

CLOUD

ADVANCED

5 DAYS

AWS Cloud Development Kit (CDK)

Build a strong foundation in Infrastructure as Code using AWS CDK to define, provision, and manage AWS resources through code. Learn how to create reusable constructs, organize infrastructure stacks, and apply best practices to build scalable and maintainable cloud infrastructure.

Why AWS CDK?

Simplified Infrastructure as Code

AWS CDK enables you to define your infrastructure using familiar programming languages. This makes it easier for developers to express their infrastructure needs using code, leveraging their existing skills and reducing the learning curve.

Flexibility and Customization

With AWS CDK, you can customize and fine-tune your infrastructure by directly manipulating the generated CloudFormation templates.

Productivity and Efficiency

By using AWS CDK, you can build infrastructure components as reusable constructs. It also enables teams to collaborate effectively by sharing and leveraging existing constructs across projects.

What you'll be able to do

- ✓ Gain a solid understanding of the principles and benefits of IaC
- ✓ Familiarize yourself with the AWS CDK framework
- ✓ Learn how to set up a development environment for working with AWS CDK
- ✓ Acquire the skills to define and provision AWS resources using AWS CDK constructs and programming languages
- ✓ Learn how to create and leverage reusable constructs in AWS CDK to build modular and scalable infrastructure components
- ✓ Understand how to manage and organize infrastructure stacks using AWS CDK
- ✓ Explore the integration capabilities of AWS CDK with various AWS services
- ✓ Learn how to define and apply configurations to infrastructure resources
- ✓ Gain insights into best practices for infrastructure as code

Who this is for

- Developers DevOps Engineers Cloud Architects
Infrastructure Engineers Technical Managers System Administrators

Curriculum

01 Introduction to Infrastructure as Code (IaC)

- Embrace the power of code to define and manage your cloud infrastructure efficiently
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

02 Getting Started with AWS CDK

- Dive into the basics of AWS CDK and its role in infrastructure provisioning
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

03 Defining Infrastructure with AWS CDK Constructs

- Learn how to create and configure AWS resources using AWS CDK constructs
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

04 AWS CDK Project Setup and Deployment

- Set up your development environment and deploy AWS CDK projects to the cloud
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

05 Infrastructure Stacks and Stack Management

- Explore the concept of stacks and how to manage them using AWS CDK
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

06 Infrastructure Composition and Reusability

- Harness AWS CDK constructs' reusability and composability features for efficient infrastructure design
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

07 Integrating AWS Services with AWS CDK

- Understand how to integrate various AWS services into your infrastructure using AWS CDK
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

08 Infrastructure Configuration and Parameterization

- Customize and parameterize your infrastructure to adapt to different environments and requirements
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

09 Infrastructure Testing and Validation

- Learn strategies for testing and validating your AWS CDK infrastructure code
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

10 Continuous Integration and Delivery (CI/CD) with AWS CDK

- Implement CI/CD practices to automate infrastructure deployments using AWS CDK
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

11 Security and Compliance Considerations

- Explore best practices for securing and ensuring compliance with your AWS CDK infrastructure
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

12 Monitoring and Debugging AWS CDK Infrastructures

- Gain insights into monitoring
- And troubleshooting techniques for AWS CDK deployments
- Apply concepts with guided exercises and validation checks

13 Infrastructure Updates and Rollbacks

- Master the process of updating and rolling back AWS CDK infrastructure stacks
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks

14 Infrastructure Optimization and Cost Management

- Optimize your AWS CDK infrastructure for performance
- And cost-efficiency
- Apply concepts with guided exercises and validation checks

15 Advanced AWS CDK Features and Best Practices

- Explore advanced features and best practices for advanced usage of AWS CDK in real-world scenarios
- Apply concepts with guided exercises and validation checks
- Apply concepts with guided exercises and validation checks