

[OS-HA]: OpenStack – High Availability

Length : 3 days
Delivery Method : Instructor-led (Classroom)

Course Overview

OpenStack is a free and open-source software platform for cloud computing, mostly deployed as an infrastructure-as-a-service (IaaS). In this training you will understand OpenStack components followed by install and configure the software. A group of 2 students will be able to deploy a private cloud on Ubuntu server using OpenStack in a highly available production level on 8 Ubuntu servers.

Audience Profile

Targeted for Cloud engineers, window server administrators, Unix/Linux administrator, Storage admins, network administrators, Virtualization administrators.

At Course Completion

Participant should be able to deploy a private cloud in highly available production grade cloud and also perform OpenStack administration.

Pre-Requisites

OpenStack Multi Node KVM training should be completed, prior to attending this training.

Course Outline

Module 1: OpenStack Eco-System Overview

Lessons

- OpenStack - Architectural Overview
- OpenStack – Versions
- OpenStack - Terminologies (Keystone, Glance, Nova, Cinder, Neutron, Horizon)
- OpenStack - Implementation Types

Module 2: OpenStack Installation

Lessons

- Deployment Planning for OpenStack
- Ubuntu Server Installation
- Network and Disk Partitioning on Linux
- NTP Server Installation and Configuration

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Module 3A: Deploy Dual controller nodes

Lessons

- Deploy two Ubuntu servers
- SSH to Ubuntu-01 and configure as controller-01
- SSH to Ubuntu-02 and configure as controller-02

Module 3B: Deploy keep alive

Lessons

- Keepalived – An Overview
- MySQL Server Management – CLI and GUI

Lab 1: Install and Configure MySQL Server on Controller node

Module 4: MySQL Server

Lessons

- MySQL Server – An Overview
- MySQL Server High Availability – Theory
- MySQL Server Management – CLI and GUI

Lab 2: Install and Configure MySQL Server on DB Node

Module 5: OpenStack Keystone Module

Lessons

- Keystone -An Overview
- Role of Keystone in OpenStack
- RabbitMQ Installation on all controller

Lab 3: Keystone Install and configure on all controller

Lab 4: Create Keystone users, tenants, and roles on all controller

Module 6: OpenStack Glance Module

Lessons

- Glance -An Overview
- Role of Glance in OpenStack
- Role of Glance images

Lab 5: Glance Installation and configuration on all controller

Lab 6: Create Linux Glance images on all controller

Module 7: Cinder Module

Lessons

- Cinder -An Overview
- Role of Cinder in OpenStack

Lab 7: Cinder Installation and configuration on all controller

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Lab 8: Create a cinder volume and test on all controller

Module 8: Nova services

Lessons

- OpenStack Nova -An Overview
- Role of Nova Compute (KVM, Xen etc.)

Lab 9: Nova Installation and configuration on all controller

Module 9: Horizon Module

Lessons

- Horizon -An Overview
- Role of Horizon in OpenStack

Lab 10: Horizon Installation

Lab 11: Customization of Horizon

Module 10: Installing Nova on Compute01 and Compute 02 Node

Lab 12: Install & Configure nova-compute for both the Nodes

Lab 13: Install & Configure nova-network for both the Nodes

Module 11: Test HA

Lab 14: Test Keystone High Availability

Lab 15: Test Glance High Availability

Lab 16: Test Cinder High Availability

Lab 17: Test Horizon High Availability

Lab 18: Test Nova High Availability

Lab 19: Test Compute High Availability

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