Architecture Design

Project - Investment Analytics(FDI Data)

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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 multiple server processes internally manage Tableau Server.

1) Gateway/Load Balancer
It acts as an Entry gate to the Tableau Server and balances the server load 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 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 include refreshing 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.

Deployment Description

Tableau deployment is the following depending on user requirements.
1. Tableau Online: Get up and running quickly with no hardware required. Tableau Online is fully
hosted by Tableau so all upgrades and maintenance are automatically managed for you.
2. Tableau Server deployed on public cloud: Leverage the flexibility and scalability of cloud
infrastructure without giving up control. Deploy to Amazon Web Services, Google Cloud
Platform, or Microsoft Azure infrastructure to quickly get started with Tableau Server (on your
choice of Windows or Linux). Bring your own license or purchase on your preferred marketplace.
3. Tableau Server deployed on-premises: Manage and scale your own hardware and software
(whether Windows or Linux) as needed. Customize your deployment as you see fit.