Day- 1

OpenStack Essential - Agenda

- **Introduction to Openstack**
  - Introduction And Welcome
  - Next Gen OpenStack Data Centers
  - Understand the components that make up the cloud

- **Architecture components of OpenStack**
  - What OpenStack is Not. (The History)
  - Architecture Workflow
  - Nova- Compute
  - Swift - Storage
  - Glance- Image Service
  - Cinder- Block Storage
  - Neutron - Networking
  - Horizon- Dashboard
  - Keystone- Identity Service

- **OpenStack Demonstrations**
  - OpenStack Hypervisors
  - Choosing your Distribution platform
  - Creating your Own OpenStack with DevStack

- **Dashboard**
  - Verify operation of the Dashboard
  - Manage/Create projects, users, and roles
  - Manage Keystone catalogue services and endpoints
  - Create roles and rules for the environment
  - Verify operation of the Identity service
  - Live Lab: Creating Projects, Users, And Roles

Day- 2

OpenStack Intermediate - Agenda

- **Dashboard**
  - Verify operation of the Dashboard

- **Compute**
  - Verify operation of Compute services
  - Manage Nova user keypairs
  - Manage Flavors
  - Manage quotas
  - Manage project security group rules
  - Launch a new Instance
  - Assign security group to Instance
  - Configure an Instance with a Floating IP address
  - Access an Instance using a keypair
  - Shutdown an Instance
  - Terminate Instance
  - Manage instance snapshots
  - Live Lab: Managing Flavors and Quotas
  - Live Lab: Launching Instances From The CLI
  - Live Lab: Launching Instances from Horizon
  - Live Lab: Configure Access and Security for Instances

- **Block Storage**
  - Block Storage Cinder Overview
  - Create volume group for block storage
  - Manage volume
  - Create a new Block Storage Volume and mount it to a Nova Instance
  - Manage quotas
  - Snapshot volume
  - Manage volumes backups
  - Manage volumes encryption
  - Live Lab: Create a new Block Storage Volume and mount it to a Nova Instance
  - Live Lab: Create a Volume Snapshot and Backup
  - Live Lab: Create an Encrypted Volume

- **Object Storage**
  - Swift - Object Stoage Overview
  - The Ring
  - Account, Proxy, Object, and Container Servers
  - Replication
  - Manage access to object storage
  - Manage expiring objects
  - Live Lab: Set Expire Times on Objects

Day- 3

OpenStack Advance - Agenda

- **Image Management**
  - Verify operation of the Image Service
  - Deploy a new image to an OpenStack instance
  - Manage image types and backends
  - Live Lab: Creating a New Image

- **Networking**
  - Linux Networking - Linux Bridges
  - Linux Networking - Network Managers with Nova-Network
  - Linux Networking - Network Traffic Flow VLAN and Flat Networks
  - Linux Networking - Floating IP Address
  - Neutron
  - Neutron - Linux Bridges
  - Neutron - Open vSwitch
  - Neutron - ML2 Plugin
  - Neutron - Agents
  - Verify operation of network service
  - Create project networks
  - Create project routers
  - External Networks
  - Manage project security group rules
  - Manage quotas
  - Live Lab: Create a New Subnet in Existing Tenant Network

- **Telemetry**
  - Telemetry - Ceilometer Overview
  - Telemetry- Ceilometer Pipelines, Meters, and Alarms
  - Verify operation of Telemetry
  - Manage Telemetry meters and alarms

- **Heat/Orchestration**
  - Orchestration- Heat Overview
  - Heat Architecture
  - Heat Templates
  - Verify operation of Heat/Orchestration
  - Use Heat/Orchestration CLI and Dashboard
  - Obtain detailed information about a stack