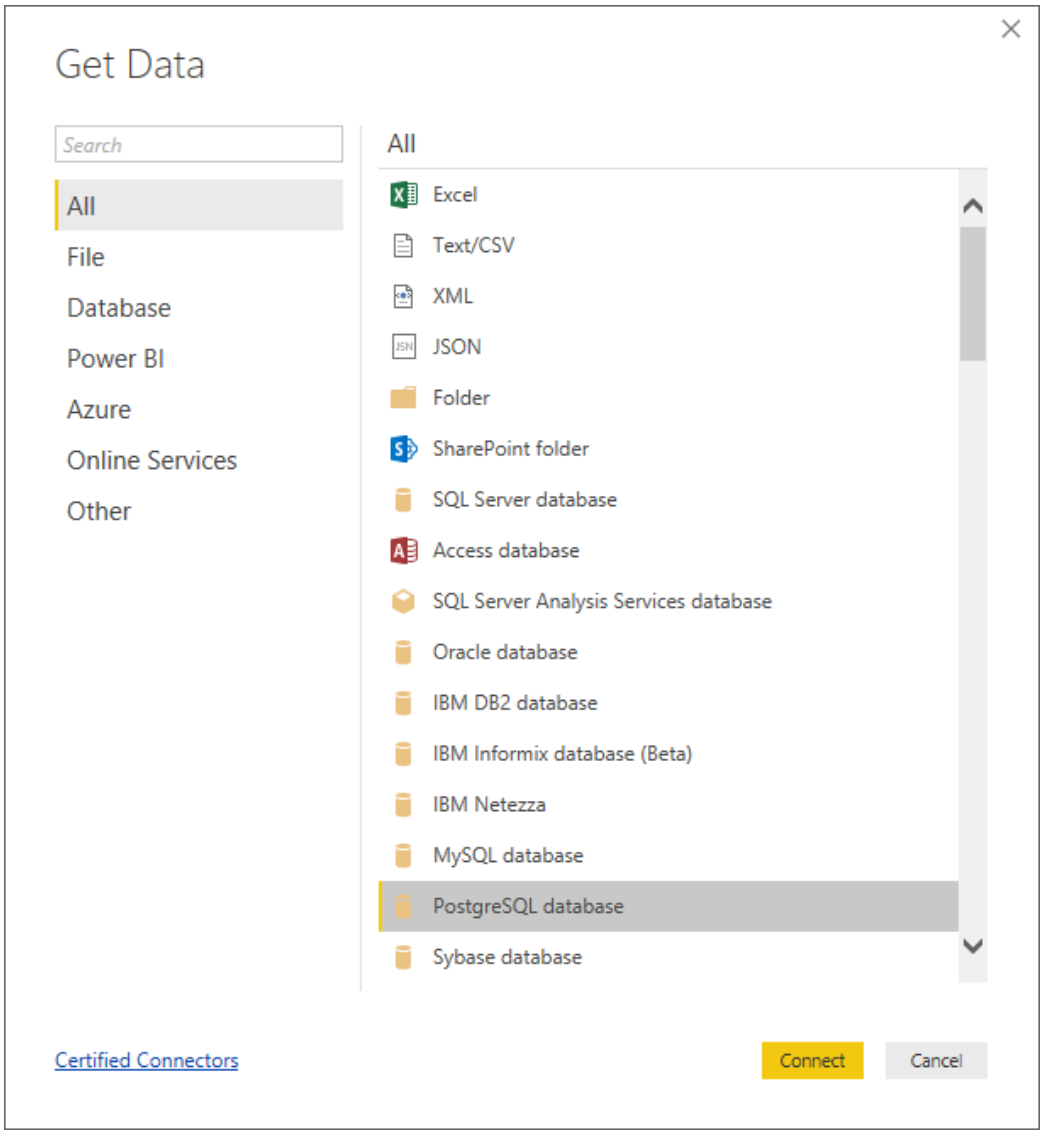
a.

i. Install ODBC driver, see PostgreSQL ODBC driver for Power BI.

ii. Select "**More**" option as shown below.



iii. Select "**PostgreSQL database**" option.



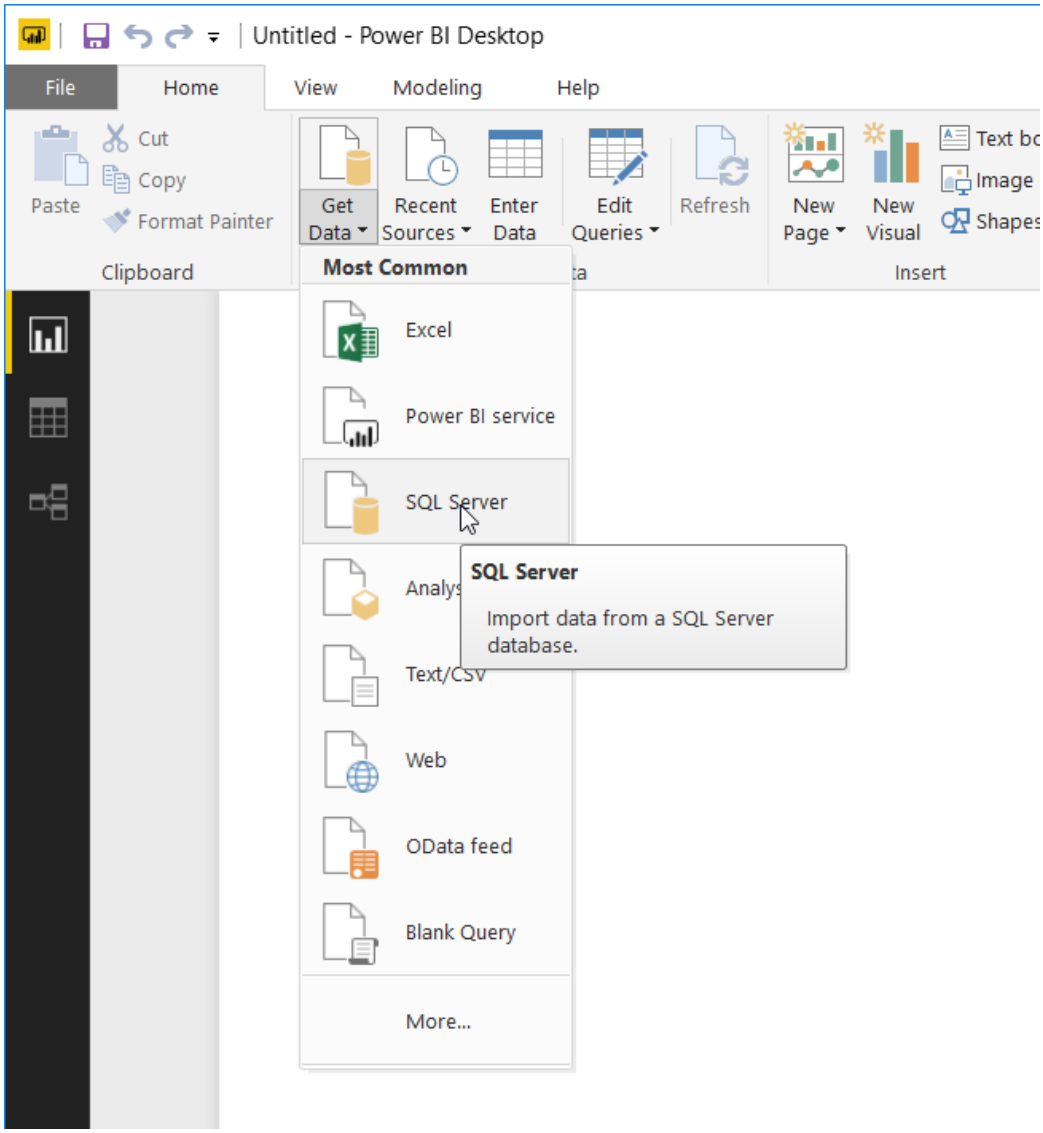
iv. Specify the IP address of the database server and name of the database associated with YSoft SafeQ: At this point you may need to add Npgsql dependency for Power BI.

1. • **MS SQL server database engine:**

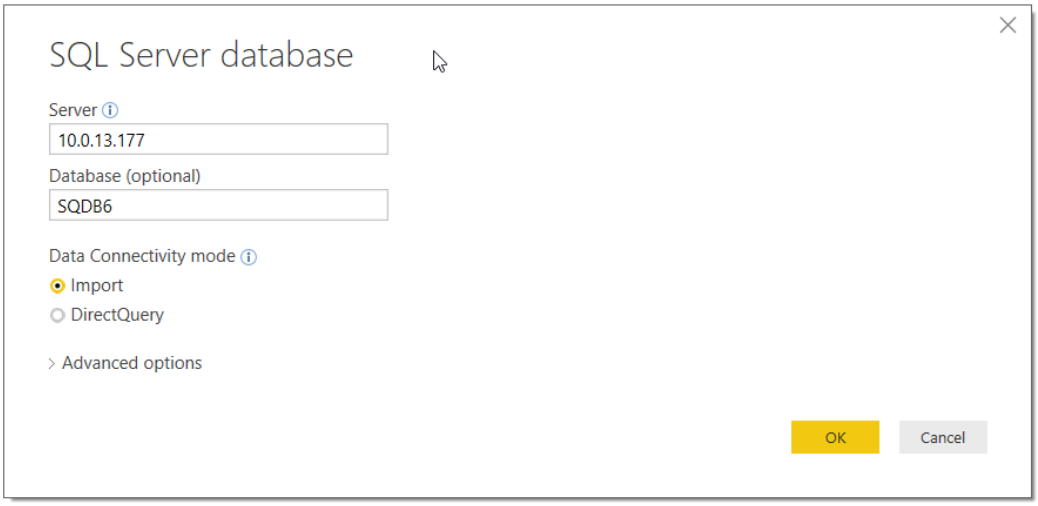
1. a.

i. Install ODBC driver, see MS SQL ODBC driver for Power BI.

ii. Select "**SQL Server**" option as shown below.

