

Academy of Information Technology (AIT)

AMAZON WEB SERVICES (AWS)

SAA-C03

Duration: 3 months

Basics of Cloud Computing

Introduction to Cloud Networking

Why Cloud computing is important for businesses

Benefits of using Cloud

Cloud Types-

Private, Public, Hybrid, Community Clouds

Cloud Models-

Infrastructure as a Service (IaaS)

Platform as a Service (PaaS)

Software as a Service (SaaS)

AWS Regions and Zones

AWS Regions

AWS Availability Zones

AWS Points of Presence (POP)

AWS Datacenters

Cloud Market- AWS, Azure, Google Cloud

AWS User Accounts

AWS Free Tier Account details

Hands On - Sign up for Free Tier Account

Hands On - Tour of AWS Console

How can users access AWS

Hands On - IAM Users & Groups

IAM Policies

Hands On - IAM Policies

What is AWS CLI

Hands On – Setup AWS CLI on Windows

What is IAM Roles for AWS Services

Hands On – IAM Roles

Hands On - Create an IAM user account

Multi Factor Authentication (MFA)

MFA devices options in AWS

IAM Security Tools

Hands On – IAM Security Tools

Hands On - Cost explorer – Monthly Cost by AWS Service

AWS Cloudshell

Basics of AWS Cloudshell

AWS Cloudshell commands

Hands On – AWS CLI

AWS Budget Setup

How Budget helps to new users from paying more charges

Hands On – Setup Budget of 10 dollars per month

EC2 Instance Fundamentals

What is Elastic Cloud Computing (EC2)

Different EC2 instance types in AWS

EC2 Sizing & configuration options

Hands On – Create and Launch Linux EC2 Instance with Data script

EC2 Instance types – General Purpose

Compute Optimized

Memory Optimized

Introduction to Security Groups firewall

Hands On – Security Groups

Hands On – SSH Linux instance using Windows Powershell

Hands On – SSH Linux using putty

Hands On – EC2 Instance Roles demo

Classic Ports – 22,21,80,443,3389

EC2 on demand Concept

Linux/Windows- Billing per second

Billing of others per hour charges

Private vs Public Vs Elastic IP address concept

Hands On - Allocate Elastic IP to Linux instance

Hands On - Disassociate this Elastic IP from Linux

EC2 Hibernate Concept

Hands On – EC2 Hibernate one Linux instance

EC2 Windows Instance

Windows Server instances on AWS

Hands On - Launch EC2 instance for Windows Server

What is a RDP

Hands On - Connecting Windows Server using RDP

S3 Bucket Storage

What is Simple Storage Service (S3)

S3 Buckets and Objects

Hands On – Create a S3 Bucket to store data

What is S3 Versioning

Hands On - S3 Versioning

Hands On - S3 Encryption

S3 Bucket Policies

Hands On – S3 Security Bucket Policy

S3 Console for Static website

Hands On – S3 Website

IAM Roles & Policies

S3 Bucket Policy

S3 Access Logs

Presigned URLs Hands on

S3 Storage Classes + Glacier

Hands On – S3 Storage Classes

S3 Lifecycle Rules

Hands On – S3 Lifecycle Rules

CloudFront with S3

Elastic Network Interface (ENI)

What is Elastic Network Interface(ENI)

Hands On - ENI with two Linux instances

EBS Volume

What is Elastic Block Storage (EBS) Volume

Hands On – EBS Volume

EBS -Elastic Block Storage Snapshots

Hands Use EBS snapshot to test on EC2 Linux

EFS Filesystem

What is an Amazon Elastic File System (EFS)

Hands On - Create EFS filesystem & mount on target system

Hands On - EBS and EFS Section Cleanup

AMI

What is an Amazon Machine Image (AMI)

Hands On - Using AMI create an Linux instance

Amazon Route 53

What is Route 53

How Route 53 is implemented in real network

High Availability and Scalability

Concept of High Availability & Scalability

What is Load Balancer

Basics of Classic Load Balancer (CLB)

Hands On - Create CLB in AWS

Application Load Balancer (ALB)

Hands On – Create ALB

What is Auto Scaling Groups

Hands On - Auto Scaling Groups

Amazon RDS

What is Amazon RDS (Relational Database Service)

Hands On – Amazon RDS

Aurora

What is an Amazon Aurora

Hands On - Demonstrate Amazon Aurora in AWS

Elasticache

Fundamentals of Elasticache

Hands On - Use Elasticache in AWS

Networking –Virtual Private Cloud (VPC)

Private vs Public IP

Default VPC basics

Hands On – VPC

Fundamentals of Subnet

Hands On - Subnet

What is Internet Gateway(IG) and Route Table

Hands On-IG and Route Table

What is Bastion Host

Hands On – Bastion Hosts

What is VPC Peering

Hands On – VPC Peering

Other Services-

Amazon Dynamo DB, AWS Snow Family, Amazon FSX

Storage Gateway, Creating ECS Cluster Service, App Runner Service

Exam