Architecture Design

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Document Version	1.0
Last Revised Date	24 jan 2023

DOCUMENT CONTROL

Change Record

VERSION	DATE	AUTHOR	COMMENTS
1.0	11 no 2022	Ayesha Siddiqui	

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 House Price Prediction 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

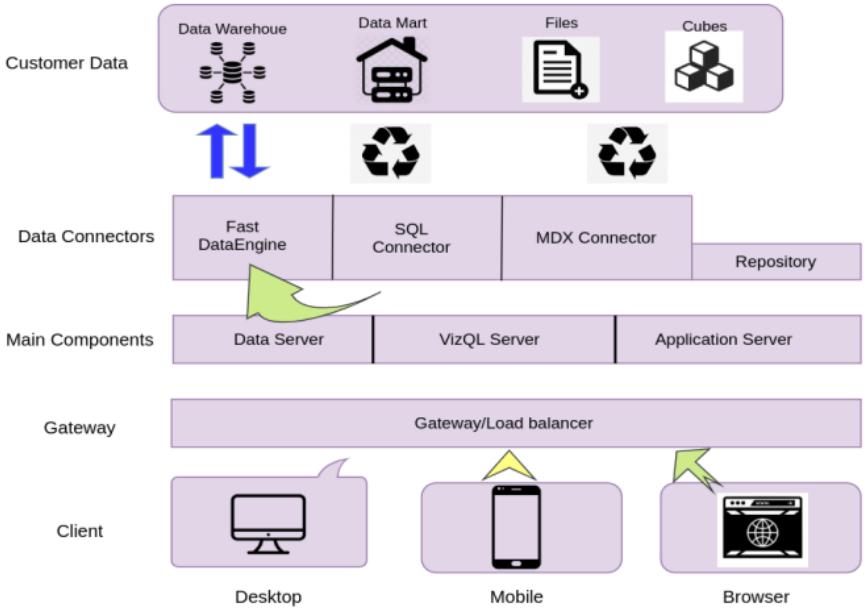


Tableau Server Architecture

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

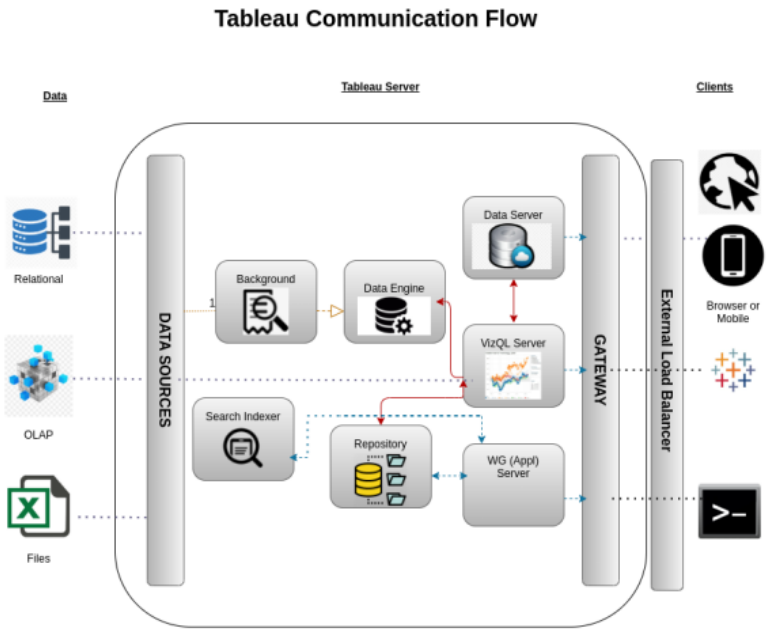


Tableau Server is internally managed by the multiple server processes.

1. Gateway/Load Balancer It acts as an Entry gate to the Tableu Server and also balances the load to the Server if multiple Processes are configured.

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 users 5) Data Engine:- It Stores data extracts and answers queries.

6) Backgrounder:- The backgrounder Executes server tasks which includes refreshes scheduled extracts, tasks initiated from tabcmd and manages other background tasks.

