

## 1. Power BI - Introduction

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### 1. Power BI - Introduction



### 1. Power BI

- ✓ **Power BI** is a Data Visualization and Business Intelligence **tool** from Microsoft.
- ✓ By using this we can collect, analyse, and visualize data.
- ✓ We can create interactive reports and dashboards to see important business data, like sales numbers or website traffic, in one place.
- ✓ It's like turning numbers into pictures (charts, graphs, etc.) to help make better decisions.

### Power BI Logo



### 2. Power BI: Key Features

#### ✓ Power Query

- Its an ETL tool, extract, transform & load the data
- Cleans, combines, and reshapes data.

#### ✓ Power Pivot

- A data modeling tool.
- Establishes relationships between tables

#### ✓ Power View

- A visualization tool
- Creates interactive data visualizations and dashboards.
- Designs charts, maps, and other visuals to represent data insights.

#### ✓ Power BI Service

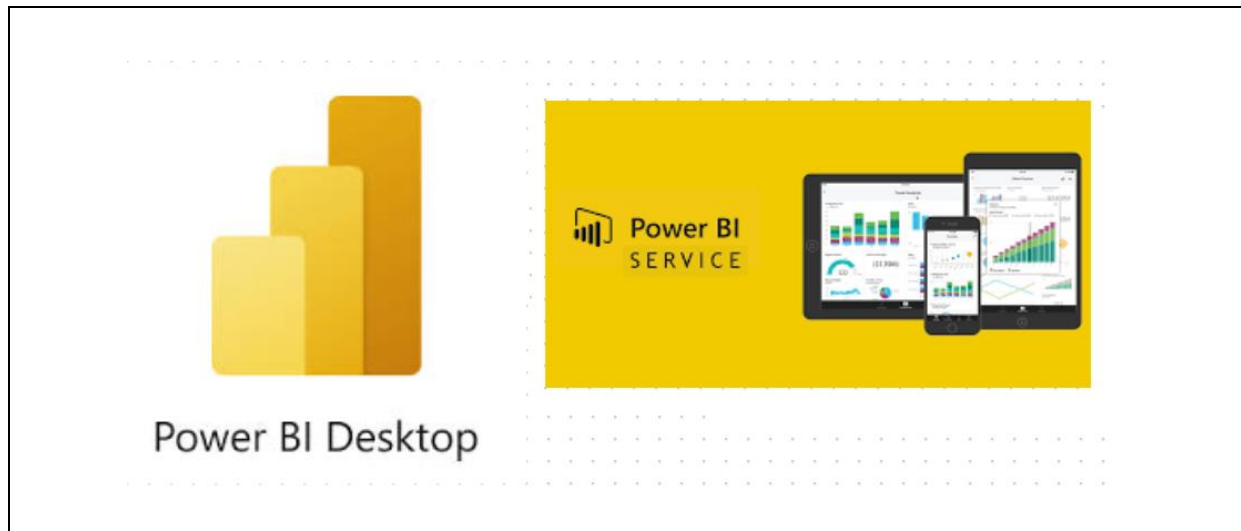
- A service for sharing and collaboration.
- Publishes, shares, and consumes reports and dashboards.
- Allows access to reports and dashboards via the web.
- Provides real-time data monitoring and alerts.

### 3. Advantages

- ✓ Easy to Use
  - It's simple to learn, even for people without a tech background. You can drag and drop data to create reports.
- ✓ Connects to Many Data Sources
  - Power BI can pull data from lots of places—Excel, databases, cloud services like Google Analytics, and more.
- ✓ Data Easy to Understand
  - You can create visual reports (like graphs and charts) that are easy to read and explore.
- ✓ Real-Time Updates
  - You can see up-to-the-minute data, which is helpful for tracking business performance right now.
- ✓ Sharing and Collaboration
  - It's easy to share your reports with others, and you can work together in real time.
- ✓ Secure
  - It has built-in security to keep your data safe.
- ✓ Smart Features
  - Power BI uses **Artificial Intelligence** to help you spot trends or get automatic insights from your data.

