Platform Engineering Interview Task

December 2021
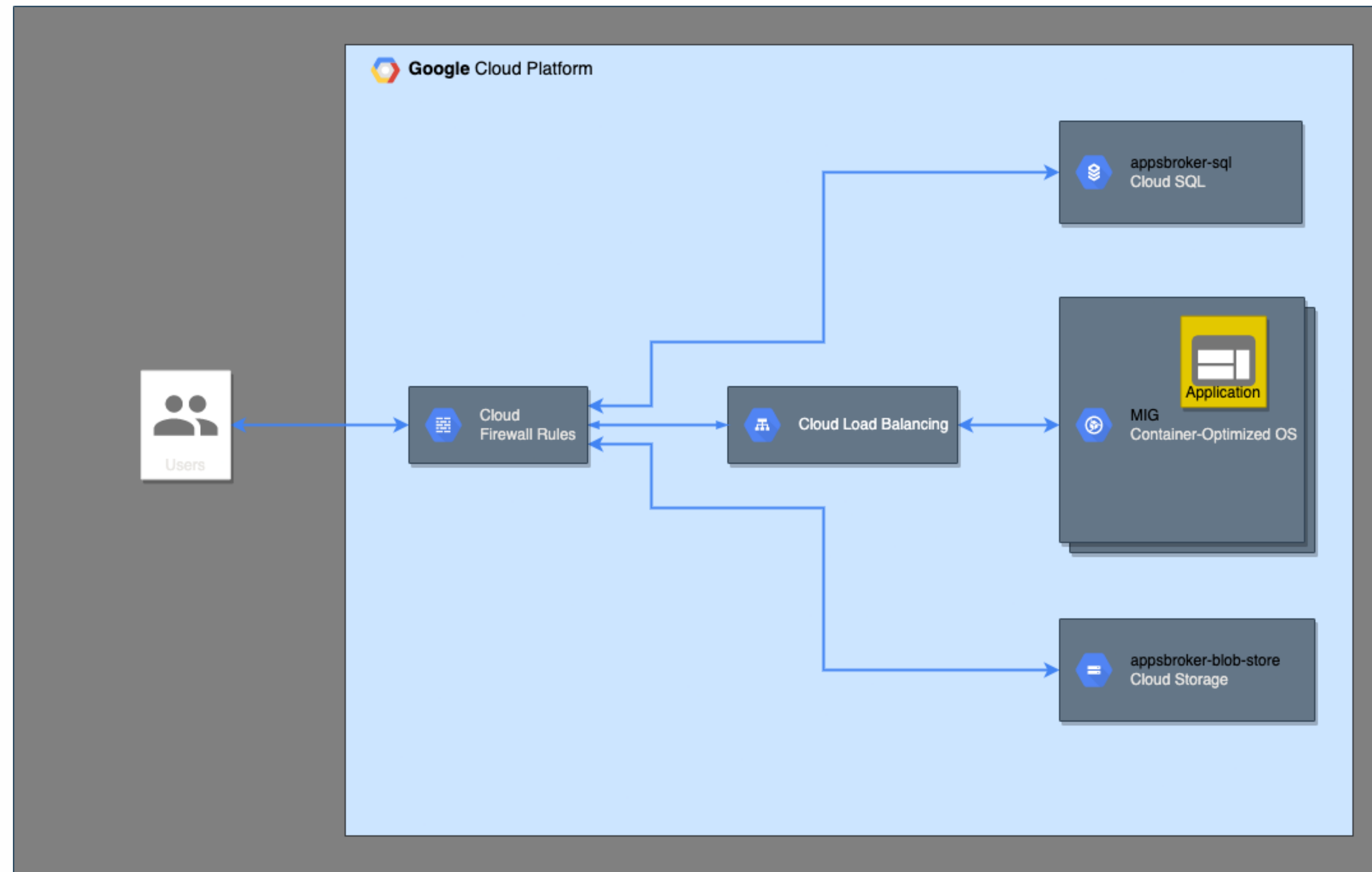
Customer Requirements

- Hello World app running on GCP

- Run on a private RFC1918 network range

- GCP Database service

- Blob Store

- Auto Scaling from any of Utilisation/Traffic/Status

- Cost Optimisation

- Secure

High Level Design Architecture

	Overview
Compute	Managed instance group utilising Linux to run the application
Network	Private load balancer, private only sql database, and private MIG. External IPs can be added later if required
Database	Cloud SQL instance leveraging mySQL for relational PII data
Storage	Google Cloud Storage Bucket for object storage

Compute	Detail
Managed Instance Group with COS	Allows scaling up and down Initial count of 1, with scaling up to 3 CPU utilisation based scaling (80%)
Instance Template	e2-micro machine type http-server tag Debian 10 image
Health Check	HTTP on port 80

Network	Detail
Proxy only Subnet	Appsbroker created network (int-lb-network) and proxy only subnet (appsbroker_proxy_subnet) on a 10.0.0.0/24 range
Private load balancer	Internal HTTP load balancer on the 10.0.0.0/24 subnet
Firewall	Rules to allow IAP, Health Check, & proxy to backend comms

Database	Detail
Cloud SQL Instance	mySQL version 5.7 db-f1-micro machine type
VPC Connector	Private IP to connect SQL instance to appsbroker network

Storage	Detail
Cloud Storage Bucket	Standard storage class

Thank you!

appsbroker