Low Level Design

Wine Data Analysis

Written By	Aditya Phulallwar, Priyam Bhalla, Tanmay Dharmadhikari
Document Version	
Last Revised Date	

DOCUMENT CONTROL

Change Record:

VERSION	DATE	AUTHOR	COMMENTS

Reviews:

VERSION	DATE	REVIEWER	COMMENTS

Approval Status:

VERSION	REVIEW DATE	REVIEWED BY		APPROVED BY	COMMENTS

Contents

1. Introduction

1.1 What is Low-Level design document?

The goal of the LDD or Low-level design document (LLDD) is to give the internal logic design of the actual program code for the Wine Review Data dashboard. LDD describes the class diagrams with the methods and relations between classes and programs specs. It describes the modules so that the programmer can directly code the program from the document.

1.2 Scope

Low-level design (LLD) is a component-level 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 data organization may be defined during requirement analysis and then refined during data design work.

2. Architecture

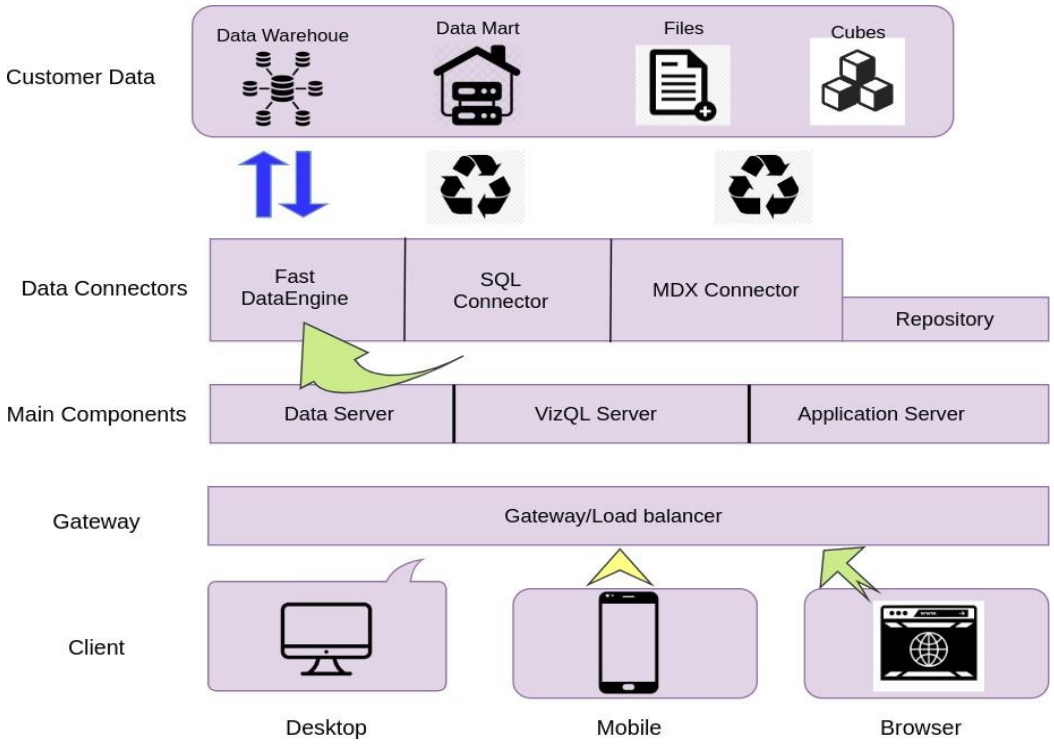


Tableau Server Architecture

Tableau has a highly scalable, n-tier client-server architecture that serves mobile clients, web clients and desktop-installed software. Tableau Server architecture supports fast and flexible deployments.