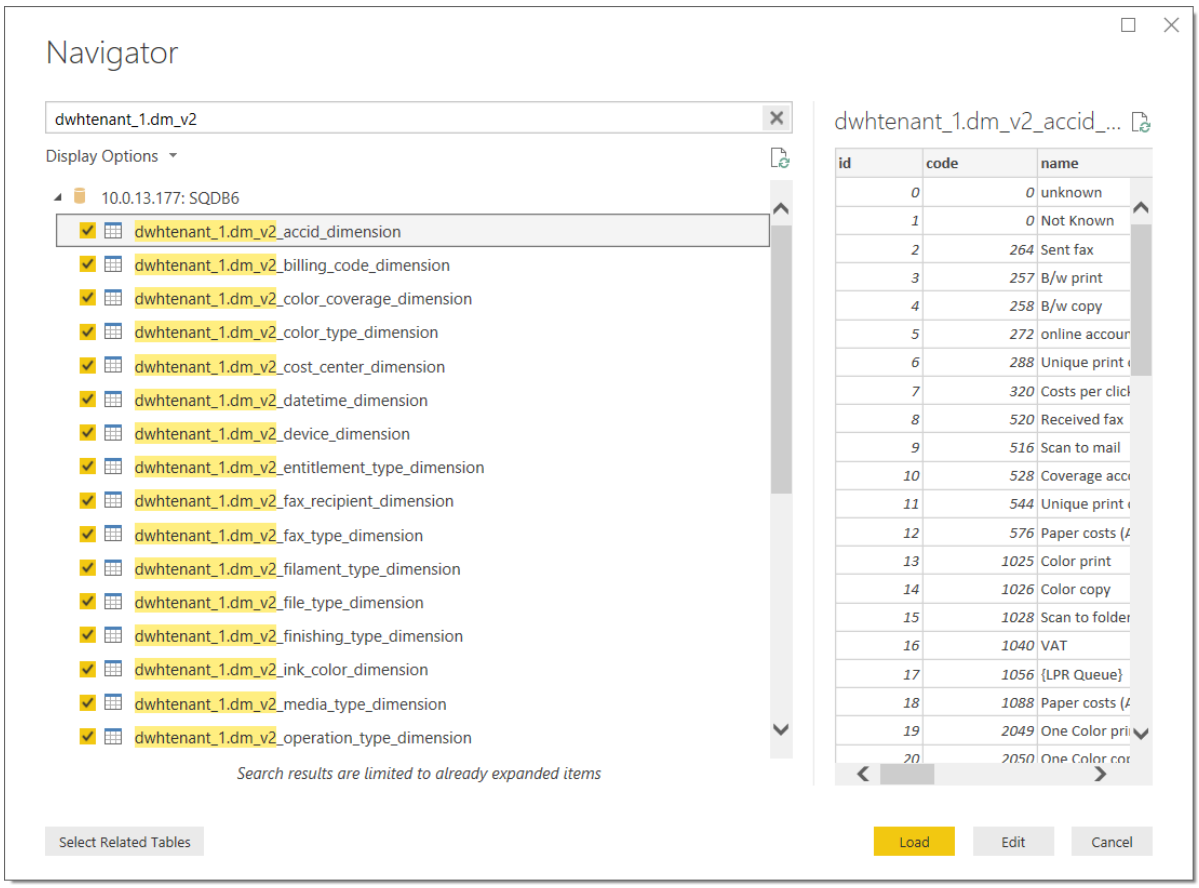


iii. Specify the IP address of the database server and name of the database associated with YSoft SafeQ:

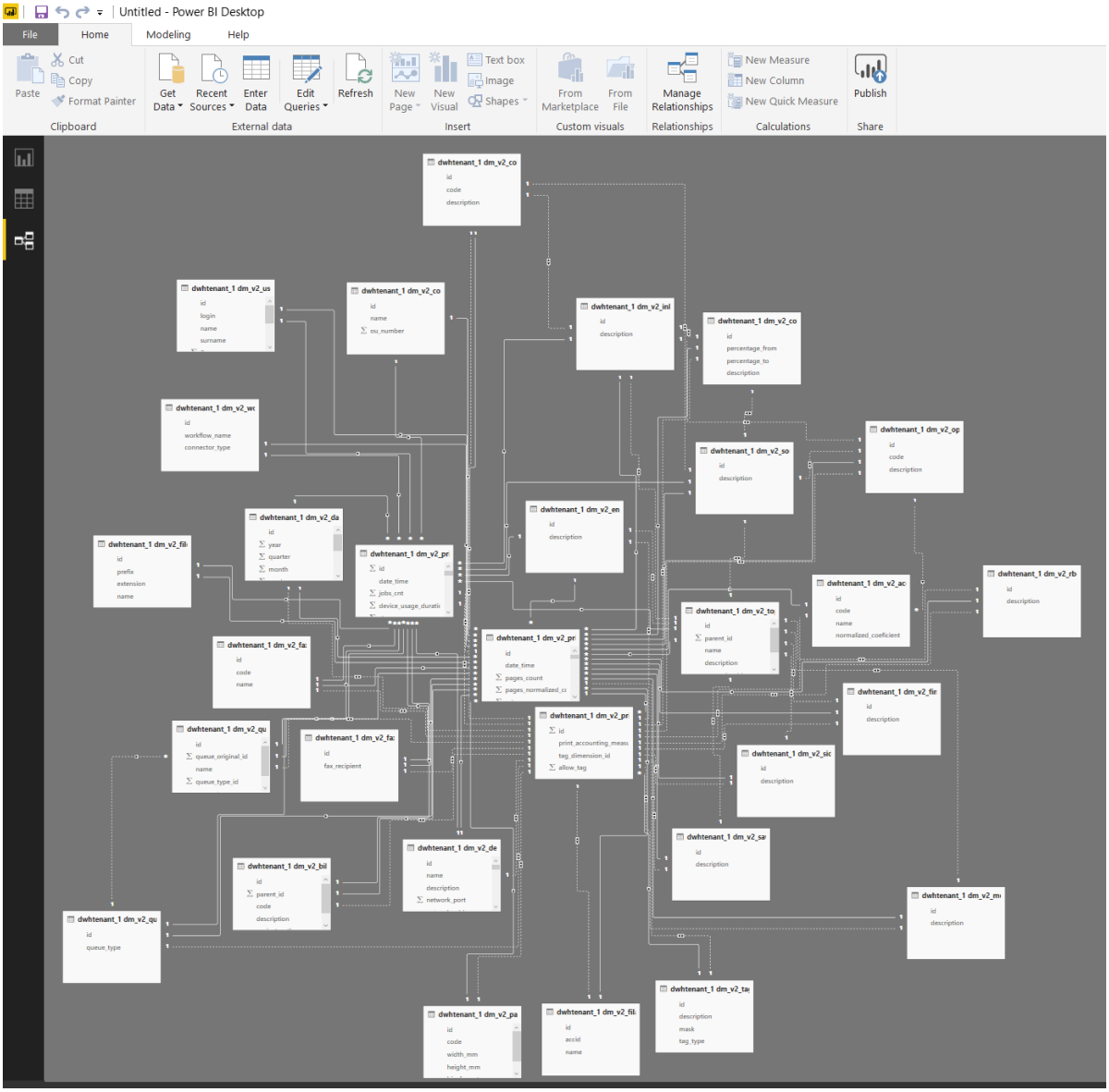


2. **Filter** data mart tables in Navigator and **select** all tables with prefix "dwhtenant_1.dm_v2". Click on **Load** button.

3. Wait for the data to load, this step takes a few minutes, depending on the database size.

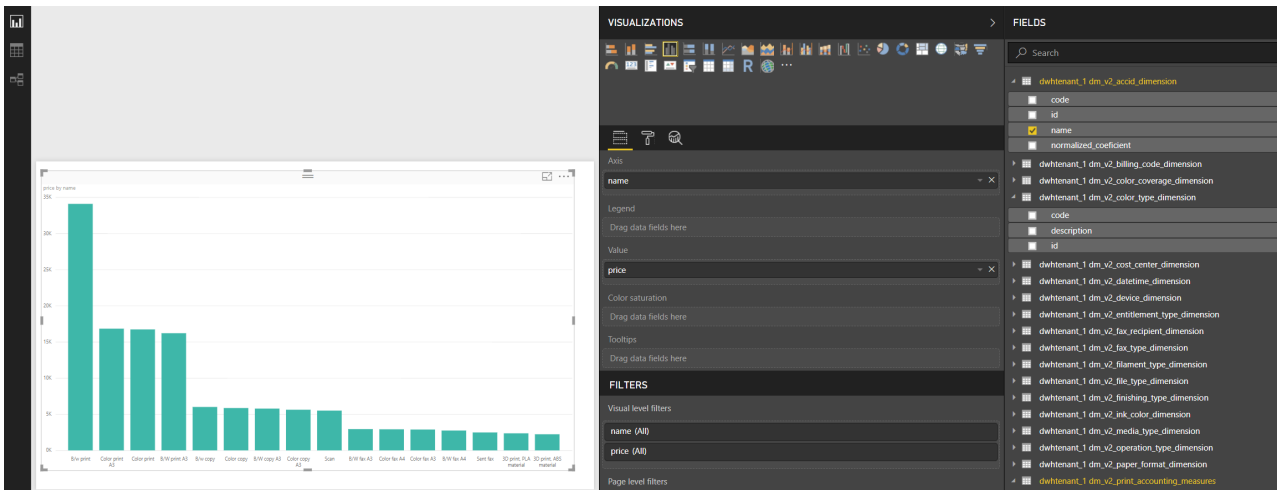


4. Result - The relationship diagram between the tables is available on vertical tab Relationships.



4 ADD A SAMPLE GRAPH

- **Generate Chart** - Select the Power BI report view from the left pane and select various data to create and render different charts. For example, what is depicted is a simple selection of the ACCID dimension rendered into a Bar Chart.



References:

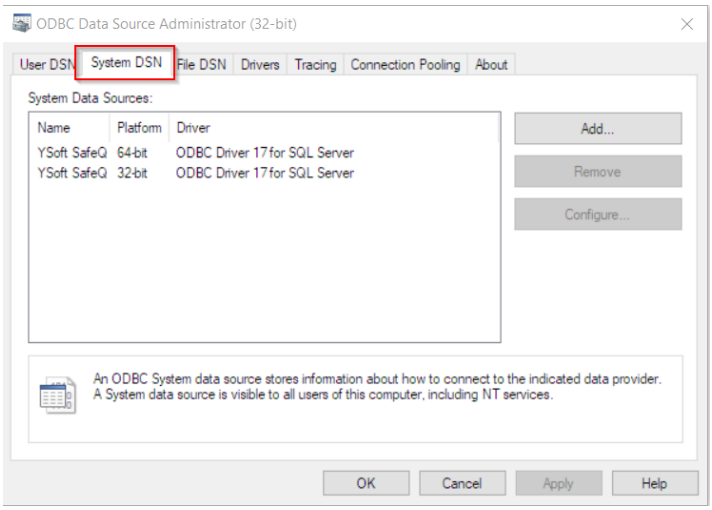
- Microsoft documentation for Power BI designers: https://docs.microsoft.com/en-us/power-bi/power-bi-creator-landing
- Microsoft documentation for Power BI admins: https://docs.microsoft.com/en-us/power-bi/service-admin-administering-power-bi-in-your-organization