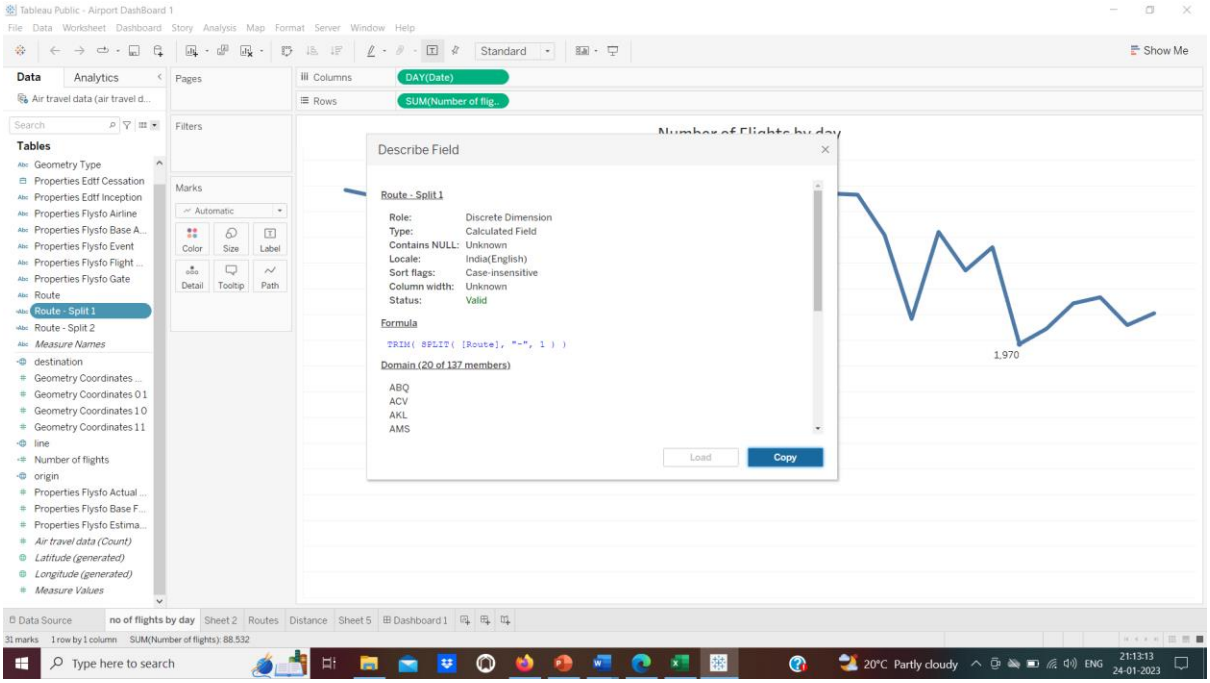
7) Data Server:- Data Server Manages connections to Tableau Server data sources It also maintains metadata from Tableau Desktop, such as calculations, definitions, and groups.

3. Architecture Description

3.1. Data Description

The Dataset contains the details of airport data, date, name and number of flights , geometry details, air route etc.

1. flight numbers: Each flight number is unique (in number).
2. travel count: Total travellers' numbers (in no).
3. route: name of the route (in string).
4. date: date (in square ft.)
5. Geometry type: longitude and latitude details (in coordinates.)



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Contains NULL: Unknown

Locale: India(English)

Sort flags: Case-insensitive

Column width: Unknown

Status: Valid

Formula

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Domain (20 of 137 members)

