AWS Cloud Computing

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Course Overview:

This course is carefully designed to provide you with a solid foundation in AWS, from the basics to advanced concepts like Lambda, DynamoDB, and ECS and so on, empowering you to confidently explode the cloud with confidence. This training also crafted with solving real world problems of amazon web services. Upon successful completion of the course industry approved aws certification will be provided.

Training Features:

- Comprehensive Curriculum: A well-structured curriculum covering Cloud Computing & AWS, Load Balancing, Elastic Compute, S3, DevOps on AWS and so on.
- Hands-On training: Engage in real-world scenarios and hands-on projects to reinforce your understanding of AWS services.
- Expert Instructors: Learn from industry experts with extensive experience in AWS, who will guide you through every aspect in the field of amazon web services.
- Certification Preparation: Equip yourself for AWS certification with targeted modules and practice exams to ensure you are exam-ready.
- Flexible Learning: Access the course content at your own pace. Whether you're a full-time professional or a student, our flexible schedule adapts to your needs.
- Community Support: Join a vibrant community of learners. Participate in forums, discussions, and connect with peers for collaborative learning.

Delivery Mode:

- Online Live Virtual Instructor Led Training

Target Audiance:

- The Basic Requirement to start a career as an AWS Cloud Engineer, you'll need a Bachelor's degree or at least 1+ years of experience in Information Technology (IT). A Bachelor's degree in Technology justice will help you get the job.

Key Learning Outcomes:

By the end of this AWS online training course, you will be able to:

- ntroduction to Cloud Computing & AWS
- Elastic Compute and Storage Volumes
- Load Balancing, Autoscaling and DNS
- Virtual Private Cloud
- Storage - Simple Storage Service (S3)
- Databases and In-Memory DataStores
- Management and Application Services
- AWS Migration
- DevOps on AWS
- Automation and Configuration management

Certification Details:

- Complete at least 85 percent of the course or attend one complete batch
- Successful completion and evaluation of the project

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Chapter 1 : Introduction to Cloud Computing & AWS

- What is Cloud Computing
- Cloud Service & Deployment Models
- How AWS is the leader in the cloud domain
- Various cloud computing products offered by AWS
- Introduction to AWS S3, EC2, VPC, EBS, ELB, AMI
- AWS architecture and the AWS Management Console, virtualization in AWS (Xen hypervisor)
- What is auto-scaling
- AWS EC2 best practices and cost involved.

Chapter 2 : Elastic Compute and Storage Volumes

- Introduction to EC2
- Regions & Availability Zones(AZs)
- Pre-EC2, EC2 instance types
- Comparing Public IP and Elastic IP
- Demonstrating how to launch an AWS EC2 instance
- Introduction to AMIs, Creating and Copying an AMI
- Introduction to EBS
- EBS volume types
- EBS Snapshots
- Introduction to EFS
- Instance tenancy- Reserved and Spot instances
- Pricing and Design Patterns.

Chapter 3 : Load Balancing, Autoscaling and DNS

- Introduction to Elastic Load Balancer
- Types of ELB – Classic, Network and Application
- Load balancer architecture
- Cross-zone load balancing
- Introduction to Auto Scaling, vertical and horizontal scaling, the lifecycle of Auto Scaling
- Components of Auto Scaling, scaling options and policy, instance termination
- Using load balancer with Auto Scaling
- Pre-Route 53 – how DNS works
- Routing policy, Route 53 terminologies, Pricing.

Module 4 : Virtual Private Cloud

- What is Amazon VPC
- VPC as a networking layer for EC2,
- IP address and CIDR notations,
- Components of VPC – network interfaces, route tables, internet gateway, NAT,
- Security in VPC – security groups and NACL, types of VPC,
- what is a subnet, VPC peering with scenarios, VPC endpoints, VPC pricing and design patterns.

