

CLOUD

ADVANCED

4 DAYS

Mastering AWS Lambda

Build a strong foundation in serverless application development using AWS Lambda by understanding core concepts and architectures. Learn how to build, deploy, integrate, and optimize Lambda functions while managing configurations, versions, and performance for scalable cloud workloads.

Why AWS Lambda?

Scalability

AWS Lambda automatically scales your application in response to incoming request volumes, ensuring optimal performance and cost efficiency.

Cost Efficiency

With AWS Lambda, you only pay for the compute time your code consumes, measured in milliseconds, resulting in cost savings compared to traditional server-based architectures.

Serverless Architecture

AWS Lambda enables you to adopt a serverless architecture, this reduces operational overhead, allowing your team to focus on application development and innovation.

What you'll be able to do

- ✓ Gain a solid understanding of the fundamentals of AWS Lambda
- ✓ Learn how to write and deploy Lambda functions using different programming languages
- ✓ Explore how to integrate Lambda functions with other AWS services
- ✓ Learn the process of deploying Lambda functions, configuring function settings, managing environment variables, and versioning functions.
- ✓ Explore techniques for optimizing the performance of Lambda functions\

Who this is for

- Developers Solution Architects System Administrators DevOps Engineers

Curriculum

01 Introduction to AWS Lambda

- An overview of AWS Lambda and its role in serverless computing
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

02 Lambda Function Development

- Learn how to write and deploy Lambda functions using various programming languages and frameworks
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

03 Event Sources and Triggers

- Explore different event sources and triggers that can invoke Lambda functions, such as API Gateway
- DynamoDB, and more
- Apply concepts with guided exercises and validation checks

04 Serverless Application Development

- Discover techniques for building serverless applications using Lambda
- Including designing microservices architectures
- Managing dependencies

05 Integration with AWS Services

- Understand how to integrate Lambda functions with other AWS services, such as SQS
- Step Functions, and more
- Apply concepts with guided exercises and validation checks

06 Scaling and Performance Optimization

- Learn strategies for optimizing the performance of Lambda functions and effectively managing scalability based on demand
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

07 Error Handling and Debugging

- Explore methods for handling errors and exceptions in Lambda functions and debugging techniques for troubleshooting
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

08 Security and IAM for Lambda

- Understand best practices for securing Lambda functions
- Including configuring IAM roles
- Implementing encryption
- And managing access controls

09 Monitoring and Logging

- Discover how to monitor
- Log Lambda functions using AWS CloudWatch
- Set up alarms
- And gain insights into function behavior

10 Continuous Deployment and Delivery

- Learn how to automate the deployment and delivery of Lambda functions using tools like AWS CodePipeline and CodeDeploy
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

11 Cost Optimization and Resource Management

- Understand pricing models
- Cost optimization techniques
- And resource management strategies to optimize costs associated with Lambda usage

12 Advanced Lambda Concepts

- Dive deeper into advanced topics such as VPC integration
- Custom runtimes
- Cross-account access
- And building custom layers