

# Connect MongoDB with Power BI

MongoDB project

## Connect to Microsoft Power BI Desktop

To connect Power BI and MongoDB there are some additional layers that should be added to complete the process of integrations, this document will go through them step by step.

A complete BI system includes the following components, all those components should be integrated together to make Power BI able to read data from MongoDB.

### 1. **MongoDB database:** Data storage, the engine that contains your data.

---

- ✓ Make sure that MongoDB is installed and running on your machine. if it is not installed, Click the below link.







<https://www.mongodb.com/try/download/community>

### 2. **BI Connector:** The MongoDB Connector for BI acts as a layer that translates queries and data between a **mongod** instance and Power BI. The BI Connector is not a data store, it is not storing any data. Only acts as a bridge between the Power BI (any business Intelligent tool) and your engine.

---

#### Prerequisites

- Download and install Visual C++ Redistributable for Visual Studio 2015. - <https://www.microsoft.com/en-us/download/details.aspx?id=48145>
  - Install the BI Connector- <https://www.mongodb.com/try/download/bi-connector>
- ✓ Download and install MongoDB BI Connector(monogdb-odbc-connector) from here, select your version according to your machine and Power BI version

 <a href="#">mongodb-connector-odbc-1.4.1-macos-64-bit.dmg</a>
 <a href="#">mongodb-connector-odbc-1.4.1-rhel-7.0-64.tar.gz</a>
 <a href="#">mongodb-connector-odbc-1.4.1-ubuntu-14.04-64.tar.gz</a>
 <a href="#">mongodb-connector-odbc-1.4.1-ubuntu-16.04-64.tar.gz</a>
 <a href="#">mongodb-connector-odbc-1.4.1-win-32-bit.msi</a>
 <a href="#">mongodb-connector-odbc-1.4.1-win-64-bit.msi</a>

**Windows**

<https://github.com/mongodb/mongo-odbc-driver/releases/>

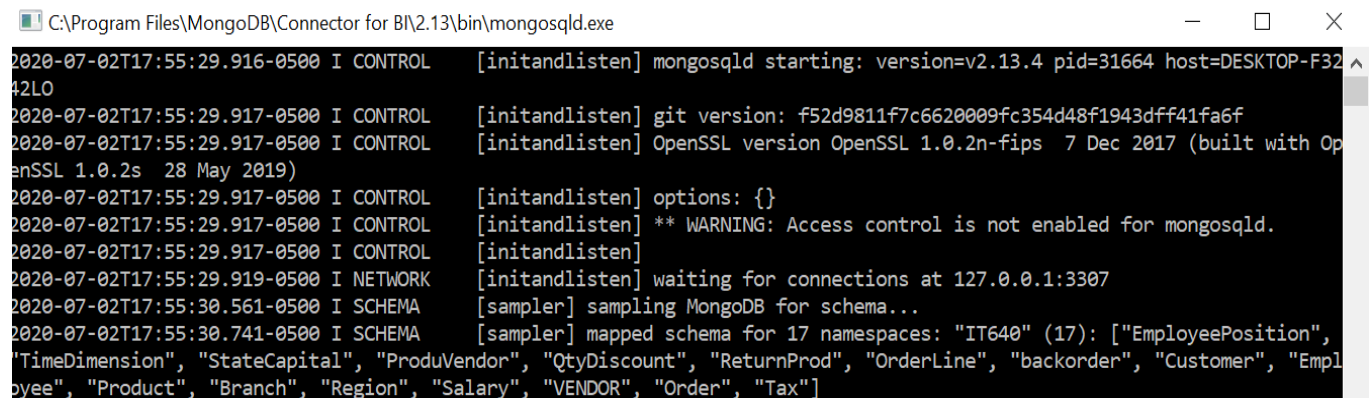
3. **ODBC data source name (DSN):** Holds the authentication and all configurations data.

---

**Add mongodb-odbc-driver to the data sources in ODBC data sources.**

- ✓ Navigate to your MongoDB installation path on windows, after installing ODBC and you will find new 2 new folders.

