

# AWS Ramp-Up Guide: Developer

For Developers, Engineers, and DevOps Engineers

This Developer Ramp-Up Guide provides a prescriptive path for you to become proficient at developing, deploying, and modernizing applications on AWS. Each section includes recommended learning for that topic. While the guide identifies a lot of resources, we recommend prioritizing the items that are most relevant and interesting to you.

## Learn the fundamentals of the AWS Cloud

| LEARNING RESOURCE                        | DURATION   | TYPE                                 |
|--|------------|--------------------------------------|
| What is Cloud Computing?                 | 10 minutes | <a href="#">Webpage »</a>            |
| Overview of AWS                          | 2 hours    | <a href="#">Whitepaper »</a>         |
| Cloud Computing with AWS                 | 10 minutes | <a href="#">Webpage »</a>            |
| AWS Global Infrastructure tool           | 15 minutes | <a href="#">Webpage »</a>            |
| AWS Glossary                             | 30 minutes | <a href="#">Webpage »</a>            |
| <i>Job Roles in the Cloud</i>            | 30 minutes | <a href="#">Digital Training »</a>   |
| <i>AWS Cloud Practitioner Essentials</i> | 6 hours    | <a href="#">Digital Training »</a>   |
|  |            | <a href="#">Classroom Training »</a> |

## Step 1: Dive deeper into AWS Cloud fundamentals, including AWS pricing and cost management

| LEARNING RESOURCE                                      | DURATION   | TYPE                               |
|--|------------|------------------------------------|
| AWS Pricing*   | 15 minutes | <a href="#">Webpage »</a>          |
| How AWS Pricing Works                                  | 45 minutes | <a href="#">Whitepaper »</a>       |
| AWS Well-Architected                                   | 15 minutes | <a href="#">Webpage »</a>          |
| AWS Well-Architected Framework                         | 2 hours    | <a href="#">Whitepaper »</a>       |
| <i>Introduction to AWS Billing and Cost Management</i> | 5 minutes  | <a href="#">Digital Training »</a> |

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Step 1 continued: Dive deeper into AWS Cloud fundamentals, including AWS pricing and cost management

| LEARNING RESOURCE                      | DURATION   | TYPE                               |
|--|------------|------------------------------------|
| <i>AWS Shared Responsibility Model</i> | 5 minutes  | <a href="#">Digital Training »</a> |
| Shared Responsibility Model            | 10 minutes | <a href="#">Webpage »</a>          |
| AWS Security Best Practices            | 2 hours    | <a href="#">Webpage »</a>          |
| AWS Security Best Practices            | 30 minutes | <a href="#">Blog Post »</a>        |
| <i>AWS Technical Essentials</i>        | 1 day      | <a href="#">Digital Training »</a> |

Step 2: Learn cloud developer fundamentals

| LEARNING RESOURCE   | DURATION   | TYPE                                   |
|---|------------|--|
| Tools to Build on AWS   | 30 minutes | <a href="#">Webpage »</a>              |
| <i>Introduction to AWS Elastic Beanstalk</i>  | 10 minutes | <a href="#">Digital Training »</a>     |
| <i>Getting Started with .NET on AWS*</i>  | 90 minutes | <a href="#">Digital Training »</a>     |
| Learn how to migrate your ASP.NET app to AWS in minutes!                              | 30 minutes | <a href="#">Tutorial »</a>             |
| Learn how to develop applications in Microsoft Visual Studio leveraging AWS services* | 4 hours    | <a href="#">Hands-On Lab »</a>         |
| Learn the basics of Python on AWS   | 90 minutes | <a href="#">Workshop »</a>             |
| <i>Developing on AWS</i>  | 3 days     | <a href="#">Classroom Training »</a>   |
| Practicing Continuous Integration and Continuous Delivery on AWS                      | 1 hour     | <a href="#">Whitepaper »</a>           |
| <i>AWS Developer: Building on AWS</i>   | 18 hours   | <a href="#">edX Digital Training »</a> |

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## Step 3: Take the AWS Certified Cloud Practitioner certification exam

| LEARNING RESOURCE                                   | DURATION  | TYPE                   |
|---|-----------|------------------------|
| AWS Certified Cloud Practitioner certification exam | 1.5 hours | <a href="#">Exam »</a> |

