

AWS Certification Training Course Content

Course Duration - 45-50 Hrs., 7-8 Weeks

Course Information

Batch Options

Weekday Batch
Mon - Fri - 1.5 Hr./Day

About the Trainer

Industry Expert Trainer with 15+ Years
Real Time Work Experience at Top US
Based Product and Consulting Firms

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Introduction To AWS Training

Amazon Web Services (AWS) Training

Amazon Web Services offers reliable, scalable, and inexpensive cloud computing services.

What you'll learn

- Understand cloud-computing platforms, and how AWS fits into them
- Learn AWS Core Skills - Networking, Computing, Storage, databases, & Security
- Use EC2, CloudWatch, S3 Buckets, IAM, VPC, NACLs, AMI and more
- Master ECS, EKS, EBS, and other various tools
- Manage security and design Identity solutions in AWS
- Architect Data Storage Solutions in AWS
- How to design resilient solutions in AWS
- How to monitor and optimize costs in AWS
- To prepare students for AWS Certified Solutions Architect Exam
- To teach AWS concepts comprehensively and turn students into Cloud Gurus

Course Content

Module 1: Introduction to AWS

- Introduction to Cloud Computing
- Introduction to Cloud Computing Service Models
- Cloud Computing Deployment Models
- Service Comparison: AWS, Azure, and GCP
- Amazon Web Services (AWS) and its Benefits
- AWS Global Infrastructure and Regions
- Availability Zones and High Availability
- Different Amazon Web Services

Module 2: AWS Account Creation and Setup

- Creating an AWS Free Tier Account
- AWS Account Activation Troubleshooting
- Different Amazon Web Services
- Access AWS using CLI, Console, and SDKs
- Explore Management Console and Configure AWS CLI
- AWS CloudShell

Module 3: IAM in AWS - Part 1

- IAM Overview
- Manage users with IAM
- Managing Permissions with Groups
- IAM Policy and its Elements
- IAM Roles for AWS Services Hands On
- Password Policy
- IAM Hands on

Module 4: IAM in AWS - Part 2

- IAM - Advanced Policies
- IAM - Resource-based Policies vs IAM Roles
- IAM - Policy Evaluation Logic
- IAM MFA
- Best Practices for IAM
- AWS Security Token Services
- AWS Access Keys, CLI and SDK
- AWS CLI Hands on Setup on Different OS - Windows, Mac OS X, Linux
- AWS CloudShell and its Region Availability
- IAM Security Tools Hands On

Module 5: EC2 Fundamentals

- Introduction to Compute Virtualization
- AWS EC2 Intro and benefits
- EC2 Instances Launch Types Hands On
- EC2 Instance Connect using SSH
- EC2 Instance Roles Demo
- EC2 Instance Purchasing Options
- Spot Instances & Spot Fleet

Module 6: EC2 - Advanced Options

- Private vs public vs Elastic IP
- Private vs public vs Elastic IP Hands On
- EC2 Placement Groups Hands On
- Elastic Network Interfaces (ENI) - Overview EBS Hands On
- EBS Snapshots Hands On
- AMI Overview Hands On
- EC2 Instance Store
- EBS Volume Types, Multi-Attach & Encryption
- Amazon EFS

Module 7: High Availability and Scalability - ELB & ASG

- High Availability and Scalability
- Note: About the Classic Load Balancer (CLB)
- Elastic Load Balancer - SSL Certificates
- Elastic Load Balancer - SSL Certificates - Hands On
- Elastic Load Balancer - Connection Draining
- Auto Scaling Groups (ASG) Overview
- Auto Scaling Groups Hands On
- Auto Scaling Groups - Scaling Policies

Module 8: Amazon S3 Basics

- S3 Overview
- S3 Security: Bucket Policy Hands On
- S3 Website Overview and Hands On
- S3 Versioning and Hands On
- S3 Replication Notes Hands On
- S3 Storage Classes Overview
- Activate, Test and Monitor the Integration runs

Module 9: Amazon S3 Advanced

- S3 Lifecycle Rules (with S3 Analytics)
- S3 Lifecycle Rules - Hands On
- S3 Requester Pays
- S3 Event Notifications Hands On
- S3 Performance
- S3 Select & Glacier Select
- S3 Batch Operations