5 ACCESSING THE REPORTS

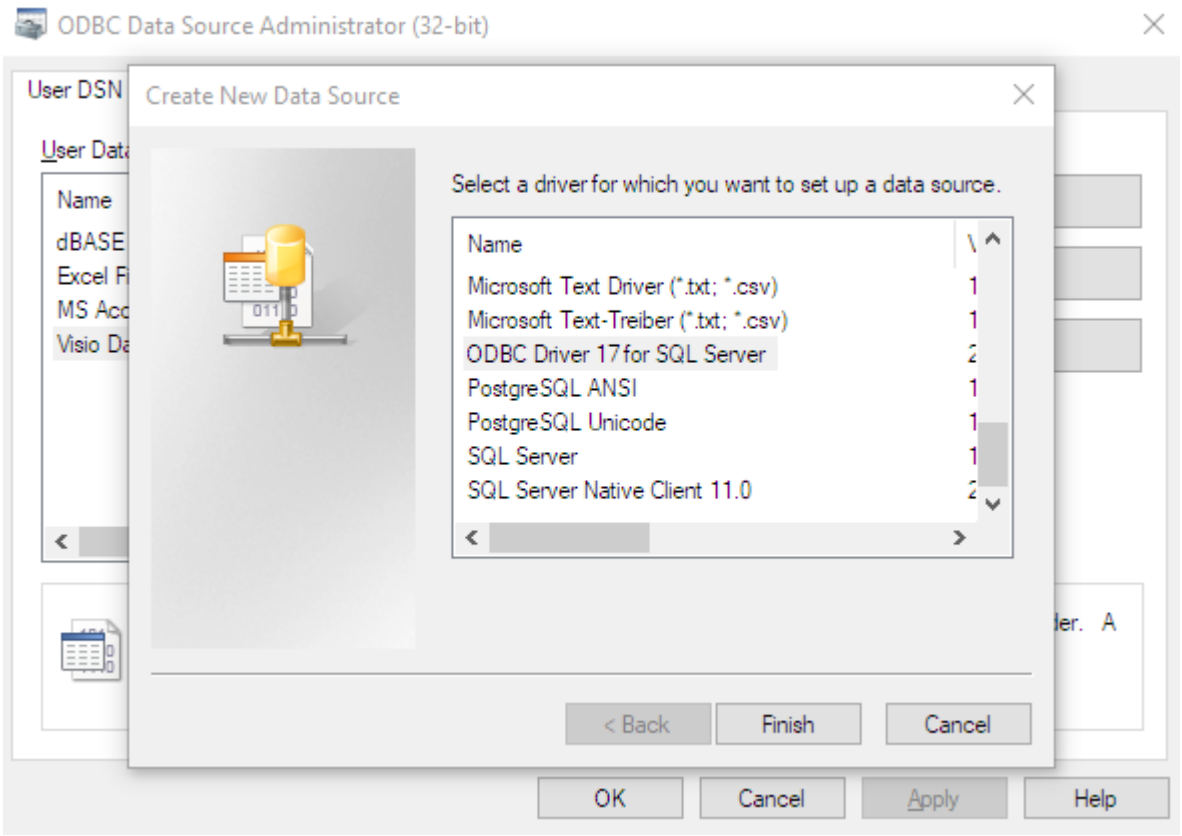
- Quick start guide: https://docs.microsoft.com/en-us/power-bi/consumer/end-user-experience
- Accessing reports as consumers: https://docs.microsoft.com/en-us/power-bi/consumer/power-bi-consumer-landing
- Export to PDF: https://docs.microsoft.com/en-us/power-bi/desktop-export-to-pdf

6 MS SQL ODBC DRIVER FOR POWER BI

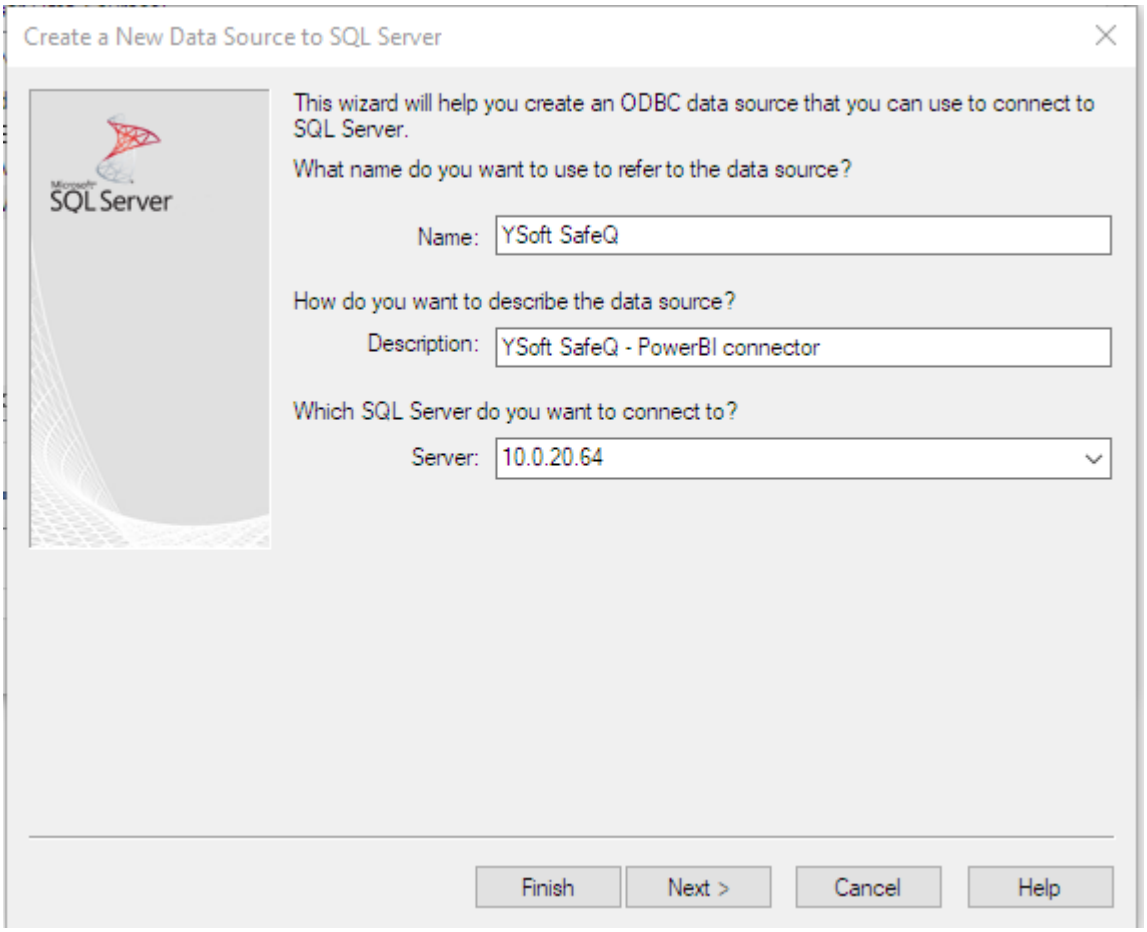
1. Download and install **Microsoft® ODBC Driver 17 for SQL Server®** - https://www.microsoft.com/en-us/download/details.aspx?id=56567
2. Open ODBC Data Source administration for 64bit platform, switch to "System DSN" tab.



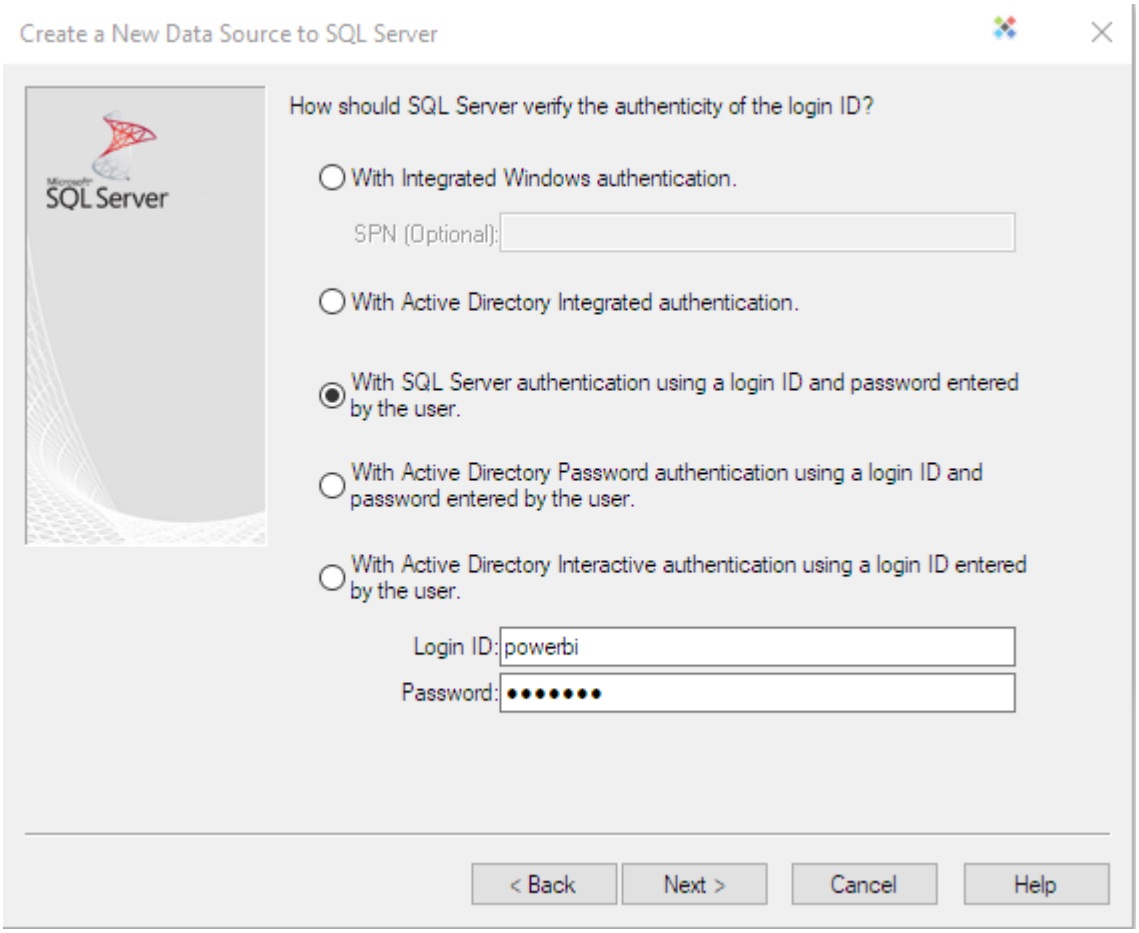
3. Add a new source, select the installed **ODBC Driver 17 for SQL Server**.



