

Course Duration: 8 hours (1 Day)

AWS Amplify Essentials

This course provides a comprehensive introduction to AWS Amplify, covering both Amplify Studio and Amplify CLI for rapid development of cloud-powered applications. Participants will learn how to set up and configure Amplify, implement authentication and authorization, host applications using Amplify Hosting, and build interactive UI components with event handlers. Through hands-on exercises, learners will gain practical experience in integrating AWS services seamlessly into their web and mobile applications.

Course objectives

- By the end of this course, participants will be able to:
- Set up AWS Amplify using both Amplify Studio and Amplify CLI for application development.
- Implement Authentication & Authorization using AWS Cognito with Amplify for secure user access.
- Deploy and host applications using AWS Amplify Hosting.
- Build UI components and manage events using Amplify Studio's drag-and-drop interface and React-based event handlers.
- Integrate Amplify features such as APIs, databases, and analytics into front-end applications.
- Optimize application performance and scalability while leveraging best practices for Amplify-powered applications.

Prerequisites

- Completed AWS Cloud Practitioner Essentials, or AWS Technical Essentials, and Developing on AWS.
- Basic understanding of cloud computing concepts.
- Experience with JavaScript/TypeScript and React (recommended but not mandatory).

Target Audience

- Frontend Developers

- Full-Stack Developers
- Cloud Architects & Engineers
- Product Managers & Tech Enthusiasts

Course outline

Module 1: Introduction to AWS Amplify

- Overview of AWS Amplify and its use cases
- Comparison: Amplify vs Traditional Full-Stack Development
- Key features: Authentication, APIs, Data, Storage, Hosting
- Understanding Amplify Studio vs Amplify CLI
- Setting up an AWS account and prerequisites for Amplify

Module 2: Setting Up AWS Amplify

- Installing and configuring AWS Amplify CLI
- Introduction to Amplify Studio
- Initializing an Amplify project

Hands-on Lab : Setting up a new project with Amplify CLI and Studio

Module 3: Authentication & Authorization with AWS Amplify

- Introduction to AWS Cognito for user authentication
- Adding authentication to an app using Amplify Auth
- Implementing sign-in, sign-up, and multi-factor authentication (MFA)
- Role-based access control (RBAC) and fine-grained authorization

Hands-on Lab: Building a user authentication flow with Amplify

Module 4: AWS Amplify Hosting & Deployment

- Overview of AWS Amplify Hosting
- Setting up a custom domain for your Amplify app

Hands-on Lab: Deploying a frontend application with Amplify Hosting

Module 5: Working with UI Components & Event Handlers

- Introduction to Amplify UI Components
- Customizing UI components using Amplify Studio
- Handling events and user interactions in Amplify-powered UI
- Integrating UI components with backend services

Hands-on Lab: Creating dynamic UI elements with event handlers

Module 6: Extending AWS Amplify with APIs & Data

- Introduction to Amplify DataStore and GraphQL API
- Setting up a backend with AWS AppSync
- Working with REST APIs in Amplify
- CRUD operations with Amplify API

Hands-on Lab: Connecting an Amplify app to a database and API

Module 7: Optimizing Performance and Security

- Best practices for securing Amplify applications
- Performance optimization techniques for Amplify apps
- Logging and monitoring with Amazon CloudWatch