

Szkolenie: Google Cloud Getting Started with Terraform for Google Cloud



DOSTĘPNE TERMINY

2025-05-09 | 1 dzień | Warszawa / Wirtualna sala

2025-06-20 | 1 dzień | Virtual Classroom

Cel szkolenia:

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.

What you'll learn

- Define the business need for infrastructure as code and the benefits of using it in your environment.
- Explain the features and functionalities of Terraform.
- Use Terraform resources, variables, and output values to create Google Cloud infrastructure resources.
- Use Terraform modules to build reusable configurations.
- Explain Terraform state and its importance.

Audience

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

Plan szkolenia:

- Module 1 - Introduction to Terraform for Google Cloud
 - Topics
 - 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
 - Installing Terraform
 - Authentication for Google Cloud
- Objectives
 - 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.
- Activities
 - 1 quiz
- Module 2 - Terms and concepts
 - Topics
 - 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
- Objectives
 - 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.
- Activities
 - 1 lab
 - 1 quiz
- Module 3 - Writing Infrastructure Code for Google Cloud
 - Topics
 - 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
- Objectives
 - 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.
- Activities
 - 1 lab
 - 1 quiz
- Module 4 - Organizing and Reusing Configuration with Terraform Modules
 - Topics
 - 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
 - Objectives
 - 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.
 - Activities
 - 1 lab
 - 1 quiz
- Module 5 - Introduction to Terraform State
 - Topics
 - 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
- Objectives
 - 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.
- Activities
 - 1 lab
 - 1 quiz

Wymagania:

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

Poziom trudności



Certyfikaty:

The participants will obtain certificates signed by Google Cloud Platform.

Prowadzący:

Authorized Google Cloud Platform Trainer.