CLUSTER COMPUTING

PRESENTED BY

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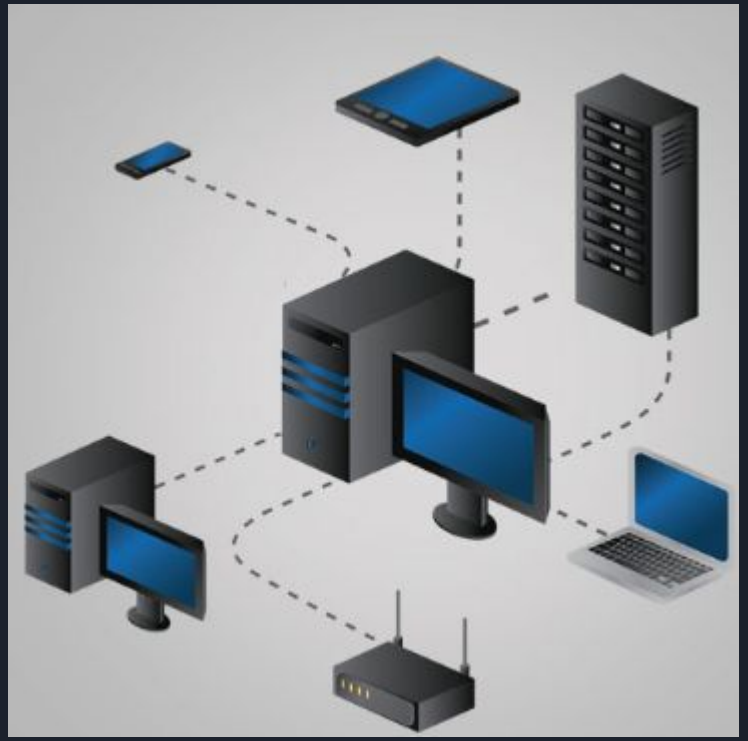
OVERVIEW

- Introduction.
- Why cluster computing is importance?
- Types of cluster computing.
- High performance cluster.
- High availability cluster.
- Load balancing cluster.
- Advantages & Disadvantages.
- Application.
- conclusion.

WHAT IS CLUSTER COMPUTING ?

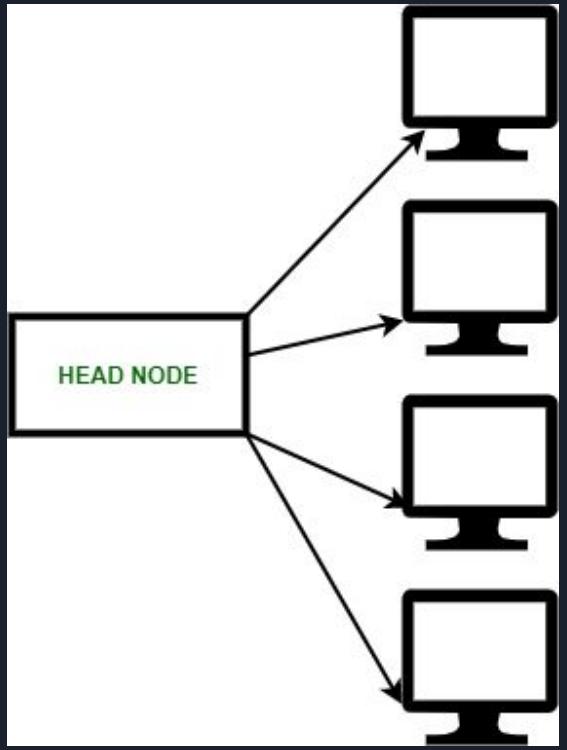
CLUSTER COMPUTING

- It is a set of computers that work together so they can be viewed as a single system.
- The each node set to perform the same task,controlled and scheduled by the software.
- The cluster are generally connected through fast local area networks.



Why cluster computing is important

- It can provide faster processing speed , larger storage capacity , better data integrity , greater reliability and wider availability of resources.
- Computer cluster are usually dedicated to specify functions,such as load balancing , high availability ,high performance or large-scale processing.