Module 10: Amazon S3 Security

- S3 Encryption
- S3 Default Encryption
- S3 CORS & MFA Delete
- S3 Access Logs
- S3 Pre-signed URLs
- Glacier Vault Lock & S3 Object Lock
- S3 Object Lambda

Module 11: AWS Databases: RDS + Aurora + ElastiCache

- AWS Database Services - Use Cases
- Amazon RDS
- Read Replica
- IAM in Amazon RDS
- Difference Between SQL and NoSQL Databases
- Amazon DynamoDB and its Data Structure
- Amazon ElastiCache
- Memcached vs. Redis
- Amazon RedShift and its features
- AWS Redshift Architecture
- Aurora Database
- Connection Management in Aurora
- Amazon Aurora Reliability, Global Database
- Amazon Aurora Serverless
- Amazon Key spaces
- Apache Cassandra
- Amazon Aurora - Advanced Concepts
- RDS & Aurora - Backup and Monitoring

Module 12: Networking in AWS - Part 1

- Section Introduction
- CIDR, Private vs Public IP
- Default VPC Overview
- VPC & Subnet Hands On
- Internet Gateways & Route Tables
- Bastion Hosts
- NAT Instances and Gateways

Module 13: Networking in AWS - Part 2

- NACL & Security Groups
- VPC Peering and Endpoints
- VPC Flow Logs+ Athena
- Site to Site VPN, Virtual Private Gateway & Customer Gateway
- Direct Connect & Direct Connect Gateway
- Direct Connect + Site to Site VPN
- Transit Gateway
- VPC Traffic Mirroring
- IPv6 for VPC
- Egress Only Internet Gateway
- Networking Costs in AWS
- AWS Network Firewall

Module 14: Route 53

- What is a DNS?
- Route 53 - Registering a domain
- Route 53 - Creating our first records
- Route 53 - EC2 Setup & TTL
- Route 53 CNAME vs Alias
- Routing Policy - Simple & Latency
- Route 53 - Health Checks
- Routing Policy - Failover, Geolocation & Geoproximity
- Routing Policy - IP-based & Multi Value
- 3rd Party Domains & Route 53

Module 15: CloudFront

- CloudFront Overview
- CloudFront with S3 - Hands On
- ALB as an Origin
- Geo Restriction & Price Classes
- Cache Invalidation

Module 16: Amazon SQS and SNS

- Introduction to Messaging
- Amazon SQS - Standard Queues & Hands On
- Message Visibility Timeout
- Long Polling & FIFO Queues
- SQS + Auto Scaling Group
- Amazon Simple Notification Service (AWS SNS) & SNS and SQS - Fan Out Pattern

Module 17: Kinesis and Active MQ

- Amazon Kinesis - Overview
- Kinesis Data Streams Overview
- Kinesis Data Streams Hands On
- Kinesis Data Firehose Overview
- Kinesis Data Firehose Hands On
- Kinesis Data Analytics
- Data Ordering for Kinesis vs SQS FIFO
- SQS vs SNS vs Kinesis

Module 18: Containers on AWS

- Docker Introduction
- Amazon ECS
- Create ECS service & cluster
- Amazon ECS - Auto Scaling & Solutions Architectures
- Amazon ECR
- Amazon EKS
- AWS App Runner

Module 19: Security Management & Encryption in AWS - Part 1

- AWS Cognito
- AWS Config
- AWS Firewall Manager
- AWS Network Firewall
- Web Application Firewall (WAF)
- Amazon Detective
- AWS Shield

Module 20: Security Management & Encryption in AWS - Part 2

- AWS Inspector
- AWS Macie
- AWS GuardDuty
- AWS Security Hub
- KMS
- CloudHSM
- AWS Secrets Manager
- Trusted Advisor

Module 21: AWS Monitoring & Audit in AWS

- AWS Monitoring - Section Introduction
- CloudWatch Metrics
- CloudWatch Logs
- CloudWatch Logs Hands On
- CloudWatch Agent & CloudWatch Logs Agent
- CloudWatch Alarms
- CloudWatch Alarms Hands On
- Event Bridge Overview (formerly CloudWatch Events)
- Amazon Event Bridge - Hands On
- CloudWatch Insights and Operational Visibility
- CloudTrail Overview
- CloudTrail Hands On
- AWS Config - Overview
- AWS Config - Hands On
- CloudTrail vs CloudWatch vs Config

