

## Workshop Terraform Fundamentals

- **Formato do curso:** Live training
- **Preço:** 935€
- **Duração:** 14 horas

Hashicorp's Terraform is one of the most popular infrastructure provisioning tools in the market, supporting multiple cloud providers (AWS, Azure, GCP, Oracle, etc.). This course enables students to use Terraform for defining infrastructure as code and automating infrastructure deployment - improving operational efficiency, lowering administrative overhead, and reducing the chance of human error.

**Esta formação é ministrada em Inglês.**

Em parceria com a entidade acreditada:



### Destinatários

- System administrators wishing to use Terraform to automate cloud-based infrastructure deployment

### Pré-requisitos

- Familiarity with the Linux command line (commands, arguments, variables, working with files and directories, using text editors)
- Basic TCP/IP networking (IP addressing, subnets, etc.)
- Basic knowledge about cloud-based IaaS architecture and terminology (VM instances, VPCs/VCNs, load balancers, security rules, etc.)

### Programa

**Introduction. What Is Terraform?**

- How we got to the DevOps era
- A quick glance at Terraform

## **Positioning Terraform**

- Defining Infrastructure as Code
- Scripts
- Configuration management tools
- Server templating tools
- Server provisioning tools
- Comparing Terraform to other tools

## **Terraform Architecture**

- Terraform language paradigm
- Workflow overview
- Environment parity
- Cloud Providers
- How Terraform works

Hands-on Lab: Environment set-up

## **Installation and Getting Started**

- Preparing the environment with examples for Linux, Windows and MacOS
- Major code elements in Terraform configuration files

Hands-on Lab: Installing Terraform

## **Terraform Configurations Overview**

- Configuring providers
- Preparing authentication credentials
- Regions and Availability Zones/Domains
- Deploying a server in AWS
- Updating an existing server
- Deploying a virtual network in OCI
- Inputs and outputs

Hands-on Lab: Working with variables

## **Providers, Resources and More**

- Managing providers and versions
- Working with multiple identical providers in multiple regions
- More resource creation examples
- Decommissioning virtual infrastructure

Hands-on Lab: Providers and data sources

## **Post Configuration, Syntax**

- Post-configuration tools: provisioners
- Provisioners types, usage, behaviors
- Functions in HCL
- The Terraform Console
- Recreating common construct behaviors: loops, conditionals

Hands-on Lab: Virtual instance resources

## **Terraform States**

- Terraform states overview
- Analyzing the contents of state files
- Sharing state files
- Securing and locking shared state files
- Read-only state

Hands-on Lab: Additional virtual resources

## **Using modules**

- Module basics
- Module inputs
- Module outputs
- Modules and paths
- Module usage best practices
- Adding and initializing modules from various sources

Hands-on Lab: Provisioners

## **Using Variables**

- Variables, variables, variables
- Variables stored in files
- Environment variables
- Securing variables

## **Tips and Tricks**

- Miscellaneous helpful tips
- Command-line options that lend a hand in writing IaC
- Code options for better control of the infrastructure