## Step 4: Learn all about containers

| LEARNING RESOURCE  | DURATION   | TYPE                               |
|--|------------|------------------------------------|
| Getting started with Docker on AWS   | 45 minutes | <a href="#">Video »</a>            |
| Running Containerized Microservices on AWS                                   | 1 hour     | <a href="#">Whitepaper »</a>       |
| AWS App2Container - A New Containerizing Tool for Java and .NET Applications | 30 minutes | <a href="#">Blog Post »</a>        |
| Building Containerized Applications on AWS (AWS on Coursera)                 | 10 hours   | <a href="#">Digital Training »</a> |
| <i>Deep Dive on AWS Fargate: Building Serverless Containers at Scale</i>     | 40 minutes | <a href="#">Digital Training »</a> |
| <i>Deep Dive on Container Security</i>                                       | 30 minutes | <a href="#">Digital Training »</a> |
| Deep Dive Into Container Networking - AWS Online Tech Talks                  | 48 minutes | <a href="#">Video »</a>            |

## Step 4.1: Learn about Elastic Container Service (Amazon ECS)

| LEARNING RESOURCE   | DURATION   | TYPE                       |
|---|------------|----------------------------|
| <i>Amazon Elastic Container Service (ECS) Primer</i>      | 30 minutes | <a href="#">Training »</a> |
| ECS Workshop  | 2 hours    | <a href="#">Workshop »</a> |
| Best practices for CI/CD using AWS Fargate and Amazon ECS | 60 minutes | <a href="#">Video »</a>    |
| Docker on Amazon ECS Fargate Using CloudFormation         | 36 minutes | <a href="#">Video »</a>    |
| Building CI/CD Pipelines with Jenkins on Amazon ECS       | 60 minutes | <a href="#">Workshop »</a> |

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## Step 4.1 continued: Learn about Elastic Container Service (Amazon ECS)

| LEARNING RESOURCE  | DURATION   | TYPE                           |
|--|------------|--------------------------------|
| Building and Deploying Containers Using Amazon Elastic Container Service | 1.5 hours  | <a href="#">Hands-On Lab »</a> |
| AWS Fargate under the hood*  | 40 minutes | <a href="#">Video »</a>        |

## Step 4.2: Learn about Elastic Kubernetes Service (Amazon EKS)

| LEARNING RESOURCE   | DURATION   | TYPE                                 |
|---|------------|--------------------------------------|
| <i>Amazon Elastic Kubernetes (EKS) Primer</i>                               | 1 hour     | <a href="#">Digital Training »</a>   |
| <i>Running Containers on Amazon Elastic Kubernetes Service (Amazon EKS)</i> | 3 days     | <a href="#">Classroom Training »</a> |
| EKS Workshop  | 2 hours    | <a href="#">Workshop »</a>           |
| De-mystifying cluster networking for Amazon EKS Worker nodes                | 30 minutes | <a href="#">Blog Post »</a>          |

## Step 5: Learn all about serverless fundamentals

| LEARNING RESOURCE                                     | DURATION   | TYPE                               |
|---|------------|------------------------------------|
| <i>Introduction to Serverless Development*</i>        | 25 minutes | <a href="#">Digital Training »</a> |
| <i>Getting into a Serverless Mindset</i>              | 30 minutes | <a href="#">Digital Training »</a> |
| <i>AWS Lambda Foundations</i>                         | 1 hour     | <a href="#">Digital Training »</a> |
| <i>Amazon API Gateway for Serverless Applications</i> | 75 minutes | <a href="#">Digital Training »</a> |
| Amazon DynamoDB for Serverless Architectures          | 2 hours    | <a href="#">Digital Training »</a> |
| Lambda Getting Started                                | 20 minutes | <a href="#">Tutorial »</a>         |

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## Step 5.1: Learn more about serverless, including best practices

