

# AWS Lambda

This AWS Lambda training covers how to use AWS Lambda for building and deploying serverless applications for web app development, data processing, and mobile backend development. AWS Lambda is incredibly powerful that allows you to build small, on-demand applications that are responsive to new information happening within milliseconds of the event, but you won't get far with it if you don't understand its inner workings, interface and identities.

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## WEEK 1

### AWS Lambda Fundamentals

151 min.

Introducing AWS Lambda Functions	1
Lambda Features and Key Terms	15
Deploy the Lambda Resource	10
Coding and Deploying a Function	16
Recap and Next Steps	5

### Extend AWS Lambda Functionality and Deployments

Overview	1
Extending Lambda Functionality	1
Deploying with Package Dependencies	8
DynamoDB Destinations	18
S3 Triggers	17
Recap Lambda Functions	2

### Connect Lambda to Private Resources on a VPC

Overview	1
Introducing Advanced Serverless Deployments	1
Understand the Solution Architecture	6
Deploy RDS on Private Subnets	7
Explore the Lambda Function Code	7
Create the Lambda Execution Role	5
Create a Psycopg2 Lambda Layer	9
Deploy and Test the Lambda Function	12
Deploy the SQS Queue and Trigger	3
Test the Solution	3

**WEEK 2****Create Unit and Integration Tests for Lambda Deployments 151 min.**

Overview	1
Introducing Lambda Tests and Orchestration	2
Prep and Install Dependencies	14
Review the Lambda Code	8
Review the Test	9
Review the SAM Template	7
Review the Deployment Script	9
Run the Deployment Script	7

**Develop Python-based AWS Lambda Functions with Containers**

Overview	1
Introduction to AWS Lambda Containers with Python	8
Setting Up AWS Lambda Container Development Tools	10
Create Sample Application and Push to Amazon ECR	10
Create AWS IAM Role for Lambda Function and Deploy	7
Use the AWS CLI to Create Lambda Function from Container	8
Deploy New Version of Python Container to AWS Lambda	6

**Build Serverless Functions with PowerShell and AWS Lambda**

Overview	1
Why Use PowerShell with Lambda?	4
Setting Up Your Development Environment	7
Building a Simple AWS Lambda Function with PowerShell	12
Integrating Lambda with Amazon API Gateway	18

**WEEK 3****105 min.**

Using Lambda Inputs from API Gateway for Control Flow	7
Scheduling Lambda Execution with Amazon CloudWatch Events	6
Cleaning Up Your AWS Account with PowerShell	11

**Schedule AWS Lambda Functions with Amazon EventBridge and PowerShell**

Overview	1
Introduction to Amazon EventBridge and PowerShell Automation	9
Setting Up Development Environment for Amazon EventBridge Automation	13
Create AWS IAM User for EventBridge and Configure AWS Tools for PowerShell	7
Finding Commands in the Amazon EventBridge PowerShell Module	8
Create Amazon EventBridge Rule with PowerShell: Write-EVBRule	12
Create AWS IAM Role for EventBridge and Update Rule with PowerShell	12
Build Sample AWS Lambda Function for EventBridge Integration	9
Configure Lambda Resource Policy, Test Integration, and Clean Up	8