

# DevOps - IaasC Tools

# IAAC Tools



Azure ARM template



CloudFormation



HashiCorp

**Terraform**

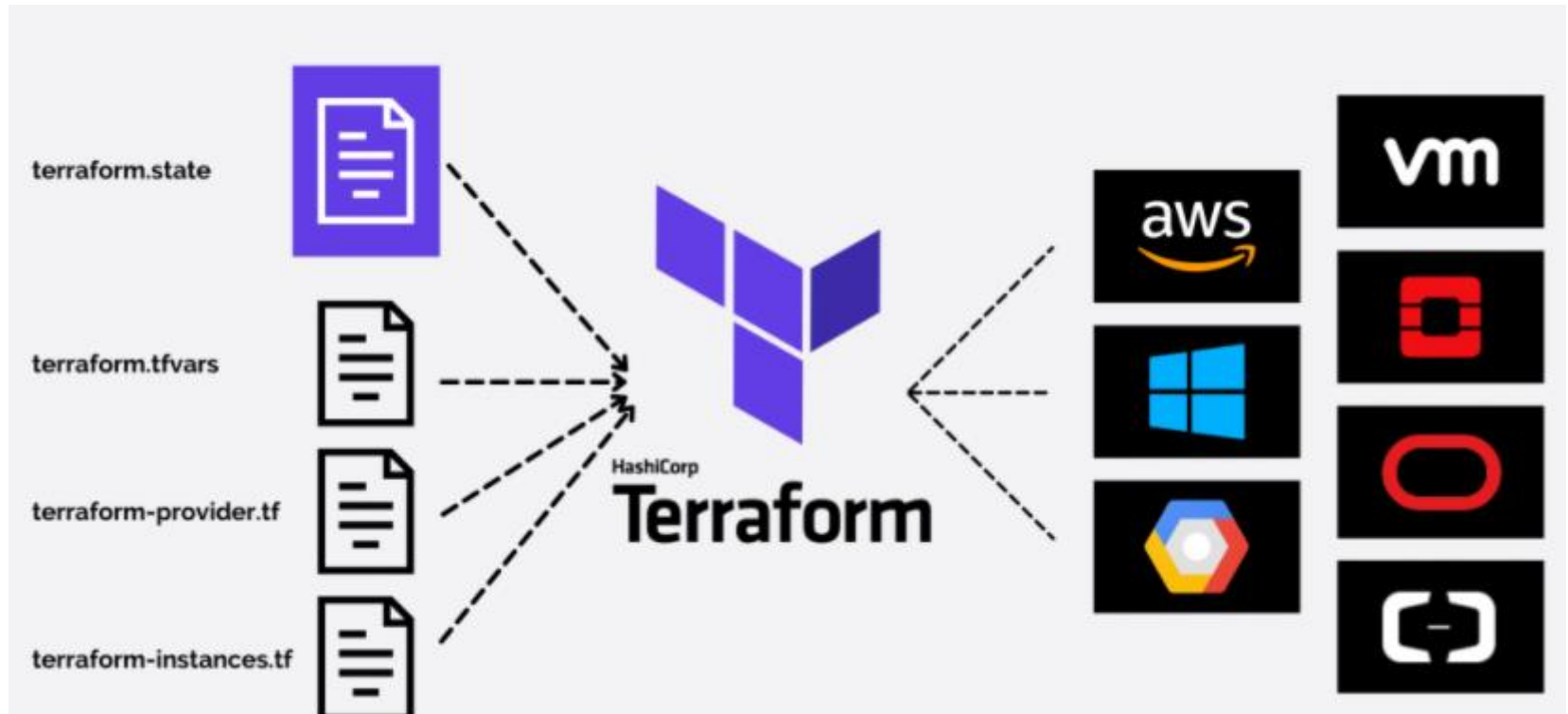


**Pulumi**

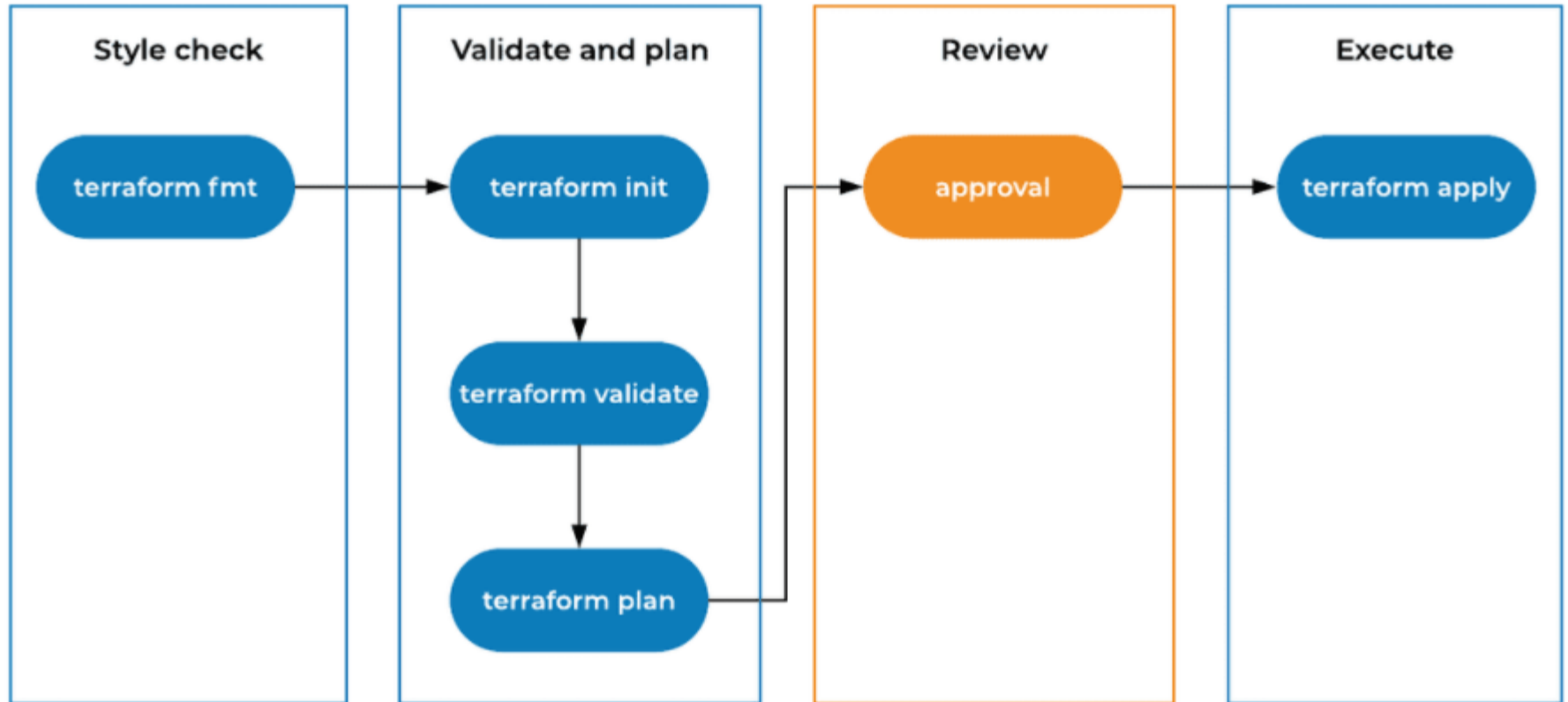
# What is Terraform?

- Terraform is an open source “Infrastructure as Code” tool, created by HashiCorp
- Terraform is an infrastructure as code (IaC) tool that allows you to build, change, and version infrastructure safely and efficiently
- Terraform enables developers to use a high-level configuration language called HCL (HashiCorp Configuration Language) to