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CCS EXPERIMENT NO. 3

Post labs:

1. Explain the various features of OpenStack.

Ans:

- a. OpenStack is a free and open-source cloud-computing software platform which provides services for managing a Cloud environment on the fly.
- b. Consists of a group of interrelated projects that control pools of processing, storage, and networking resources. Provides users methods and support to deploy virtual machines in a remote environment.
- c. State in OpenStack is maintained in centrally managed relational database (MySQL or MariaDB).
- d. OpenStack provides all the services for an IaaS Features of OpenStack
 - Live Upgrades
 - Federated Identity (Shibboleth)
 - Trove – “Project Red dwarf”: Manage database resources
 - Object storage replication

2. Explain the modes of operation of OpenStack.

Ans:

OpenStack Modes of Operation

- a. Two modes – Single Host and Multi-host
- b. In multi host mode copy of network runs on each of compute nodes
- c. In single host mode network service is based on central server (CLC).

The operation is called multi host mode, if a copy of the network is run on each of the compute nodes and the nodes are used as the internet gateway by the instances that are running on individual node.

3. Explain any 1 scenario where you can use OpenStack

Ans:

- a. OpenStack is an open-source software for creating private and public clouds, built and disseminated by a large and democratic community of developers, in collaboration with users.
- b. OpenStack controls large pools of compute, storage, and networking resources throughout a datacenter, managed through a dashboard that gives administrators control while empowering users to provision resources through a web interface.
- a. This is what makes OpenStack a great software to be used in scenarios such as when you aren't sure how big your application is going to get.
- b. This is when you wouldn't be sure about how much you want to spend on the hardware resources because you might end up spending too much extravagantly or might end up spending like a miser and your application is barely able to fulfill the needs of growing number of users. This is where OpenStack's scalable storage and virtual machines come into picture where you just scale your resources based on the fame of your application