ARCHITECTURE DESIGN DOCUMENT

AMAZON SALES DATA ANALYSIS
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Contents

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1. Introduction
1.1.   What is Architecture Design Document?
The design of any software requires an architectural representation. According to IEEE, architectural design is "the process of defining a collection of hardware and software components and their interfaces to establish the framework for the development of a computer system. The software for computer-based systems can have various architecture. Each architecture defines a system category that consists of:

- A set of components (e.g., Database, computational modules) that perform a function required by the system.
- A set of connectors that facilitate coordination, communication and cooperation among the components.
- Constraints that specify how components can be integrated to form the system
- Semantic models that help the designer to understand the overall properties of the system.

1.2.   Scope
Architecture Design Document (ADD) is a systematic approach to architectural design that follows a sequence of refinement steps.

- The approach can be applied to design data structures, software architecture, source code and performance algorithms.
- The design principles are initially established during requirement analysis and then elaborated during architectural design work.

2. Architecture
2.1.   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
- Power BI Desktop

- Power BI Mobile
- Power Pivot
- Power View
- Power Map
- Power Q&A

In simple terms, Power BI uses takes data from various data sources such as files, Azure source, online services, direct query or gateway sources. In Power BI Desktop, the imported data is cleaned and transformed according to user's need.

Once the data is transformed and formatted, it is ready to use in making visualisations in reports.
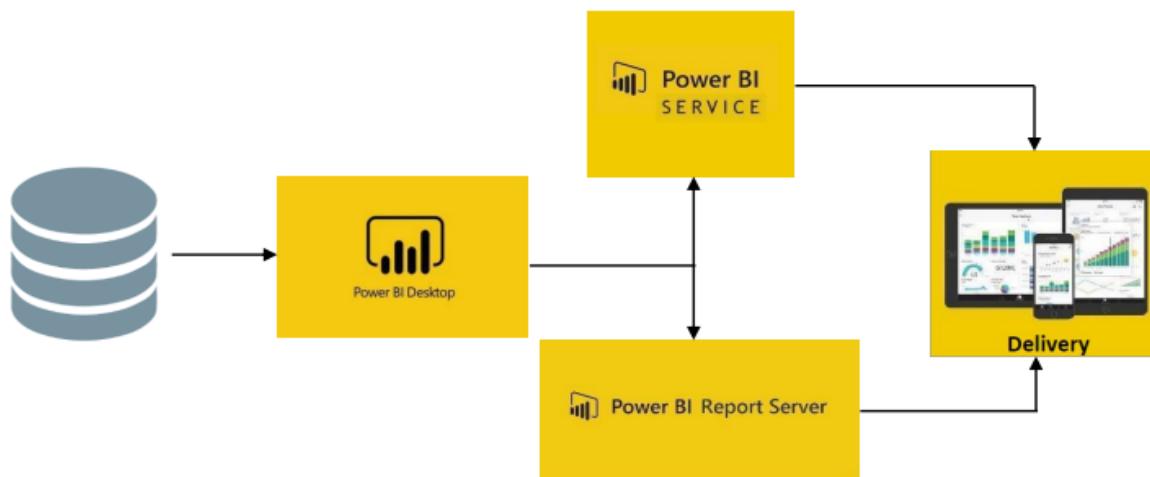
2.2. Components of Power BI Architecture

2.2.1. Data Sources

An important component of Powe 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 1GB.

Some commonly used data sources in Power BI are:

- Excel
- Test/CSV
- XML
- JSON
- Oracle Database
- IBM DB2
- MySQL
- PostgreSQL
- Sybase
- Teradata
- SAP HANA
- SAP Business Warehouse
- Amazon Redshift
- Google Big Query
- Azure SQL Database
- Salesforce Reports
- Google Analytics
- Facebook
- GitHub

2.2.2. Power BI Desktop

Power BI Desktop is a client side-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 modelling and create reports.

2.2.3. Power BI Service

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

- Free Version
- Pro Version
- Premium Version

2.2.4. 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.

3. Deployment

3.1. Power BI Deployment

The deployment process enables you to transfer content from one stage in the pipeline to another, usually from development to test, and from test to production. The links among the replicated items are preserved throughout the replication process. Power BI also enforces the specified deployment rules to the modified content in the target stage. The duration of deployment may vary depending on the number of items being transferred. You can access other pages in the Power BI portal while deployment is in progress, but you cannot utilize the content in the target stage.

3.2. Publish Datasets & Reports from Power BI Desktop

By publishing a Power BI Desktop file to the Power BI Service, you can transfer the data in the model and any reports you created in Report view to your Power BI workspace. A new dataset the same name and any reports will appear in your Workspace navigator. This is equivalent to using Get Data in Power BI to connect to and upload a Power BI Desktop file.
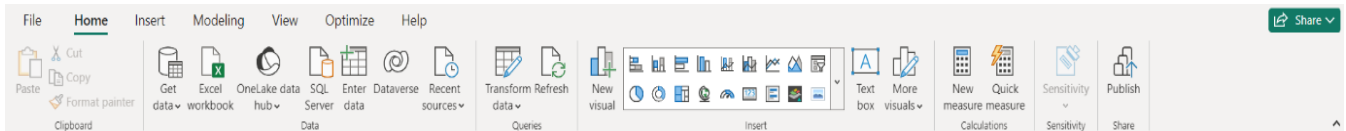
Publish to Power BI

Select a destination

My workspace

ⓘ Make Sure you read and understand novyPro's Terms of Service, Privacy Policy, Community Guidelines,s, and Communication List before Publishing

Select   **Cancel**

Publishing to Power BI

✓ Success!

Open 'Amazon Sales.pbix' in Power BI

Get Quick Insights

Did you know?
You can create a portrait view of your report, tailored for mobile phones. On the **View** tab, select **Mobile Layout**. Learn more

Got it