AWS Developer Associate Training Content

Description:

This course is for students who have an understanding of AWS Services and basic concepts. The course is designed to understand developing, deploying and maintaining applications on the AWS Cloud. Participants will get to know how to interact with AWS using the CLI. API and SDK. The course covers how to design applications using different AWS services and how to deploy them in an efficient manner by automating the process using AWS tools. The concept of containers is explored by understanding Docker and going through its implementation using services like ECS and EKS. Serverless architectures are covered by building applications using API Gateway, Lambda, S3, Cognito and DynamoDB. The concept of CI/CD is demonstrated for automation of application development. An exam readiness session for AWS Certified Developer Associate will be included which will contain discussion on exam questions and strategy to clear the exam.

Course Outcomes:

- Understand core AWS services and building applications using the services.
- Hands-on experience using compute, storage, networking and database in the AWS Cloud using labs
- Interact with AWS using APIs, CLIs or SDKs and when to use what
- Familiarity with IT concepts and their practical use cases in the cloud
- Build serverless applications in the AWS Cloud
- Use Lambda for automation of common IT Tasks
- Ability to troubleshoot common problems faced in AWS Cloud
- Automate application deployment using CI/CD pipelines
- Implement Security best practices to protect your architectures
- Knowledge about different AWS Services and their use cases
- Understand concept of Docker and deploy it on ECS and EKS
- Readiness for the Developer Associate Exam and discussion on ways to tackle the exam including common API commands
- Understanding of the various cloud job roles and employment opportunities

Course Syllabus-

Day 1:

Unit 1 – Cloud Computing with AWS

- AWS Cloud Review
- AWS Global Infrastructure
- AWS Services Overview

Day 2:

Unit 2- Cloud Foundations

- EC2 Instance Creation
- AMI Creation, Purchasing Models, Elastic IPs
- Creating EBS Volumes, Snapshots & AMIs
- IAM Users, Groups and Roles
- CLI Demo
- Web Identity Federation

Day 3:

Unit 3- Storage Options in AWS

- Storing Objects with S3

- Common S3 CLI Commands
- Caching Objects with CloudFront
- CORS Configuration
- Data Archival with Glacier

Day 4:

Unit 4- Serverless Architectures

- Introduction to Lambda
- Case Study: Alexa Skills
- Versioning with Lambda
- Step Functions and X-Ray
- Create APIs using API Gateway
- Deep Dive on API Gateway
- Cognito User Pools, Identity Pools
- Case Study: Create a Serverless Application

Day 5:

Unit 5- Databases

- Relational Database Service (RDS)
- NoSQL & DynamoDB
- DynamoDB Provisioned Throughput, On-Demand Capacity
- DynamoDB Transactions, TTL or Streams
- DAX for Caching
- Caching with ElastiCache

Day 6:

Unit 6- Encryption on AWS

- KMS
- API Calls and Envelope Encryption
- S3 Encryption options

Unit 7- Application Integration

- SQS, SNS and SES
- Kinesis

Day 7:

Unit 8- Deployment Options

- Deployment with Elastic Beanstalk
- Systems Manager Parameter Store
- Infrastructure as Code with CloudFormation

Day 8:

Unit 9- Developer Tools and Automation

- Docker and Container Basics
- CodeCommit, CodeBuild and CodeDeploy
- CodeDeploy AppSpec File and lifecycle hooks
- Set up a CI/CD Pipeline
- Serverless Application Model
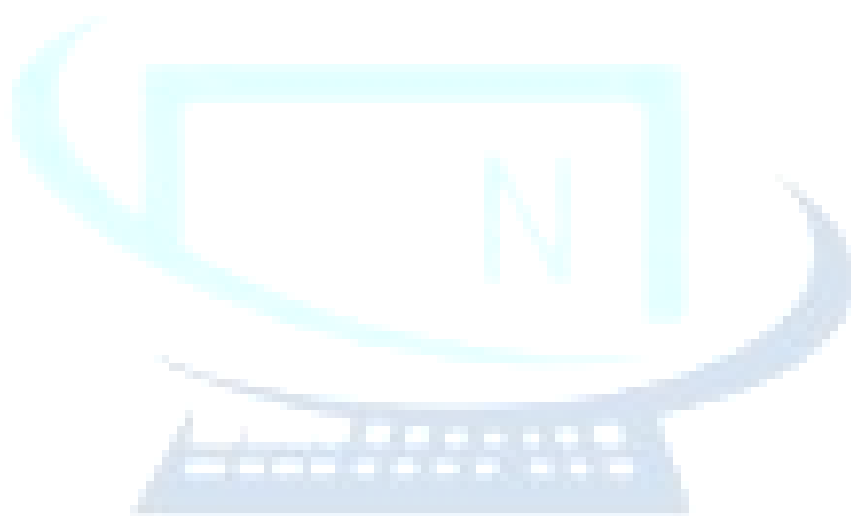- Build applications using ECS and EKS

Day 9:

Unit 9- Debugging and Monitoring

- CloudWatch
- CloudTrail
- X-Ray Configuration

Day 10:

Unit 10- Exam Readiness

- AWS Exam Blueprint
- Relevant AWS Services
- API Commands
- Mock Tests
- Additional Resources