

Power BI Assignment 2

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

Ans. Benefit #1 – Guided NLQ is a unique self-service BI experience.

Benefit #2 – Every question is understood by Guided NLQ.

Benefit #3 – Guided NLQ makes it simple to ask complex questions.

Benefit #4 – Guided NLQ is integrated throughout Yellowfin.

Natural language query: 5 benefits of Guided NLQ

- As part of our series on natural language query (NLQ), this blog details 5 benefits of using Guided NLQ, and how it differs from search-based NLQ to bring users true self-service BI.

A. Guided NLQ is a unique self-service BI experience

- provides immediate assistance on the question you want to ask, with no guesswork or technical knowledge required to get started with using the tool.
- After selecting a dataset, you're presented with a search box you can type in, but it's not blank. Guided NLQ provides a list of options for possible questions, then guides you through each step in formulating the query. You can choose your own path through the question by typing what you want to ask, using your mouse to choose an option, or both.

B . Every question is understood by Guided NLQ

Traditional search-based NLQ solutions are harder to set up because they're focused on fixing the wrong problem: semantics (language used in a question), rather than analytics.

With Yellowfin Guided NLQ, there is no need to set up synonyms and word dictionaries, or continuously train the solution to understand your users' intent, because using the Yellowfin metadata layer bypasses this problem altogether.

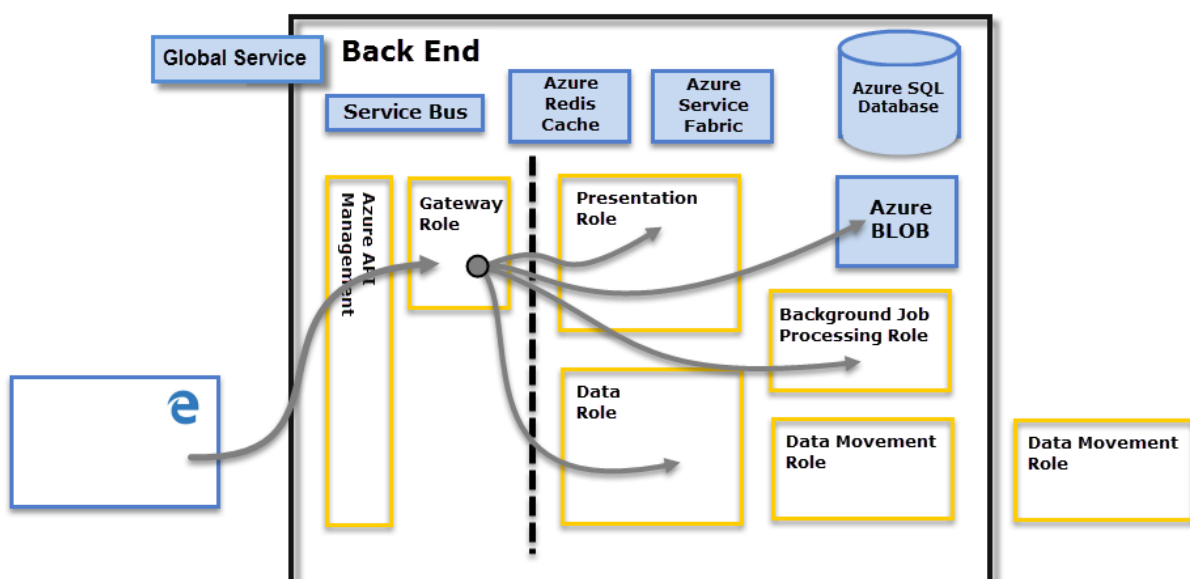
Guided NLQ makes it simple to ask complex questions

The questions you can ask search-based NLQ tools are often too basic because the vendor has spent all their effort in fixing the language problem, and their approach doesn't support question complexity in the best way.

Guided NLQ approaches question complexity differently by implementing thousands of comprehensively modelled question types and sequences, which effectively enables anyone to ask questions of their data, and to deliver answers as best practice visualizations or tabular reports for every possible question combination you can think.

