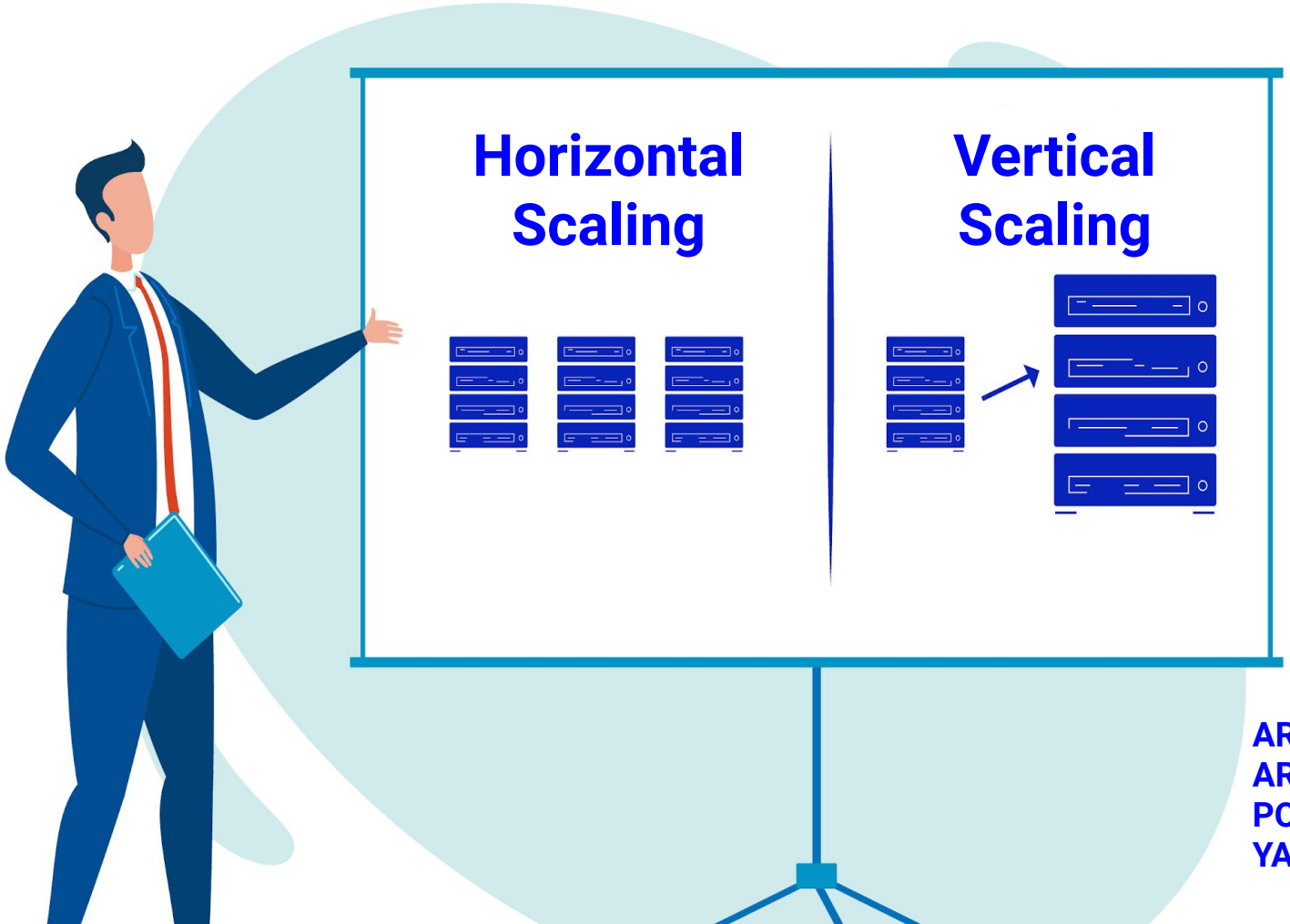


ARPITHA
ARYA
POORNIMA
YASHIKA

DATABASE SCALABILITY

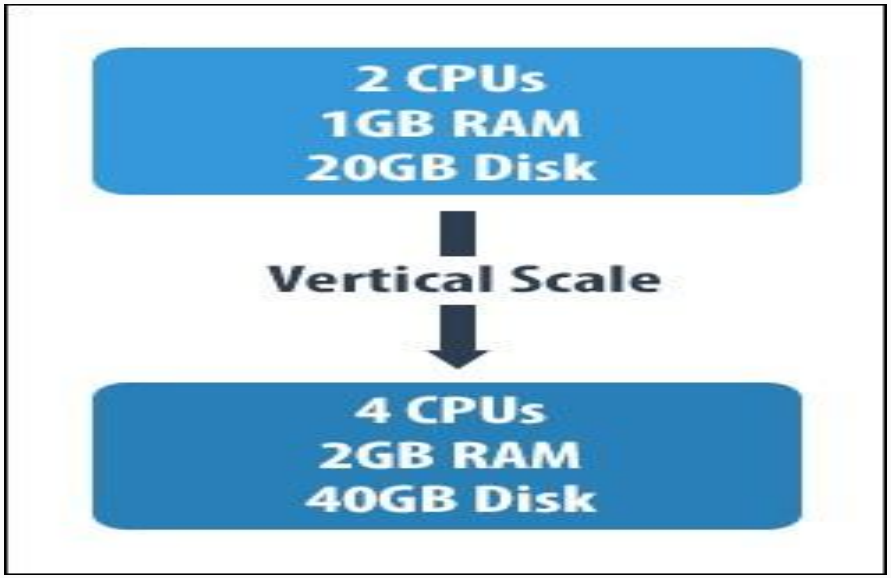
- Scaling means altering size of the system.
- Scalability is the capability of a system, network, or process to handle a growing amount of work.
- Database Scalability is the ability to expand a database to allow it to hold increasing amounts of data without sacrificing performance.
