Terraform interview questions

What is a terraform module?

Ans: A module in a terraform is a set of configuration files within a single directory it can have one or more files.

Can you create one simple module of terraform.

**Example 1: AWS VPC Module**

Creating an AWS Virtual Private Cloud (VPC) is fundamental for many infrastructure deployments. Instead of defining the VPC configuration repeatedly, we can create a Terraform module for it.

There are three types of Modules in terraform:

1.root module: As the name implies, this module is the root of any configuration. Every Terraform configuration consists of the root module as the main directory that works with the .tf files

module "vpc" {

source = "spacelift.io/your-organization/vpc-module-name/aws"

version = "1.0.0"

[...]

2. child module: this is a module in which is being called by a root module and this is a reusable module as well.

3.published module: Published Modules are modules pushed to a private or public repository. Terraform registry is the primary public repository. It hosts freely-accessible modules that can be used by anyone within their configurations. Terraform will automatically download the necessary modules from the registry when the appropriate source and version are defined in the module block.

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Terraform Import, Tainting Resources and Debugging:

Terraform Taint: The terraform taint command informs Terraform that a particular object has become degraded or damaged so it will try to create in the next apply face.

Debugging:we can enable debugging in terraform to know more related to error in terraform and we can use env variable.

example: export TF\_LOG=TRACE. and to store logs as persistent we need to use export TF\_LOG\_PATH=/tmp/terrafomr.log

What are the componenets that you have created using terraform?

Ans: some of the componenets which i have created using terraform are like s3,ec2,vpc,etc.tmp/

unset TF\_LOG\_PATH: this is to unset the error logs.

Terraform Import:Import command is use to import existing infrastructure in a terraform configuration.

resource "aws\_instance" "myvm" {

ami = "unknown"

instance\_type = "unknown"

}

terraform import aws\_instance.myvm <Instance ID>

Data\_sources: we can use data to read resources created by other tools or console.

terraform import: this command is use to import existing resource and syntax is terraform import resource\_type.resource\_name attribut.

by above command terraform confg file won't be updated instead the state file will be updated.

Terraform State:

Introduction to Terraform State:state file in terraform maps the real world infrastructe with the resource definition file.

Purpose of State: is to track real world with current config, and it is use to manage state of infor when deal with team memebers.

rsource dependency in terraform:

Update and Destroy Infrastructure:

Remote State:

What is Remote State and State Locking?

remote state is a state file where we can keep in remote backend as we use that file is being used by different team memebrs as well as provide security.

Remote Backends with S3:

Terraform State Commands: terraform state file are not mean to be edited by vi tool instead we can use terraform state command that is listed below.

list,mv,show,pull,rm.

terraform state show aws\_instance.fiannce.

2.how can you change or modify the exisiting infrastructe.

Ans:we can use import command.

3.what is mean by terraform state file.

Ans: Terraform maintain a state filw which maps the current state of infr with the confirugation. and it is mostly in local machine or we can store in terraform cloud or in s3 bucket as it may contain sensetive confirugation as well.

4.what happens if you lost your terraform state file?

Ans:Terraform will compare the cloud infra with the expected state file so if we lost the state file too we still can import the actual infa from the cloud using thier provide.

5.What are the major features that terraform have and why it is more popular then other tools?

Ans: the major features of terraform are like it have many plugins where we can use single file with multiple providers. it uses HCL language and terraform have simple syntax and can can quickly spin the resources using terraform.

6.What is mean by terraform validate?

Ans: this command will check for the terraform syntax and if there is any error it will thorow.

7.what is mean by lifecycle in terraform?

ans:init, plan apply

lifecycle is a nested block that can appear within a resource block. The lifecycle block and its contents are meta-arguments, available for all resource blocks regardless of type. The arguments available within a lifecycle block are create\_before\_destroy , prevent\_destroy , ignore\_changes , and replace\_triggered\_by

8.there are 20 resources in public cloud and can we destroy only 1 resource out of 20 resources.

Ans:yes we can use destroy\_target\_resource.

9.Have you evered preserved the key used in terraform.

Ans: this is a key that we genrally gerated from the aws for the cli access and we can use this key for the use to set in their home directory.

10.what are the different types of modules in terraform?

ans: root,child and publish module.

11.

variable 'bk'{

region = 'esast-2'

descrption='wrhoera'

}

How can we prevent corrupting terraform state file and what are the methods to recover from tate file.

=> Remote state management

Store the state file remotely in a service like Amazon S3, Google Cloud Storage, or HashiCorp Consul. This allows multiple team members to access it simultaneously and prevents accidental deletions.

State locking

Terraform automatically locks the state file for operations that can write to it, preventing others from acquiring the lock and potentially corrupting the file.

State file versioning

Retain previous versions of the state file to roll back to if it gets corrupted.

Encryption

Encrypt the state file at rest and in transit to protect sensitive information.

What is terraform workspace?

Terraform workspaces are a feature of Terraform, an infrastructure as a code (IaC) tool, that allow users to manage multiple infrastructure resources within a single configuration file

know more here : https://developer.hashicorp.com/terraform/cli/workspaces