Architecture Design

Amazon Sales Data Analysis

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1. Introduction

1.1 What is Architecture design document?

Any software needs the architectural design to represents the design of software. IEEE defines architectural design as “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 that is built for computer-based systems can exhibit one of these many architectures.

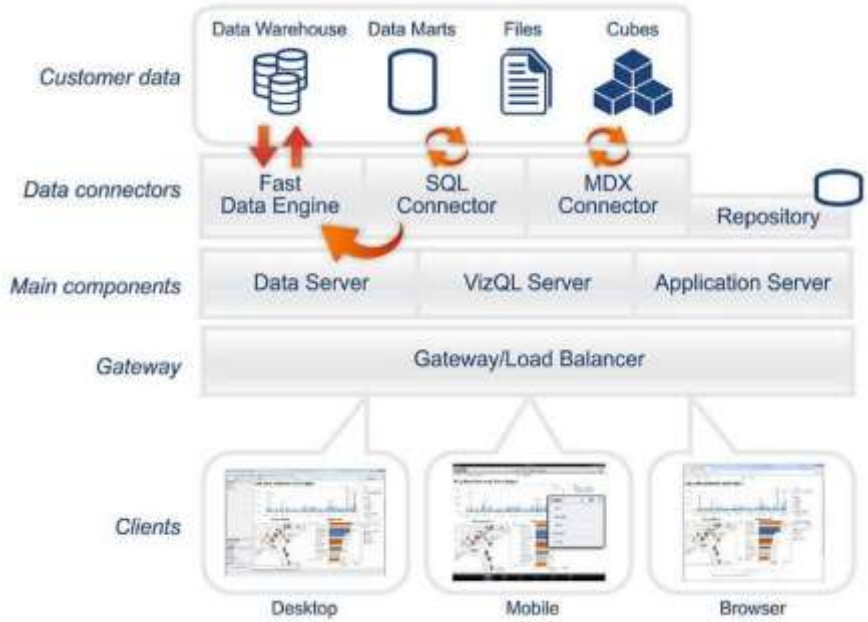
Each style will describe a system category that consists of:

- A set of components (e.g.: a database, computational modules) that will perform a function required by the system.
- The set of connectors will help in coordination, communication, and cooperation between the components.
- Conditions that 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

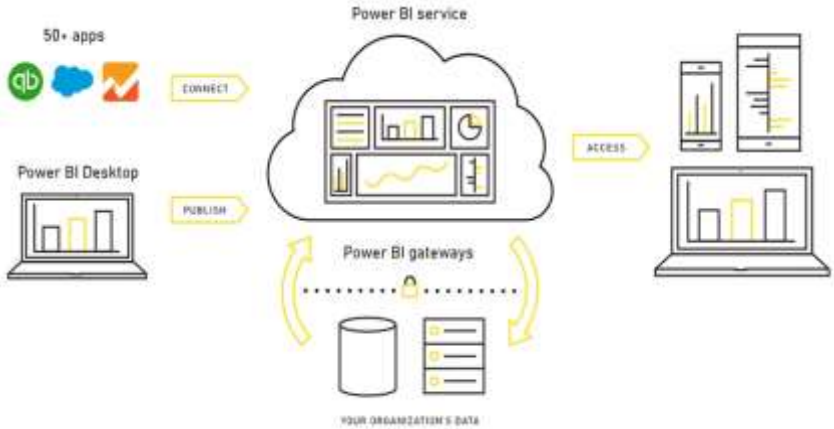
Architecture Design Document (ADD) is an architecture design process that follows a step-by-step refinement process. The process can be used for designing data structures, required software architecture, source code and ultimately, performance algorithms. Overall, the design principles may be defined during requirement analysis and then refined during architectural design work.

2. Architecture



2.1 Power BI Architecture:

Power Bi has a highly scalable architecture that serves mobile clients, web clients and desktop-installed software. Power BI architecture supports fast and flexible report and dashboard creation to drive business insights. The following diagram shows Power BI's architecture:

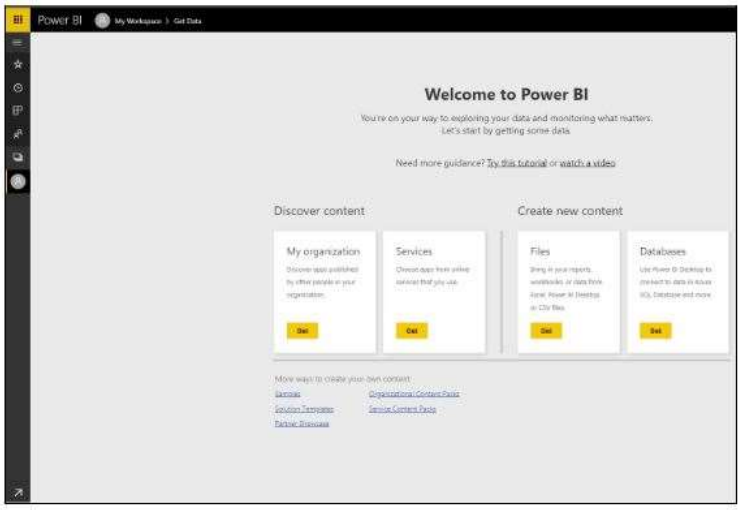


2.2 Power BI Architecture Design:

Power BI architecture is a service built on top of Azure. There are multiple data sources that Power BI can connect to. Power BI Desktop allows you to create reports and data visualizations on the dataset. Power BI gateway is connected to on-premise data sources to get continuous data for reporting and analytics. Power BI services refer to the cloud services that are used to publish Power BI reports and data visualizations. Using Power BI mobile apps, you can stay connected to their data from anywhere. Power BI apps are available for Windows, iOS, and Android platforms.

2.3 Power BI Service:

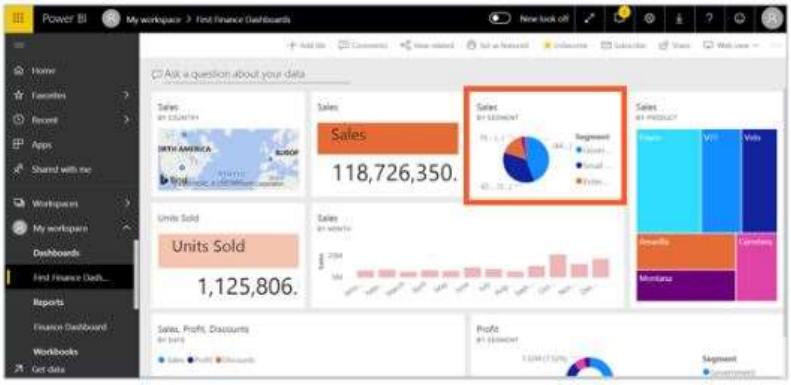
Power BI Service is a Software as a Service (SaaS) also known as Power BI online. Here's how the page looks like once you log in:



It allows you to connect to data, create reports and dashboards, and ask questions about your data.

2.4 Power BI Dashboard:

Power BI Dashboard is a single page visualization to tell a story. The visualizations on a dashboard are generated from reports, and each report is based on one dataset. A single page dashboard is known as a Canvas.



3. Deployment

In Power BI, You can directly publish the report online to your workstation. If you do not have the work email-id then you can save the file in '.pbix' version. This helps another viewer see your work and understand the story or insights you're communicating.