- Database Scalability is one of the key factors to be considered when deciding e-commerce platform.
- Two types of scaling:
  - Vertical Scaling
  - Horizontal Scaling

VERTICAL SCALING

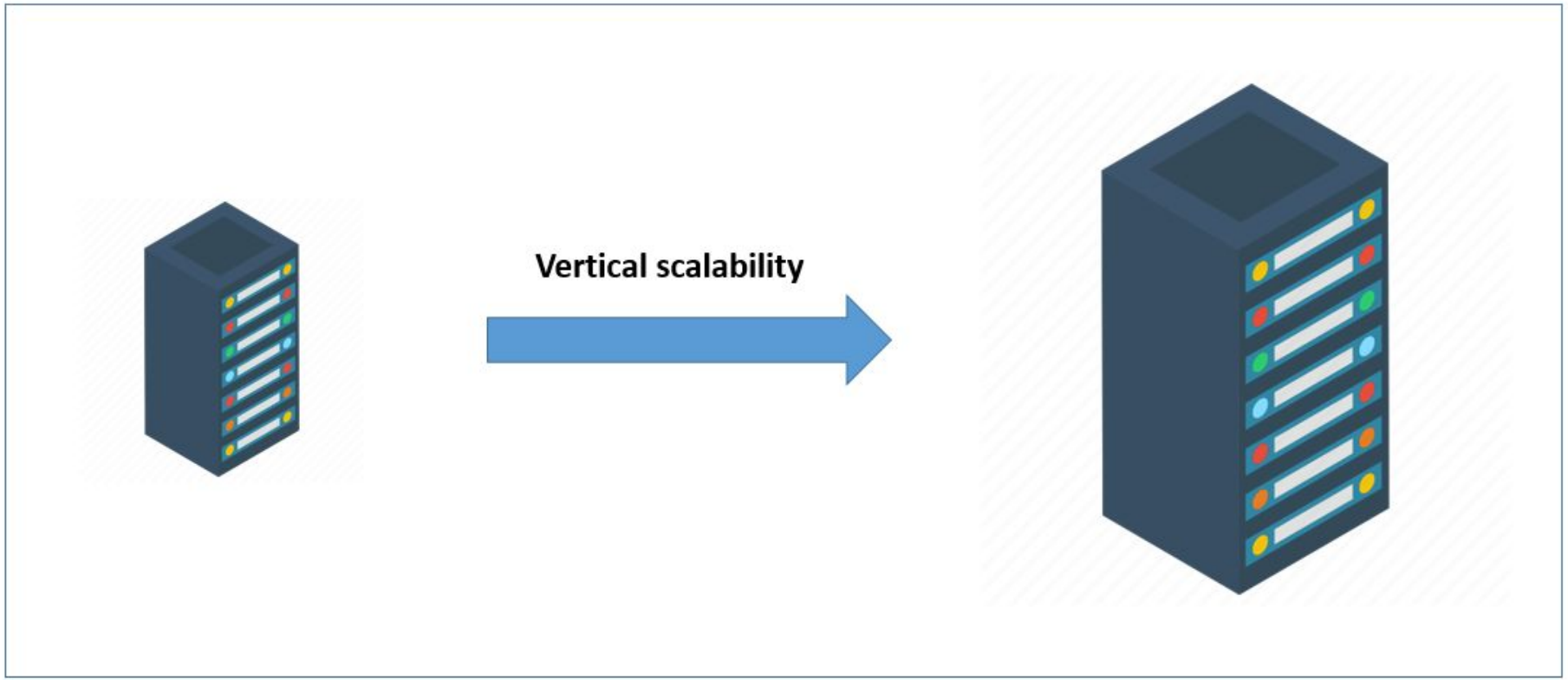
When new resources are added in the existing system to meet the expectation it is known as Vertical Scaling.

It involves a limited range offices and minimal querying.