| LEARNING RESOURCE   | DURATION   | TYPE                               |
|---|------------|------------------------------------|
| Getting Started with AWS Lambda and Serverless Computing - AWS Online Tech Talks*   | 1 hour     | <a href="#">Video »</a>            |
| Implementing Microservices on AWS   | 1 hours    | <a href="#">Whitepaper »</a>       |
| Serverless architectural patterns and best practices  | 1 hour     | <a href="#">Video »</a>            |
| Serverless Architectures with AWS Lambda  | 1 hour     | <a href="#">Whitepaper »</a>       |
| Optimizing Enterprise Economics with Serverless Architectures   | 30 minutes | <a href="#">Whitepaper »</a>       |
| Serverless Design with AWS Lambda   | 4 hours    | <a href="#">Hands-On Lab »</a>     |
| AWS Serverless Wild Rydes Workshops: Web Application, Data Processing, DevOps, Image Processing, and Multi Region on GitHub | 1 hour     | <a href="#">Workshop »</a>         |
| <i>Architecting Serverless Solutions</i>  | 3 hours    | <a href="#">Digital Training »</a> |
| Innovator Island serverless workshop  | 2 hours    | <a href="#">Workshop »</a>         |
| Innovator Island serverless workshop walkthrough  | 5 hours    | <a href="#">Video »</a>            |
| <i>Build and Deploy APIs with a Serverless CI/CD</i>  | 45 minutes | <a href="#">Digital Training »</a> |
| CI/CD for serverless applications   | 1 hour     | <a href="#">Workshop »</a>         |
| Build a Modern Web Application in your preferred language   | 2 hours    | <a href="#">Workshop »</a>         |
| Modernization Workshops with 3 <sup>rd</sup> Party Integration  | 2 hours    | <a href="#">Workshop »</a>         |
| Serverless Application Lens   | 2 hours    | <a href="#">Whitepaper »</a>       |
| Building microservices with AWS Lambda  | 1 hour     | <a href="#">Video »</a>            |
| AWS Serverless Multi-Tier Architectures   | 30 minutes | <a href="#">Whitepaper »</a>       |
| Security Overview of AWS Lambda   | 1 hour     | <a href="#">Whitepaper »</a>       |
| Serverless Streaming Architectures and Best Practices   | 1 hour     | <a href="#">Whitepaper »</a>       |
| Best practices for organizing larger serverless applications  | 15 minutes | <a href="#">Blog Post »</a>        |

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## Step 5.1 continued: Learn more about serverless, including best practices

| LEARNING RESOURCE   | DURATION   | TYPE                       |
|---|------------|----------------------------|
| Create a near real-time multiplayer game built on AWS                   | 2 hours    | <a href="#">Workshop »</a> |
| Moving to event-driven architectures                                    | 1 hour     | <a href="#">Video »</a>    |
| Scalable serverless event-driven applications using Amazon SQS & Lambda | 50 minutes | <a href="#">Video »</a>    |

## Step 6: Learn how to build and manage Infrastructure as Code

| LEARNING RESOURCE   | DURATION   | TYPE                               |
|---|------------|------------------------------------|
| Infrastructure as Code  | 1 hour     | <a href="#">Whitepaper »</a>       |
| <i>Introduction to AWS CloudFormation</i>                                       | 10 minutes | <a href="#">Digital Training »</a> |
| Introduction to AWS CloudFormation  | 45 minutes | <a href="#">Hands-On Lab »</a>     |
| Creating an Amazon Virtual Private Cloud (VPC) with AWS CloudFormation          | 1 hour     | <a href="#">Hands-On Lab »</a>     |
| Launching and Managing a Web Application with AWS CloudFormation*               | 2 hours    | <a href="#">Hands-On Lab »</a>     |
| Introduction to AWS CloudFormation Designer                                     | 40 minutes | <a href="#">Hands-On Lab »</a>     |
| AWS Cloud Development Kit (CDK)*  | 4 hours    | <a href="#">Workshop »</a>         |
| Working with the AWS Cloud Development Kit and AWS Construct Library            | 30 minutes | <a href="#">Blog Post »</a>        |
| Simplifying Application Building with AWS Solutions Constructs and the AWS CDK* | 30 minutes | <a href="#">Video »</a>            |

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## Step 7: Learn how mobile and front-end web developers can quickly and easily build secure and scalable full stack applications

| LEARNING RESOURCE                                      | DURATION   | TYPE                         |
|--|------------|------------------------------|
| Build web and mobile apps with AWS Amplify             | 30 minutes | <a href="#">Tutorial »</a>   |
| Build a React Application using AWS Amplify            | 50 minutes | <a href="#">Tutorial »</a>   |
| Build a Full-Stack iOS App using AWS Amplify*          | 45 minutes | <a href="#">Tutorial »</a>   |
| Guides to build Front-end and full stack applications* | 90 minutes | <a href="#">Guide »</a>      |
| Mobile applications how to blog directory*             | 30 minutes | <a href="#">Blog Posts »</a> |

