DETAILED COURSE CONTENT

Module 1: Introduction to AWS
• Introduction to Cloud Computing
• Introduction to Amazon Web services
• AWS Global Infrastructure
• Signing up for AWS
• Introduction AWS management console

DEMO 1: Running through AWS Management Console

Module 2: AWS-Identity and Access Management
• AWS Management Console and Creating AWS Account
• Configuring IAM users, groups and policies - Secret Keys and API Access
• Multi-factor Authentication

Lab 1: Working with Amazon Identity and Access Management

Module 3: Networking on AWS
• Virtual Private Cloud (VPC) concepts and security
• VPC Peering and Direct Connect
• Amazon VPC Security Troubleshooting
• Route 53 service

Lab 2: Configuring a Virtual Private Cloud

Module 4: Computing in the Cloud
• Compute Capacity in the AWS Cloud: Amazon EC2
• Creating instances & Types of EC2 Instances
• AMI & ELB
• Instance Security
• Pricing Model

Lab 3: Working with Amazon EC2

Module 5: Storage and Archiving in the Cloud
• Using Amazon Elastic Block Store
• Amazon S3,AWS Import/Export, and AWS Storage Gateway
• Amazon Glacier
• Storage Security
• Pricing

Lab 4: Using storage in the Cloud; Synchronising files with Amazon S3

Module 6: Database in Cloud
• Managed Relational Database: Amazon Relational Database Service
• NoSQL Database: Amazon DyamoDB
• Migrate Existing Database to Amazon RDS

DEMO 2: Working with RDS

Module 7: Creating Scalable Deployments in the Cloud

• Common Deployment Scenarios
• Redirecting Traffic with Elastic Load Balancing
• Scaling to Demand with Auto Scaling
• Routing with Amazon Route 53
• Troubleshooting Scalable Deployments

Lab 5: Deploy an Auto Scaling Web Service

Module 8: Infrastructure as Code

• Manual vs. Automated Configuration
• Automate Everything Through AWS CloudFormation
• Facts About AWS Application Management services

Lab 6 : Exploring CloudFormation

Module 9: Orchestrating Batch Processing

• Amazon Simple Queue Service
• Amazon Simple Notification Service
• Amazon Simple Workflow
• Amazon Simple Email Service
• Use Amazon CloudSearch to set Up a Search solution

Lab 7: Creating a Batch Processing Cluster

Module 10 : Monitoring in the cloud

• Logging Basics
• Using CloudWatch and CloudWatch Logs
• Using AWS CloudTrail
• Security and Monitoring
• Troubleshooting

Lab 8: Monitor EC2 System Status with CloudWatch; Auto-stop Unused Instances

Module 11: Managing Resource Consumption in the Cloud

• Automating Cost Reduction
• Tagging
• CloudWatch
• Cost Explorer
• Trusted Advisor

Lab 9: Managing Resources with Tagging; Identifying and Terminating Non-Compliant Resources

Module 12: Designing Web-Scale Media Hosting

• Web-Scale Media Hosting Using Amazon S3
• Amazon CloudFront
• Securing your Contents

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Module 13: Reviewing Large Scale Design Patterns
• Stream Processing
• Sensor Network Data Ingestion and Processing
• Mobile Gaming
• AWS Mobile Solution
• Transcode and Serving Video Files with AWS
• Detailed Billing

AWS SYSTEM OPERATIONS
Module 1: Understanding System Operations on AWS
• Administer Resources on AWS
• Data Center vs the cloud
• High Level Overview
• Securing Your AWS Account
• Command Line Basics

Module 2: Computing on AWS
• Creating instances
• Instance Security
• Pricing
• Troubleshooting

Lab 1: Launching and troubleshooting Amazon EC2 instances
Module 3: Networking on AWS
• Common Amazon VPC Scenarios
• Amazon VPC Peering and Direct Connect
• Amazon VPC Security Troubleshooting

Lab 2: Configuring a Virtual Private Cloud
Module 4: Storage and Archiving in the Cloud
• Using Amazon Elastic Block Store
• Amazon S3,AWS Import/Export, and AWS Storage Gateway
• Amazon Glacier
• Storage Security
• Trouble Shooting

- Pricing

Lab 3: Using storage in the Cloud; Synchronizing files with Amazon S3

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Module 7: Configuration in the Cloud

- Using and Creating New AMIs
- Using Configuration Management
- Troubleshooting CM

Lab 6: Deploy an Auto Scaling Web Server

Module 8: Creating Scalable Deployments in the Cloud

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- Redirecting Traffic with Elastic Load Balancing
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