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Who am I ?

My Name is Mithun Reddy L , having 12 years exp.

I am a Software Architect and Trainer in Cloud and DevOps Tools.

I applied DevOps techniques in my all IT Projects.

- Introduction of Terraform?

- Installation

- First Terraform script .

- Terraform commands.

Introduction.

- Terraform is an open-source, infrastructure as code software (IaC) tool, created by HashiCorp and written in the Go programming language.

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- Infrastructure as code is the process of managing infrastructure in a file or files, rather than manually configuring resources in a user interface (UI).

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- Here resources are nothing but virtual machines, Elastic IP, Security Groups, Network Interfaces...

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- Terraform code is written in the HashiCorp Configuration Language (HCL) in files with the extension .tf

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- Terraform allows users to use HashiCorp Configuration Language (HCL) to create the files containing definitions of their desired resources on almost any provider (AWS, GCP, Azure, Digital Ocean, OpenStack, etc) and automates the creation of those resources at the time of apply.

https://www.terraform.io/docs/providers/index.html

Pre - Requisites

- 1) Any Cloud Provider (AWS, GCP, Azure, Digital Ocean, OpenStack, etc)
- 2) User credentials (Secret Key and Access Key)

- Add the following policies to IAM user if you are using AWS as cloud provider.

- AmazonEC2FullAccess.

Terraform - Installation

- Follow my blog for installation.

- https://mithuntechnologies-devops.blogspot.com/2020/02/terraform-installation-linux-server.html

- Follow my below youtube channel video url.

- https://youtu.be/kxOR-WrK4y8

First Terraform Script

```
provider "aws" {
    region = "ap-south-1"
    access_key = "AKIA4UQE3BUQ2J3WWZFL"
    secret_key = "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"
}

resource "aws_instance" "AWSServers" {
 ami = "ami-0a74bfeb190bd404f"
 instance_type = "t2.micro"
 key_name = "mithuntechnologies"
security_groups = ["launch-wizard-19"]
 tags = {
 Name = "Terraform Server"
 }
}
```

Terraform Commands

- **terraform init :** The terraform init command is used to initialize a working directory containing Terraform configuration files. This is the first command that should be run after writing a new Terraform configuration.

- **terraform fmt:** The terraform fmt command is used to rewrite Terraform configuration files to a canonical format and style.

- **terraform validate :** The terraform validate command validates whether a configuration is syntactically valid or not.

- **terraform plan :** The terraform plan command is used to create an execution plan. This command is a convenient way to check whether the execution plan for a set of changes matches your expectations without making any changes to real resources or to the state.

- **terraform apply:** terraform apply to actually create the infrastructure on AWS.

- **terraform destroy :** The terraform destroy command is used to destroy the Terraform-managed infrastructure.

Thank you

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