Navigate to **C:\Program Files\MongoDB\Connector for BI\2.13\bin** and run the mongosqld.exe. If you could see this console screen, Congratulations BI Connector is up and running



C:\Program Files\MongoDB\Connector for BI\2.13\bin\mongosqld.exe

```
2020-07-02T17:55:29.916-0500 I CONTROL [initandlisten] mongosqld starting: version=v2.13.4 pid=31664 host=DESKTOP-F3242LO
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] git version: f52d9811f7c662009fc354d48f1943dff41fa6f
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] OpenSSL version OpenSSL 1.0.2n-fips 7 Dec 2017 (built with OpenSSL 1.0.2s 28 May 2019)
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] options: {}
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for mongosqld.
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten]
2020-07-02T17:55:29.919-0500 I NETWORK [initandlisten] waiting for connections at 127.0.0.1:3307
2020-07-02T17:55:30.561-0500 I SCHEMA [sampler] sampling MongoDB for schema...
2020-07-02T17:55:30.741-0500 I SCHEMA [sampler] mapped schema for 17 namespaces: "IT640" (17): ["EmployeePosition", "TimeDimension", "StateCapital", "ProduVendor", "QtyDiscount", "ReturnProd", "OrderLine", "backorder", "Customer", "Employee", "Product", "Branch", "Region", "Salary", "VENDOR", "Order", "Tax"]
```

## Create a System DSN

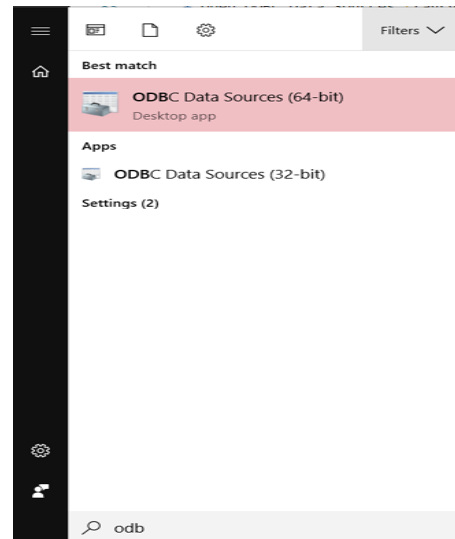
### Prerequisites:

Before creating a DSN, you should

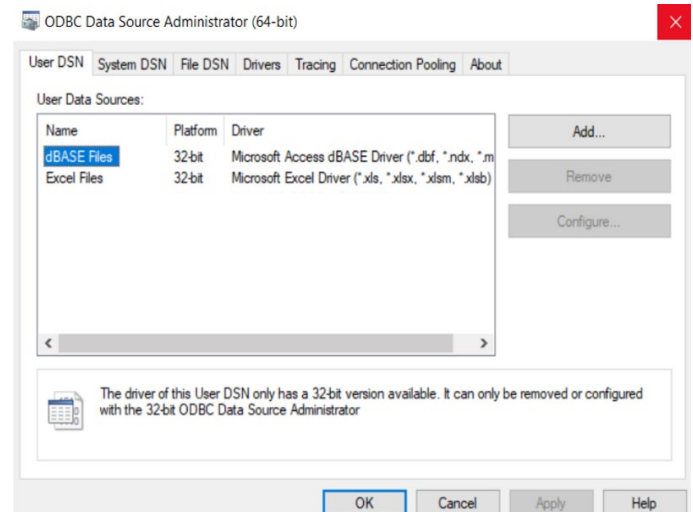
- Install the BI Connector.
- Download and install Visual C++ Redistributable for Visual Studio 2015.
- Download and Install the MongoDB ODBC Driver for BI Connector.

### Open ODBC Data Sources from start menu.

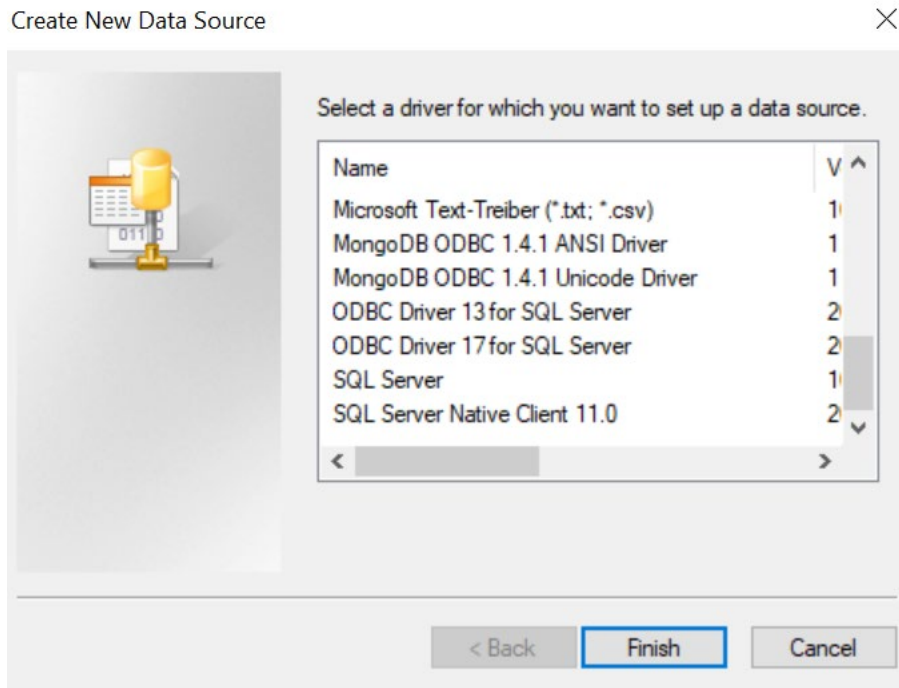
- ✓ Select windows button and search “ODBC”. (Click ODBC Data Sources (64-bit))



