



TECHNOCATION FREELANCING TRAINING INSTITUTE & SOFTWARE HOUSE

Professional AWS (Amazon Web Services) Course Outline

Module 1: Introduction to AWS Cloud

- Overview of AWS Global Infrastructure
- AWS Free Tier and Account Setup
- Understanding Regions, Availability Zones, and Edge Locations
- AWS Shared Responsibility Model

Module 2: AWS Compute Services

- Amazon EC2: Instances, AMIs, Elastic Load Balancer (ELB)
- Auto Scaling and Elasticity
- AWS Lambda: Serverless Computing
- Amazon ECS & EKS for Containerized Applications

Module 3: AWS Storage Services

- Amazon S3: Storage Classes, Lifecycle Policies, Security
- Amazon EBS: Block Storage for EC2
- Amazon EFS: Scalable File Storage
- AWS Storage Gateway and Backup Solutions

Module 4: AWS Networking & Content Delivery

- Amazon VPC: Subnets, Route Tables, NAT Gateway
- AWS Direct Connect & VPN
- Elastic Load Balancing (ELB)
- Amazon Route 53: DNS Management
- AWS CloudFront: Content Delivery Network (CDN)

Module 5: AWS Databases & Analytics

- Amazon RDS: MySQL, PostgreSQL, Aurora
- Amazon DynamoDB: NoSQL Databases
- Amazon Redshift: Data Warehousing
- AWS Glue & AWS Lake Formation for ETL
- AWS Athena for Querying Data

Module 6: AWS Security & Compliance

- Identity and Access Management (IAM)
- AWS Key Management Service (KMS)
- AWS Shield & WAF for DDoS Protection
- Amazon GuardDuty & AWS Security Hub
- Best Practices for Cloud Security

Module 7: Infrastructure as Code (IaC) & Automation

- AWS CloudFormation: Template-Based Deployment
- Terraform for AWS Infrastructure Automation
- AWS Systems Manager & AWS OpsWorks
- AWS Elastic Beanstalk for Simplified Deployments

Module 8: DevOps on AWS

- AWS CodeCommit, CodeBuild, CodeDeploy, and CodePipeline
- CI/CD Pipeline with AWS Developer Tools
- Container Orchestration with AWS Fargate & EKS
- Monitoring & Logging: AWS CloudWatch, AWS X-Ray

Module 9: AWS Machine Learning & AI Services

- Amazon SageMaker: ML Model Training & Deployment
- AWS Rekognition: Image & Video Analysis
- Amazon Polly & Lex: Speech & Chatbot Services
- AWS Comprehend & Translate

Module 10: AWS Serverless & Event-Driven Architecture

- AWS Lambda with API Gateway
- AWS Step Functions for Workflow Automation
- Amazon EventBridge & Simple Notification Service (SNS)
- AWS IoT Services Overview

Module 11: AWS Cost Optimization & Governance

- AWS Pricing Models (On-Demand, Reserved, Spot Instances)
- AWS Budgets & Cost Explorer
- AWS Trusted Advisor for Cost Optimization
- AWS Well-Architected Framework

Module 12: AWS Certification & Real-World Project

- Overview of AWS Certifications (Solutions Architect, DevOps Engineer, SysOps, Security)
- Hands-on Capstone Project: End-to-End AWS Deployment
- Final Exam & Certification Preparation