

Terraform

Course Outline

- Introduction
 - Introduction to Infrastructure as Code
 - Introduction to Terraform
 - Terraform vs Others & Alternatives
 - Terraform Architecture
- Global Configuration
 - terraformrc
 - Environment variables
 - VS Code configuration (Development Environment)
- First Terraform Project
 - Structure of Terraform Project / Repo
 - Git Ignore for Terraform
- Terraform CLI Basics
 - Terraform Init
 - Terraform Plan
 - Terraform Apply
- Terraform Basics
 - Introduction to HCL (Terraform's config language)
 - Providers
 - Resources
 - Data Sources
 - Outputs
 - Count, For each & IF
 - Provisioners & Cloud Init
- Outputs
 - Sensitive data in outputs
 - Integration Terraform with other tools
- Terraform State
 - What is Terraform state (and why is important)
 - Importing resources (to Terraform & state)
 - Working with state (terraform state command)
- Backend
 - Usage of state backends
 - Remote Backends
 - Gitlab
 - S3
- Terraform Modules
 - Using modules from Terraform Registry
 - Writing custom modules

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- Terraform Monorepo
 - Introduction to Terraform Monorepo (for large infrastructure)
 - Example monorepo
- Infracost
 - What is Infracost
 - Price breakdown based on Terraform Configuration (AWS & Azure only)
 - Price change per pull / merge request
 - Integration with CI (Gitlab CI, Github Actions)
- Custom Terraform Providers
 - Why to write custom provider
 - Example of simple providers