## Step 8: Learn about AWS Developer Tools

| LEARNING RESOURCE                                 | DURATION   | TYPE                                 |
|---|------------|--------------------------------------|
| <i>AWS Development Tools Services Overview</i>    | 5 minutes  | <a href="#">Digital Training »</a>   |
| <i>Introduction to AWS CodeCommit</i>             | 15 minutes | <a href="#">Digital Training »</a>   |
| Working with AWS CodeCommit                       | 40 minutes | <a href="#">Hands-On Lab »</a>       |
| Working with AWS CodeCommit on Windows            | 40 minutes | <a href="#">Hands-On Lab »</a>       |
| <i>Introduction to AWS CodeBuild</i>              | 10 minutes | <a href="#">Digital Training »</a>   |
| Introduction to CodeDeploy                        | 80 minutes | <a href="#">Hands-On Lab »</a>       |
| <i>Introduction to AWS CodePipeline</i>           | 10 minutes | <a href="#">Digital Training »</a>   |
| <i>Introduction to AWS CodeStar</i>               | 10 minutes | <a href="#">Digital Training »</a>   |
| <i>Introduction to AWS X-Ray</i>                  | 10 minutes | <a href="#">Digital Training »</a>   |
| <i>DevOps Engineering on AWS</i>                  | 3 days     | <a href="#">Classroom Training »</a> |
| AWS Developer Tools and Services YouTube Playlist | 1 hour     | <a href="#">Videos »</a>             |

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## Step 9: Prepare for and take the AWS Certified Developer - Associate certification exam

| LEARNING RESOURCE  | DURATION | TYPE                                 |
|--|----------|--------------------------------------|
| <i>Exam Readiness: AWS Certified Developer – Associate</i> | 2 hours  | <a href="#">Classroom Training »</a> |
|  |          | <a href="#">Digital Training »</a>   |
| AWS Certified Developer – Associate certification exam     | 2 hours  | <a href="#">Exam »</a>               |

## Step 10: Learn about DevOps the Amazon Way

| LEARNING RESOURCE  | DURATION   | TYPE                        |
|--|------------|-----------------------------|
| 2019 DevOps at Amazon Fireside Chat  | 42 minutes | <a href="#">Video »</a>     |
| Learn how Amazon goes faster with Continuous Delivery                        | 45 minutes | <a href="#">Webpage »</a>   |
| Learn about Amazon CI/CD Practices for Software Development Teams            | 50 minutes | <a href="#">Video »</a>     |
| Moving to DevOps the Amazon Way  | 1 hour     | <a href="#">Video »</a>     |
| Using a Cloud Center of Excellence (CCOE) to Transform the Entire Enterprise | 20 minutes | <a href="#">Blog Post »</a> |
| Driving change and building a high-performance DevOps culture                | 1 hour     | <a href="#">Video »</a>     |

## Step 11: Learn to create and manage CI/CD Pipelines

| LEARNING RESOURCE                 | DURATION   | TYPE                       |
|-----------------------------------|------------|----------------------------|
| Set Up a CI/CD Pipeline on AWS    | 1 hour     | <a href="#">Tutorial »</a> |
| Moving to DevOps the Amazon Way   | 1 hour     | <a href="#">Video »</a>    |
| CI/CD for serverless applications | 1 hour     | <a href="#">Workshop »</a> |
| CI/CD with AWS Fargate            | 60 minutes | <a href="#">Workshop »</a> |



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## Step 11 continued: Learn to create and manage CI/CD Pipelines

| LEARNING RESOURCE  | DURATION   | TYPE                                   |
|--|------------|--|
| <i>AWS Developer: Deploying on AWS</i>                           | 18 hours   | <a href="#">edX Digital Training »</a> |
| Blue/green and Canary deployments for Amazon EKS and Amazon ECS* | 90 minutes | <a href="#">Workshop »</a>             |
| Leadership Session: Developer Tools on AWS                       | 50 minutes | <a href="#">Video »</a>                |
| CI/CD Pipeline for AWS CloudFormation templates on AWS           | 30 minutes | <a href="#">Tutorial »</a>             |

## Step 12: Learn to modernize your applications

| LEARNING RESOURCE   | DURATION   | TYPE  |
|---|------------|---|
| <i>AWS Developer: Optimizing on AWS</i>                               | 18 hours   | <a href="#">edX Digital Training »</a>      |
| <i>Advanced Developing on AWS</i>                                     | 3 days     | <a href="#">Classroom Training »</a>        |
| Jenkins on AWS  | 1 hour     | <a href="#">Whitepaper »</a>                |
| Learn about Git Webhooks  | 15 minutes | <a href="#">Webpage »</a>                   |
| Get hands-on with Git Webhooks with AWS services Quick Start          | 45 minutes | <a href="#">Workshop »</a>                  |
| Accelerating Software Delivery with DevOps                            | 1 hour     | <a href="#">Whitepaper »</a>                |
| Advanced instrumenting distributed systems for operational visibility | 60 minutes | <a href="#">Webpage »</a>                   |
| <i>Accelerating Messaging Modernization with Amazon MQ*</i>           | 30 minutes | <a href="#">Digital Training »</a>          |
| <i>Building Modern Java Applications on AWS*</i>                      | 18 hours   | <a href="#">Coursera Digital Training »</a> |
|   |            | <a href="#">edX Digital Training »</a>      |
| <i>Building Modern Node.js Applications on AWS*</i>                   | 18 hours   | <a href="#">Coursera Digital Training »</a> |
|   |            | <a href="#">edX Digital Training »</a>      |

