

1. Three data sources Power BI can connect to

Power BI can connect to hundreds of data sources. Three common ones are:

- **Excel files (.xlsx)**
 - **SQL Server databases**
 - **Web APIs or online services (e.g., SharePoint, Google Analytics)**
-

2. First step to import data into Power BI Desktop

Go to **Home** → **Get Data** → **Text/CSV (or another source)** and select the data file you want to import (e.g., *Sales_Data.csv*).

3. How to refresh imported data in Power BI

You can refresh by:

- Clicking **Home** → **Refresh** in Power BI Desktop.
 - In Power BI Service, set up a **scheduled refresh** if the dataset is published and connected to a gateway.
-

4. File formats Power BI can import directly (two examples)

- **CSV (.csv)**
- **Excel (.xlsx)**

(Also supports JSON, XML, Parquet, etc.)

5. What the "Navigator" window shows after selecting a data source

The **Navigator** window displays:

- The **available tables or sheets** within the data source.
 - A **preview** of the data so you can choose which ones to load or transform.
-

6. Import *Sales_Data.csv* and load only the "Product" and "Price" columns

Steps:

1. Go to **Home** → **Get Data** → **Text/CSV**.
2. Select *Sales_Data.csv*.

3. Click **Transform Data**.
 4. In Power Query, **remove other columns**, keeping only *Product* and *Price*.
 5. Click **Close & Load**.
-

7. Change OrderDate to a date format during import

In Power Query:

- Select the **OrderDate** column → click the **Data Type** icon → choose **Date**.
This ensures Power BI recognizes it as a date column (for time intelligence operations).
-

8. Difference between "Load" and "Transform Data"

| Option | Description |
|-----------------------|---|
| Load | Imports the data directly into Power BI without changes. |
| Transform Data | Opens the Power Query Editor to clean, filter, or modify the data before loading. |

9. Why you might see an error when connecting to a SQL database

Possible reasons:

- **Incorrect credentials or permissions.**
 - **Server not reachable (network/firewall issue).**
 - **Invalid connection string or database name.**
-

10. How to replace a data source after importing it

In Power BI Desktop:

1. Go to **Home** → **Transform Data** → **Data Source Settings**.
 2. Select the old source → click **Change Source**.
 3. Browse to or enter the new source (e.g., updated file path or database).
-

11. M-code to import only rows where Quantity > 1

Example Power Query M-code:

```
let
    Source = Csv.Document(File.Contents("C:\Data\Sales_Data.csv"),
        [Delimiter=",", Columns=5, Encoding=65001, QuoteStyle=QuoteStyle.None]),
    PromoteHeaders = Table.PromoteHeaders(Source, [PromoteAllScalars=true]),
    FilteredRows = Table.SelectRows(PromoteHeaders, each [Quantity] > 1)
```

in
FilteredRows

12. How to change the data source if *Sales_Data.csv* changed

If the file was moved or renamed:

- Go to **Home** → **Transform Data** → **Data Source Settings** → **Change Source**, then update the file path to the new CSV location.
-

13. Troubleshoot: CSV import fails due to a "mixed data type" error

Fix by:

- Opening Power Query → selecting the column with mixed data →
 - Changing the **Data Type** manually (e.g., to *Text*).
 - Or using “**Detect Data Type**” carefully after cleaning inconsistent rows.
 - Remove or correct invalid values before re-importing.
-

14. Connect to a live SQL database with parameters (e.g., filter by year)

Steps:

1. In **Power Query**, go to **Home** → **Manage Parameters** → **New Parameter** (e.g., YearParam = 2024).
 2. **Connect to SQL Server**:
 3. `SELECT * FROM Sales WHERE YEAR(OrderDate) = @YearParam`
 4. Power BI will substitute the parameter when loading or refreshing data.
-

15. Automate data imports using Power BI and Power Automate

You can automate updates by:

- Creating a **Power Automate flow** that triggers when a new CSV file is uploaded (e.g., to OneDrive or SharePoint).
- The flow runs a **Power BI “Refresh Dataset”** action.
This ensures your dashboard always reflects the latest data automatically.