

## Szkolenie: Google Cloud Getting Started with Terraform for Google Cloud



### DOSTĘPNE TERMINY

2025-06-16 | 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.