COMARCH
Szkolenia

Terraform - Automation of creating and managing cloud infrastructure

Using the Infrastructure as Code (IaC) approach and the Terraform tool to automate the creation and management of cloud infrastructure

Training objectives

The aim of the training is to familiarize participants with the topic of automating the creation and management of cloud infrastructure using the Terraform tool and the Infrastructure as Code approach.

In the theoretical part of the training (lectures), participants will gain knowledge about how the Terraform tool works and its functions enabling the implementation of tasks related to the automation of the creation and management of cloud infrastructure. The practical part of the training (exercises) will be carried out on the Linux platform and will allow training participants to check and understand exactly how the Terraform tool works.

The purpose of the training is not to familiarize participants with the operation of the cloud infrastructure within which the training will be carried out.

Skills

Thanks to the training, the participant will be able to:

- *Define what the Infrastructure as Code approach is and state its advantages*
- *Indicate how the Terraform tool implements the Infrastructure as Code approach*
- *Install and configure Terraform*
- *Create and configure a new project*
- *Select and configure the Provider associated with the target infrastructure*
- *Create resource definition using HashiCorp Configuration Language (HCL)*
- *Create, modify and delete resources using Terraform*
- *Manage the status of resources created by Terraform*
- *Parameterize the operations performed by the Terraform tool*
- *Create and use modules*
- *Use built-in HCL functions*
- *Create dynamic blocks when defining resources in HCL*
- *Create and manage Terraform Workspace*
- *Diagnose and troubleshoot Terraform performance issues*

The training is intended for people whose work is related to the creation and management of cloud infrastructure and are interested in expanding their knowledge of Infrastructure as Code using the Terraform tool.

Training for: System engineers, DevOps teams

Requirements

Training participants are required to know how the cloud infrastructure in which they want to use the Terraform tool works and the basics of using Linux operating systems.

Training outline

1. *Introduction to the Infrastructure as Code (IaC) approach*
2. *Terraform - how to implement the Infrastructure as Code approach*
3. *Overview of available Providers*
4. *HCL language - basic concepts*
5. *Getting started with Terraform – installation and configuration*
6. *Provider and project configuration*
7. *Creating, updating and deleting resources*
8. *Terraform State – managing the state of created resources*
9. *Data types in HCL language*
10. *Resource parameterization - defining and using variables*
11. *Terraform Modules – creation, parameterization and versioning*
12. *Built-in functions provided by Terraform*
13. *Dynamic blocks - dynamic definition of resources*
14. *Additional Terraform CLI commands*
15. *Terraform Workspace – creation and management*
16. *Diagnosing and solving problems*

Format of the training

The training is divided into modules including a theoretical part (lectures) and a practical part (exercises). During the theoretical part, the training participant acquires the basic and necessary knowledge to complete the practical part. The practical part is carried out on a remote platform and requires only a web browser.

Duration

2 days, 16 hours