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

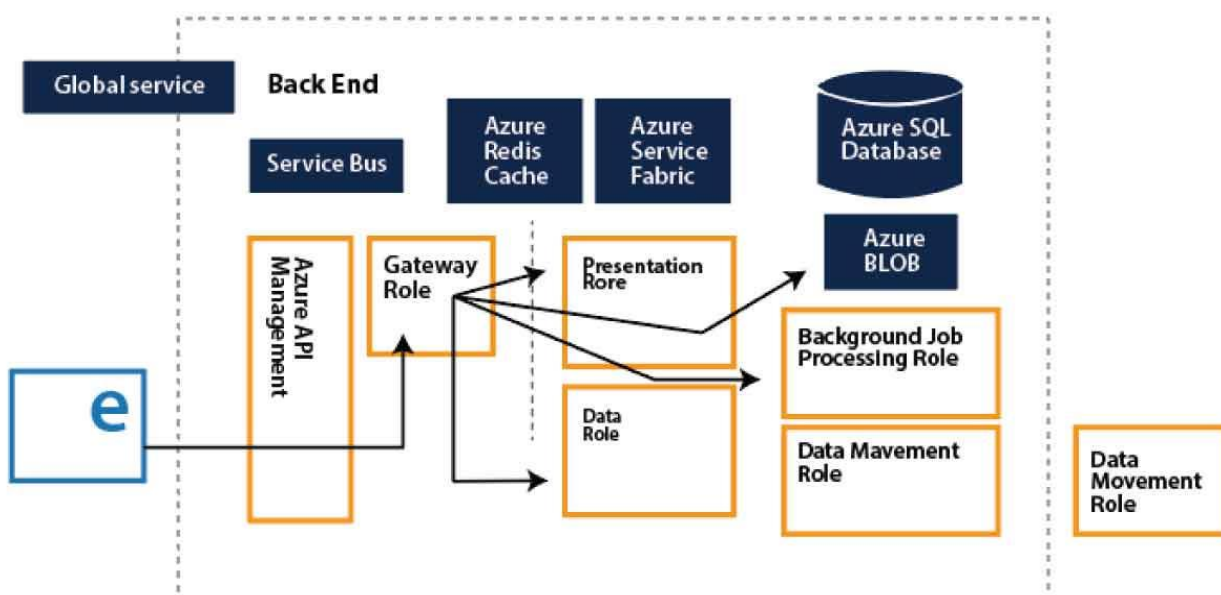
Ans. **The Web Front End (WFE) cluster.** The WFE cluster manages the initial connection and authentication to the Power BI service. **The Back-End cluster.** Once authenticated, the Back-End handles all subsequent user interactions. Power BI uses Azure Active Directory (Azure AD) to store and manage user identities. Azure AD also manages data storage and metadata using Azure BLOB and Azure SQL Database, respectively.



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

Ans. 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. Traffic Manager directs requests using the DNS record of the client attempting to connect, authenticate, and to download static content and files. Power BI uses the Azure Content Delivery Network (CDN) to efficiently distribute the necessary static content and files to users based on geographical locale.

The Back-End cluster determines how authenticated clients interact with the Power BI service. The Back-End cluster manages visualizations, user dashboards, datasets, reports, data storage, data connections, data refresh, and other aspects of interacting with the Power BI service



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

Ans. Power BI Architecture

Power BI is a business suite that includes several technologies that work together. To deliver outstanding business intelligence solutions, Microsoft Power BI technology consists of a group of components such as:

- ☐ Power Query (for data mash-up and transformation)
- ☐ Power BI Desktop (a companion development tool)
- ☐ Power BI Mobile (for Android, iOS, Windows phones)
- ☐ Power Pivot (for in-memory tabular data modeling)
- ☐ Power View (for viewing data visualizations)
- ☐ Power Map (for visualizing 3D geo-spatial data)
- ☐ Power Q&A (for natural language Q&A)

In simple terms, a Power BI user takes data from various data sources such as **files**

Power BI Service is a cloud-based public platform whereas Power BI Report Server is an on-premise platform protected by firewall security.

You can create dashboards on these platforms by pinning visualizations from your published reports. Lastly, share your dashboards and reports and collaborate with other users from your organization or outside, using delivery options like a *web-browser, Power BI on iPad, tablets, laptops, phones*, etc.

Components of Power BI Architecture

Let us learn about the components of Power BI architecture in detail.

. *Data Sources*

An important component of Power BI is its vast range of data sources. You can import data from files in your system, cloud-based online data sources or connect directly to live connections. If you import from data on-premise or online services there is a limit of 1 GB. Some commonly used data sources in Power BI are:

Excel , Text/CSV , XML, JSON , Oracle Database , IBM DB2 Database
MySQL Database , PostgreSQL Database , Sybase Database Teradata
Database , SAP HANA Database , SAP Business Warehouse server ,
Amazon Redshift , Impala , Google BigQuery (Beta) Azure SQL Database

2. *Power BI Desktop*

Power BI Desktop is a client-side tool known as a companion development and authoring tool.

