

# ALX Project

## 1. Distributed web infrastructure:

**For every additional element, why you are adding it:**

Adding a load balancer to handle too much traffic .

**What distribution algorithm your load balancer is configured with and how it works:**

It's a round robin algorithm where the two servers work equally, the first request for the first server then the second request for the second one, then start again with the first server

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**Is your load-balancer enabling an Active-Active or Active-Passive setup, explain the difference between both:**

It's active-active, because they do the same service at the same time, and the difference between them is that during the same time in active-active we can access all the resources, but if we have active-passive we cannot use the backup cluster resources.

**How a database Primary-Replica (Master-Slave) cluster works:**

The master database saves updates and the clusters make a backup for the data that are stored in the master whenever an update is made in it (synchronous) or in another time (asynchronous).

**What is the difference between the Primary node and the Replica node in regard to the application:**

The replica node is a copy of the codebase that is in the primary node.

**The issues with some infrastructure:**

**Where are SPOF:**

the SPOF here is the single load balancer.

**Security issues (no firewall, no HTTPS):**

While the user connects with other servers using HTTP protocol, so every information sent is as plain text, and while there is no firewall, all devices may be attacked with DOS or Man in the middle attack or any type of attacks that can be made by incoming anonymous traffic.

**No monitoring:**

Monitoring helps to discover how devices work and helps to find their technical and problems, so without monitoring we can lose many devices and more time in maintenance.