

POWER BI ASSIGNMENT-2

1. Explain the advantages of Natural Queries in PowerBi with an example?

-The Q&A feature in Power BI lets you explore your data in your own words by using natural language. Q&A is interactive, even fun. Often, one question leads to others as the visualizations reveal interesting paths to pursue. Asking the question is just the beginning.

For Example:

- Ask natural questions: Which sales has the highest revenue?
- Use relative date filtering Show me sales in the last year
- Return only the top N Top 10 products by sales
- Provide a filter Show me sales in the USA

2. Explain Web Front End(WFE) cluster from Power BI Service Architecture?

-The WFE cluster uses Azure AD to authenticate clients, and provide tokens for subsequent client connections to the Power BI service. Power BI uses the Azure Traffic Manager (Traffic Manager) to direct user traffic to the nearest datacenter.

3. Explain Back End cluster from Power BI Service Architecture?

-The back-end cluster manages datasets, storage, reports, visualizations, data connections, data refreshing, and other services in Power BI. At the cluster, web clients have only two points to interact with the information, i.e., Azure API Management and Gateway Role.

4. What ASP.NET component does in Power BI Service Architecture?

-In the Power BI Service architecture, ASP.NET components play a crucial role in providing the **web application framework** for the Power BI Service. ASP.NET is a web application framework developed by Microsoft that allows developers to build dynamic web applications and services.

1.Power BI Web Application

2.Authentication and Authorization

- 3.Request Handling
- 4.Caching and Performance Optimization
- 5.Integration with other Components

5. Compare Microsoft Excel and PowerBI Desktop on the following features:

Data import

Data transformation

Modeling

Reporting

Server Deployment

Convert Models

Cost

Data Import:

1.Data Import:

Microsoft Excel: Excel allows users to import data from various sources, including databases, files, and online services. It provides built-in data import capabilities like data connections, Power Query, and Power Pivot.

Power BI Desktop: Power BI Desktop offers robust data import capabilities, similar to Excel. It supports a wide range of data sources and provides advanced data connectors, transformations, and mashup capabilities through Power Query.

2.Data Transformation:

Microsoft Excel: Excel offers basic data transformation capabilities using functions, formulas, and built-in features like sorting, filtering, and conditional formatting. Advanced transformations may require manual scripting or additional add-ins.

Power BI Desktop: Power BI Desktop excels in data transformation with its powerful Power Query Editor. It allows users to perform complex data

transformations, merging, splitting, filtering, and shaping data using a user-friendly interface.

3.Modeling:

Microsoft Excel: Excel provides data modeling capabilities through Power Pivot, which allows users to create relationships, define measures, and build calculations using Data Analysis Expressions (DAX). However, Excel's modeling capabilities may be more suitable for smaller datasets.

Power BI Desktop: Power BI Desktop is specifically designed for data modeling. It provides a robust modeling engine that supports complex relationships, calculations, hierarchies, and advanced DAX expressions. It is optimized for handling large datasets and building enterprise-level data models.

4.Reporting:

Microsoft Excel: Excel offers extensive reporting capabilities with its charting, pivot tables, and custom report designs. Users can create interactive reports with formulas, charts, tables, and conditional formatting. However, sharing and collaboration options may be limited.

Power BI Desktop: Power BI Desktop focuses on creating interactive and visually appealing reports and dashboards. It provides a wide range of customizable visuals, drill-through capabilities, interactive filtering, and advanced report formatting. Power BI reports are designed for easy sharing, collaboration, and real-time data updates.

4.Server Deployment:

Microsoft Excel: Excel files can be stored on local drives, shared network locations, or cloud storage services like OneDrive or SharePoint. Sharing

and collaboration are typically done through file sharing, which may lead to versioning and data consistency issues.

Power BI Desktop: Power BI Desktop reports can be published to the Power BI Service, enabling centralized management, sharing, and collaboration. Power BI Service allows for real-time data refresh, scheduled updates, and secure sharing options with fine-grained access control.

5.Convert Models:

Microsoft Excel: Excel models can be converted to Power BI models by importing the Excel data and transforming it in Power BI Desktop. The Power BI model can then be enhanced with additional features and visualizations.

Power BI Desktop: Power BI Desktop models can be easily shared and converted into interactive reports and dashboards using Power BI Service. Users can also export Power BI models to Excel format for further analysis if needed.

6.Cost:

Microsoft Excel: Excel is typically a part of Microsoft Office suite, and its cost depends on the Office edition and licensing model. It may require additional licensing for certain advanced features like Power Pivot or Power Query.

Power BI Desktop: Power BI Desktop is a free application available for download. However, certain Power BI features, such as collaboration, sharing, and advanced data refresh options, may require a Power BI Pro license or subscription.

6. List 20 data sources supported by Power Bi desktop

-Excel Workbook

Text/CSV

XML

JSON

Folder

PDF
Parquet
SharePoint folder
SQL Server database
Access database
Oracle database
MySQL database
PostgreSQL database
Snowflake
SQL Server Analysis Services database
Oracle database
IBM Db2 database
IBM Informix database (Beta)
IBM Netezza
Vertica