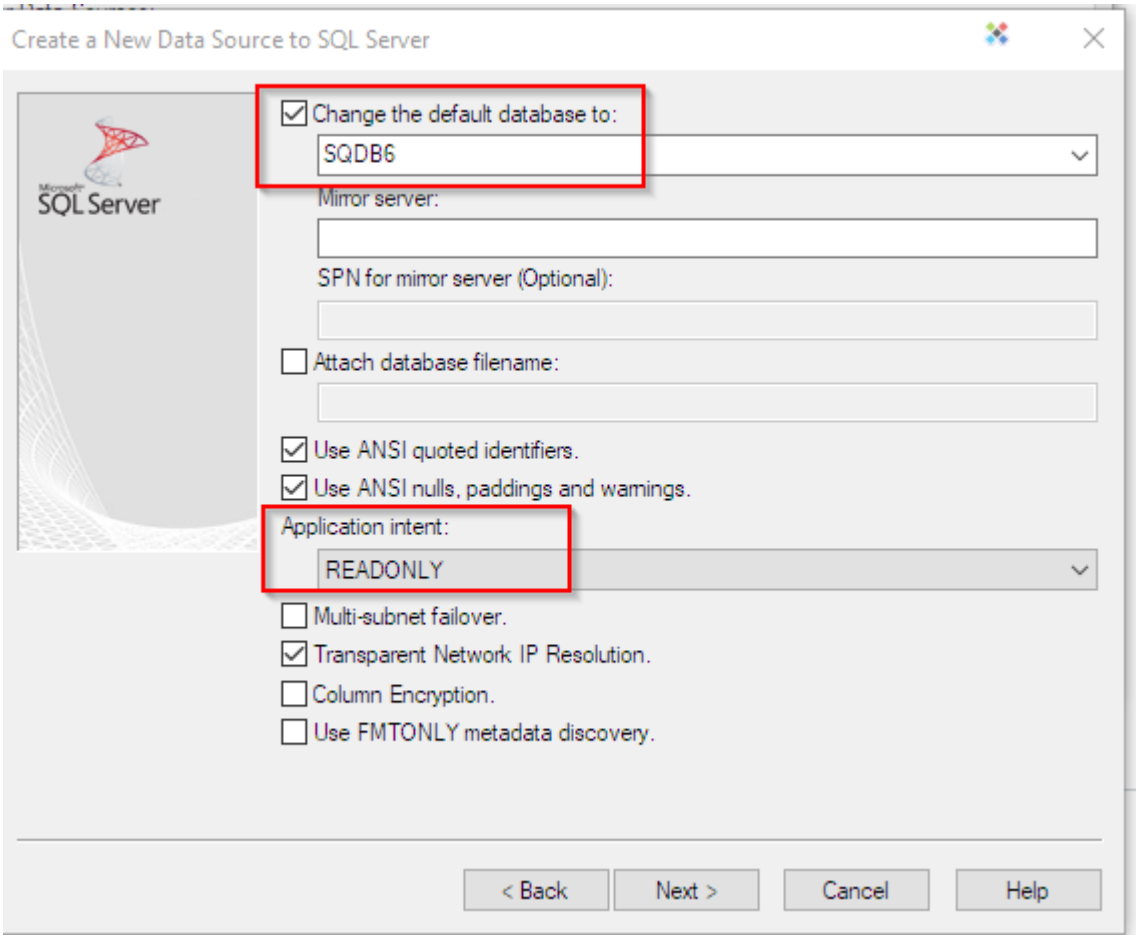
4. Enter database server:



5. Specify database authentication method:

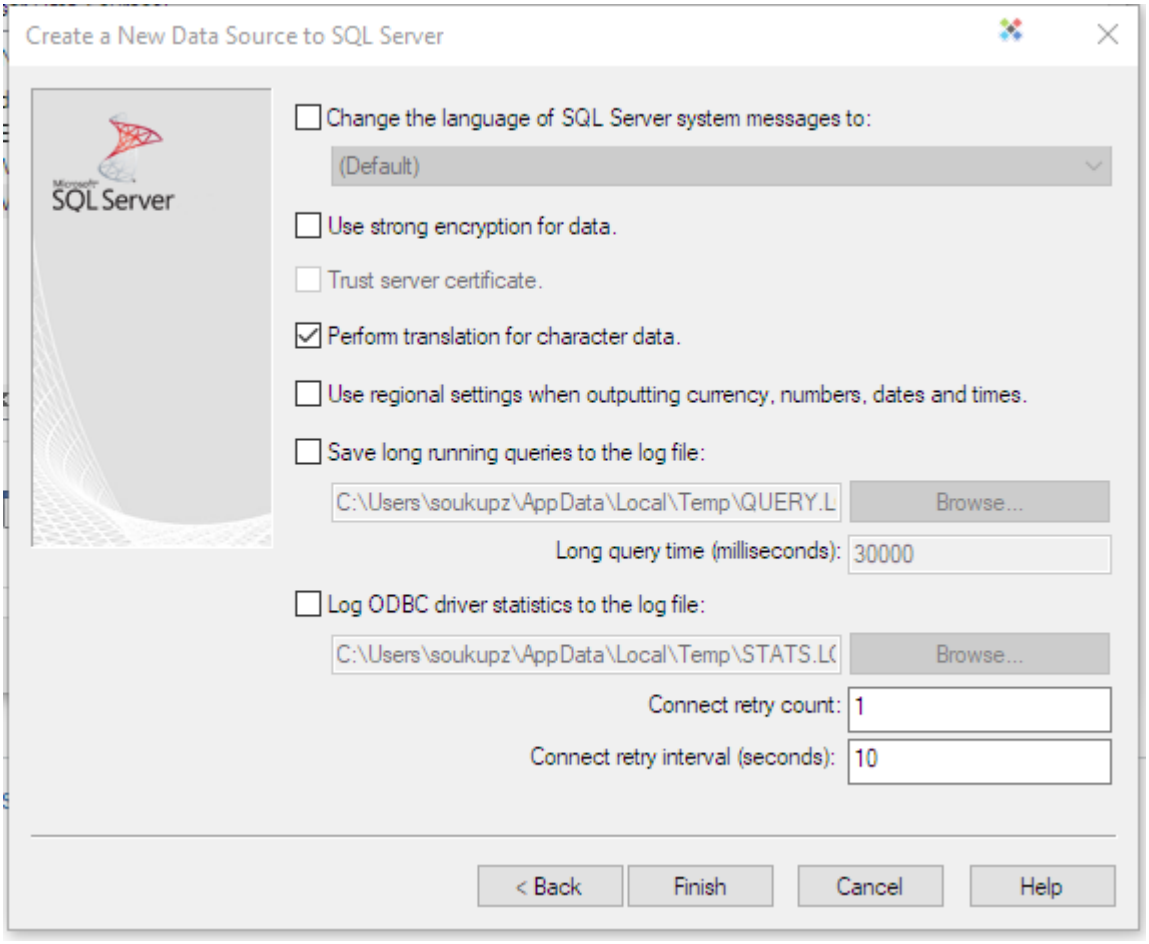


6. Specify database access:
Default database name is SQDB6 or SQDB6_DWH. The namedependson selected database deployment scenario.

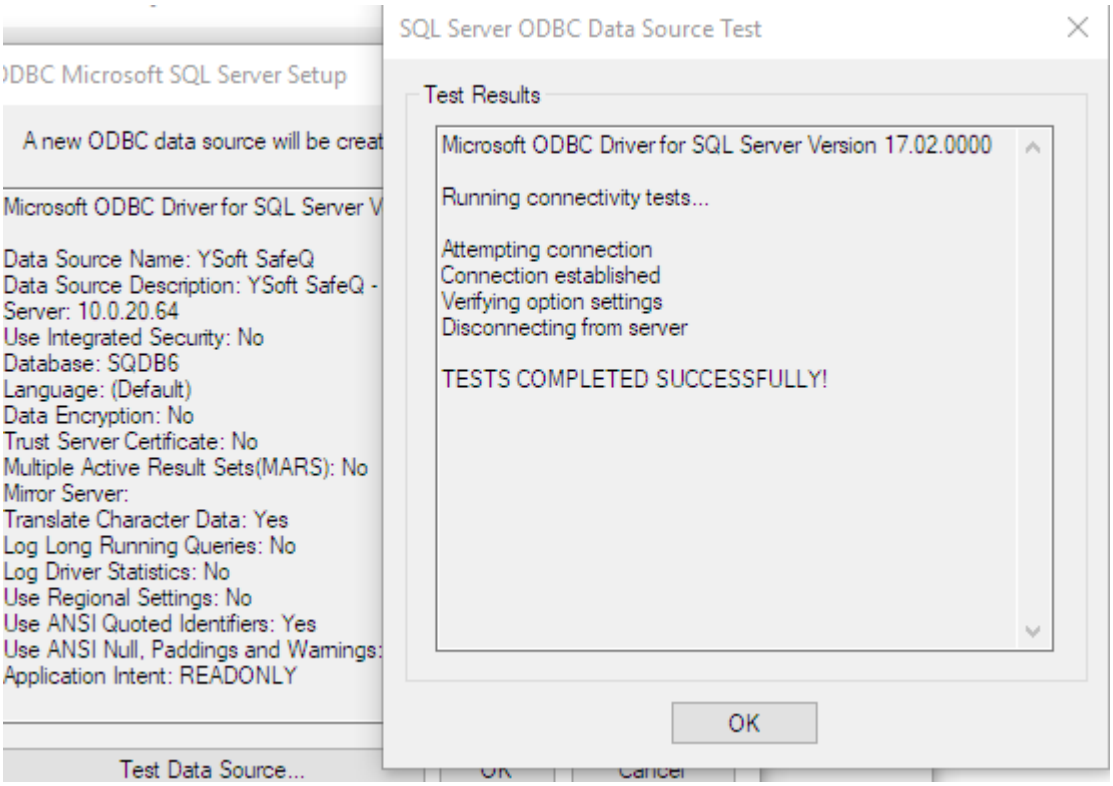


7. No change:

You may need to adjust configuration for data encryption.



