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Sign up

AWS CloudFormation training

2 days (14 hours)

Presentation

AWS CloudFormation is a service providing a language to help model and configure your AWS application resources in your cloud environment. AWS CloudFormation helps simplify infrastructure management. The service enables you to create a CloudFormation template or modify an existing one. By keeping created or modified CloudFormation templates, we can add more virtual machine instances or storage space at any time. When you create CloudFormation templates to manage how AWS resources are configured, you can deploy multiple instances of the same resources, using a single template. Managing a collection of resources is like managing a single unit, so deployment is much faster than manual configuration. The application enables users to streamline system monitoring, team productivity, incident management, continuous integration (CI), continuous delivery (CD) and version control processes. AWS CloudFormation enables organizations to use programming languages and a text file to model all application resources across multiple regions and user accounts. After completing our AWS CloudFormation training course, you'll be able to model and configure your AWS resources for greater productivity.

Objectives

- Learn how to use Stacks
- Learn how to use StackSets
- Understanding the anatomy of a CloudFormation model
- How to write your own CloudFormation templates
- Learn how to make templates reusable
- Understand how to create and use nested templates
- Updating CloudFormation stacks

Target audience

- Architects
- System administrators
- Developers

- DevOps engineers

Prerequisites

Knowledge of AWS services such as EC2, S3 and VPC.

AWS CloudFormation training program

Introducing CloudFormation

- Understanding the internal aspects of AWS CloudFormation
- Creating the first stack
- CloudFormation IAM permissions
- Drift detection

Advanced model development

- Review of internal model elements
- Create reusable templates
- Use of conditional elements
- Deletion policies
- Reference to existing stacks
- AWS settings
- Dynamic references with Parameter Store and Secrets Manager

Linting and stack deployment

- Using a linter
- Linting
- Creating custom rules
- Stack provisioning
- Deploying stacks using Change Sets
- Managing errors
- Working with drift
- Model validation

Continuous integration and deployment

- Smoke testing for EC2
- Smoke testing for VPC resources

- CloudFormation stack version management
  - Using version control systems
  - Using IAM CloudFormation
  - Using the right CI/CD tools
- Create a CI/CD pipeline with CloudFormation and CodePipeline
  - Scenario - Basic stack

Working with Stacks

- Using the console
- Stack updates
- Using the AWS Command Line Interface (AWS CLI)
  - cfn-create-stack
  - cfn-delete-stack
  - cfn-describe-stack-resources
  - cfn-list-stacks

StackSets

- Introducing StackSets
- StackSets practices
- Deployment to multiple accounts
- Prevent failure of multiple StackSet deployments with TAGs

Companies concerned

This course is aimed at both individuals and companies, large or small, wishing to train their teams in a new advanced computer technology, or to acquire specific business knowledge or modern methods.

Positioning on entry to training

Positioning at the start of training complies with Qualiopi quality criteria. As soon as registration is finalized, the learner receives a self-assessment questionnaire enabling us to assess his or her estimated level of proficiency in different types of technology, as well as his or her expectations and personal objectives with regard to the training to come, within the limits imposed by the selected format. This questionnaire also enables us to anticipate any connection or security difficulties within the company (intra-company or virtual classroom) which could be problematic for the follow-up and smooth running of the training session.

Teaching methods

Practical course: 60% Practical, 40% Theory. Training material distributed in digital format to all participants.

Organization

The course alternates theoretical input from the trainer, supported by examples, with brainstorming sessions and group work.

Validation

At the end of the session, a multiple-choice questionnaire verifies the correct acquisition of skills.

Sanction

A certificate will be issued to each trainee who completes the course.