

# Tytuł szkolenia: HPE Training for Terraform

## Kod szkolenia: HJ7F1S

### Wprowadzenie

This course provides foundational concepts for using the Terraform "infrastructure as code" DevOps tool, and introduces workflows for managing a large infrastructure effectively and safely with Terraform. The course covers key concepts, including how to automate the management of infrastructure, through a series of hands-on labs using Amazon Web Services (AWS). The course also introduces the building blocks for successfully implementing Terraform workflows across a large enterprise. HPE's expertise, end-to-end delivery experience, and leadership in technical education solutions will help ensure your success in developing enterprise-grade Terraform deployments.

### Adresaci szkolenia

The audience for this course includes system administrators, infrastructure engineers, application developers, cloud engineers and anyone else wanting to get a basic understanding of implementing and using Terraform to manage public, private or hybrid cloud infrastructure and services.

#### Prerequisites

Experience with a programming language

### Cel szkolenia

- Understand the functionality and capabilities of the Terraform "infrastructure as code" tool
- Write Terraform scripts to provision virtual infrastructure using Amazon Web Services, starting with a basic virtual machine and gradually adding complexity
- Implement advanced Terraform configuration techniques that leverage modules, plugins, provisioners, and backends
- Learn recommended workflows for using Terraform effectively
- Learn how to collaborate effectively with a team that uses Terraform
- Learn how Terraform can scale across an organization

### Czas i forma szkolenia

- 21 godzin (3 dni x 7 godzin), w tym wykłady i warsztaty praktyczne.

## Plan szkolenia

### 1. Introduction to Terraform

- What is 'infrastructure as code'?
- Basic Terraform use
  - The workflow for creating, modifying and destroying infrastructure as code
  - Lab: Introduction to Terraform workflow
  - Lab: Deploying a Windows machine using Terraform
- Practical Terraform use
  - Terraform state, modules and resource dependencies
  - Lab: Infrastructure with explicit and implicit resource dependencies
  - Lab: Customizing an Amazon AMI

### 2. Advanced Terraform Concepts

- Writing reusable modules
- Terraform in multi-cloud environments
- Partial state recovery
  - Lab: Hands-on state recovery
- Resource lifecycle management
- Collaborating on infrastructure changes

### 3. Terraform Enterprise Best Practices

- Achieving DevOps maturity
- Terraform Enterprise architecture and design
  - Demo: The Terraform Enterprise web interface
- Creating workflows with workspaces in Terraform Enterprise
  - Lab: Using Terraform Enterprise's remote state backend
  - Lab: Configuring dev and prod environments using variables
- Integrating Terraform Enterprise with version control systems
- Continuous provisioning workflows
- Collaborating with Terraform Enterprise
  - Lab: Connect a GitHub repository to create a continuous provisioning pipeline
- Compliance and governance with Terraform Enterprise