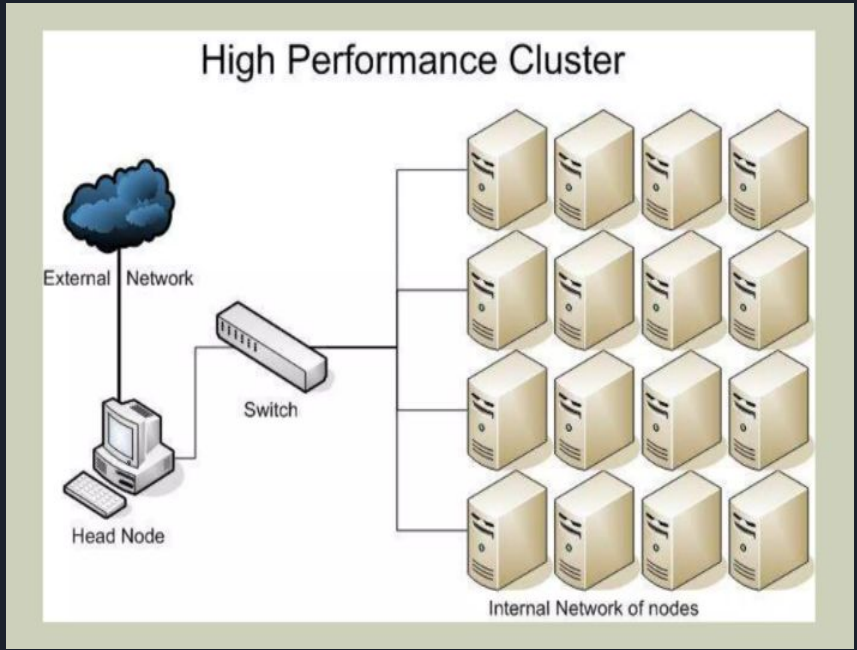


TYPES OF CLUSTER COMPUTING

- HIGH PERFORMANCE CLUSTER.
- HIGH AVAILABILITY CLUSTER .
- LOAD BALANCING CLUSTER.

HIGH PERFORMANCE CLUSTER

- It Start from 1994.
- Donald becker of nasa assembled this cluster.
- It is also known as beowulf cluster.
- It is dependable parallel computers.
- Application like data mining,parallel processing etc.



HIGH AVAILABILITY CLUSTER

- Avoid single point of failure.
- Always with redundancy.
- It is also known as failover cluster.
- This requires atleast two nodes a primary and a backup.
- It is used to implement database,web application servers.

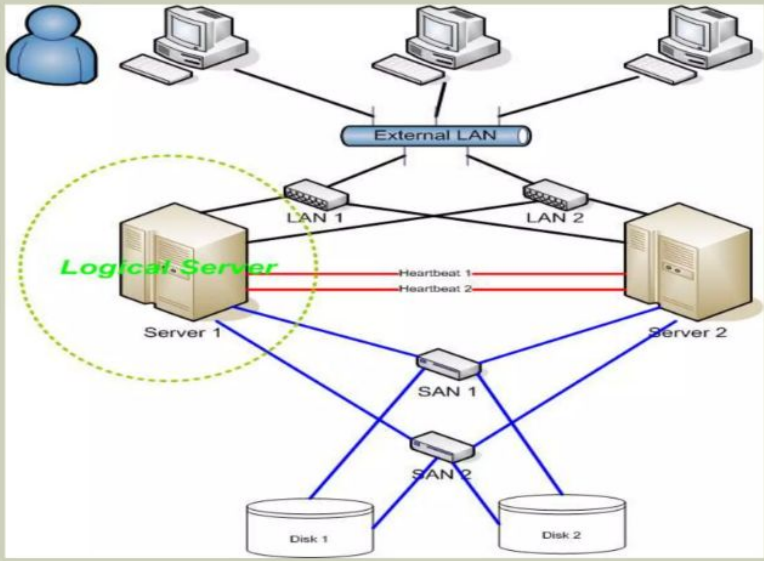


Fig :- High Availability Cluster

LOAD BALANCING CLUSTER

- Each node in a cluster is able to handle requests for the same content or application.
- Both the high availability and load balancing cluster. technologies can be combined to increase the reliability.
- Pc cluster deliver load balancing performance.

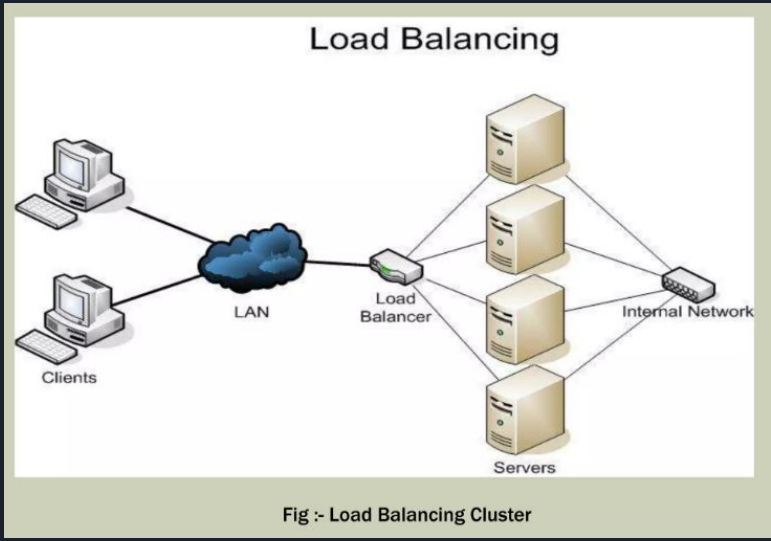


Fig :- Load Balancing Cluster

ADVANTAGES

- Availability
- Scalable
- Load handling and maintenance
- Easy to manage

DISADVANTAGES

- More space is required
- Very expensive

APPLICATIONS

- Earthquake simulation.
- Image rendering.
- Weather forecasting.
- Email, Echat, Ebook, Ebank.
- Computational fluid dynamics.
- Petroleum reservoir simulation.

CONCLUSION

- Cluster are promising.
- Solve parallel processing paradox.
- Cluster based supercomputer (linux based cluster).
- New trends in hardware and software technologies are likely to make cluster.


THANK YOU!