8. Finish and test connection:



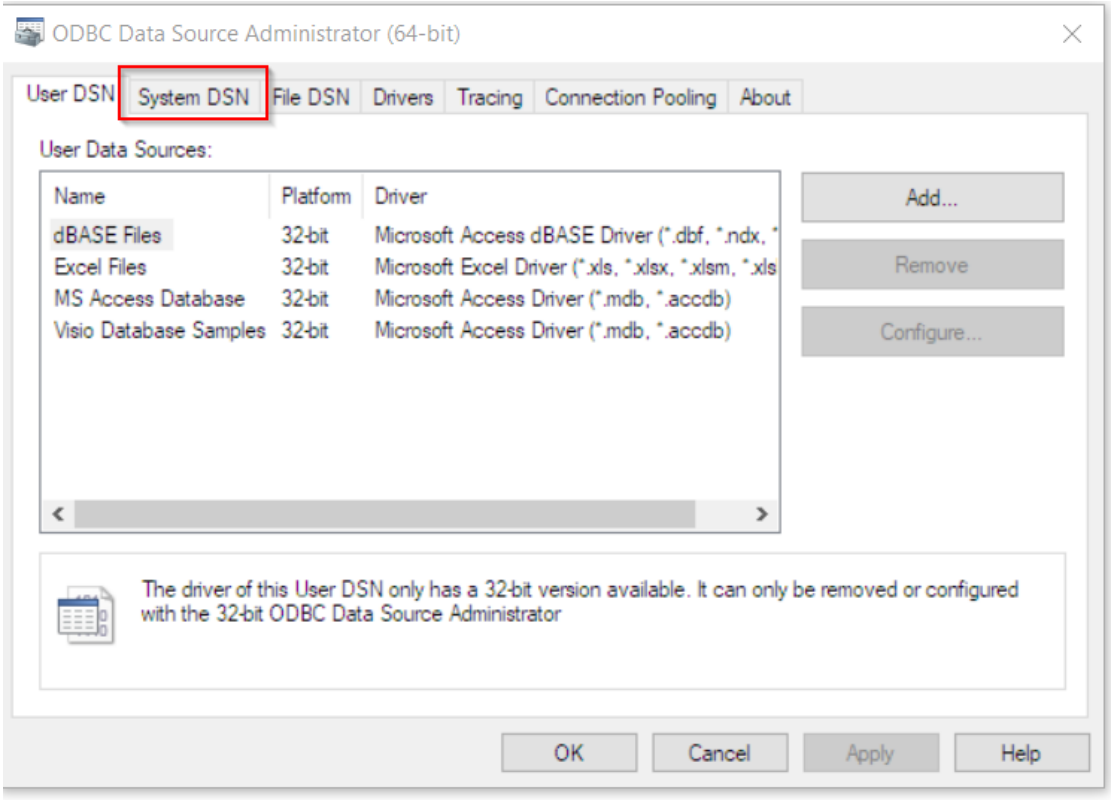
9. Repeat steps 3 to 8 for 32 bit ODBC Data Source as well, use exactly the same name.

Reference:

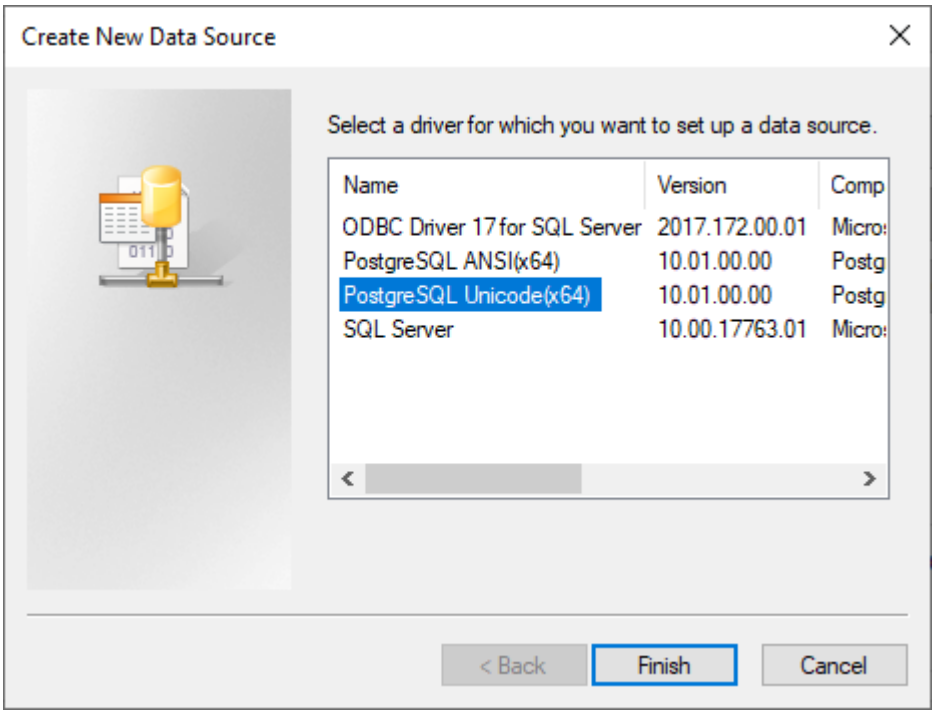
- https://github.com/mkleehammer/pyodbc/wiki/Connecting-to-SQL-Server-from-Windows

7 POSTGRESQL ODBC DRIVER FOR POWER BI

1. Download **PostgreSQL ODBC drivers** for both 32 AND 64 bit form https://www.postgresql.org/ftp/odbc/versions/msi/
2. Install `psqlodbc_10_01_0000-x64.zip` AND `psqlodbc_10_01_0000-x86.zip`
3. Open ODBC Data Source administration for 64bit platform, switch to "System DSN" tab

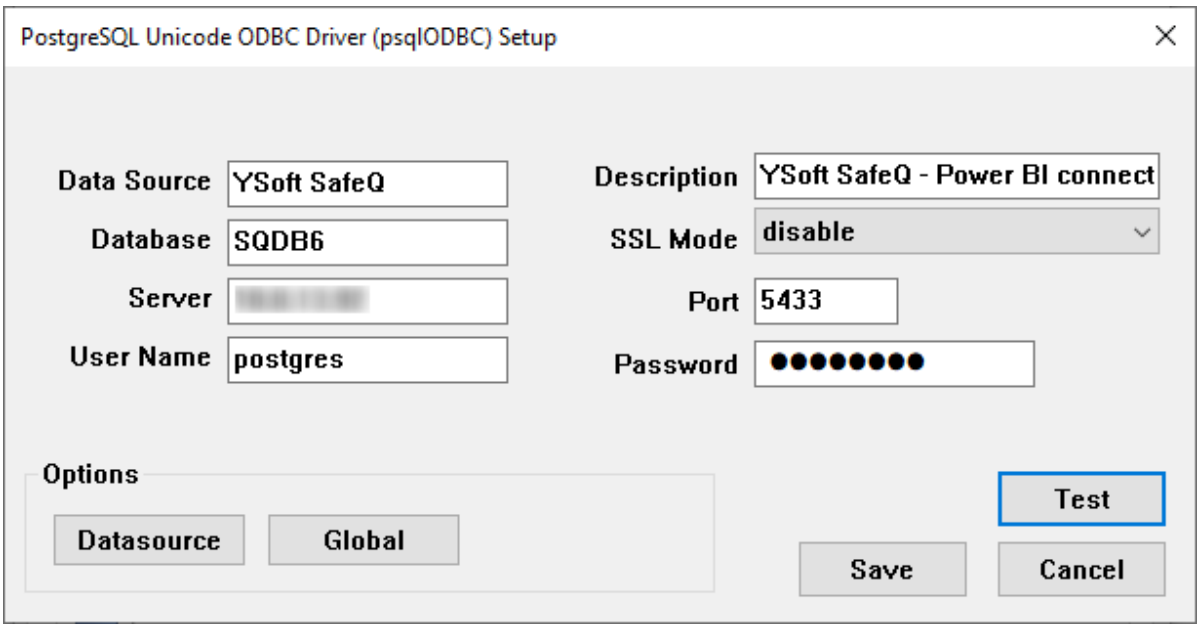


4. Add a new source, select **PostgreSQL Unicode (x64)**.



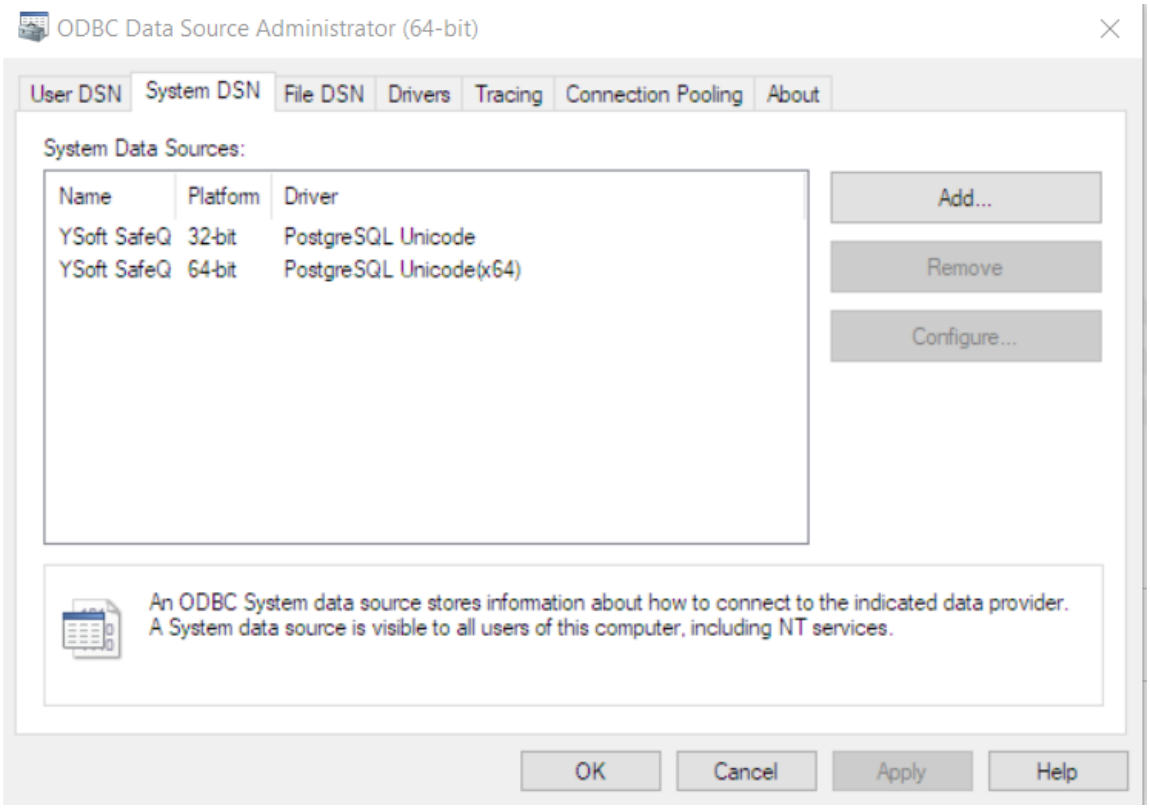
5. Enter database server:

If you want to test connection you have to set all fields. Database, server and username with password could be defined later in Power BI. Default database name is SQDB6 or SQDB6_DWH. The namedependson selected database deployment scenario.



