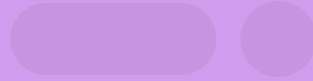




Chandresh Patle's Blog



Day 1: Introduction to Terraform and Terraform Basics

Getting Started with Terraform: An Introduction and Core Concepts



CHANDRESH PATLE

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▶ 0:00 / 2:54



TABLE OF CONTENTS

◆ TerraWeek Day 1

◆ TerraWeek Day 1

- What is Terraform and how can it help you manage infrastructure as code?
 - ✦ Terraform is an open-source infrastructure as code (IaC) tool developed by HashiCorp. It is designed to help automate and manage infrastructure resources efficiently. Terraform allows you to define your infrastructure, including servers, networks, databases, and other cloud resources, as code in a configuration file, typically written in HashiCorp Configuration Language (HCL). The core Terraform workflow has three steps:
 1. **Write** - Author infrastructure as code.
 2. **Plan** - Preview changes before applying.
 3. **Apply** - Provision of reproducible infrastructure.

This guide walks through how each of these three steps plays out in the context of working as an individual practitioner, how they evolve when a team is collaborating

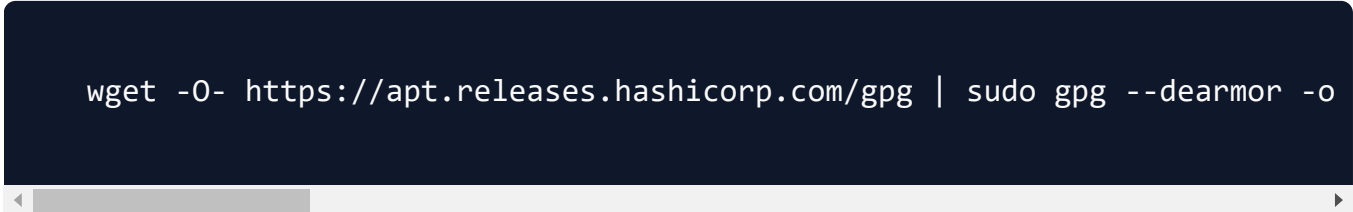
on infrastructure, and how Terraform Cloud enables this workflow to run smoothly for entire organizations.

- Why do we need Terraform and how does it simplify infrastructure provisioning?
 - ✦ Terraform allows you to build, change, and version your infrastructure using code techniques.

Terraform simplifies infrastructure provisioning by automating and standardizing the process, making it more reliable, efficient, and consistent. It aligns with modern DevOps practices and supports the dynamic nature of cloud and hybrid cloud environments.

- How can you install Terraform and set up the environment for AWS, Azure, or GCP?
 - ✦ By using the below commands:

```
wget -O- https://apt.releases.hashicorp.com/gpg | sudo gpg --dearmor -o
```

A dark-themed terminal window with a light gray scrollbar on the right. The command is displayed in a monospaced font.

-
- Explain the important terminologies of Terraform with the example at least (5 crucial terminologies).

✦ Here are the important terminologies of these Terraform terminologies:

1. **Provider:** Manages resources in a specific cloud or infrastructure platform.

```
provider "aws" {  
    region = "us-east-1"  
}
```

2. **Resource:** Defines and provisions infrastructure objects within a provider.

```
resource "aws_instance" "example" {  
    ami          = "ami-0c55b159cbfafa1f0"  
    instance_type = "t2.micro"  
}
```

3. **Module:** A reusable component for organizing and provisioning resources.

```
module "vpc" {  
    source = "../modules/vpc"  
    vpc_name = "my-vpc"  
}
```

4. **Variable:** Parameters that make configurations flexible and reusable.

```
variable "instance_count" {  
    description = "Number of instances to create"  
    type        = number  
    default     = 2  
}
```

5. **Output:** Extracts and displays information from your infrastructure after creation.

```
output "instance_public_ip" {  
    value = aws_instance.example.public_ip  
}
```

Watch this [Reference Video](#)

Happy Learning! :)

Stay in the loop with my latest insights and articles on cloud ☁️ and DevOps ☺️ by following me on Hashnode, LinkedIn

(<https://www.linkedin.com/in/chandreshpatle28/>), and GitHub

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