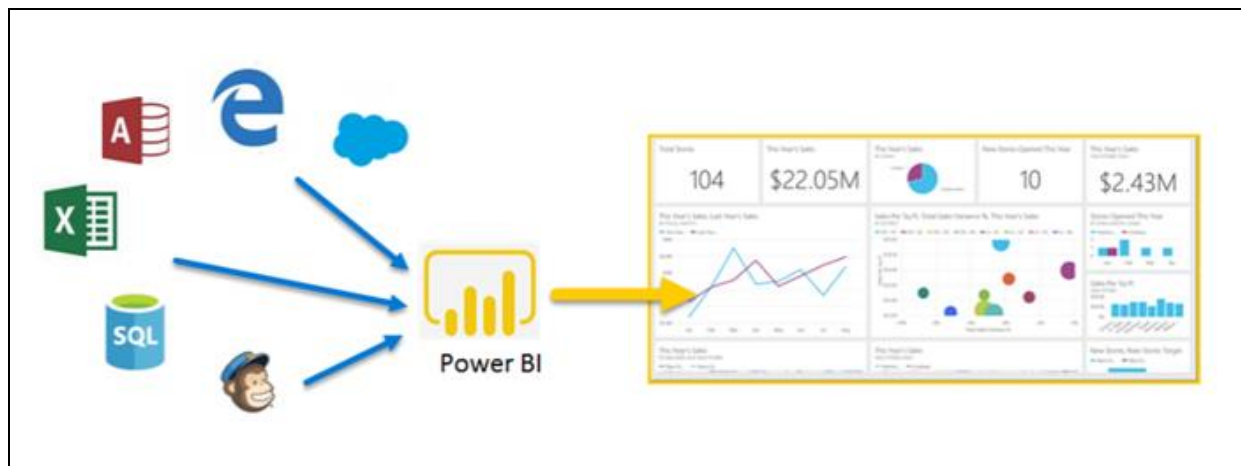
### 4. Power BI Core components

- ✓ Power BI Desktop
- ✓ Power BI Service



### 5. Power BI Desktop

- ✓ Power BI Desktop is a Windows-based application.
- ✓ Users can create, design, and develop interactive reports and data models.
- ✓ It is the primary tool for data preparation, modeling, and visualization.



#### 5.1. Key Features of Power BI Desktop

- ✓ Data Import and Transformation
  - Connects to various data sources (Excel, databases, APIs, etc.).
  - Cleans and transforms data using Power Query.
- ✓ Data Modeling
  - Establishes relationships between tables.
  - Enables advanced calculations using DAX (Data Analysis Expressions).
- ✓ Visualization Creation
  - Offers a wide range of charts, graphs, and custom visuals.
- ✓ No Internet Required
  - Fully functional offline for data analysis and report creation.

### 6. Power Service

- ✓ Power BI Service is a **cloud-based platform**.
- ✓ Users can publish, share, and collaborate on Power BI reports and dashboards.
- ✓ It enables real-time access to reports sharing across teams and organizations.

#### 6.1. Key Features of Power BI Service

- ✓ Report and Dashboard Hosting
  - Hosts reports created in Power BI Desktop.
- ✓ Collaboration and Sharing
  - Shares reports and dashboards with colleagues or stakeholders securely.
  - Supports comments, feedback, and collaborative analysis.
- ✓ Real-Time Data Monitoring
  - Connects to live data sources for real-time insights.
  - Sends alerts for data changes or thresholds via notifications.
- ✓ Access Anywhere
  - Accessible from any device with an internet connection, including mobile devices.
- ✓ Scheduled Data Refresh
  - Automatically updates data from connected sources at regular intervals.

### 7. Comparison: Power BI Desktop vs. Power BI Service

Feature	Power BI Desktop	Power BI Service
1. Purpose	✓ Create & design reports	✓ Share, collaborate & access reports
2. Platform	✓ Windows application	✓ Cloud based application
3. Visualization	✓ Full report creation capabilities	✓ Primarily dashboard creation
4. Collaboration	✓ No collaboration features	✓ Enables sharing and commenting
5. Internet Dependency	✓ Works offline	✓ Requires internet
6. Real-Time Data	✓ Not supported directly	✓ Supports real-time updates