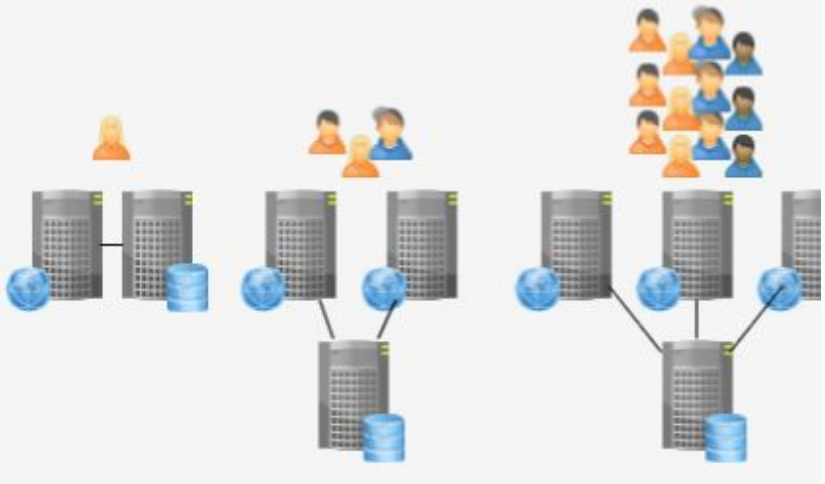
It is often limited to capacity of single machine.Scaling beyond that capacity results in downtime.



Vertical Scaling

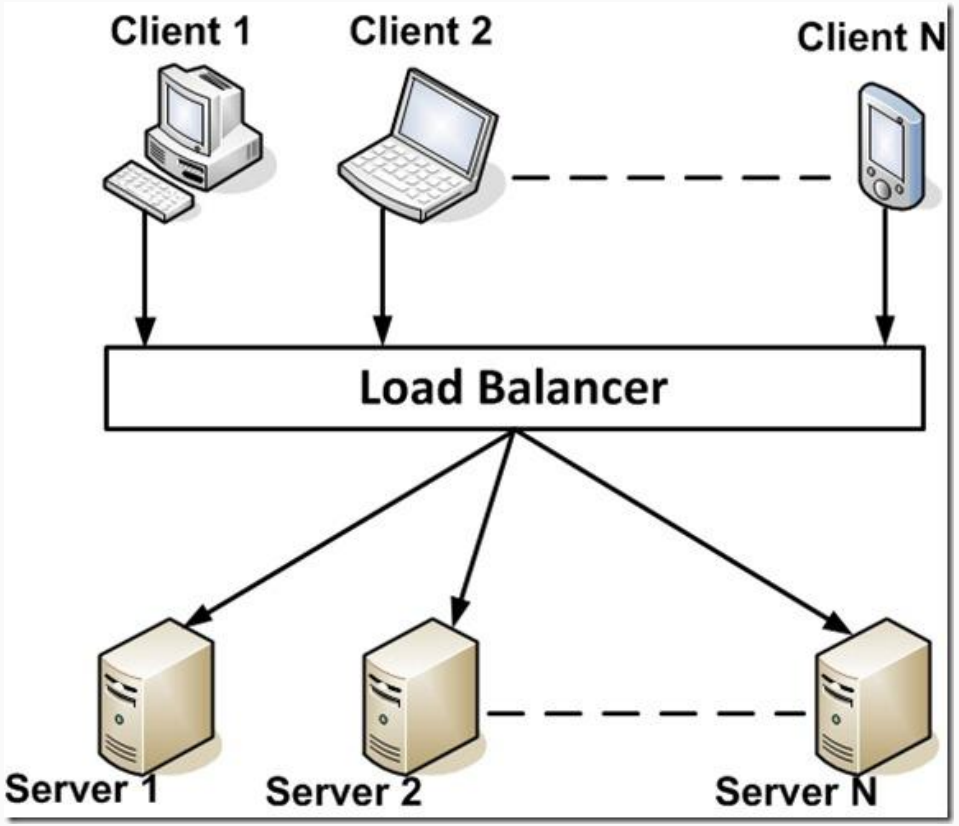


HORIZONTAL SCALING



Horizontal Scalability is the ability to increase capacity of existing server or database. It can be achieved with the help of clustering, distributed file system, and load balancing.By increasing nodes in the cluster, performance of the system can be increased and simultaneously distribution of work among separate server nodes can be done. Load balancer controls the traffic among the servers. Cassandra, Mongodb, etc are examples of horizontal scaling.

Horizontal Scaling



HORIZONTAL SCALING Vs VERTICAL SCALING

HORIZONTAL SCALING	VERTICAL SCALING
• Adding more machines. • Data is divided in between the machines. • Implementation becomes difficult since design complexity increases	• Increasing the power of the existing machine. • Data resides over a single machine. • Implementation becomes easier since a single machine is involved.

ADVANTAGES

HORIZONTAL SCALING

- Enables endless growth.
- Fault tolerance is more.
- Load can be handled well.
- Better performance.

VERTICAL SCALING

- Reduced software costs.
- Less administrative efforts.
- Easier implementation.
- Power consumption becomes less.

THANK YOU