

- You must be able to explain some specifics about this infrastructure:
 - For every additional element, why you are adding it
 - What distribution algorithm your load balancer is configured with and how it works
 - Is your load-balancer enabling an Active-Active or Active-Passive setup, explain the difference between both
 - How a database Primary-Replica (Master-Slave) cluster works
 - What is the difference between the Primary node and the Replica node in regards to the application
- You must be able to explain what the issues are with this infrastructure:
 - Where is SPOF
 - Security issues (no firewall, no HTTPS)
 - No monitoring

Answer:

1. I added two more servers to create redundancy to my web infrastructure so that if one server fails, other servers can continue to handle incoming request
2. I used Round Robin load balance which distributes requests among the servers sequentially unless one server is down.
3. The load balance enables an Active-Active setup where all nodes or servers are actively running. While in Active-Passive setup not all nodes will be actively up. That is, at least one node must be on standby.
4. The Primary node also known as the master node allows changes from one server(master) to be replicated in other servers(slaves). Whenever changes such as insert, delete, and so on occur on the primary node or server, the primary node log the operations, and then sends it across to the slaves which most call the replica. If the changes are made to both the primary and replica at the same time, it is known as synchronous. If the changes are queued up and later written, it is known as asynchronous. This operation is usually used on multiple servers for scalability. It can also be used for other purposes such as failover or analyzing data.
5. The primary node is responsible for processing write operations and maintaining data consistency, while the Replica nodes handle read queries to improve performance and scalability