

# AWS Developer & Serverless Training

## | DVA-C02 Certification

### Module 1 – Introduction to Cloud Development on AWS

- Overview of Cloud Computing
- AWS Architecture and Core Services
- Cloud-Native Development
- Monolithic Applications vs. Microservices
- Serverless Concepts
- Overview of the Capstone Project
- AWS Development Tools
- AWS CLI and AWS SDKs

### Module 2 – Identity and Access Management with IAM

- AWS Security Concepts
- IAM Users, Groups, and Roles
- IAM Policies
- Permissions and Access Control
- Security Best Practices
- Access Key Management
- Federated Authentication

### Module 3 – Cloud Storage with Amazon S3

- Introduction to Amazon S3
- Buckets and Objects
- Permission Management
- Static Website Hosting
- Versioning
- Storage Classes
- Data Security
- Common Use Cases

### Module 4 – NoSQL Databases with Amazon DynamoDB

- Introduction to NoSQL Databases
- DynamoDB Architecture
- Tables and Partitions
- Primary Keys
- Secondary Indexes
- Reading and Writing Data
- Performance Optimization
- Data Modeling Best Practices

## Module 5 – Serverless Development with AWS Lambda

- Introduction to AWS Lambda
- Serverless Architecture
- Creating Lambda Functions
- Event Management
- Environment Variables
- Error Handling
- Deployment and Versioning
- Performance Optimization

## Module 6 – Building APIs with Amazon API Gateway

- Overview of API Gateway
- REST and HTTP APIs
- Integration with Lambda
- Route Management
- Parameters and Validation
- Securing APIs
- Quota Management
- Monitoring and Logging

## Module 7 – User Management with Amazon Cognito

- Overview of Amazon Cognito
- User Pools
- Authentication and Authorization
- User Registration Management
- Password Management
- Multi-Factor Authentication
- Integration with Web Applications
- Securing APIs

## Module 8 – Monitoring and Operating AWS Applications

- Introduction to Amazon CloudWatch
- Metric Collection
- Application Monitoring
- Logs and Logging
- Alerts and Notifications
- Application Troubleshooting
- Operational Best Practices
- Cost Optimization

## Module 9 – AWS Developer Capstone Project

- Building a Complete Serverless Web Application
- Frontend Hosted on Amazon S3
- Authentication with Amazon Cognito

- REST API with Amazon API Gateway
- Serverless Backend with AWS Lambda
- Data Storage with Amazon DynamoDB
- Logging with Amazon CloudWatch
- Securing Access
- Complete Deployment in an AWS Environment