The following diagram shows Tableau Server's architecture:

Tableau Communication Flow

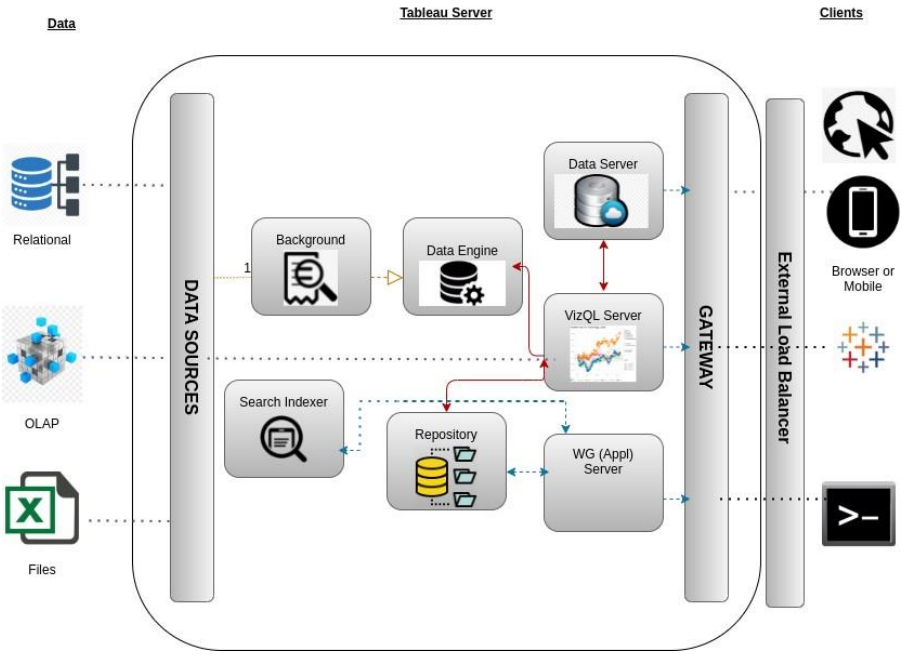


Tableau Server is internally managed by the multiple server processes.

1. Gateway

The gateway channelizes the requests from users to Tableau components. When the client makes a request, it is forwarded to external load balancer for processing. The gateway works as a distributor of processes to various components. In case of absence of external load balancer, gateway also works as a load balancer. For single server configuration, one primary server or gateway manages all the processes. For multiple server configurations, one physical system works as primary server while others are used as worker servers. Only one machine can be used as a primary server in Tableau Server environment.

2) Application Server: -

Application Server processes (wgserver.exe) handle browsing and permissions for the Tableau Server web and mobile interfaces. When a user opens a view in a client device, that user starts a session on Tableau Server. This means that an Application Server thread starts and checks the permissions for that user and that view.

3) Repository: -

Tableau Server Repository is a PostgreSQL database that stores server data. This data includes information about Tableau Server users, groups and group assignments, permissions, projects, data sources, and extract metadata and refresh information.

4) VIZQL Server: -

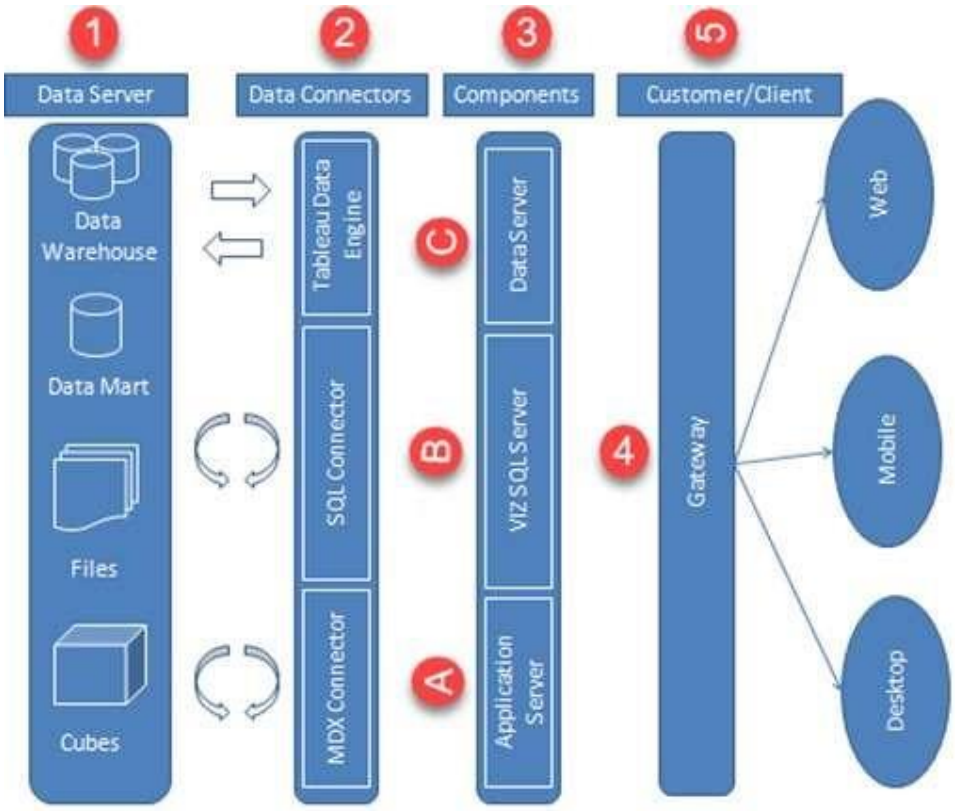
Once a view is opened, the client sends a request to the VizQL process (vizqlserver.exe). The VizQL process then sends queries directly to the data source, returning a result set that is rendered as images and presented to the user. Each VizQL Server has its own cache that can be shared across multiple use.

