Why terraform

Terraform is a provisioning tool supports multi cloud architecture.

**Access key ID** AKIA2HY4BA7H7O3N5CPP

**Secret access key** 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

C:\Users\547927\.aws\credentials

|  |  |
| --- | --- |
| **Terraform** | **Ansible** |
| Terraform is a provisioning tool. | Ansible is a configuration management tool. |
| It follows a declarative Infrastructure as a Code approach. | It follows a procedural approach. |
| It is the best fit for orchestrating cloud services and setup cloud infrastructure from scratch. | It is mainly used for configuring servers with the right software and updates already configured resources. |
| Has state file for tracking the infra | Doesn’t have any logs like state file |
| Terraform cannot do update/ patching to your environment | Ansible is configuration management tool helps in update/ patching infra |

https://github.com/zealvora/terraform-beginner-to-advanced-resource

<https://github.com/gopal1409/capgeminiterraform/blob/main/Terraform%20Instalation>

https://thinkwrightin-my.sharepoint.com/:f:/g/personal/niyaz\_k\_thinkwright\_in/El0zlelNJ2JEtI4RELaSRh8Bv8oRahvz5n00MhuZhzFUQA?e=0awv9e

<https://github.com/gopal1409/azurergwithterraform.git>

https://iihtlimited-my.sharepoint.com/personal/vilt\_iiht\_com/\_layouts/15/onedrive.aspx?id=%2Fpersonal%2Fvilt%5Fiiht%5Fcom%2FDocuments%2F2021%2F11%2E%20Nov%2FAmdocs%2F%5FAmdocs%5FTerraform%5F29%2DNov%2D21%5F09%2DDec%2D21%5F09%20Days%5FVILT

Init - to initialize the terraform and download required plugins/providers related to cloud infra using setting block.

validate - to check the syntax

plan - terraform perform refresh and determine what action is needed to achieve desired state,

apply – apply changes in environment , also create .tfstate file with configuration

destroy – using tf.state file terraform will destroy the resource destroy will also create tfstate.backup file which will have old config

state file is store in Azure blob storage / aws S3 or aws dynamo db

null resource – used as a trigger

Teraform language

1. Block

Terraform resource

|  |
| --- |
| terraform { |
|  | required\_providers { |
|  | azurerm = { |
|  | source = "hashicorp/azurerm" |
|  | version = "=2.91.0" |
|  | } |

For each loop

List(string) used to get different subnet values

**Terraform input variable**

Terraform.tfvars – to override the values of input variable

terraform apply --var-file=production.tfvars

How to lock the state file using azure blob(using acquire lease / release lease) and aws s3 and dynamoDB

Dynamic block in terraform like for loop(used to create multiple resource in nested loop concept )

https://registry.terraform.io/modules/terraform-aws-modules/vpc/aws/latest

from Gopal dAS to All Participants:

git clone <https://github.com/gopal1409/cogawsmodule.git>

https://github.com/gopal1409/cogawsmodule.git

Terraform authenticate AWS

provisoner

Backend locking

Pipeline with different environment

Modules

workspace