- ✓ Click '**ADD**' to add mongodb-odbc-driver to the data sources.

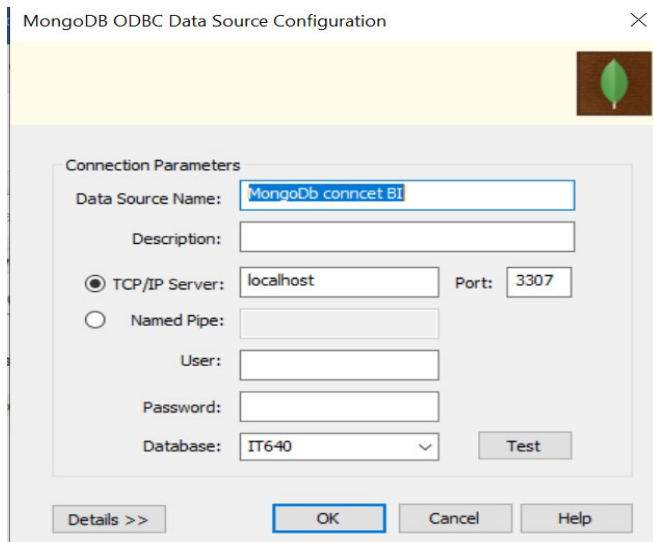


- ✓ Select MongoDB ODBC driver from the list of available drivers.  
(select MongoDB ODBC 1.4.1 ANSI Driver and Click Finish.

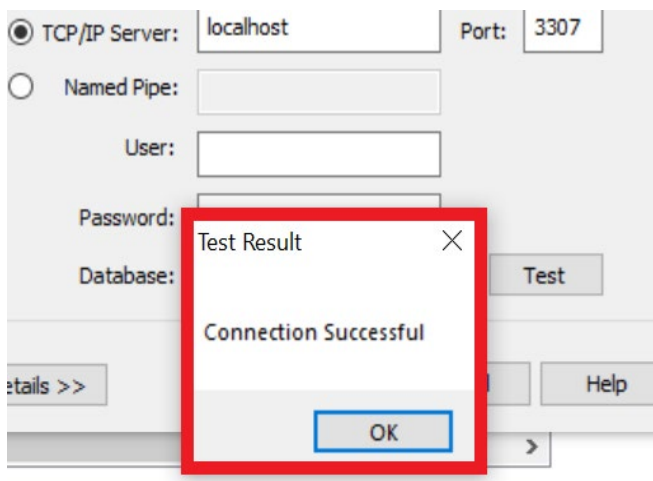


- ✓ Fill in the information about the BI Connector from the running service mongosqld as explained.

```
C:\Program Files\MongoDB\Connector for BI\2.13\bin\mongosqld.exe
2020-07-02T17:55:29.916-0500 I CONTROL [initandlisten] mongosqld starting: version=v2.13.4 pid=31664 host=DESKTOP-F32
42LO
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] git version: f52d9811f7c6620009fc354d48f1943dff41fa6f
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] OpenSSL version OpenSSL 1.0.2n-fips 7 Dec 2017 (built with Op
enSSL 1.0.2s 28 May 2019)
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] options: {}
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten] ** WARNING: Access control is not enabled for mongosqld.
2020-07-02T17:55:29.917-0500 I CONTROL [initandlisten]
2020-07-02T17:55:29.919-0500 I NETWORK [initandlisten] waiting for connections at 127.0.0.1:3307
2020-07-02T17:55:30.561-0500 I SCHEMA [sampler] sampling MongoDB for schema...
2020-07-02T17:55:30.741-0500 I SCHEMA [sampler] mapped schema for 17 namespaces: "IT640" (17): ["EmployeePosition",
"TimeDimension", "StateCapital", "ProduVendor", "QtyDiscount", "ReturnProd", "OrderLine", "backorder", "Customer", "Empl
oyee", "Product", "Branch", "Region", "Salary", "VENDOR", "Order", "Tax"]
```



- ✓ Click “Test” button to test the ODBC connection. (Test Result-message will pop-up)  
If the connection is successful, Click **OK** to add the DSN.