6. Optional: Test connection.
7. Save

8. Repeat steps 3 to 8 for 32 bit ODBC Data Source as well
    a. use exactly the same name,
    b. choose **PostgreSQL Unicode** driver.
9. Once completed, the "System DSN" tab looks as follows:



7.1 ALTERNATIVE CONFIGURATION METHOD:

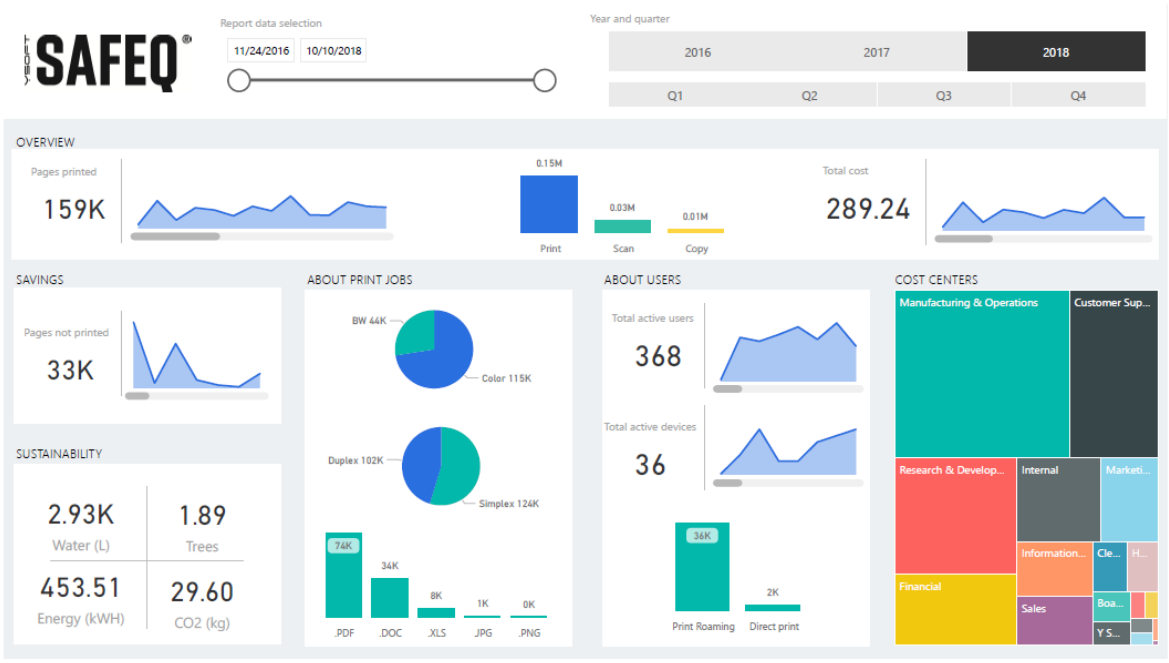
1. Download **PostgreSQL ODBC drivers** for both 32 AND 64 bit form https://www.postgresql.org/ftp/odbc/versions/msi/
2. Install `psqlodbc_10_01_0000-x64.zip` AND `psqlodbc_10_01_0000-x86.zip`
3. ⚠ Adjust variables $dbServer and $db to point to database server and refer database name.
4. Run the PowerShell script:

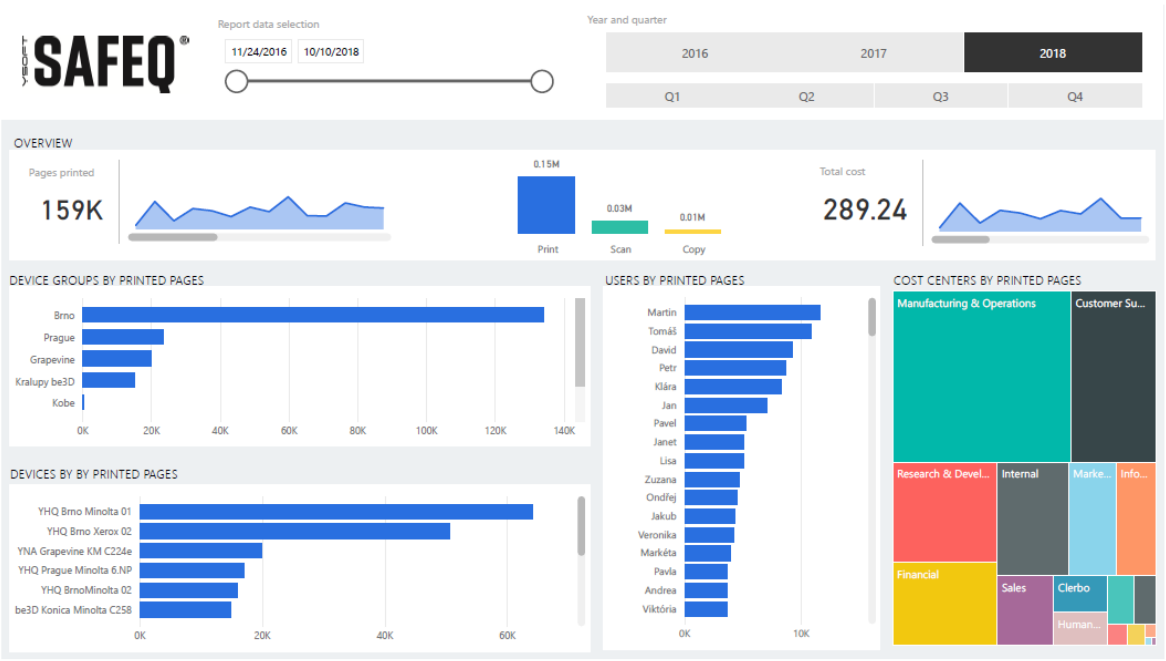
```
$dbServer= "ysoft.safeq.db.server.local"
$db= "SQDB6"

Add-OdbcDsn-Name"YSoft SafeQ"-DriverName"PostgreSQL Unicode"-DsnType"System"-Platform"32-
bit"-SetPropertyValue@("Server=$dbServer", "Trusted_Connection=Yes", "Database=$db")
Add-OdbcDsn-Name"YSoft SafeQ"-DriverName"PostgreSQL Unicode(x64)"-DsnType"System"-Platform
"64-bit"-SetPropertyValue@("Server=$dbServer", "Trusted_Connection=Yes", "Database=$db")
```

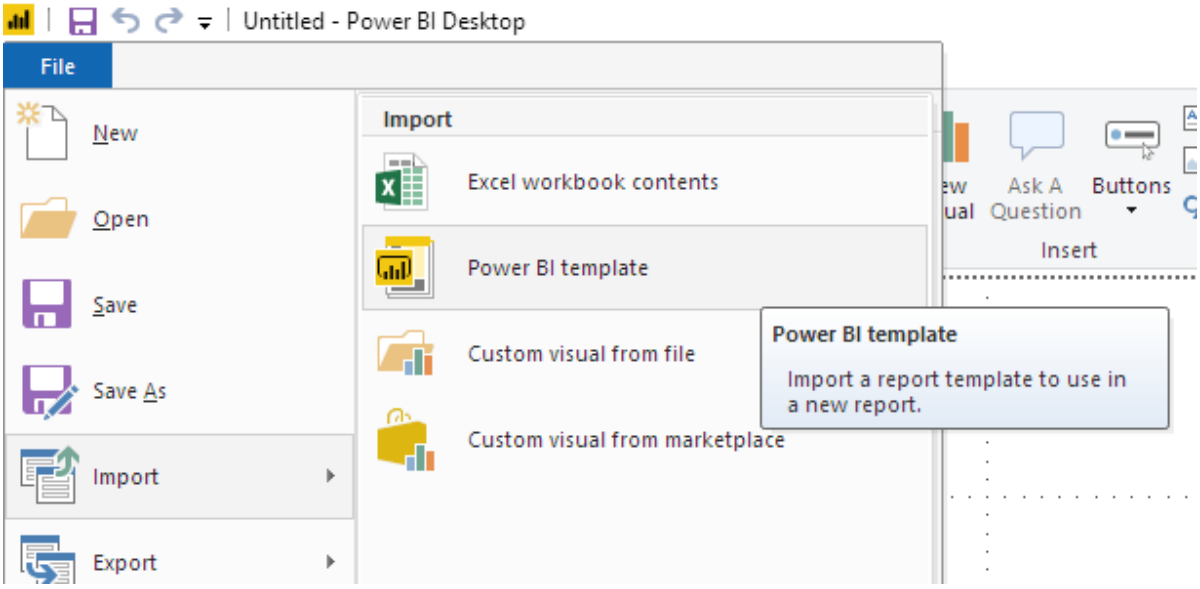
8 POWER BI DESKTOP - IMPORT TEMPLATE

1. Templates are part of full installation package You can locate them under path *Complementary Solutions\Enterprise Reporting*. The main template will render YSoft SafeQ data similarly to what is depicted below.

