

① How anyone EC<sub>2</sub> provide load balancing?

Ans. Micro services must be scalable & elastic, & if components fail new instances or containers must be brought online to ensure constant availability. This means IP address of each instance changes constantly in the microservice. Each instance of services also must constantly maintained using load balancers provide stable & available points. Load balancers require additional compute resource & introduce if client is in control. Elastic load balancing automatically distribute incoming application traffic across multiple targets such as instances, containers etc. It can handle the load of your application in a single availability zone.

② Compare Google file system & HDFS?

Ans Hadoop distributed file system

- Developed in Java
- deleted files are renamed into particular folder & then it will removed via garbage.
- No n/w stack issues
- only append possible
- It has name node & address node.

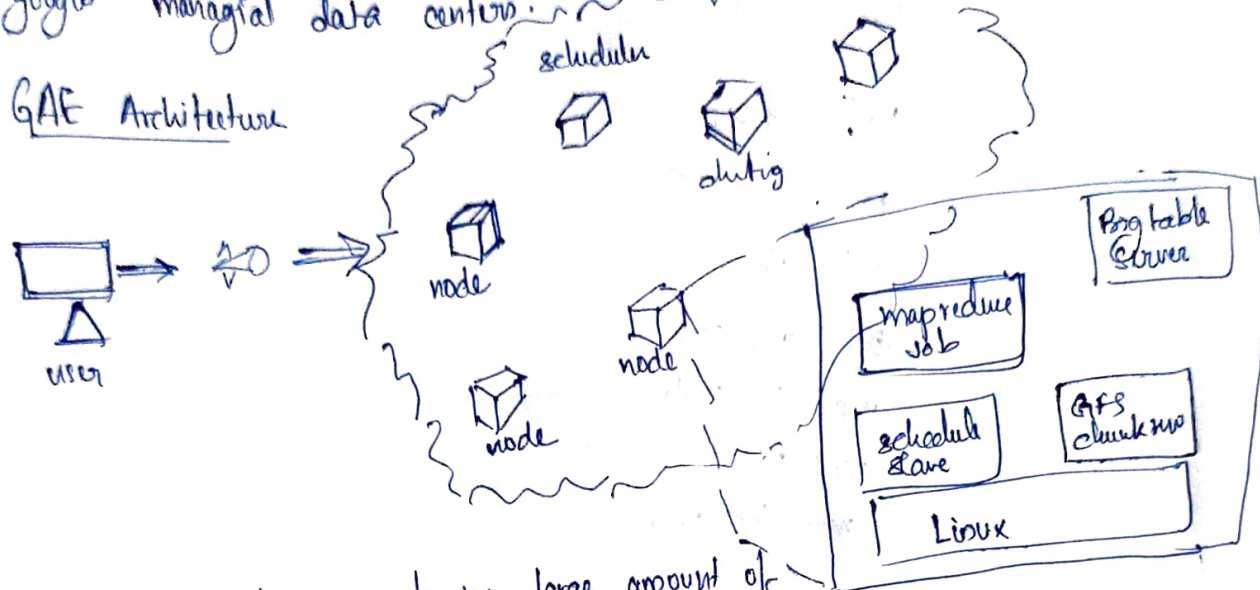
Google file system

- developed in C, C++
- deleted files are not deleted immediately and are renamed. In hidden name space & deletes after 3 days
- n/w stack issues.
- redeem file also possible.
- it has waste write & chunk server

③ Discuss about google App engine with the help of suitable diagrams.

Ans These platform service for developing & hosting web application in google managed data centers.

### GAE Architecture



GFS is used for storing large amount of data. map reduce is for use in application program development. clustering is used for distributed application local service. Big table offer a storage service for accessing used data. User can interact with google app. via the web interface provided by each application. Third party application provide can use to build closed application for providing service.

Inside each data center there are 1000 of service forming difficult cluster.

The holding block of google cloud computing application include the google file system, for storing large amount of data. Map reduce programming framework for applied non developers.

The figure shown is the overall architecture of google cloud infrastructure. A typical cluster can run the GFS, ~~map~~ map reduce job & Big table server for structure data extra service such as clustering for distributed load can also run the cluster.