Web infrastructure design Project
Task 3: 3-scale_up
Url link = 3-scale_up - Google Docs
Done by = Temesgen Abdissa
        Definitions and Explanations.

Exploring the Need for Additions: Each time we introduce a new element, there's a rationale behind it. In this instance, we've brought in an extra server and integrated a load balancer. The introduction of this new server has a specific purpose—to separate distinct components: the web server (Nginx), the application server (code base), and the database (MySQL), each residing on its dedicated server. Yet, we've also set up an extra server that accommodates all components, poised to serve as a backup in case of component or server malfunctions. Vigilant monitoring and reinforced firewalls are in place for each server. Furthermore, we've added an additional load balancer to effectively manage amplified traffic flow across the entirety of the infrastructure.

3-scale_up design

https://ww.foobar.com

8.8.8.8

DNS

DNS

DNS

8.8.8.8

SSL Certificate

8.8.8.8

Load Balancers (HAproxy)

IP: 8.8.8.8

using **round-robin distribution algorithm**; where the first request will be sent to server 1, then the second request sent to server 2, then the third request sent to server 3 ...

Firewall

Firewall

Firewall

Firewall

Web Server
Nginx

Application
Server
Code base

Database
MySQL

Web Server
Nginx

Application Server
Code base

Database
MySQL

Server 1 (Active)

Server 2 (Active)

Server 3 (Active)

Server 4 (Active)

Master DB

Slave DB

Monitoring
client 1

Monitoring
client 2

Monitoring
client 3

Monitoring
client 4

Sumologic