Amazon Web Services

Cloud hosted web sites and applications are the future of Information Technology. Amazon Web Services (AWS) is a secure cloud services platform, offering compute power, database storage, content delivery, highly reliable, scalable, low-cost pay-for-what-you-use infrastructure platform on the cloud. AWS powers hundreds of thousands of businesses around the world and offers other functionality to help businesses scale and grow.

As Cloud Computing has become very popular, there is a great demand for System and Cloud Administrators with AWS skills.

This course is taught by industry experts with several years of experience.

AWS
Amazon Web
Services

Course Outline

- Introduction to Amazon Web Services (AWS)
- Introduction to Cloud Computing
- Compute Services (EC2, AMI Etc.)
- EC2 Instances
- Amazon Elastic Block Store (EBS)
- LOAD BALANCING & Auto Scaling
- Network & Security
- Elastic Beanstalk, Amazon Virtual Private Cloud (VPC)
- Amazon Route 53, Cloudfront
- Security & Identity Services, IAM
- Storage & Content Delivery Services, Amazon S3 & Amazon Glacier, EFS
- Database Services (RDS, NoSQL Service)
- Management Tools (Amazon Cloud watch, Cloud Formation)
- Application Services (SES, SQS, SNS)

Course Curriculum

Introduction to Cloud Computing

- What is Cloud
- Why Cloud?
- Types of Cloud Deployment Models
- Types of Cloud Services
- Future of Cloud Technologies
- Advantages and Disadvantages of Cloud

Introduction to Amazon Web Services (AWS)

- What is AWS?
- How to Subscribe for AWS account
- What is the AWS Free Usage Tier
- AWS Certification
- Introduction to the AWS management Console
- List of services given by AWS

Compute Services

Elastic Compute Cloud (EC2)

- What is Amazon EC2?
- Features of Amazon EC2
- Managing the EC2 infrastructure
- EC2 Dashboard
- Pricing for Amazon EC2

Regions and Availability Zone Concepts

- Describing Regions
- Availability Zones, and Endpoints
- Managing instances in an Availability Zone

Amazon Machine Images (AMI)

- Managing AMIs
- Working with Windows, Linux AMIs
- Shared and Paid AMI
- Making an AMI Public

EC2 Instances

- Instance Type
- Instance life cycle
- Differences between reboot, stop, and terminate
- Building an EC2 windows and linux instances
- To install instance in public and private subnet
- Security via Key Pairs
- EC2 Class and VPC Security Groups
- Managing Elastic IP's
- Pricing model in EC2 instances
- EC2 with Amazon command line interface

Amazon Elastic Block Store (EBS)

- Features of Amazon EBS
- Amazon EBS volumes
- Managing EBS volumes
- Increasing the volume size
- Amazon EBS snapshots

Load Balancing

- Creating a load balancer
- Internal and external load balancer
- Load balancing protocols
- Security groups for the load balancer
- Health check for the load balancer
- Cross-zone load balancing
- Connection Draining

Auto Scaling

- What is auto scaling?
- Auto scaling components
- Benefits of auto scaling
- Creation of launch configuration
- Configuration of auto scaling policies
- Advantages of using auto scaling with ELB

Network & Security

- Security Groups
- Elastic IPs
- Key Pairs
- Network Interfaces

Elastic Beanstalk

- Deploy, manage, scale an application
- How management complexity are reduced
- Workflow of Elastic Beanstalk
- Create Application
- Launch Environment
- Manage Environment
- Modifying the properties of the deployment

Networking Services

Amazon Virtual Private Cloud (VPC)

- What is Amazon VPC?
- VPC Essentials
- Default and Nondefault VPC
- VPC Networking and ACL
- Security Groups
- DNS and DHCP Options Sets
- VPC Peering and Endpoints
- Subnet Routing
- VPC Internet Gateway
- Elastic IP addresses and network interfaces
- VPC integration with many other AWS services
- Creating a NAT instance in a VPC
- Configuring a Web application in VPC

Amazon Route 53

- Route 53 as your DNS service
- Using Traffic Flow
- Route 53 Health Checks
- Configuring DNS Failover
- Latency Based Routing
- Weighted Routing Policies

Cloud Front

Storage & Content Delivery Services

Amazon S3

- What is object Storage?
- Data as objects
- Lifecycles of S3
- Managing Buckets
- Accessing S3 storage via tools
- Creation of a static website using S3 storage

Amazon Glacier

- Low-cost storage service
- Storage for data backup and archival
- Pricing model for Glacier storage
- Working with vaults and archives

EFS Elastic File System

Security & Identity Services

- Identity Access Management (IAM)
- IAM Features
- Getting Started With IAM
- Creation of user, groups, roles
- Managing policies
- Credential Report
- IAM Console and the Sign-in Page

Database Services

Relational Database Service (RDS)

- RDS Essentials
- Launching RDS instance
- Selecting the Engine
- Configuring the Database Engine
- Managing RDS Database
- Setting up automatic backups
- Authorizing access to the DB

DynamoDB (NoSQL Service)

- DynamoDB overview
- What is NoSQL database?
- How It Works
- Using the DynamoDB Console
- Creating Tables and Loading Sample Data
- Query and Scan Operations in DynamoDB

Management Tools

Amazon CloudWatch

- Amazon CloudWatch Architecture
- List of services monitored by CloudWatch
- Collect and track metrics
- Monitoring memory and disk Metrics
- Monitoring logs, Graphs
- Set Alarms

Cloud Formation

- Building AWS infrastructure as a code
- Design a template
- Create a Stack
- Create a Template from your Existing Resources

Cloud Trail

Application Services

Amazon Simple Email Service (SES)

- Simple email service overview
- Configuring Amazon email service
- Amazon SES and Deliverability
- Amazon SES Email-Sending Process
- Email format and Limits of SES

Amazon Simple Queue Service (SQS)

- Simple Queue service overview
- SQS for background work task
- Creating a Queue
- Confirming the Queue exists
- Add a permission to the Queue

Amazon Simple Notification Service (SNS)

Simple Notification Service overview

- Publishers and subscribers
- Subscribing to topic via Email
- Setting notification for EC2 instance changes