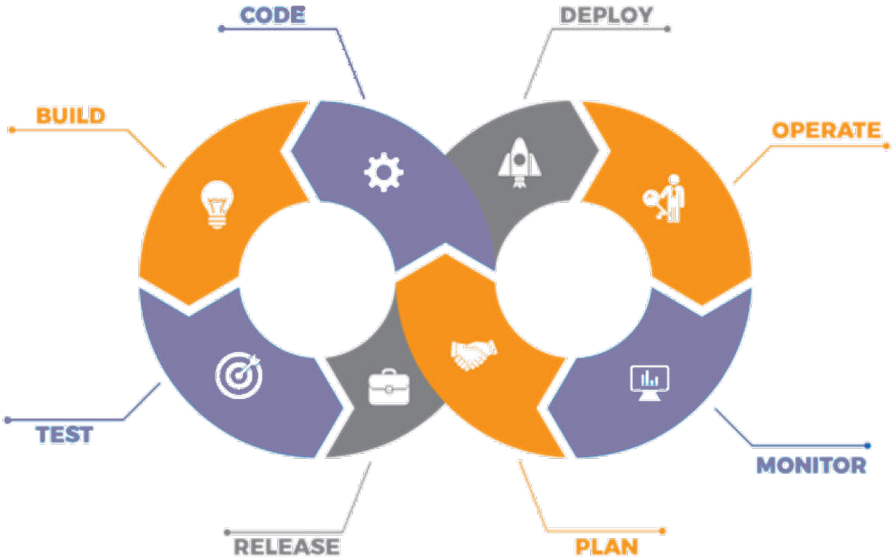
Introduction to Terraform



Agenda

01 What is Infrastructure as a Code?

02 Infrastructure as a Code vs Configuration Management

03 Introduction to Terraform

04 Installing Terraform on AWS EC2

05 Basic Terraform Operations

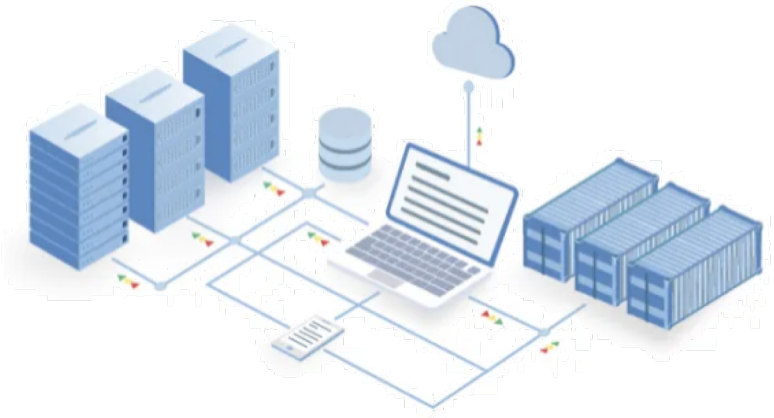
06 Terraform Code Basics

07 Deploying an end to end Architecture using Terraform

What is Infrastructure as a Code?

What is Infrastructure as Code (IaC)?

Infrastructure as Code (IaC) is the management of **infrastructure** (networks, virtual machines, load balancers, and connection topology) in a descriptive model, using the same versioning as **DevOps** team uses for source **code**. **Infrastructure as Code** evolved to solve the problem of environment drift in the release pipeline.

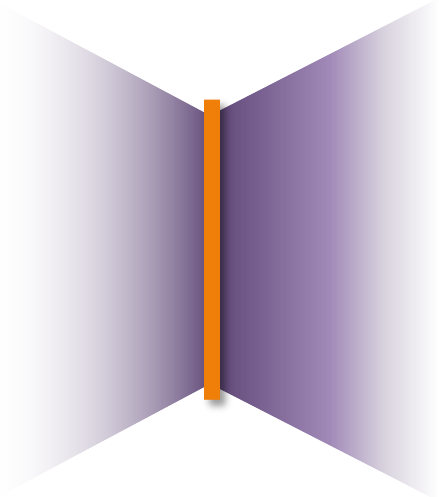


Infrastructure as Code vs Configuration Management

IaC vs Configuration Management

Infrastructure as a Code

1. Can create / destroy hardware architectures
2. Can install software while bootstrapping servers
3. Should not be used as a replacement to CM tools



Configuration Management

1. Works only with softwares
2. Cannot work on hardware level, but can install any software
3. Cannot be used as a replacement to IaC tools

Introduction to Terraform

What is Infrastructure as Code (IaC)?

Terraform is an open-source infrastructure as code software tool created by HashiCorp. It enables users to define and provision a datacenter infrastructure using a high-level configuration language known as Hashicorp Configuration Language, or optionally JSON.

HashiCorp
Terraform

Installing Terraform for AWS

Installing Terraform for AWS

1. Install Terraform on local/EC2 Machine
2. Create a user, and use this user to authenticate terraform to AWS
3. Initialize Terraform Directory

Basic Terraform Operations

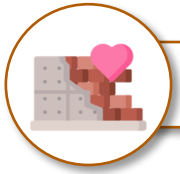
Basic Terraform Operations

There are four kinds of operations in Terraform:

Init

Plan

Apply



Destroy

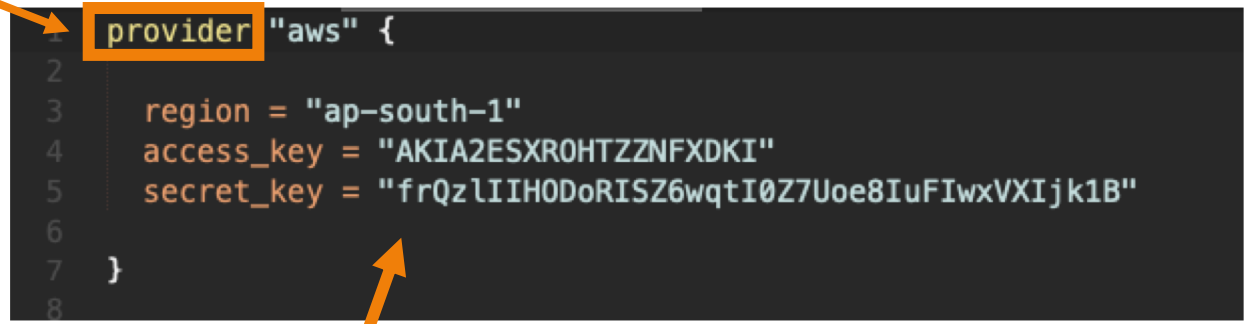
HashiCorp Terraform

Terraform Code Basics

Terraform Code Basics

Following is a snipped of terraform file. Terraform files are saved with the extension of tf (*.tf). It has two main components, **block type** and **Key Value Pairs**

Block Type



Key Value Pairs

HashiCorp Terraform

Deploying end to end Infrastructure using Terraform

IntelliPaat

India: +91-7847955955

US: 1-800-216-8930 (TOLL FREE)

sales@intellipaat.com

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