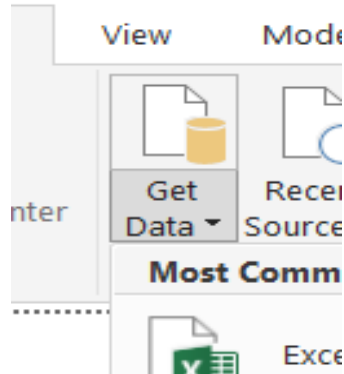
## 4. Power BI

Open Power BI desktop to start the visualization journey.

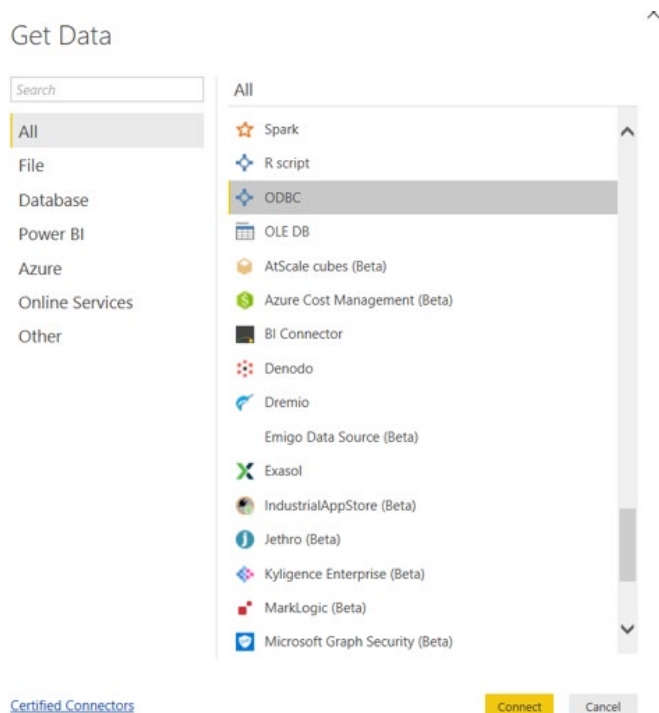
Download: <https://powerbi.microsoft.com/en-us/>

---

- ✓ Select the **GetData** tab and Click **More...**



- ✓ Select **ODBC** from the list of data sources and Click **Connect**.



- ✓ Select the data source that you have created in the previous step and Click **OK**

From ODBC

Data source name (DSN)

MongoDb connctet BI

Advanced options

OK Cancel

- ✓ The Power BI Navigator shows a list of databases. select the targeted database and targeted collection. Then select **Load**

Navigator

Display Options

ODBC (dsn=MongoDb connctet BI) [3]

information\_schema

IT640 [17]

backorder

Branch

Customer

Employee

EmployeePosition

Order

OrderLine

Product

ProduVendor

QtyDiscount

Region

ReturnProd

Salary

StateCapital

Tax

TimeDimension

EmployeePosition

_Id	DESCRIPTION	POSITION
5efd37fd0770749d003cfd41	CEO	1
5efd37fd0770749d003cfd42	Branch Manager	2
5efd37fd0770749d003cfd43	Sales Manager	3
5efd37fd0770749d003cfd44	Sales Representative	4
5efd37fd0770749d003cfd45	Customer Service Manager	5
5efd37fd0770749d003cfd46	Customer Service	6
5efd37fd0770749d003cfd47	Technician	7
5efd37fd0770749d003cfd48	Programmer	8
5efd37fd0770749d003cfd49	Accountant	9

Select Related Tables

Load Transform Data Cancel

- ❖ Import your database and start playing and visualizing your data.



## Reference:

- <https://www.mongodb.com/>
- <https://docs.mongodb.com/bi-connector/master/tutorial/install-bi-connector-windows/#install-bic-windows>
- <https://www.youtube.com/watch?v=lwq7BzQB8DA&t=538s>
- <https://www.progress.com/blogs/mongodb-odbc-driver-for-data-integration-with-power-bi>