Power BI Assignment 2

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1. Explain the advantages of Natural Queries in Power-Bi with an example?

- To get an answer from data is to perform a search over data using natural language is called queries. The Q&A feature in power-BI let us explore our own words using natural language.
- Just by typing a question in a natural language, we got a chart with the desired data without the need to technically format any visualization.
- GUIDED NATURAL QUERY IS A UNIQUE SELF-SERVICE BI EXPERIENCE - Provides immediate assistance on the question as we want to ask with no guesswork or technical knowledge request to get started using the tool.
- EVERY QUESTION IS UNDERSTOOD BY NATURAL LANGUAGE QUERY - There is no need to set up synonyms and word dictionaries.
- NATURAL LANGUAGE QUERY MAKES SIMPLE TO ASK COMPLEX QUESTIONS - Approaches question complexity differently by implementing thousands of comprehensively modelled question types and sequences, which effectively enables anyone to ask questions of their data, & to deliver answers as best visualizations or tabular reports for every possible question.

2. Explain the web Front End (WFE) cluster from Power-BI Service Architecture?

- The power-BI service architecture is based on two clusters – The Web Front End and Back End cluster.
- The Web Front End manages the initial connection and authentication to the power-BI service and once authenticated, the back end handles all subsequent user interactions.
- Power-BI uses Azure Active Directory (AAD) to store and manage user identities and manages the storage ofdata and metadata using Azure BLOB and Azure SQL Database.
- Power-BI also uses the Azure Traffic Manager (ATM) to direct user traffic to the nearest data centre, determined by the DNS record of the client attempting to connect, for the authentication process and to download static content and files.
- Azure Content Delivery Network (CDN) to efficiently distribute the necessary static content and files to users based on geographical locale.
- ASP.NET is an open-source, a server-side web-application framework designed for web development to produce dynamic web pages.

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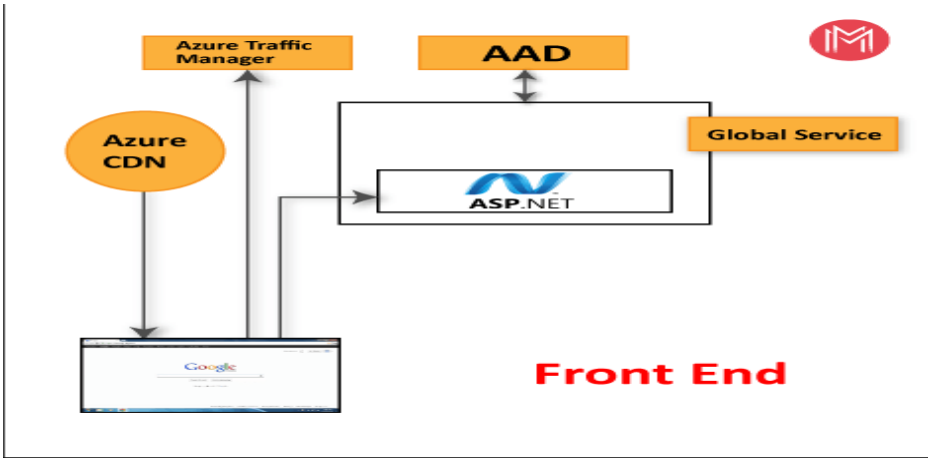
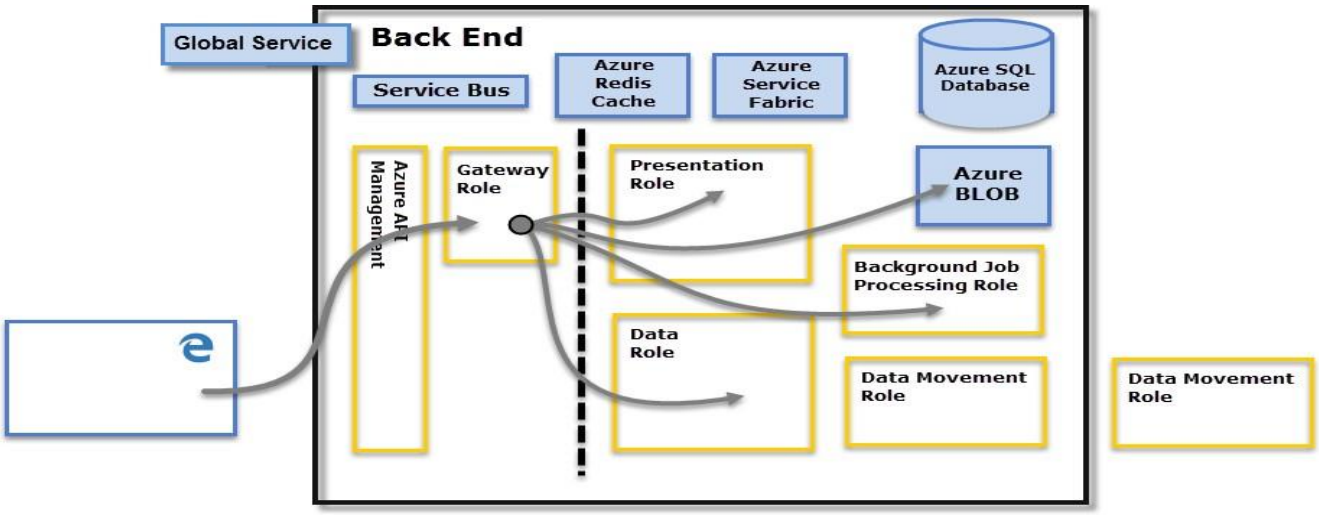


