

Ceyda  
Duzgec

# Transfer Your Existing Infrastructure to Terraform

GDG Izmir 2024

## Agenda

**5 Facts About Me**

**Terraform**

**Terraformer**

**Terraform Modules**

**Terragrunt**

# 5 Facts About Me

3

B.Sc. Computer  
Science & Engineering  
**@Sabanci**

M.Sc. Software  
Engineering  
**@Bogazici**

Backend Engineer  
**@Pera Wallet**

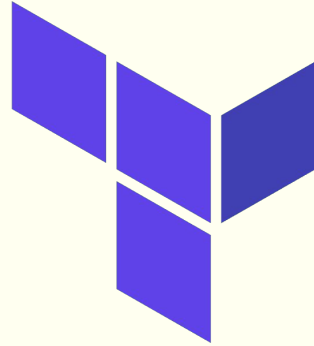
Cloud and Platform  
Engineer  
**@Sufle**

AWS, Kubernetes,  
**Terraform**, Devops..

AWS Cloud Practitioner  
AWS AI Practitioner  
**Terraform Associate**



# 1. Terraform



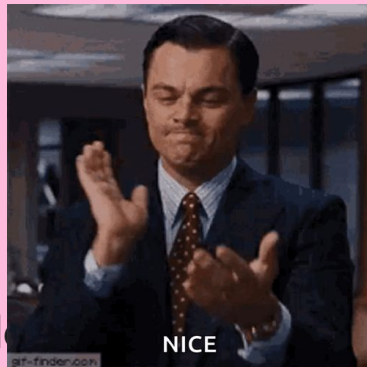
## Challenges to Maintain Infrastructure

- Configuration inconsistency
- Difficult to replicate exact infrastructure setup
- Manual configurations lead to human errors
- Lack of version control
- Difficult to roll back to previous configurations
- Limited documentation of infrastructure setup
- Risk of knowledge loss during staff turnover



# Terraform Solves Them

- Create standardized infrastructure components
- Hide complex implementation details
- Reduce complexity of main configuration files
- Improve code readability and maintainability
- Enforce consistent naming conventions



# Terraform

```
23:55:36.606 STDOUT terraform: data.aws_partition.current: Reading...
23:55:36.608 STDOUT terraform: data.aws_partition.current: Read complete after 0s [id=aws]
23:55:36.615 STDOUT terraform: aws_instance.this[0]: Refreshing state... [id=i-070cd2e18bbe9c2b3]
23:55:39.902 STDOUT terraform: Note: Objects have changed outside of Terraform
23:55:39.902 STDOUT terraform:
23:55:39.902 STDOUT terraform: Terraform detected the following changes made outside of Terraform since the
23:55:39.902 STDOUT terraform: last "terraform apply" which may have affected this plan:
23:55:39.902 STDOUT terraform:   # aws_instance.this[0] has changed
23:55:39.902 STDOUT terraform:   ~ resource "aws_instance" "this" {
23:55:39.902 STDOUT terraform:       id                                = "i-070cd2e18bbe9c2b3"
23:55:39.902 STDOUT terraform:   ~ instance_state                     = "running" -> "shutting-down"
23:55:39.903 STDOUT terraform:       tags                             = {
23:55:39.903 STDOUT terraform:           "Environment" = "test"
23:55:39.903 STDOUT terraform:           "Name"        = "devfest-test-devfest"
23:55:39.903 STDOUT terraform:           "Namespace"   = "devfest"
23:55:39.903 STDOUT terraform:           "Owner"       = "CeydaD"
23:55:39.903 STDOUT terraform:           "Terraform"   = "true"
23:55:39.903 STDOUT terraform:       }
23:55:39.903 STDOUT terraform:       # (39 unchanged attributes hidden)
23:55:39.903 STDOUT terraform:       # (9 unchanged blocks hidden)
23:55:39.903 STDOUT terraform:   }
23:55:39.903 STDOUT terraform: Unless you have made equivalent changes to your configuration, or ignored the
23:55:39.903 STDOUT terraform: relevant attributes using ignore_changes, the following plan may include
23:55:39.903 STDOUT terraform: actions to undo or respond to these changes.
```

A decorative graphic consisting of four colored squares: a red square, a yellow square, and a light blue square, all overlapping the bottom-left corner of the main green rectangle.