describe the desired “end-state” cloud or on-premises infrastructure for running an application
- Platform agnostic - Can use it with any cloud services provider provisions immutable infrastructure

# What is Terraform?



# Terraform Life Cycle



# Terraform Overview

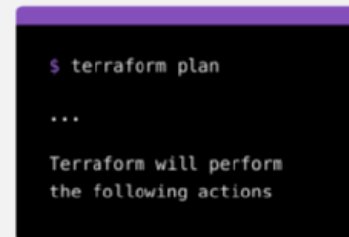
## Write

Define infrastructure in configuration files



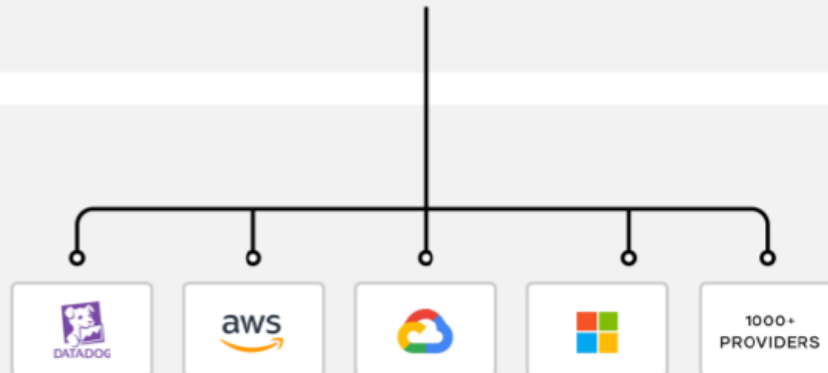
## Plan

Review the changes  
Terraform will make to  
your infrastructure



## Apply

Terraform provisions  
your infrastructure and  
updates the state file.