Module 22: Serverless Computing in AWS

- AWS Lambda
- AWS Serverless Application Model (SAM)
- AWS Step Functions
- Lambda in VPC
- RDS - Invoking Lambda & Event Notifications

Module 23: AWS Cloud Analytics and Cost Management

- Athena
- Athena Hands On
- Redshift
- OpenSearch (ex: ElasticSearch)
- EMR, QuickSight
- Glue, Lake Formation
- Kinesis Data Analytics
- Kinesis Data Analytics - Hands On
- MSK - Managed Streaming for Apache Kafka
- Big Data Ingestion Pipeline

Module 24: AWS Architectural Designs - Disaster Recovery & Migrations

- Introduction to AWS Well-Architected Framework
- AWS Well-Architected Framework Pillars
- Resilience
- Design Highly Available and Fault-Tolerant Architectures
- Choose Appropriate Resilient Storage
- Designing Decoupling Mechanisms Using AWS Services
- Design a Multi-tier Architecture Solution
- Disaster Recovery in AWS
- Database Migration Service (DMS)
- RDS & Aurora Migrations
- On-Premises Strategies with AWS
- AWS Backup - Hands On
- Application Migration Service (MGN)
- Transferring Large Datasets into AWS
- VMware Cloud on AWS

Module 25: AWS Advanced Features

- Event Processing in AWS
- Caching Strategies in AWS
- Blocking an IP Address in AWS
- High Performance Computing (HPC) on AWS
- EC2 Instance High Availability

Module 26: Cost Control

- Cost Allocation Tags
- AWS Tag Editor
- Trusted Advisor
- AWS Service Quotas
- EC2 Launch Types & Savings Plan
- S3 Cost Savings
- S3 Storage Classes - Reminder
- AWS Budgets & Cost Explorer
- AWS Compute Optimizer
- EC2 Reserved Instance

Module 27: AWS Cloud Migration

- Cloud Migrations - The 6R
- Storage Gateway
- Storage Gateway - Advanced Concepts
- Snow Family
- Snow Family - Improving Performance
- AWS DMS - Database Migration Services
- AWS CART - Cloud Adoption Readiness Tool
- Disaster Recovery
- AWS FIS - Fault Injection
- VM Migrations Services
- AWS Migration Evaluator
- AWS Backup

Module 28: Machine Learning

- Machine Learning (ML)
- Steps of Machine Learning
- Types of Machine Learning algorithms
- Machine Learning on AWS cloud platform
- Amazon SageMaker
- What are Chatbots?
- Amazon Polly
- Working of Amazon Polly
- Amazon Lex
- Working on Amazon Lex
- Amazon Rekognition
- Working of Amazon Rekognition
- Machine Learning Summary

***** AWS Real Time Project Examples *****

Module 29: Real Time Project Example 1, 2

- Introduction to Realtime Project Examples 1, 2
- Build Project Examples 1, 2 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 30: Real Time Project Example 3, 4

- Introduction to Realtime Project Examples 3, 4
- Build Project Examples 3, 4 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 31: Real Time Project Example 5, 6

- Introduction to Realtime Project Examples 5, 6
- Build Project Examples 5, 6 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 32: Real Time Project Example 7, 8

- Introduction to Realtime Project Examples 7, 8
- Build Project Examples 7, 8 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 33: Real Time Project Example 9, 10

- Introduction to Realtime Project Examples 9, 10
- Build Project Examples 9, 10 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 34: Real Time Project Example 11, 12

- Introduction to Realtime Project Examples 11, 12
- Build Project Examples 11, 12 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 35: Real Time Project Example 13, 14

- Introduction to Realtime Project Examples 13, 14
- Build Project Examples 13, 14 for Realtime scenarios
- Test the Project Examples and debug the if required

Module 36: Real Time Project Example 15 + Course Revision

- Introduction to Realtime Project Example 15
- Build Report 15 for Realtime scenario
- Course Revision

Module 37: AWS Solution Architect Certification Guidance

- Explain various AWS Certification Options
- Discuss 60+ Important AWS Solution Architect Certification
- Practice AWS Solution Architect Certification

Module 38: Resume Preparation, Interview and Job Assistance

- Prepare Crisp Resume as AWS Developer/Architect
- Discuss common interview questions in AWS
- Explain students what jobs they should target and how