5) Data Server: -

Data Server Manages connections to Tableau Server data sources. It also maintains metadata from Tableau Desktop, such as calculations, definitions, and groups.

6) Client: -

The dashboards and visualizations in Tableau server can be viewed and edited using different clients. The Clients are Tableau Desktop, web browser and mobile applications.



3. Architecture Description

3.1. Data Description

The Dataset contains wine review data of countries

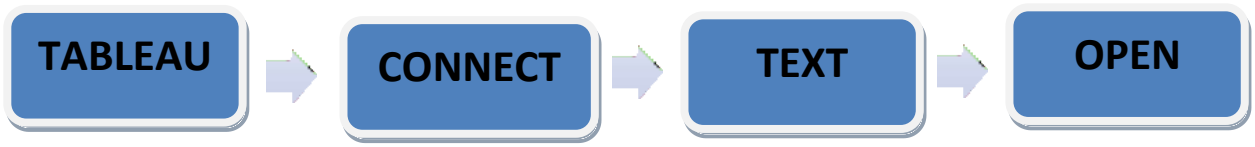
- Country - The country that the wine is from.
- Designation - The vineyard within the winery where the grapes that made the wine are from.
- Points - The number of points Wine Enthusiast rated the wine on a scale of 1-100 (though they say they only post reviews for.
- Price - The cost for a bottle of the wine.
- Province - The province or state that the wine is from.
- Region_1 - The wine growing area in a province or state.
- Region_2 - Sometimes there are more specific regions specified within a wine growing area (i.e., Rutherford inside the Napa Valley).

3.2. Data Transformation

In the Transformation Process, we will convert our original datasets with other necessary attributes format.

3.3. Data Insertion into Tableau

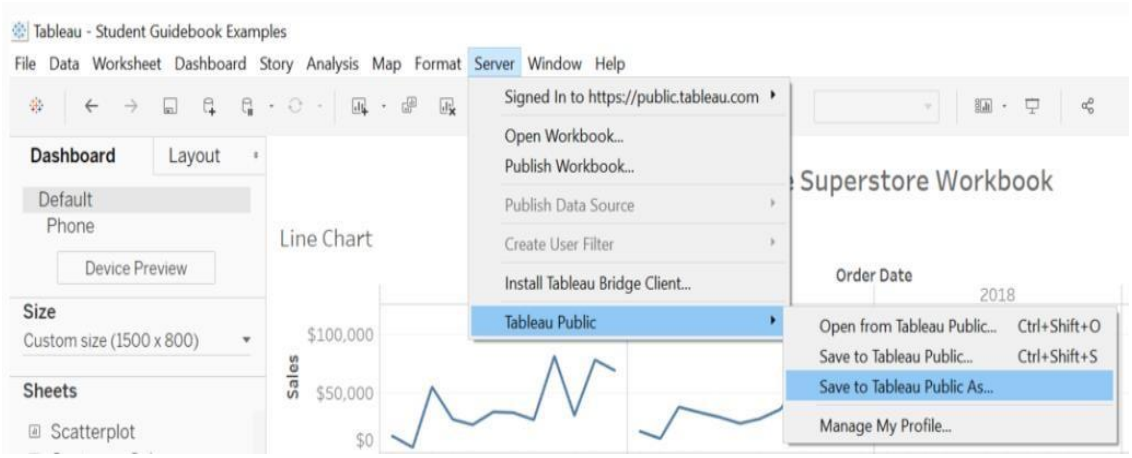
Data is inserted in the Tableau public by connecting the data to the tableau.
Data is connected by selecting text in the dialogue box and data (csv file) is selected in that dialogue box and the data is connected with Tableau.



