Cloud Computing – Amazon (AWS) and Openstack

Course details

Duration: 30 hours

Location: Pune

Course Outline:

- Consuming Public Cloud Services – using Amazon Cloud
  - Components of Typical IT Infrastructure
  - Challenges in a traditional IT Infrastructure
  - Virtualization - Types ,Priced and open source products in the market
  - Types of Cloud – IAAS , PAAS, SAAS
  - Overview of Public Cloud vendors
  - Overview of Private cloud products
  - Introduction to Amazon AWS cloud – Pricing ,Regions Availability Zones ,Types of instances
  - Overview of different services of AWS
  - Consuming EC2 Instance Service from AWS
    (Creating Linux and Windows Instances from the available AMIs connecting and remote control from the laptop)
  - Consuming EBS block storage service from AWS – Adding volumes to Instances
    Taking snapshots , creating volumes from snapshots , attaching volumes to running instances
  - Using Elastic IP service –Assigning Public IP addresses and connecting from the internet
  - Installing additional softwares components on the instances
  - Automating installations and tasks at the booting time of a instance
  - Using the Load Balancers for load distribution
  - Installing command line tools
  - Using cloud watch service
  - Using Auto scaling -Depending on the cloud watch alerts to provision instances
  - Using Route 53 Service
  - Creating own AMIs
  - Virtual Private Cloud - Public and Private Network Scenarios

- Using AWS S3 service
- Creating a Mysql database using RDS service
- IAM –Identity Access Management
- Taking backups using command line tools

➢ Deploying a Private cloud - using Openstack
- Introduction to Openstack
- Openstack Architecture and Components
- Installation of Openstack [Build your own private cloud]
- Accessing services through GUI and command line
- Keystone [Identity Service] – Creating projects/tenants, users and assigning roles
- Glance [Image Service] – Uploading Images for Virtual Machine Deployments
- NOVA [Compute Service] – Creating instances (Webserver and Database instances)
- Neutron [Network Service] - Creating Networks, Private and Public Subnets, Routers, Creating Load balancer and load balancing Webserver instances
- Cinder [Block Storage Service] - Creating volumes and attaching to instances
- Swift [Object Storage Service] - Creating private and public container and uploading and downloading objects
- Heat [Orchestration Service] - Creating and deploying custom templates


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