





Amazon AWS

Course Content



# Introduction to cloud computing

Introduction to Cloud Computing Why Cloud Computing?
Benefits of Cloud Computing

## **Types of Cloud Computing**

Public Cloud
Private Cloud
Hybrid Cloud
Community Cloud
Software as a Service
Platform as a Service
Infrastructure as a Service
Horizontal vs. vertical scaling

## **Cloud Computing Issues**

Security
Costing Model
Service Level Agreement (SLA)
Cloud Interoperability Issue
What to migrate?
Legal and compliance

#### Virtualization

What is virtualization?
Virtualization and cloud computing
Types of virtualization
Virtualization terminologies
Hypervisor
Benefits
Vendors

## **Amazon Web Services (AWS)**

#### **Introduction to AWS**

Elastic computing
Introduction to the AWS products
Regions and Availability Zones
Signing up for AWS
AWS Free usage tier
Introduction AWS management console

#### **EC2 Instances**

Understanding AMI
Launching your first AWS instance
On-demand Instance pricing
Reserved Instance pricing
Spot instance pricing
Setting up security



Security groups
Choosing the AMI
Creating a new AMI
Public and Private IP's
Deploying a new instance from the created AMI
Key Pairs
Elastic IP's
ELB (Elastic Load Balancer)

## **EBS (Elastic Block Storage)**

Create EBS volumes
Delete EBS Volumes
Attach and detach EBS volumes
Mounting and un-mounting EBS volume
Creating and deleting snapshots
Creating volumes from snapshots

## S3 (Simple Storage Service)

What is S3?
RRS (Reduced Redundancy storage)
S3 durability and redundancy
S3 Buckets

S3 Uploading Downloading S3 Permissions

S3 Object Versioning

S3 Lifecycle Policies

# **Glacier storage**

#### Route53

Creating zones
Hosting a website
Understanding routing policies
Weighted simple and failover policies

#### CloudFront

Use of cloudfront Creating a cloudfront distribution Hosting a website of cloudfront distribution Implementing restrictions Configuring origins and behaviours

## Identity access management (IAM)

Creating Users and Groups Applying policies Password Policy Roles

## **Amazon Virtual Private Cloud (VPC)**

What is VPC? VPC configuration



VPC security
Elastic IP's
Inbound and outbound ACL's

#### **Cloud Formation**

What is cloud formation?
Deploying template
Create Stack
Delete Stack
Monitoring the resources

## **Relational Database Service (RDS)**

Selecting the Database type
Configuring the database
Creating database
Configuring backups
Configuring the maintenance windows
Connecting to the database.

#### CloudWatch

Cloudwatch dashboard
Configuring Monitoring services
Setting thresholds
Configuring actions
Creating a cloudwatch alarm
Getting statistics for ec2 instances
Monitoring other AWS services
Configuring Notifications
Integrating cloudwatch with Auto scaling

# **Autoscaling**

Boot straping
Create a launch configuration
Create an Auto Scaling group
Create a policy for your Auto Scaling group
set up an auto-scaled, load-balanced Amazon EC2 application

# **Simple Notification Service (SNS)**

What is SNS? Creating a topic Create subscription Subscribed to the subscription

Simple Email Service (SES)

Simple Queue Service (SQS)

Command line management.



# **Scaling Applications in AWS**

Deploying scalable applications in AWS
Selecting and launching an application environment
Provisioning application resources with CloudFormation

## Dynamo DB

Creating a Dynamo db Configuring alarms Adding data manually

## **Elastic Beanstalk**

Creating environment Application versioning Deploying a sample app

# **AWS troubleshooting**

Troubleshooting EC2 instances Troubleshooting using CloudWatch Troubleshooting using ELB Using CloudTrail

# **Project and AWS Case study**

Creating and managing a multitier application on AWS platform Best practices for AWS Cost control strategies Overview of AWS certification