Summary

This Instructor led comprehensive course (**AWS Cloud Practitioner, AWS Solutions Architect – Associate & SysOps Administrator)** designed to show how to setup and run Cloud services in Amazon Web Services all the way through to IaaS with hands-on experience on AWS Public cloud.

This course provides a strong foundation for implementing and designing cloud services.

Objectives

Objectives of the course

- Compute (EC2)
- Storage (S3, EBS, EFS, Storage Gateway and Snowball)
- Database (RDS, DMS and Redshift)
- Network and Content Delivery (Route53, VPC and CloudFront)
- Management Tools (CloudWatch, Cloud Formation and CloudTrail)
- Security & Identity Compliance (IAM, Trusted Advisor, Config and Inspector)
- Application Services (SWF and Elastic Transcoder)
- Messaging (SNS, SQS and SES)
- DevOps tools (Code Commit, Code Build, Code Deploy and Code Pipeline)

Prerequisites

- Absolute Beginners. No prior AWS experience is necessary.
- Previous System Administration/ Development knowledge would be added advantage.
- System Administrators Interested in Deploying Applications on AWS
- Cloud Computing enthusiasts

Setup requirements

- Need to set up an AWS Account
  (Most of the Services comes with AWS free tier eligibility)
- **Windows:** Putty, Putty KeyGen and Web Browser with Internet connectivity.
- **Linux/Mac:** Default Terminal

AWS Course Content

Introduction to Cloud Computing

- Introduction to cloud computing
- Essential Characteristics of Cloud Computing
- Service Models in Cloud computing
- Deployment models in Cloud Computing
- Introduction to AWS
- AWS Account creation & free tier limitations overview

Identity Access Management

- Root Account Vs IAM user
- Multi Factor Authentication for Users
- IAM Password Policies
- Creating Customer Managed Policies.
- Policy generator

Storage

- What is Simple Storage Service (S3)
- Storage Classes
- Versioning
- Cross-region replication / Same Region replication
- Life Cycle Management
- Security & Encryption
- KMS (Key Management Service)
- Static Webhosting with S3 bucket
- Events configuration on S3 buckets
- Enabling cross account access for S3
- S3 Data management and backup using 3rd Party applications.
- S3 Cross Account Access and Pre-Signed URLs
- Storage Gateway

Linux Introduction (Free Course)

- Basics of Linux for AWS
- Linux Installation and Basic commands overview
- Web Server and Services Configurations

Compute

- EC2 Instance Launch Wizard
- EC2 Instance Types
- Generating custom Public Key and Private keys for EC2 instances
- Security groups
- Volumes and Snapshots
- Creating customized Amazon Machine Images
- User Data and Metadata
- Elastic Load Balancers & Health Checks
- Auto Scaling Groups
- CloudWatch
- Creating Billing Alarm and EC2 instance alarms.
- AWS CLI & EC2 Roles
- Elastic File System / FSx
- AWS Lightsail
- Elastic Beanstalk
- Placement Groups
- AWS Systems Manager (Run Command / Automation/ Resource Groups)

Route 53

- DNS Records overview
- Routing Policies
- Hosting sample Website and configuring Policies.

VPC (Virtual Private Cloud)

- Networking Basics
- Creating custom VPCs and custom Subnets
- Network ACL's
- Route Tables & IGW
- VPC Peering
- Flowlog creation
- AWS Gateway Endpoints
- AWS Transit gateway
- VPN Configuration with AWS (OpenVPN/Site-to-site VPN)

Databases

- Launching a RDS Instances (MySQL, MSSQL & Aurora)
- Multi-AZ & Read Replicas for RDS instances
- DynamoDB
- Redshift and Elastichache overview
- Database Migration Service and Schema conversion tool

Security Options:

- CloudTrail
- AWS Config
- Key Management Services
- AWS Certificate Manager
- AWS Inspector
- AWS Trusted Advisor
- Content Delivery Networks / CloudFront

Application Services

- Simple Email Service
- Simple Queue Service
- Simple Workflow Service

- Simple Notification Service
- **SMS -** Server Migration Service (Migrating server from on-premises to cloud)
- Directory Services and Adding EC2 instance to Domain
- AWS TCO Calculator and Simple Monthly calculator

DevOps Tools Overview

- What is DevOps in Cloud
- Code Pipeline
- Code Commit
- Code Build
- Code Deploy
- Lambda
- Cloudformation
- Amazon ECS (Amazon Elastic Container Service)

Monitoring Tools:

- Creating Custom Metrics with CloudWatch

Amazon White Papers review

Quiz and Scenario based questions discussion

Resume Key Points and AWS Certifications overview