

CmpE 28 I

Team Tech-Phantoms

Airbnb

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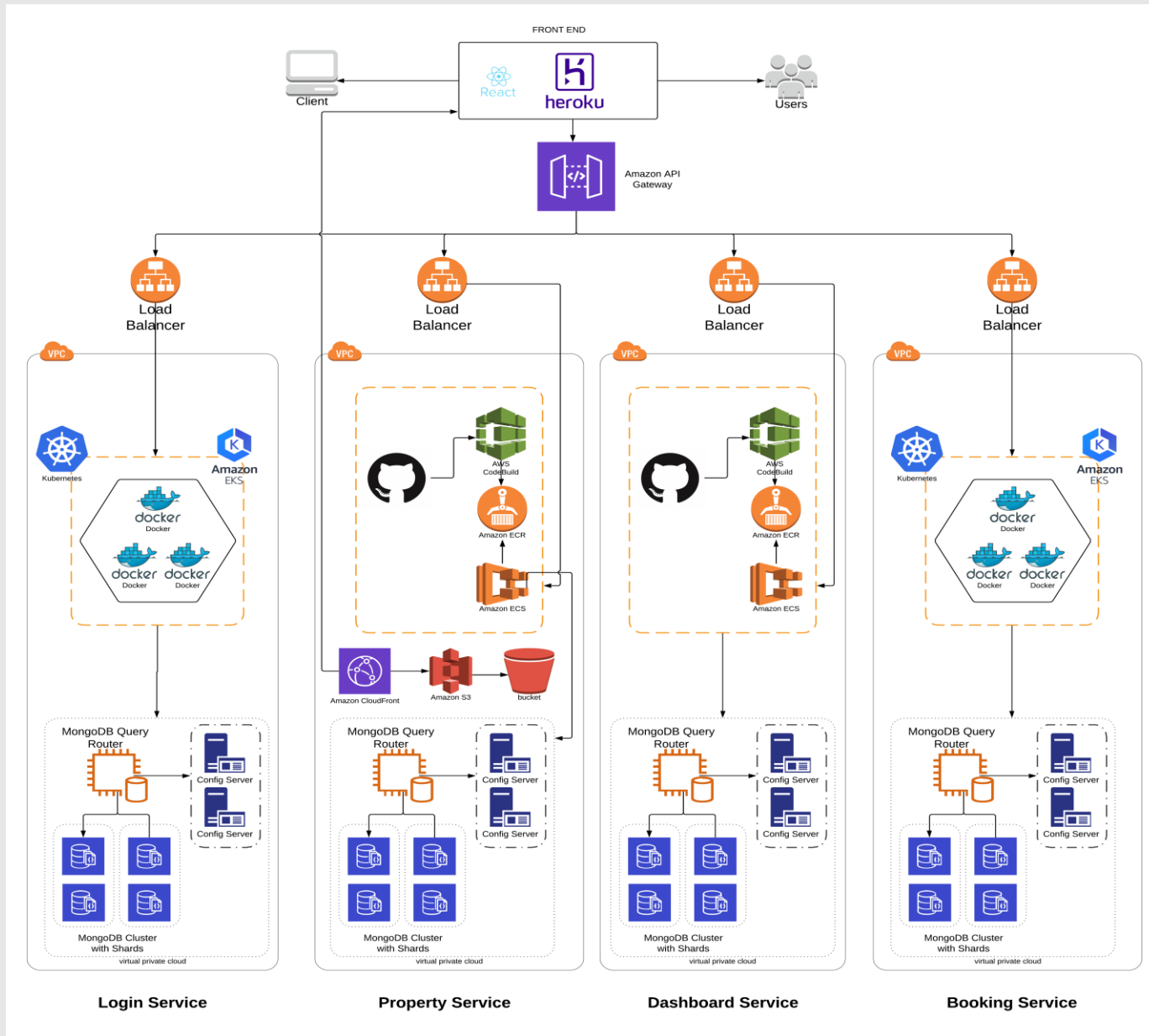
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Architecture Overview

- Airbnb as the name suggests is the clone of Airbnb application.
- The frontend of Airbnb made in react is deployed on Heroku with a CI/CD pipeline.
- The frontend communicates with the four microservices named Login, Property, Booking and Dashboard.
- The microservices are hosted on each team members' own AWS VPC with sharded mongo clusters handling the data.
- These microservices are dockerized and are running on either Amazon Elastic Container Service(ECS) or Amazon Elastic Kubernetes Service(EKS) clusters, again integrated with CI/CD pipeline for continuous deployment.
- The dockerized microservices are exposed to frontend using Amazon's API Gateway which on getting the request proxies it to the respective load balancers.

- Link



AKF Scaling Cube

- X-axis Scaling:

The X-axis Scale has been addressed by replicating each microservice across multiple instances which increases the throughput and helps in avoiding failures.

- Y-axis Scaling:

By dividing each service based on their functions and deploying it to separate AWS accounts, our application also addresses the Y-axis scaling.

- Z-axis Scaling:

The NoSql database i.e MongoDB has been sharded to address the Z-axis Scale.

Demo

Frontend URL : <https://airbnb-project-cmpe28l.herokuapp.com/homepage>