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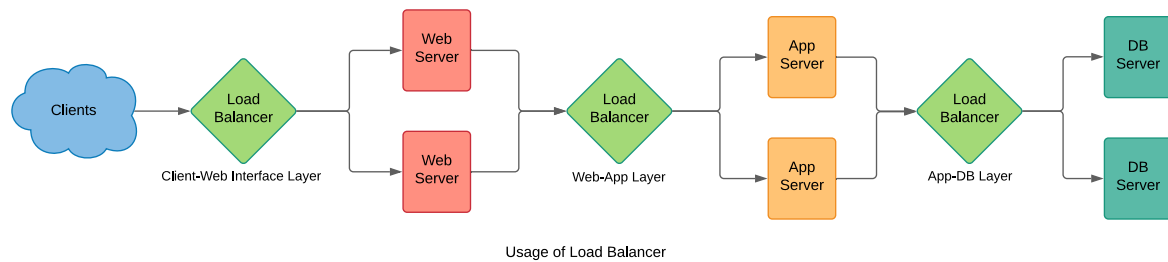
Load Balancing

Definition and benefits

The process of balancing load evenly on *N* servers is **Load Balancing**.

A properly implemented **load balancer** helps in the following ways:

1. It helps spread traffic across a cluster of servers to improve responsiveness and availability of applications, websites or databases.

2. Keeps tract of statuses of all the resources while distributing requests.

3. Avoids re-routing requests to a server which has the following issues:

   - elevated rate of errors,
   - non-responsiveness, and;
   - request overload.

4. Prevents single point of failure and increases, availability and responsiveness.

Usage of Load Balancer
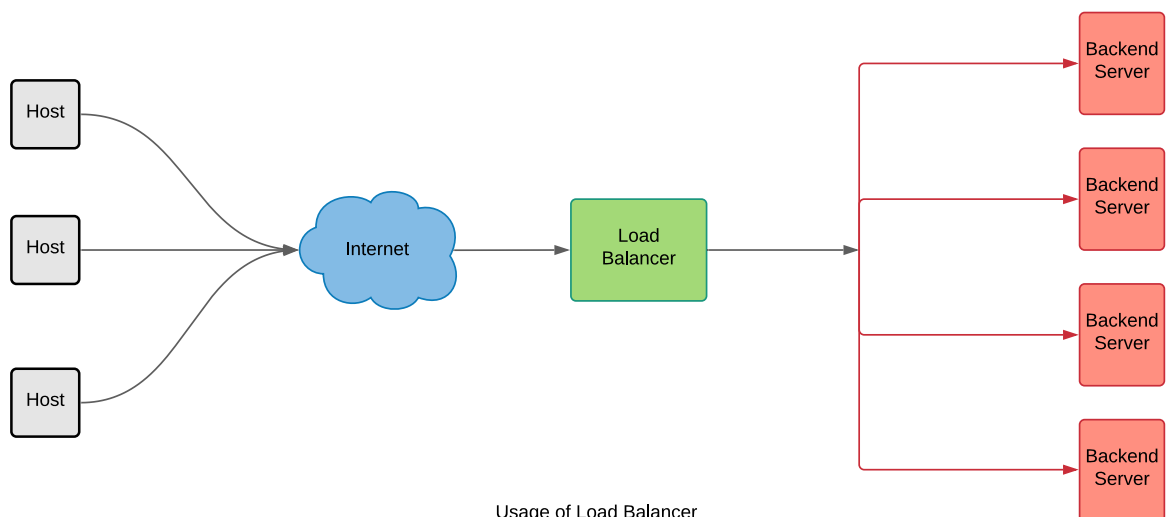
The following diagram explains where are all the places where Load Balancers, can be placed to utilize full scalability and reliability.

Usage of Load Balancer

Dealing with Redundancy in Load Balancers

Load Balancing Algorithms

Least Connection Method

Least Response Time Method

Least Bandwidth Method

Round Robin Method

Weighted Round Robin

IP Hash

Consistent Hashing