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## Step 12 continued: Learn to modernize your applications

| LEARNING RESOURCE                                  | DURATION   | TYPE  |
|--|------------|---|
| <i>Building Modern Python Applications on AWS*</i> | 18 hours   | <a href="#">Coursera Digital Training »</a><br><a href="#">edX Digital Training »</a> |
| <i>Developing Machine Learning Applications</i>    | 2.5 hours  | <a href="#">Digital Training »</a>  |
| Increase business value through modernization      | 1 hour     | <a href="#">Video »</a>   |
| Building Modern Applications at AWS                | 25 minutes | <a href="#">Video »</a>   |
| Modern Application Development on AWS              | 1 hour     | <a href="#">Whitepaper »</a>  |

## Step 13: Prepare for and take the AWS Certified DevOps Engineer - Professional certification exam

| LEARNING RESOURCE   | DURATION | TYPE   |
|---|----------|--|
| <i>Exam Readiness: AWS Certified DevOps Engineer - Professional</i> | 7 hours  | <a href="#">Classroom Training »</a><br><a href="#">Digital Training »</a> |
| AWS Certified DevOps Engineer - Professional                        | 3 hours  | <a href="#">Exam »</a>   |

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| Explore additional resources |   |                           |
|------------------------------|---|---------------------------|
| LEARNING RESOURCE            | DESCRIPTION   |                           |
| Learning Library             | Continue to learn by exploring our extensive portfolio of free digital training and classroom training. Filter according to your preferences, or find a specific course using the “Search” box. | <a href="#">Explore »</a> |
| AWS Whitepapers & Guides     | Explore technical whitepapers, technical guides, reference material, and reference architecture diagrams, all authored by AWS and the AWS community.  | <a href="#">Explore »</a> |
| AWS User Group               | Join and connect with AWS users all over the world to share ideas and learn.  | <a href="#">Explore »</a> |
| AWS Events and Webinars      | Connect with, collaborate with, and learn from AWS experts.   | <a href="#">Explore »</a> |
| AWS Podcast                  | Listen and learn about AWS.   | <a href="#">Explore »</a> |
| AWS Blog                     | Read about the latest launches from AWS Technical Evangelist Jeff Barr and others.  | <a href="#">Explore »</a> |
| AWS Documentation            | Search for AWS service guides, API references, tutorials, projects, SDKs, and toolkits.   | <a href="#">Explore »</a> |
| AWS Knowledge Center         | Review AWS Support’s responses to AWS customers’ most frequently asked questions.   | <a href="#">Explore »</a> |
| AWS FAQs                     | Find answers to common Product and Technical frequently asked questions.  | <a href="#">Explore »</a> |
| AWS Hands-On Tutorials       | Get started with 10-minute, step-by-step tutorials to launch your first application.  | <a href="#">Explore »</a> |
| AWS Solutions Library        | Use vetted, technical reference implementations designed to help you solve common problems and build faster.  | <a href="#">Explore »</a> |
| AWS YouTube Channel          | Explore a wide variety of AWS topics by watching videos created by AWS experts across the world.  | <a href="#">Explore »</a> |
| AWS Architecture Center      | Explore reference architecture diagrams, vetted architecture solutions, Well-Architected best practices, patterns, icons, and more.   | <a href="#">Explore »</a> |
| Amazon’s Builders’ Library   | Learn how Amazon builds and operates software.  | <a href="#">Explore »</a> |
| AWS Twitch Channel           | Learn how millions of customers are currently leveraging AWS Cloud products and solutions to build sophisticated applications with increased flexibility, scalability, and reliability.         | <a href="#">Explore »</a> |
| AWS Twitch for Developers    | Join the developer education and community with AWS Live Video.   | <a href="#">Explore »</a> |
| AWS Security Documentation   | Configure AWS services to meet your security and compliance objectives.   | <a href="#">Explore »</a> |

For a training plan customized for your requirements,  
contact your AWS Account Manager or contact us [here](#)

We would love to hear from you.  
Provide your feedback on this AWS Ramp-Up Guide [here](#)