Chapter 5 : Storage - Simple Storage Service (S3)

- Introduction to AWS storage
- Pre-S3 – online cloud storage
- API, S3 consistency models
- Storage hierarchy, buckets in S3
- Objects in S3, metadata and storage classes, object
- versioning, object lifecycle management, cross-region replication, data encryption, connecting using VPC endpoint, S3 pricing.

Chapter 6 Databases and In-Memory DataStores

- What is a database, types of databases, databases on AWS
- Introduction to Amazon RDS
- Multi-AZ deployments, features of RDS
- Read replicas in RDS, reserved DB instances
- RDS pricing and design patterns
- Introduction to Amazon Aurora, benefits of Aurora, Aurora pricing and design patterns
- Introduction to DynamoDB, components of DynamoDB, DynamoDB pricing and design patterns
- What is Amazon Redshift, advantages of Redshift
- What is ElastiCache, why ElastiCache.

Chapter 7 Management and Application Services

- Introduction to CloudFormation
- CloudFormation components
- CloudFormation templates
- The concept of Infrastructure-as-a-code
- Functions and pseudo parameters
- Introduction to Simple Notification Service, how does SNS work
- Introduction to Simple Email Service, how does SES work
- Introduction to Simple Queue Service, how does SQS work.

Chapter 8 Access Management and Monitoring Services

- Pre-IAM, why access management
- Amazon Resource Name (ARN), IAM features
- Multi-factor authentication (MFA) in IAM, JSON
- IAM policies, IAM permissions, IAM roles, identity federation, pricing
- Introduction to CloudWatch, metrics and namespaces,
- CloudWatch architecture, dashboards in CW, CloudWatch alarms, CloudWatch logs, pricing and design patterns
- Introduction to CloudTrail, tracking API usage.

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Chapter 9 Automation and Configuration management

- What is AWS Lambda
- How Lambda is different from EC2
- Benefits and limitations of Lambda
- How does Lambda work
- Use cases of Lambda, Lambda concepts
- Integration S3 with Lambda
- What is Elastic Beanstalk, how does Beanstalk work, Beanstalk concepts, Beanstalk pricing
- What is configuration management
- What is AWS OpsWorks, AWS OpsWorks benefits
- CloudFormation vs OpsWorks, services in OpsWorks, AWS OpsWorks Stacks, OpsWorks pricing

Chapter 10 AWS Migration

- What is Cloud migration
- Why migration is important
- Migration process in AWS, the 6 R's migration strategy
- Virtual machine migration, migrating a local vm onto the AWS cloud
- Migrating databases using Database Migration Service (DMS)
- Migrating a local database to RDS
- Migrating an on-premises database server to RDS using DMS, other migration services.

Chapter 11 Architecting AWS – whitepaper

- Important guidelines for creating a well-architected AWS framework that is resilient and performant
- Designing of fault-tolerant and high-availability architecture Resilient storage
- Decoupling mechanism
- Multi-tier architecture solution
- Disaster recovery solution
- Scalable and elastic solutions.

Chapter 12 DevOps on AWS

- What is DevOps,
- Introduction to AWS DevOps,
- AWS Developer tools CodeCommit, CodeBuild, CodeDeploy and CodePipeline, integrating GitHub with CodePipeline,
- Creating a DevOps lifecycle using AWS DevOps tools.

Chapter 13 Amazon FSx and Global Accelerator

- What is FSx
- Types of FSx and FSx for Windows server
- How does FSx for Windows File Server work, FSx for Lustre
- Use cases of FSx
- Automatic failover process
- Supported clients and access methods
- What is a Global Accelerator, How Global Accelerator works, Listeners and Endpoints
- What are AWS Organizations, Features of AWS Organizations, Managing multiple accounts
- What are ENIs, ENAs and EFAs, Working with network interfaces
- Enhanced Networking with ENA, EFA with MPI, Monitoring an EFA

Chapter 14 AWS Architect Interview Questions

- Guidance for clearing the exam, most probable interview
- questions and other helpful tips for clearing the exam and interview.