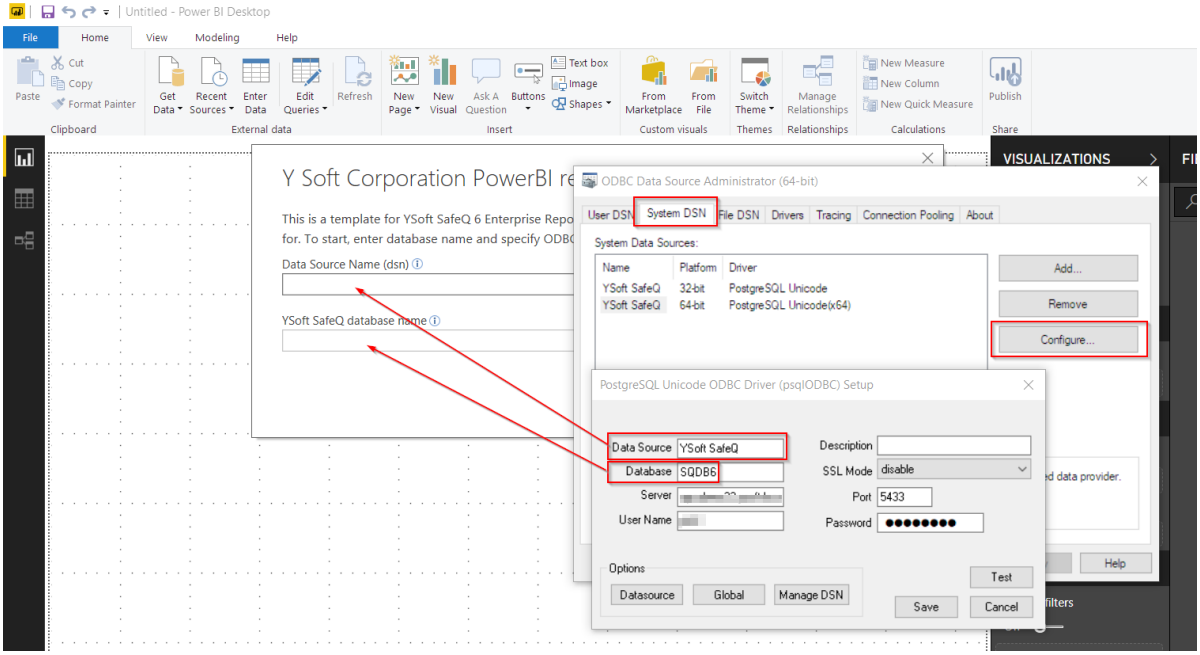




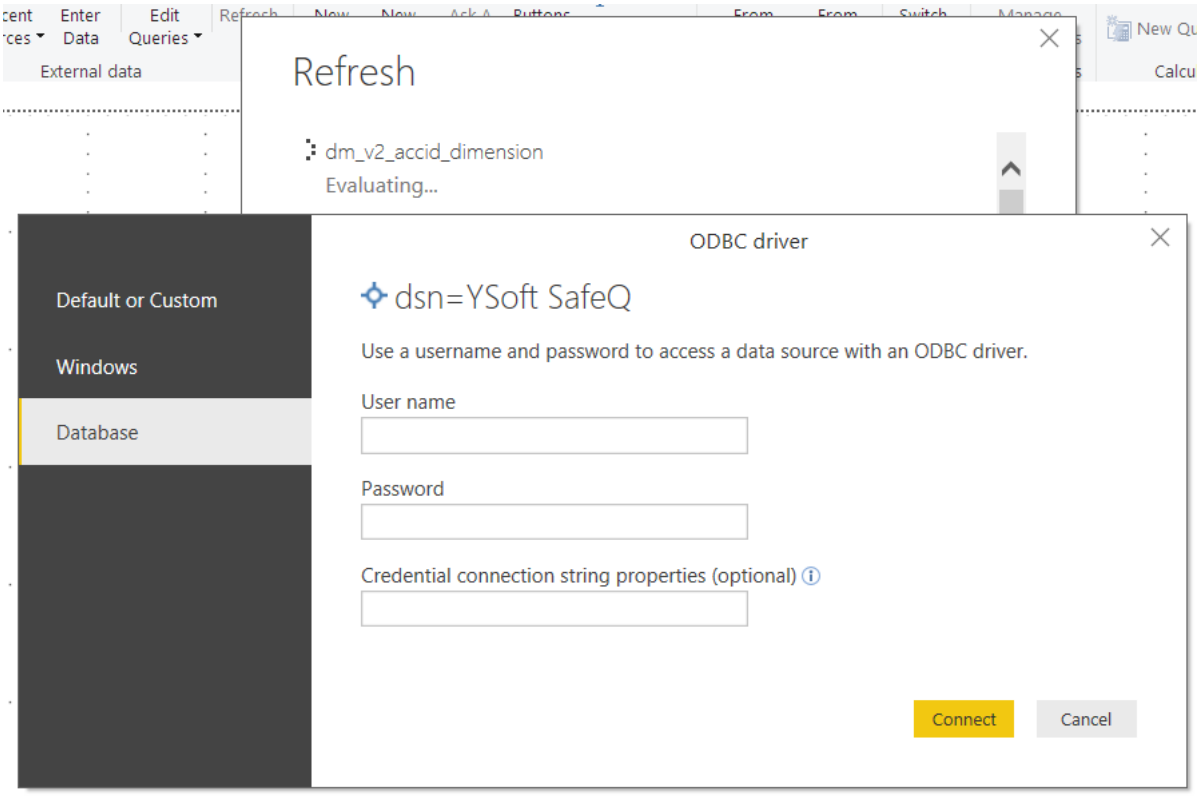
2. Import the template into Power BI Desktop.



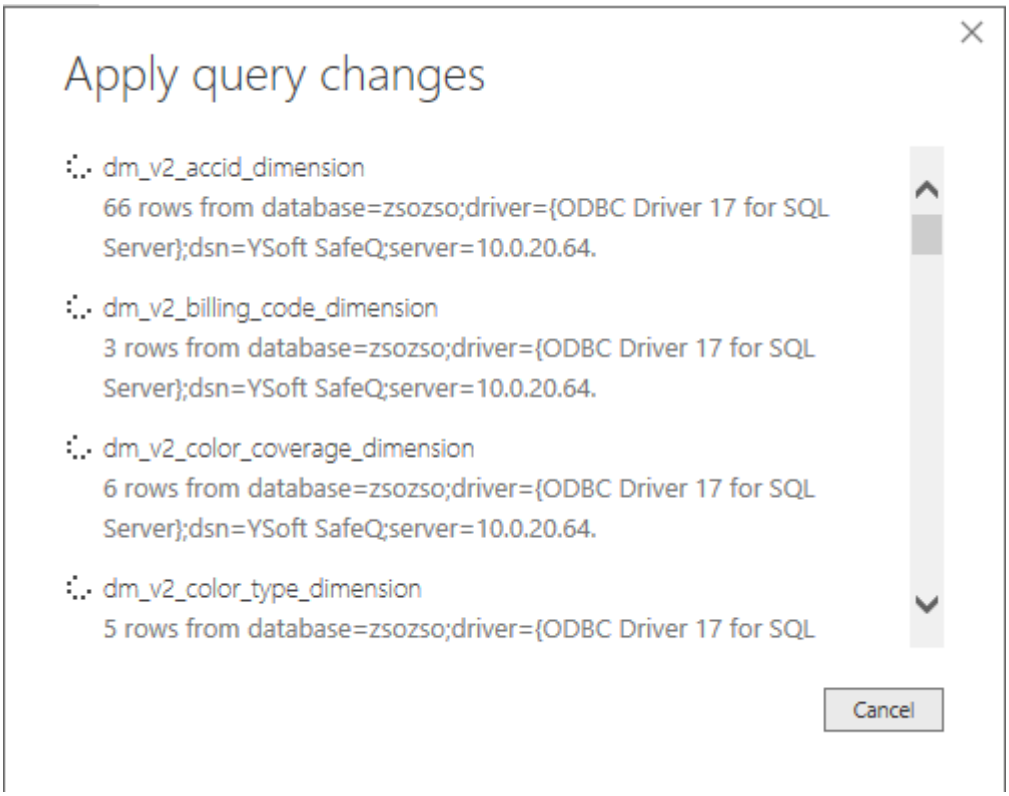
3. ⚠ This step requires to have ODBC connection created and working. See PostgreSQL ODBC driver for Power BI and MS SQL ODBC driver for Power BI articles. Enter connection information into the template



4. When prompted, enter database access account



5. Back on the main PowerBI Desktop screen, wait for the report to load data.



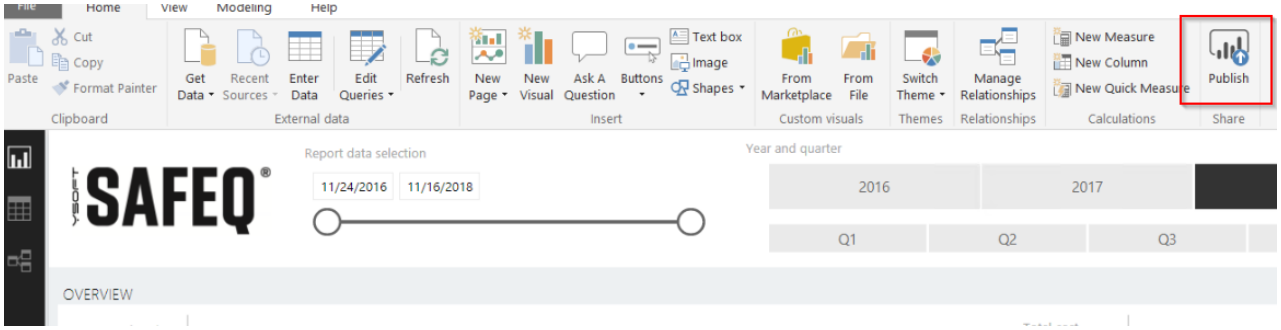
Where to go next: Publish Power BI Report with Power Bi Gateway

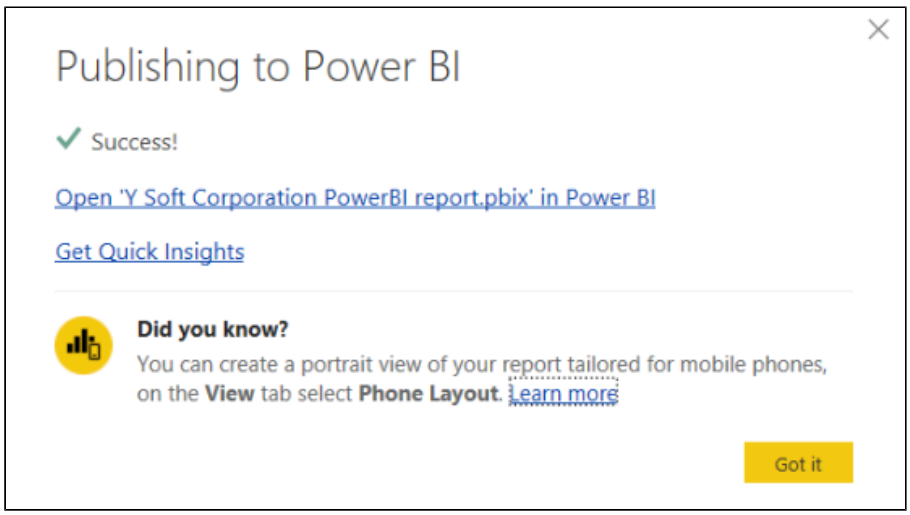
9 PUBLISH POWER BI REPORT WITH POWER BI GATEWAY

9.1 PUBLISH/SHARE POWER BI REPORT

Once the report is created (manually or using provided Y Soft template),administrators can share the report and give users access to view it.

Both viewing and publishing the reports requires "Power BI Pro" account.





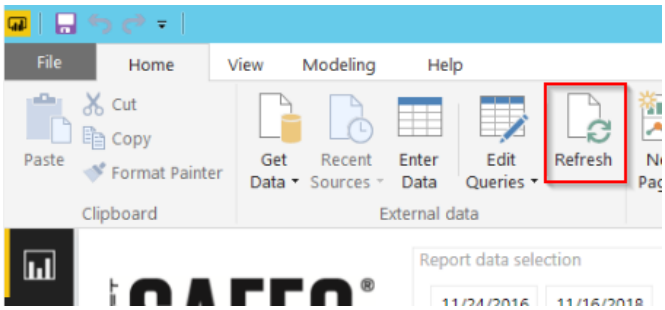
Reference:

- https://docs.microsoft.com/en-us/power-bi/guided-learning/publishingandsharing?tutorial-step=2
- https://docs.microsoft.com/en-us/power-bi/service-features-license-type

9.2 POWER BI GATEWAY

To keep the published report up to date, it needs to be refreshed periodically. There are two options to achieve this:

1. **Manually**: refresh the data in Power BI Desktop and publish a new version.



2. **Automatically**: implement Power BI Gateway.