3. Explain Back End cluster from Power BI Service Architecture?

- Back End Cluster is how authenticated clients interact with the Power-BI service. It manages visualizations, user dashboards, datasets, reports, data storage, data connections data fresh, and other aspects of interacting with the Power-BI service.
- The gateway role acts as a gateway between user requests and the Power-BI service. Users don't interactdirectly with any roles other than the gateway role.
- Azure API management will eventually handle the gateway role. Both are accessible through the public internet. They provide Authentication, Authorization, DDoS protection, Throttling, Load balancing, Routing and Other Capabilities.



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

- ASP.NET is a free web framework for building great websites and web applications using HTML, CSS andJavaScript.
- ASP.NET component within the Web Front End cluster parses the token to determine which organization theuser belongs to and then consults the PBI global service.
- The Web Front End specifies to the browser which back-end cluster houses the organization's tenant.

5. List 20 data sources supported by the Power Bi desktop.

- Data sources supported by Power Bi desktop-

MS Excel	Blank Query	IBM Informix Database
PBI Datasets	XML	MySQL Database
PBI Data flowsData Verse	JSO N Folder	IBM Db2 DatabaseData Feed
SQL Server Analysis Services	PDF Parquet	
Text/CSV	Share Point Folder	
Web	Oracle Database	

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6. Compare Microsoft Excel and Power-Bi Desktop on the following features:

- DATA IMPORT –
- Microsoft Excel gets data from almost everywhere with power query limited.
- Power-BI also uses power query so it too can get data from almost anywhere.
- DATA TRANSFORMATION –
- Microsoft Excel is not efficient in handling big data and only handles a certain amount of information.
- Power BI can connect many data sources. So, it is very much faster to transform information into insights.
- DATA MODELLING –
- Microsoft Excel is the ability to work on simple and structured data models.
- Power-BI is ideal for building complex data models easily.
- DATA REPORTING–
- Microsoft Excel is ideal for creating reports in tabular format. So, it creates simple and less attractive reportsthan those of Power-BI.
- Power-BI is creating tabular reports that are more limited. So, it creates more Beautiful, Personalized, Attractive,and Interactive reports which can be present in the dashboard.
- SERVER DEPLOYMENT –
- Microsoft Excel is On-Premises or hosted cloud.
- Power-BI is a cloud service.
- COVERT MODELS –
- Microsoft Excel is totally focused on structure and simple data models with a wide range of features.
- Power-BI is really focused on data ingesting and building potential data models easily.
- COST –
- Microsoft Excel, most of us already have Excel. So, there is no additional cost for using it to build and sharedashboards.
- Power-BI, free for personal use, otherwise US$10/month to share reports with others. For large companiesthere is a premium licence available.