This desktop-based software is loaded with tools and functionalities to *connect to data sources, transform data, data modeling and creating reports*.

You can download and install Power BI Desktop in your system for free. Using Power BI Desktop features, one can do *data cleansing, create business metrics and data models, define the relationship between data, define hierarchies, create visuals and publish reports*.

3. Power BI Service

Power BI Service is a web-based platform from where you can *share reports made on Power BI Desktop, collaborate with other users, and create dashboards*. It is available in three versions:

It is available in three versions:

- ☐ Free version
- ☐ Pro version
- ☐ Premium version

4. Power BI Report Server

The Power BI Report Server is similar to the Power BI Service. The only difference between these two is that Power BI Report Server is an on-premise platform. It is used by organizations who do not want to publish their reports on the cloud and are concerned about the security of their data.

Power BI Report Server enables you to create dashboards and share your reports with other users following proper security protocols. To use this service, you need to have a Power BI Premium license.

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

Data import

Power BI can connect to a large number of data sources, while Excel's connectivity capacity is limited.

Also, unlike Excel, Power BI can be easily used from mobile devices. Power BI has faster processing than Excel. Power BI dashboards are more visually appealing, interactive and customizable than those in Excel.

Data transformation

Power BI can connect to a large number of data sources, while Excel's connectivity capacity is limited.

Also, unlike Excel, Power BI can be easily used from mobile devices. Power BI has faster processing than Excel. Power BI dashboards are more visually appealing, interactive and customizable than those in Excel.

Power Pivot contains features for importing and shaping data, but it is recommended to leave this job to Power Query.

The data is then loaded to the model for Power Pivot to begin establishing relationships and creating measures using DAX. Power BI is a completely separate tool that has both of these tools included. Reporting