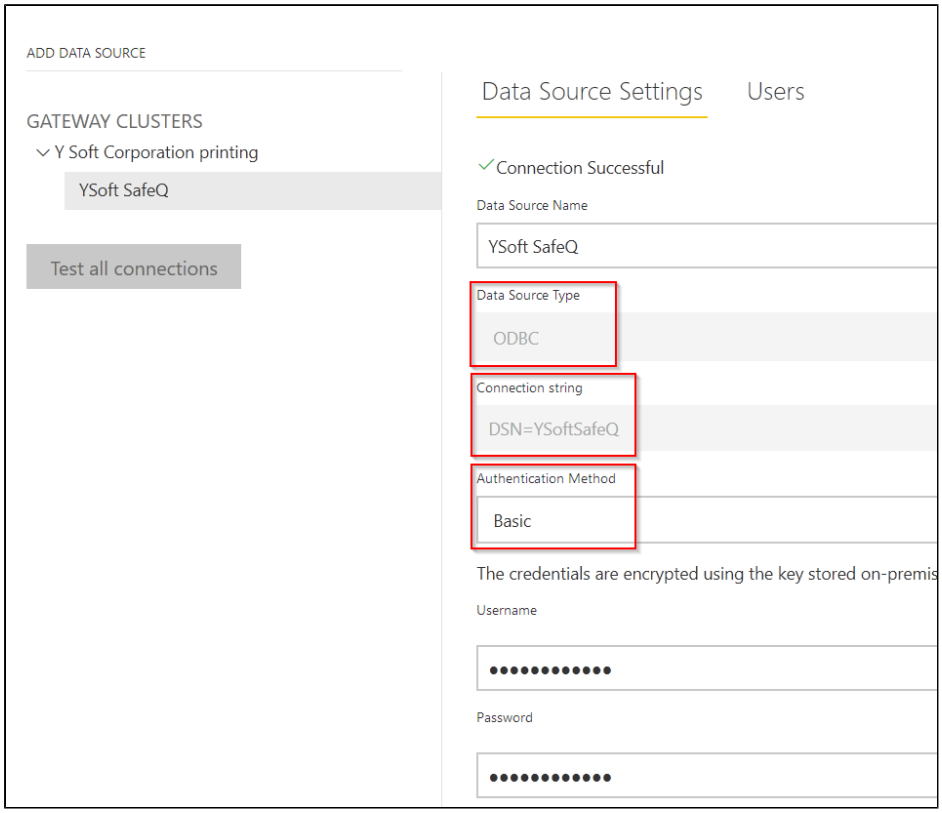
9.2.1 IMPLEMENT POWER BI GATEWAY

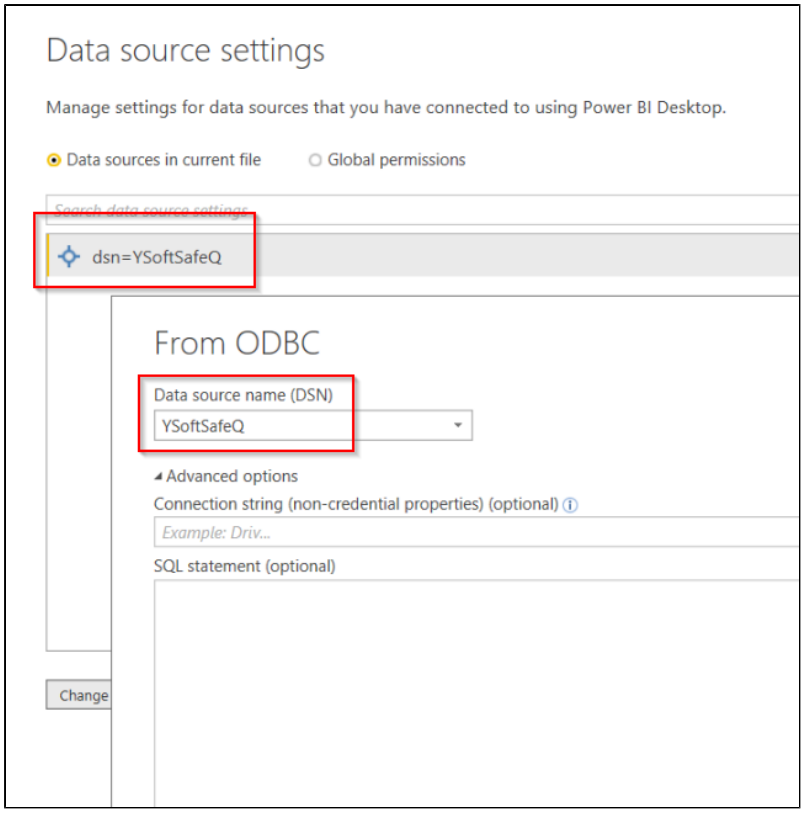
The Power BI Gateway requires exactly the same ODBC connection configuration as Power BI Desktop is using. Follow respective guides to configure this on the server where deploying the gateway:

- PostgreSQL ODBC driver for Power BI
- MS SQL ODBC driver for Power BI

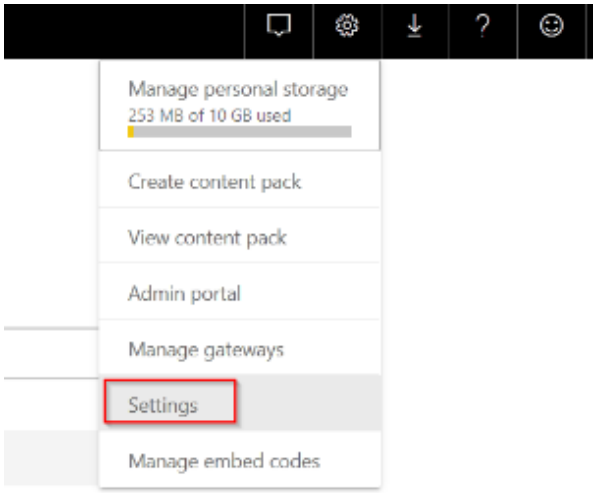
- To install the Power BI Gateway follow Microsoft documentation: https://docs.microsoft.com/en-us/power-bi/service-gateway-install

- Once installed, go to Power BI account and add a data source. Follow Microsoft documentation: https://docs.microsoft.com/en-us/power-bi/service-gateway-manage
  - The ODBC data have to match in both *Power BI* data source and *Power BI Desktop* data source:

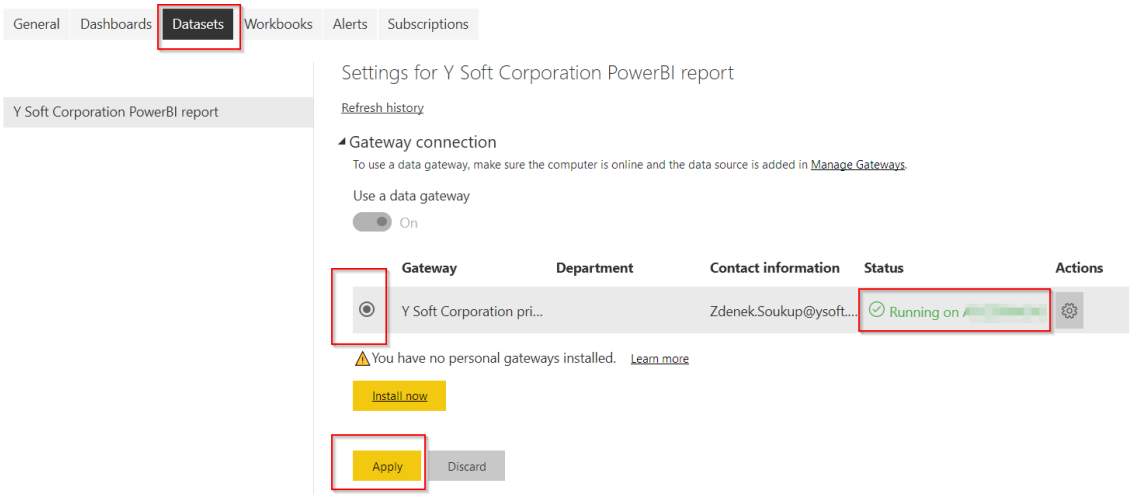




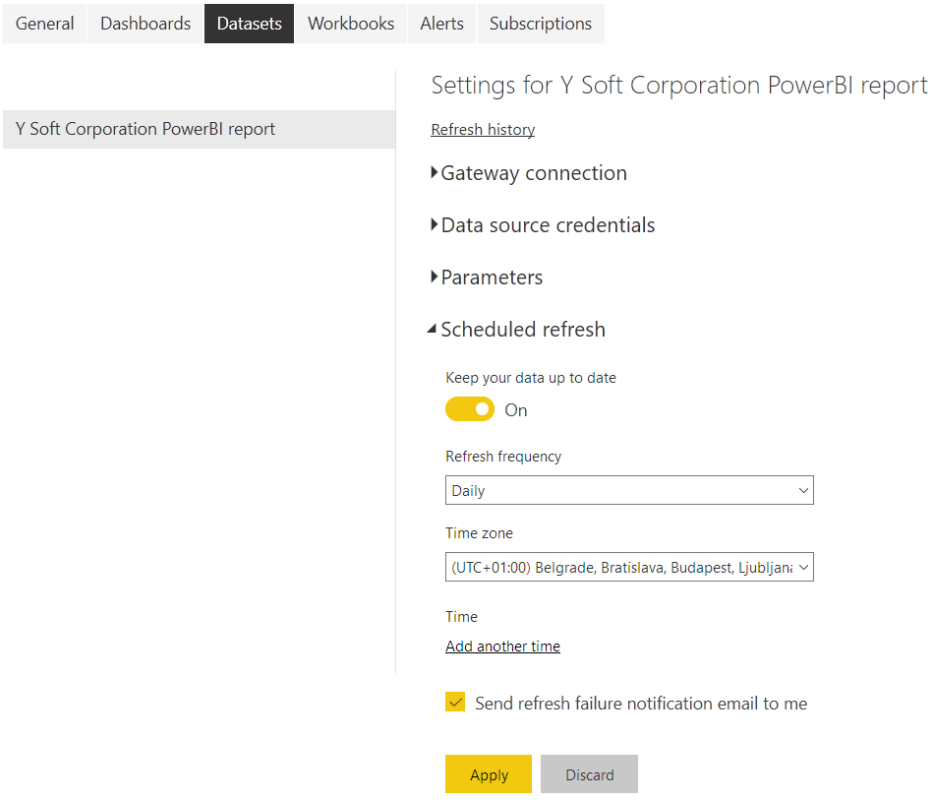
- Confirm correct configuration under your PowerBI account:
  - Navigate to Settings:



- Navigate to "Datasets", expand "Gateway connection" section:
  - Select the Gateway and apply it to the report.
  - Confirm that status is green "Running on ..."



  - Again in menu "Datasets", expand "Scheduled refresh" section and enable it:



Reference:

- https://docs.microsoft.com/en-us/power-bi/service-gateway-getting-started