## 2. Terraformer



GoogleCloudPlatform / terraformer

Type **17** to search

+ 🔍

<> Code Issues 19 Pull requests 62 Discussions Actions Security Insights

terraformer Public

Watch 146 Fork 1.7k Star 12.7k

master 51 Branches 34 Tags

Go to file Add file <> Code

brennoo fix: add GetConfig for Okta provider (#1914) 4 months ago 1,717 Commits

.github	build(deps): bump actions/stale from 8 to 9 (#1817)	10 months ago
assets	Split Docs providers to /docs & create assets dir	3 years ago
build	chore: remove refs to deprecated io/ioutil (#1775)	last year
cmd	chore: remove refs to deprecated io/ioutil (#1775)	last year
docs	Add more example details for Okta (#1835)	10 months ago
providers	fix: add GetConfig for Okta provider (#1914)	4 months ago
snap	snap	5 years ago
terraformutils	chore: remove refs to deprecated io/ioutil (#1775)	last year
tests	#830 added SSM PS	3 years ago
.gitignore	update tencentcloud (#1315)	2 years ago
.golangci.yml	ci: replace golint with revive (#1164)	3 years ago
AUTHORS	Add LICENSE	6 years ago
CODE_OF_CONDUCT.md	Add LICENSE	6 years ago
CONTRIBUTING.md	Add LICENSE	6 years ago
LICENSE	Add LICENSE	6 years ago

CLI tool to generate terraform files from existing infrastructure (reverse Terraform). Infrastructure to Code

kubernetes golang aws cloud terraform gcp google-cloud hcl infrastructure-as-code terraform-configurations

Readme

Apache-2.0 license

Code of conduct

Security policy

Activity

Custom properties

12.7k stars

146 watching

1.7k forks

Report repository

Releases 33

0.8.24 Latest on Jul 3, 2023

+ 32 releases

<https://github.com/GoogleCloudPlatform/terraformer>

# Terraformer Issues

10

**Plugin configuration error for Apple Silicon**

**<https://github.com/GoogleCloudPlatform/terraformer/issues/1925>**

**Deprecated variables:**

**<https://github.com/GoogleCloudPlatform/terraformer/issues/1938>**

**Provider version inconsistency**

**<https://github.com/GoogleCloudPlatform/terraformer/issues/1642>**



## 3. Terraform Modules

**vpc**  
aws provider

Version 5.16.0 (latest) ▾

Terraform module to create AWS VPC resources 🇺🇦

Published November 18, 2024 by [terraform-aws-modules](#)Module managed by [antonbabenko](#)Source Code: [github.com/terraform-aws-modules/terraform-aws-vpc](https://github.com/terraform-aws-modules/terraform-aws-vpc) (report an issue)

📁 Submodules ▾

📄 Examples ▾

## Module Downloads

All versions ▾

Downloads this week 744,927

Downloads this month 744,927

Downloads this year 39.4M

Downloads over all time 100.8M

## Provision Instructions

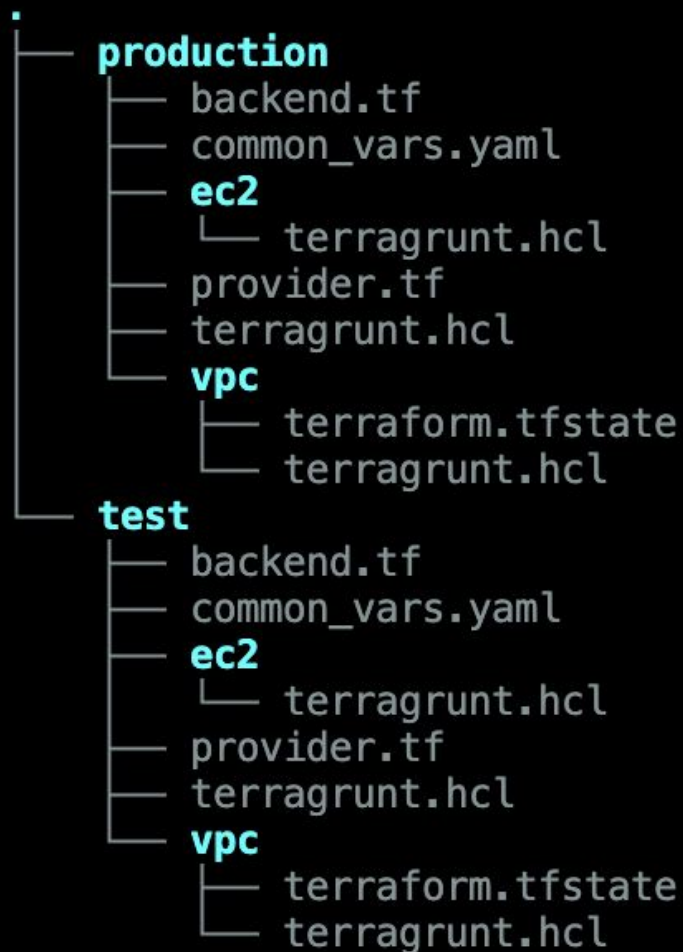
Copy and paste into your Terraform configuration, insert the variables, and run `terraform init`:

```
module "vpc" {  
  source = "terraform-aws-modules/  
  version = "5.16.0"  
}
```

[Readme](#)[Inputs \(232\)](#)[Outputs \(118\)](#)[Dependency \(1\)](#)[Resources \(80\)](#)



## 4. Terragrunt





Q&A

?

Ceyda Düzgeç