Getting Started with Terraform for Google Cloud

Cursusduur: 1 Dag Cursuscode: GO8335 Trainingsmethode: Maatwerk

Beschrijving:

This course provides an introduction to using Terraform for Google Cloud.

It enables learners to describe how Terraform can be used to implement infrastructure as a code and to apply some of its key features and functionalities to create and manage Google Cloud infrastructure. Learners will get hands-on practice building Google Cloud resources using Terraform.
Products:
-Compute Engine
-VPC Networking
- Cloud Storage
- Terraform
- Cloud Foundation Toolkit

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Maatwerk

Global Knowledge biedt zowel standaard- als maatwerkcursussen die zijn afgestemd op uw wensen en die als besloten cursus op uw eigen locatie of onze locatie gevolgd kunnen worden.

Doelgroep:

Cloud engineers, DevOps engineers, and individuals who want to start using Terraform to automate infrastructure provisioning with a focus on Google Cloud Platform

Doelstelling:

- **After this course participants should be able to:**
- Define infrastructure as code.
- Explain the features and benefits of using Terraform.
- Explain the use case of Terraform for Google Cloud.
- Describe how to use Terraform for Google Cloud.
- Explain the Terraform workflow.
- Create basic configuration files within Terraform.
- Explain the purpose of a few Terraform commands.
- Describe the Terraform Validator tool.
- Create, update, and destroy Google Cloud resources using Terraform.
- Declare the resources within Terraform.
- Explain implicit and explicit resource dependencies.
- Use variables and output values within the root configuration.
- Explain Terraform Registry and Cloud Foundation Toolkit.
- Define Terraform modules.
- Use modules to reuse configurations.
- Use modules from the public registry.
- Use input variables to parameterize configurations.
- Use output values to access resource attributes outside the module.
- Define Terraform state.
- List the benefits of storing the state file remotely.
- Explain how to store the Terraform state in a Cloud Storage bucket.
- Explain Terraform state best practices.

Vereiste kennis en vaardigheden:

To get the most out of this course, participants should:

- Complete Google Cloud Fundamentals: Core Infrastructure
- Have basic programming skills and familiarity with using CLI
- Have general familiarity with Google Cloud

Examens en certificering

None

Vervolgcursussen:

None

Cursusinhoud:

Module 01: Introduction to Terraform for Google Cloud

- Introduction to IaC
- What is infrastructure as code (IaC)?
- Problems IaC can solve
- Benefits of IaC
- Provisioning versus configuration
- Imperative versus declarative approach
- Introduction to Terraform
- Terraform overview
- Terraform features
- IaC configuration workflow
- Terraform use cases
- Using Terraform
- How to use Terraform
- Running Terraform in production

Module 02: Terms and concepts

- The Author phase
- Terraform Directory structure
- Introduction to HCL syntax
- Resources
- Variables
- State
- Modules
- Terraform commands
- terraform init
- terraform plan
- terraform apply
- terraform fmt
- terraform destroy
- Terraform Validator tool
- Introduction
- Why use the Terraform Validator tool
- Validation workflow
- Terraform Validator use cases

Module 03: Writing Infrastructure Code for Google Cloud

- Introduction to Resources
- Resources overview
- Syntax
- Example
- Refer a resource attribute
- Considerations to define a resource block
- Meta-arguments for resources
- Resource dependencies
- Implicit dependency
- Explicit dependency
- Introduction to Variables
- Overview
- Syntax to declare a variable
- Syntax to reference and assign a value to a variable
- Variables best practices
- Introduction to output values
- Output values overview
- Best practices
- Terraform Registry and CFT
- Introduction to Terraform Registry
- Introduction to CFT

Module 04: Organizing and Reusing Configuration with Terraform Modules

- Introduction to modules:
- Why are modules needed
- What is a module?
- Example
- Reusing configurations by using modules
- Module sources
- Calling a module into the source configuration
- Using variables to parameterize your configuration
- Pass resource attributes using output variables
- Module use cases, benefits, and best practices

Module 05: Introduction to Terraform State

- Introduction to Terraform state
- How information is stored in a Terraform state file
- Ways to save a state file
- Storing a state file in a Cloud Storage bucket
- Issues when storing the Terraform state locally
- Benefits of storing a state file in a Cloud Storage bucket
- Process of storing a Terraform state file remotely in a Cloud Storage bucket
- Terraform state best practices

Nadere informatie:

Neem voor nadere informatie of boekingen contact op met onze Customer Service Desk 030 - 60 89 444

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