Exam Prep: AWS Certified Cloud Practitioner

This course not only prepares students for AWS certification but also provides an in-depth understanding of cloud concepts.

Course Overview

This course offers a foundational understanding of cloud computing by exploring Amazon Web Services (AWS), a leading cloud provider. You'll learn essential cloud concepts and core AWS services, empowering you to communicate effectively with technical teams and make informed decisions about cloud technology.

This course is ideal for:

- Individuals looking to transition into a cloud-focused role from a different industry or field, seeking foundational AWS knowledge.
- College students or recent graduates in IT-related fields seeking a competitive edge in the job market through industry-recognized certification.
- System administrators, network engineers, or developers aiming to validate their cloud skills and advance their careers with AWS certification.
- Project managers, sales representatives, or analysts needing a foundational understanding of AWS for better project management and decision-making.
- Sales, marketing, or support staff working with cloud-focused teams who want to improve communication and collaboration.

Key Learning Outcomes

By the end of this course, students will be able to:

1. **Understand Cloud Concepts**: Grasp the core benefits and design principles of cloud computing, and recognize strategies for migrating to AWS Cloud.
2. **Ensure Security and Compliance**: Comprehend the AWS shared responsibility model, understand security governance, and identify AWS access management capabilities.
3. **Leverage AWS Technology and Services**: Identify and understand AWS compute, database, network, and storage services.
4. **Navigate AWS Billing and Support**: Compare AWS pricing models, manage billing and budgeting resources, and identify AWS support options.
5. **Prepare for the Certification Exam**: Equip themselves with the knowledge and skills needed to confidently approach the AWS Certified Cloud Practitioner exam.

Class 1: Cloud Concepts, Security & Compliance

Module 1: Cloud Concepts

1.1 Define the benefits of the AWS Cloud

- Cloud Computing Definition & Value Proposition
- Advantages: Agility, Elasticity, Cost Savings, Global Deployment

1.2 Identify design principles of the AWS Cloud

- AWS Well-Architected Framework (6 Pillars: CROPSS)

1.3 Understand the benefits of and strategies for migration to the AWS Cloud

- AWS Cloud Adoption Framework (CAF - 6 Perspectives)
- Migration Strategies & Services: Snowball, Transfer Family, DMS, SCT, Application Discovery/Migration Service, Migration Hub

1.4 Understand concepts of cloud economics

- Fixed vs. Variable Costs
- Cost Savings: TCO, BYOL
- Managed Services (e.g., RDS) & Undifferentiated Heavy Lifting
- Automation Benefits: CloudFormation, Config

Module 2: Security and Compliance

2.1 Understand the AWS shared responsibility model

- AWS vs. Customer Responsibilities (Examples: EC2, RDS, Lambda)

2.2 Understand AWS Cloud security, governance, and compliance concepts

- Compliance Resources: Artifact, Compliance Center
- Monitoring & Auditing: CloudWatch, CloudTrail, Config, Audit Manager
- Security Services: Inspector, GuardDuty, Shield, Security Hub
- Data Encryption (In Transit - HTTPS/SSL/TLS, At Rest - KMS)

2.3 Identify AWS access management capabilities

- Root User & Best Practices (MFA)
- IAM Overview: Users, Groups, Roles, Policies (Managed/Custom)
- Authentication & Credentials: Password Policies, Access Keys, Credential Reports
- Principle of Least Privilege
- Identity Federation & IAM Identity Center (formerly SSO)

2.4 Identify components and resources for security

- Network Security Layers: Security Groups, Network ACLs, WAF
- Security Information Resources: Knowledge Center, Security Blog, Trusted Advisor
- AWS Marketplace Security Products

Class 2: Technology, Services, Billing & Support

Module 3: Cloud Technology and Services

3.1 Define methods of deploying and operating in the AWS Cloud

- Access Methods: Console, CLI, SDKs/APIs
- Infrastructure as Code: CloudFormation
- Deployment Models: Cloud, Hybrid, On-premises
- Connectivity Options: VPN, Direct Connect, Public Internet

3.2 Define the AWS global infrastructure

- Regions, Availability Zones (High Availability), Edge Locations
- Local Zones, Wavelength Zones
- Content Delivery & Acceleration: CloudFront, Global Accelerator

3.3 Identify AWS compute services

- Virtual Machines Overview
- EC2 Instances: Types, Use Cases
- Scaling: Vertical vs. Horizontal, Auto Scaling, ELB
- Containers: Concept, ECR, ECS, EKS
- Serverless Compute: Lambda, Fargate

3.4 Identify AWS database services

- Database Overview: Relational vs. NoSQL
- Relational Databases: RDS, Aurora
- NoSQL Databases: DynamoDB
- Other Databases: Redshift, Neptune, MemoryDB
- Database Migration (Recap: DMS, SCT)

3.5 Identify AWS network services

- VPC Fundamentals: Subnets (Public/Private), Gateways (Internet/VPN)
- DNS: Route 53
- Certificates: Certificate Manager (ACM)
- Network Security (Recap: Network ACLs, Security Groups)

3.6 Identify AWS storage services

- Storage Types: Block, Object, File

- Block Storage: EBS (Volumes/Snapshots/Types, Instance Store)
- Object Storage: S3 (Buckets/Objects/Durability, Storage Classes, Intelligent Tiering, Lifecycle Policies)
- File Storage: EFS, FSx
- Hybrid Storage: Storage Gateway
- Backup: AWS Backup

3.7 & 3.8 Overview of AI/ML, Analytics, and Additional Key Services

- Analytics Services Overview: Athena, Kinesis, Glue, QuickSight (*Quiz Format*)
- AI/ML Services Overview: SageMaker, Lex, Kendra, Rekognition (*Quiz Format*)
- Application Integration: SQS, SNS, EventBridge
- Brief Overview: Business Apps, Customer Engagement, Dev Tools, End-User Computing, Frontend/Mobile, IoT (*Quiz Format*)

Module 4: Billing, Pricing, and Support

4.1 Compare AWS pricing models

- Compute Purchasing Options: On-Demand, Savings Plans, Reserved Instances, Spot, Dedicated Hosts/Instances, Capacity Reservations
- Data Transfer Costs: Inbound vs. Outbound

4.2 Understand resources for billing, budget, and cost management

- Cost Management Tools: Cost Explorer, Budgets, Pricing Calculator, Billing Conductor
- Account Structures: AWS Organizations, Consolidated Billing
- Cost Allocation Tags

4.3 Identify AWS technical resources and AWS Support options

- Automated Checks & Dashboards: Trusted Advisor, Health Dashboard/API
- AWS Support Plans: Basic, Developer, Business, Enterprise On-Ramp, Enterprise
- Documentation & Knowledge Resources: Whitepapers, Blogs, Knowledge Center, re:Post
- Partner Network: ISVs, SIs, Marketplace
- Other AWS Resources: Professional Services, Solutions Architects, Trust & Safety

Join Us

Enrol in the **Exam Prep: AWS Certified Cloud Practitioner** course to gain the knowledge and skills required to pass the AWS Certified Cloud Practitioner exam while gaining a practical understanding of AWS services and their applications.