multisoft
Systems

AWS Certified Developer Associate Training

COURSE CONTENT

GET IN TOUCH

Multisoft Systems
B - 125, Sector - 2, Noida

(+91) 9810-306-956

info@multisoftsystems.com

www.multisoftsystems.com

About Multisoft

Train yourself with the best and develop valuable in-demand skills with Multisoft Systems. A leading certification training provider, Multisoft collaborates with top technologies to bring world-class one-on-one and certification trainings. With the goal to empower professionals and business across the globe, we offer more than 1500 training courses, which are delivered by Multisoft's global subject matter experts. We offer tailored corporate training; project Based Training, comprehensive learning solution with lifetime e-learning access, after training support and globally recognized training certificates.

About Course

The AWS Certified Developer Associate training by Multisoft Systems is an immersive course designed for developers seeking to deepen their understanding of the Amazon Web Services (AWS) platform. This course meticulously covers the key concepts, services, and tools that developers need to master to build and manage applications on AWS

Module 1: Development with AWS Services

1. Develop code for applications hosted on AWS

- ✓ Architectural patterns (for example, event-driven, microservices, monolithic, choreography, orchestration, fanout)
- ✓ Idempotency
- ✓ Differences between stateful and stateless concepts
- ✓ Differences between tightly coupled and loosely coupled components
- ✓ Fault-tolerant design patterns (for example, retries with exponential backoff and jitter, dead-letter queues)
- ✓ Differences between synchronous and asynchronous patterns

2. Develop code for AWS Lambda

- ✓ Event source mapping
- ✓ Stateless applications
- ✓ Unit testing
- ✓ Event-driven architecture
- ✓ Scalability
- ✓ The access of private resources in VPCs from Lambda code

3. Use data stores in application development Knowledge of:

- ✓ Relational and non-relational databases
- ✓ Create, read, update, and delete (CRUD) operations
- ✓ High-cardinality partition keys for balanced partition access
- ✓ Cloud storage options (for example, file, object, databases)
- ✓ Database consistency models (for example, strongly consistent, eventually consistent)
- ✓ Differences between query and scan operations

- ✓ Amazon DynamoDB keys and indexing
- ✓ Caching strategies (for example, write-through, read-through, lazy loading, TTL)
- ✓ Amazon S3 tiers and lifecycle management
- ✓ Differences between ephemeral and persistent data storage patterns

Module 2: Security

1. Implement authentication and/or authorization for applications and AWS services

- ✓ Identity federation (for example, Security Assertion Markup Language [SAML], OpenID Connect
- ✓ [OIDC], Amazon Cognito)
- ✓ Bearer tokens (for example, JSON Web Token [JWT], OAuth, AWS Security Token Service [AWS
- ✓ STS])
- ✓ The comparison of user pools and identity pools in Amazon Cognito Resource-based policies, service policies, and principal policies
- ✓ Role-based access control (RBAC)
- ✓ Application authorization that uses ACLs
- ✓ The principle of least privilege
- ✓ Differences between AWS managed policies and customer-managed policies
- ✓ Identity and access management

2. Implement encryption by using AWS services

- ✓ Encryption at rest and in transit Certificate management (for example, AWS Private Certificate Authority)
- ✓ Key protection (for example, key rotation)
- ✓ Differences between client-side encryption and server-side encryption
- ✓ Differences between AWS managed and customer managed AWS Key Management Service (AWS KMS) keys

3. Manage sensitive data in application code

- ✓ Data classification (for example, personally identifiable information [PII], protected health information [PHI]) Environment variables
- ✓ Secrets management (for example, AWS Secrets Manager, AWS Systems Manager Parameter Store)
- ✓ Secure credential handling

Module 3: Deployment

1. Prepare application artifacts to be deployed to AWS

- ✓ Ways to access application configuration data (for example, AWS AppConfig, Secrets Manager, Parameter Store)
- ✓ Lambda deployment packaging, layers, and configuration options
- ✓ Git-based version control tools (for example, Git, AWS CodeCommit) Container images

2. Test applications in development environments

- ✓ Features in AWS services that perform application deployment
- ✓ Integration testing that uses mock endpoints
- ✓ Lambda versions and aliases

3. Automate deployment testing

- ✓ API Gateway stages
- ✓ Branches and actions in the continuous integration and continuous delivery (CI/CD) workflow
- ✓ Automated software testing (for example, unit testing, mock testing)

4. Deploy code by using AWS CI/CD services

- ✓ Git-based version control tools (for example, Git, AWS CodeCommit)

- ✓ Manual and automated approvals in AWS CodePipeline
- ✓ Access application configurations from AWS AppConfig and Secrets Manager CI/CD workflows that use AWS services
- ✓ Application deployment that uses AWS services and tools (for example, CloudFormation, AWS
- ✓ Cloud Development Kit [AWS CDK], AWS SAM, AWS CodeArtifact, AWS Copilot, Amplify, Lambda)
- ✓ Lambda deployment packaging options
- ✓ API Gateway stages and custom domains
- ✓ Deployment strategies (for example, canary, blue/green, rolling)

Module 4: Troubleshooting and Optimization

1. Assist in a root cause analysis

- ✓ Logging and monitoring systems
- ✓ Languages for log queries (for example, Amazon CloudWatch Logs Insights)
- ✓ Data visualizations
- ✓ Code analysis tools
- ✓ Common HTTP error codes
- ✓ Common exceptions generated by SDKs
- ✓ Service maps in AWS X-Ray

2. Instrument code for observability

- ✓ Distributed tracing
- ✓ Differences between logging, monitoring, and observability
- ✓ Structured logging
- ✓ Application metrics (for example, custom, embedded, built-in)

3. Optimize applications by using AWS services and features

- ✓ Caching

- ✓ Concurrency
- ✓ Messaging services (for example, Amazon Simple Queue Service [Amazon SQS], Amazon Simple Notification Service [Amazon SNS])