ABQ

ACV

AKL

AMS

ASE

ATL

AUS

BCN

BFL

BLR

BNA

BNE

BOI

BOS

BUR

BWI

BZN

CAN

CDG

CLE

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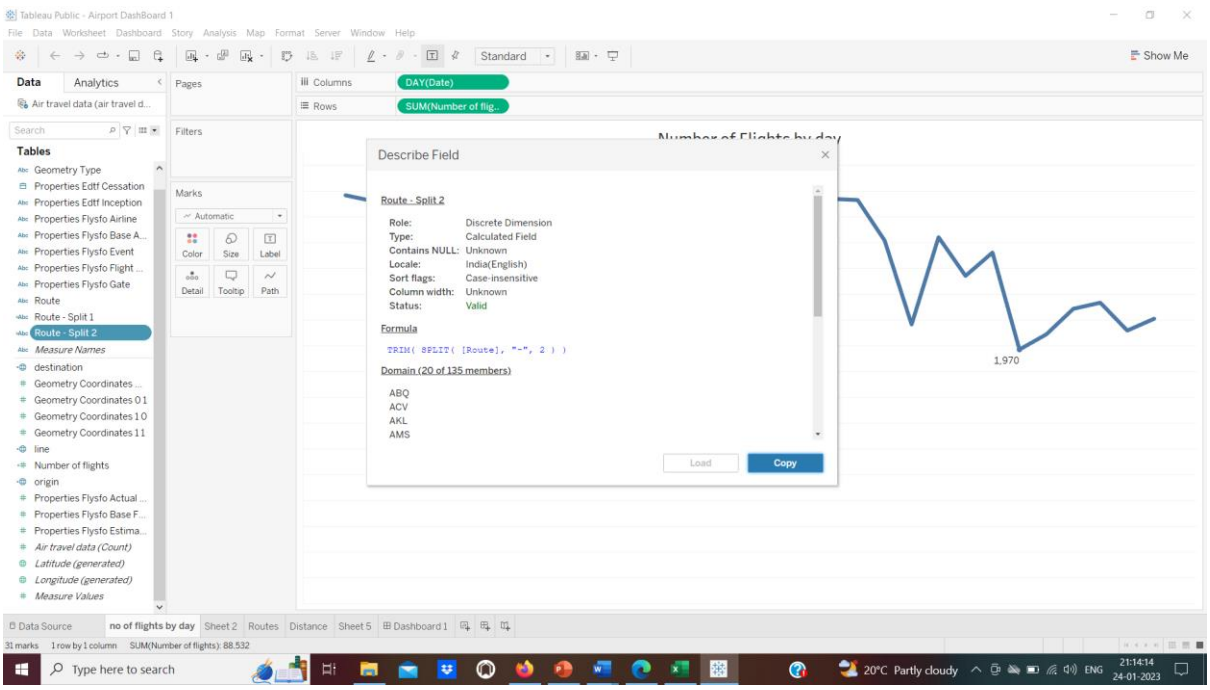

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Status: Valid

Formula

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Domain (20 of 135 members)

ABQ

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AUS

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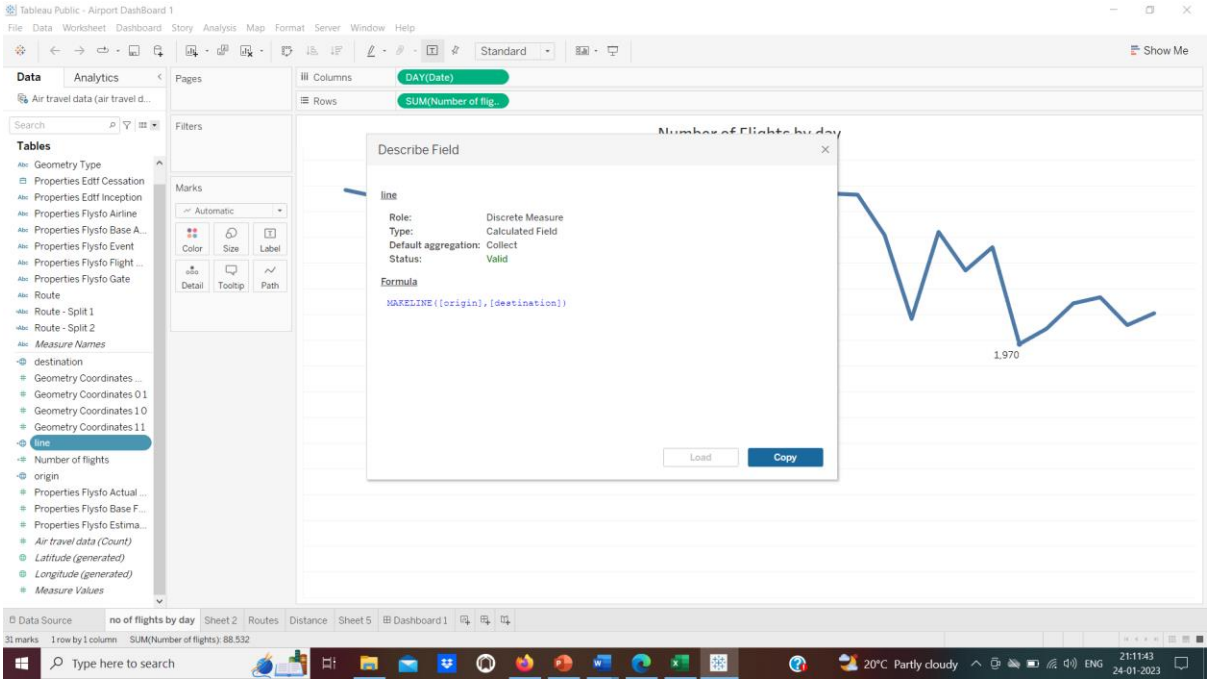

line

Role: Discrete Measure

Type: Calculated Field

Default aggregation: Collect

Status: Valid

Formula

MAKELINE([origin],[destination])