



## 5. Cloud Technologies

### 5.1 Amazon

**Duration:** 60 Lectures

#### **Course Content:**

##### **1. Introduction AWS Overview**

- 1.1. Introduction & History of AWS
- 1.2. Creating AWS Free-tier Account
- 1.3. Navigating AWS Management Console
- 1.4. AWS Global Infrastructure
- 1.5. Security features of AWS
- 1.6. Advantages & Disadvantages of AWS
- 1.7. Cloud Service Model
- 1.8. Cloud Deployment Model
- 1.9. Compute on Cloud (EC2)

##### **2. Managing the EC2 Infrastructure**

- 2.1. Browsing Amazon Machine Images (AMI)
- 2.2. Specifying security groups and key pairs
- 2.3. Customizing VM's
- 2.4. Creating your own AMI
- 2.5. Creating new images of running instances
- 2.6. Security on Cloud (IAM)

##### **3. Controlling account security**

- 3.1. Managing User with Identity & Access Management (IAM)
- 3.2. IAM User, group, Roles & Policies
- 3.3. Provisioning Resources



## 4. Evaluating Elastic Block Store (EBS) and instance store root devices

- 4.1. Assigning elastic IP Address
- 4.2. Mapping instance types to computing needs
- 4.3. Storage in Cloud

## 5. Storing Data in the cloud (S3 & Glacier)

- 5.1. Lab: Create an S3 Bucket
- 5.2. Lab: S3 Version Control
- 5.3. Lab: S3 Lifecycle Management & Glacier
- 5.4. Cloud Front CDN
- 5.5. S3 Security & Encryption
- 5.6. Storage Gateway
- 5.7. Import Export
- 5.8. S3 Transfer Acceleration

## 6. Transparently scaling to meet load variation

- 6.1. Elastic load balancer (ELB) and health check
- 6.2. Auto-scaling and Auto-scaling Group
- 6.3. AWS Cloud Watch
- 6.4. Placement Group
- 6.5. Lab

## 7. Relational Database Service (RDS)

- 7.1. Creating Database Instances and scheduling for Backup
- 7.2. Taking snapshot of Database
- 7.3. Create read replica RDS
- 7.4. Dynamo DB lab
- 7.5. Networking on Cloud(VPC)
- 7.6. Virtual Private Cloud(VPC)
- 7.7. Public and Private Subnet



7.8. NAT Gateway

7.9. LAB

## 8. Route53

8.1. Route53

8.2. DNS Concept

8.3. Lab

## 9. Cloud Formation

9.1. Scripting Infrastructure

9.2. Sample CF Demo

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