# Terraform – Things to Know

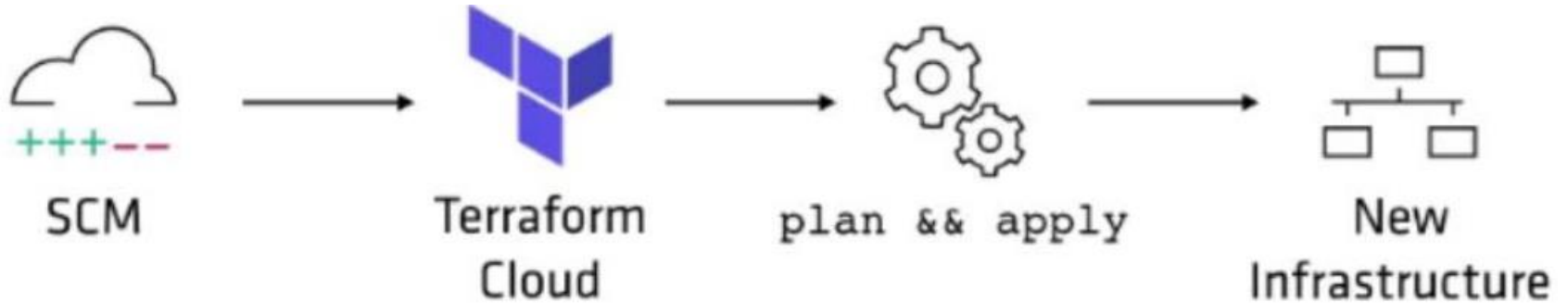
- Installation (Windows/Linux)
- Init/plan/apply/destroy
- Variables
- Outputs
- Providers
- Provider Authentication
- State File
- Remote State Management
- Multi-Environment
- Provisioners
- Modules
- Terraform Registry

# Terraform Labs

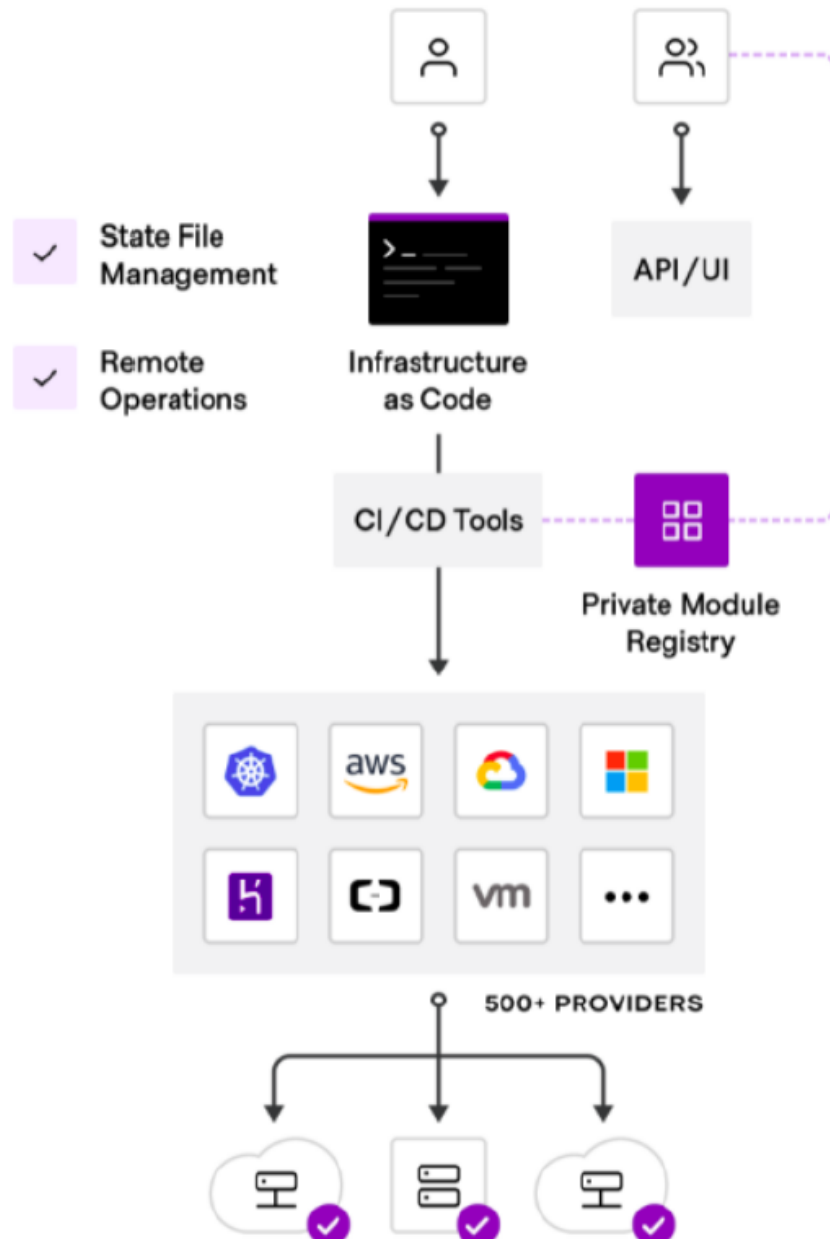


# Terraform Cloud Walkthrough

# Terraform Cloud Overview



# Terraform Cloud Overview



# What is Terraform Cloud?

- An application that manages Terraform runs in a consistent and reliable environment instead of on your local machine
- It stores shared state and secret data, and connects to version control systems so that you and your team can work on infrastructure as a code within your usual code workflow
- It also has private registry for sharing terraform modules
- Enterprise and business version includes access control for approving changes to infrastructure, detailed policy control for governing content of TF configurations, and more

# Terraform Cloud Lab