3.4. Deployment.

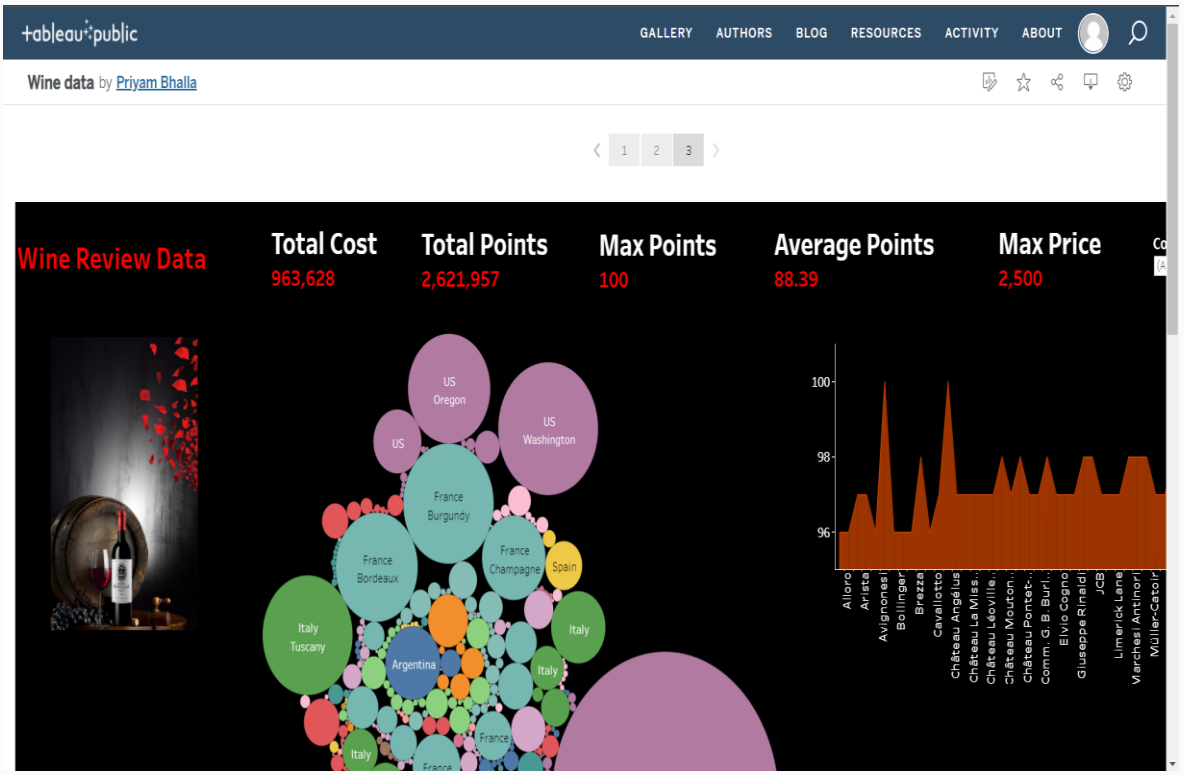
Once you've completed your dashboard, follow these steps:**- Server, Tableau Public, Save to Tableau Public As**

You may be prompted to log into your Tableau Public profile first if this is your first time publishing.



Next, fill out the title you want your viz to have and click “save”.

Here in the below screenshot, we can see that out workbook has been published to tableau public.



4. Unit Test Cases

TEST CASE DESCRIPTION	EXPECTED RESULTS
Total Cost	When clicked on the slicer, a dropdown should occur which has Various Countries which will help to show total cost of wines sold in the country.
Total Points	When clicked on the slicer, a dropdown should occur which has Various Countries which will help to show total points of wines scored in the country.
Max Points	When clicked on the slicer, a dropdown should occur which has Various Countries which will help to show maximum points of wines scored in the country, which will help to characterize best wine in that country.
Average Points	When clicked on the slicer, a dropdown should occur which has Various Countries which will help to show average points of wines scored in the country, which will help to characterize above average and below average wines in that country.
Max Price	When clicked on the slicer, a dropdown should occur which has Various Countries which will help to show maximum price of wines sold in the country, which will help to characterize the expensive wine in that country.