

Heartbeats and Service Discovery in a Distributed System

Heartbeats in a distributed system are messages sent by a health service between nodes to verify their status and ensure that they are still operational. The purpose of heartbeats is to detect failed nodes and allow the system to respond to such failures. This can be done by marking the failed node as dead and reassigning its tasks to other nodes, or by triggering a system-wide failover to a backup node. Heartbeats are used to maintain reliability and availability.

Health service is closely tied to the Service Discovery problem. If a user requests a service, that service is routed by a load balancer rather than by the service itself, and it keeps the snapshot of all the data in its database or cache. Now the health service will see a difference in the snapshot in the load balancer and then open's up a new connection with them and check their heartbeat..