Server Deployment

Convert Models

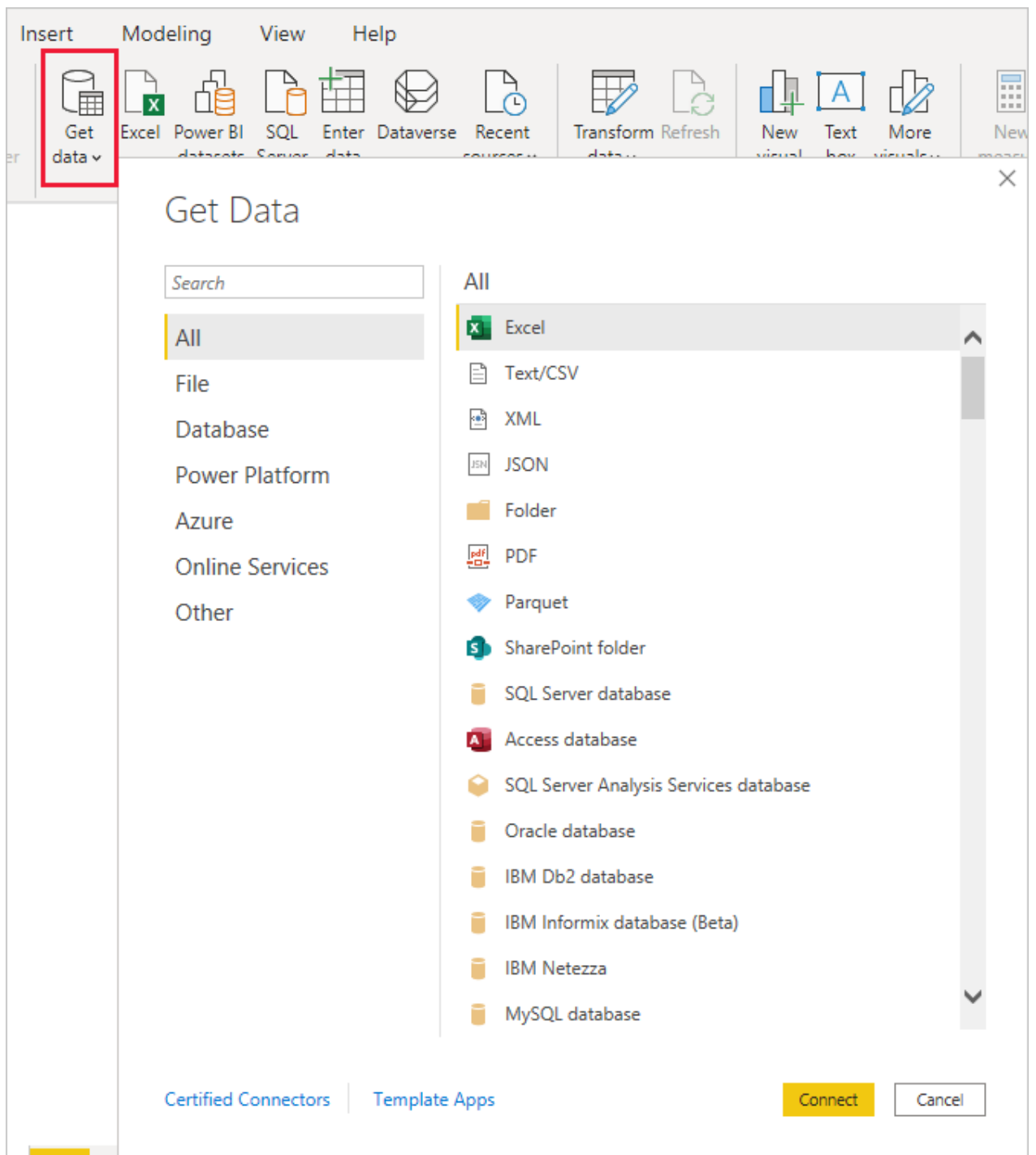
Cost

6. List 20 data sources supported by Power Bi desktop

Ans.

- i **SQL Server database.**
- ii **Access database.**
- iii **SQL Server Analysis Services database.**
- iv **Oracle database.**
- v **IBM Db2 database.**
- vi **IBM Informix database (Beta)**
- vii **IBM Netezza.**
- viii **MySQL database.**
- ix **xcel Workbook**
- x **Text/CSV**

- xi **XML**
- xii **JSON**
- xiii **Folder**
- xiv **PDF**
- xv **Parquet**
- xvi **SharePoint folder**
- xvii **eradata database**
- xviii **SAP HANA database**
- xix **SAP Business Warehouse Application Server**
- xx **SAP Business Warehouse Message Server**



Get Data

All

File

Database

















Power Platform

Azure

Online Services

Other

Other

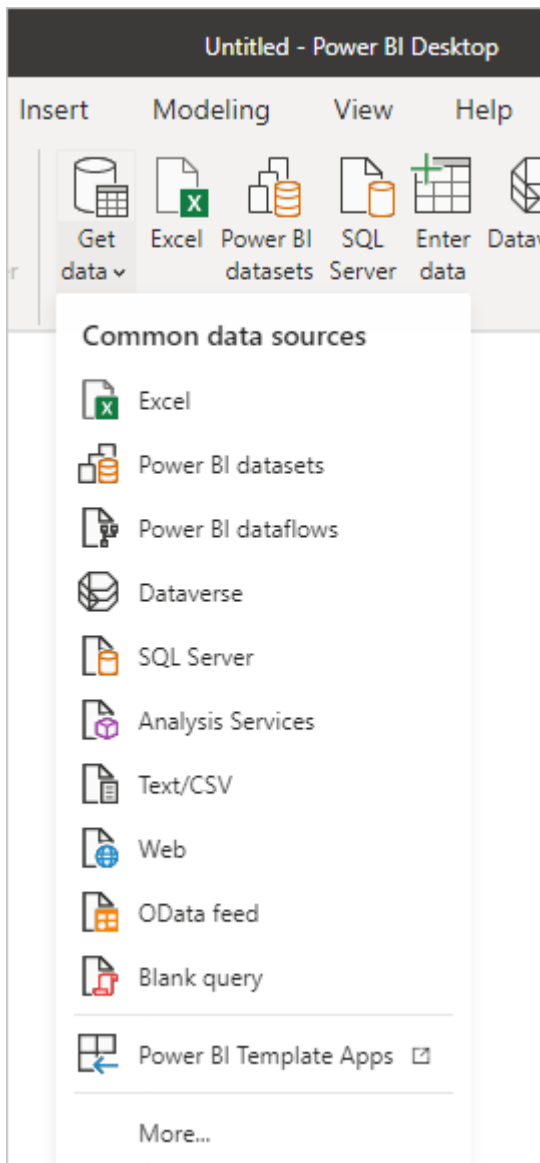
-  Web
-  SharePoint list
-  OData Feed
-  Active Directory
-  Microsoft Exchange
-  Hadoop File (HDFS)
-  Spark
-  Hive LLAP
-  R script
-  Python script
-  ODBC
-  OLE DB
-  Acterys : Model Automation & Planning (Beta)
-  Anaplan Connector (Beta)
-  Solver
-  Bloomberg Data and Analytics (Beta)

Certified Connectors

Template Apps

Connect

Cancel



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