High Availability Clustering

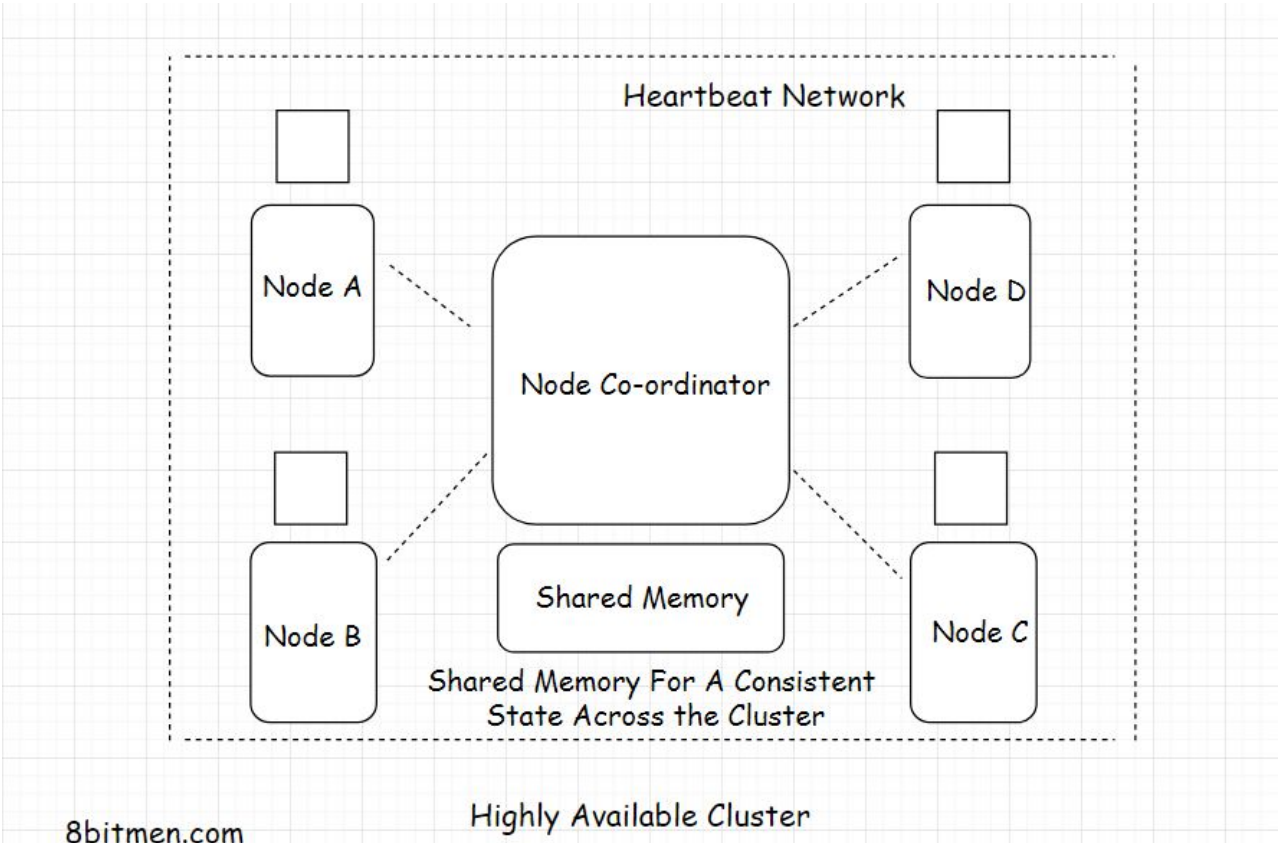
In this lesson, you will cover high availability clustering.

Now that you have a clear understanding of high availability, let's talk a bit about the high-availability cluster.

A *high availability cluster* also known as the *fail-over cluster*, contains a set of nodes running in conjunction with each other that ensures high availability of the service.

The nodes in the cluster are connected by a private network called the *heartbeat network* that continuously monitors the health and the status of each node in the cluster.

A single state across all the nodes in a cluster is achieved with the help of a shared distributed memory and a distributed coordination service like the *Zookeeper*.



To ensure the availability, HA clusters use several techniques such as *disk mirroring/Redundant Array of Independent Disks (RAID)*, redundant network connections, redundant electrical power etc. The network connections are made redundant. So, if the primary network goes down the backup network takes over.

Multiple HA clusters run together in one geographical zone ensuring minimum downtime and continual service.

Alright, so now we have a pretty good understanding of scalability and high availability. These two concepts are crucial to software system design.

Let’s move on to the next chapter where we discuss load balancing in web applications.

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