

# Developing on AWS

## Course Benefits & Agenda



**Overview**

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**Course Benefits**

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**Agenda**

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## Overview

This course teaches experienced developers how to programmatically interact with AWS services to build web solutions. It guides you through a high-level architectural discussion on resource selection and dives deep into using the AWS Software Development Kits (AWS SDKs) and Command Line Interface (AWS CLI) to build and deploy your cloud applications. You will build a sample application during this course, learning how to set up permissions to the development environment, adding business logic to process data using AWS core services, configure user authentications, deploy to AWS cloud, and debug to resolve application issues. The course includes code examples to help you implement the design patterns and solutions discussed in the course. The labs reinforce key course content and help you to implement solutions using the AWS SDK for Python, .Net, and Java, the AWS CLI, and the AWS Management Console.

## Course Benefits

This course is designed to teach the student how to:

- Build a simple end-to-end cloud application using AWS Software Development Kits (AWS SDKs), Command Line Interface (AWS CLI), and IDEs.
- Configure AWS Identity and Access Management (IAM) permissions to support a development environment.
- Use multiple programming patterns in your applications to access AWS services.

- Use AWS SDKs to perform CRUD (create, read, update, delete) operations on Amazon Simple Storage Service (Amazon S3) and Amazon DynamoDB resources.
- Build AWS Lambda functions with other service integrations for your web applications.
- Understand the benefits of microservices architectures and serverless applications to design.
- Develop API Gateway components and integrate with other AWS services.
- Explain how Amazon Cognito controls user access to AWS resources.
- Build a web application using Cognito to provide and control user access.
- Use DevOps methodology to reduce the risks associated with traditional application releases and identify AWS services that help in implementing DevOps practices.
- Use AWS Serverless Application Model (AWS SAM) to deploy an application.
- Observe your application build using Amazon X-Ray.

## Agenda

### Day 1

Module	Topic
Module 1	Course Overview
Module 2	Building a Web Application on AWS
Module 3	Getting Started with Development on AWS
Module 4	Getting Started with Permissions
Lab 1	Configure the Developer Environment
Module 5	Getting Started with Storage
Module 6	Processing Your Storage Operations
Lab 2	Develop Solutions Using Amazon S3

## Agenda

### Day 2

Module	Topic
Module 7	Getting Started with Databases
Module 8	Processing Your Database Operations
Lab 3	Develop Solutions Using Amazon DynamoDB
Module 9	Processing Your Application Logic
Lab 4	Develop Solutions Using AWS Lambda Functions
Module 10	Managing the APIs
Lab 5	Develop Solutions Using Amazon API Gateway

### Day 3

Module	Topic
Module 11	Building a Modern Application
Module 12	Granting Access to Your Application Users
Lab 6	Capstone – Complete the Application Build
Module 13	Deploying Your Application
Module 14	Observing Your Application
Lab 7	Observe the Application Using AWS X-Ray
Module 15	Course Wrap-up

## Agenda

### Day 5

Module	Topic
Module 21	Migration Strategies
Lab 7	Application deployment using AWS Fargate
Module 22	RTO/RPO and Backup Recovery Setup
Module 23	Final Review