1. what is terraform:
2. A tool for provisioning infrastructure.
3. **Terraform** is an infrastructure as code (IaC) tool that allows you to build, change, and version infrastructure safely and efficiently.
4. what is provisioner in terraform
5. **Provisioners** are used to execute scripts on a local or remote machine as part of resource creation or destruction.
6. **The file provisioner :** is used to copy files or directories from the machine executing Terraform to the newly created resources. <https://github.com/DeekshithSN/Terraform/tree/master/Provisioner/file-Provisioner>
7. **local-exec provisioner** invokes a local executable after a resource is created. Exute scripts where out terraform scipts. To store the resource IP in local file. We use this.
8. provisioner "local-exec" {
9. command = "echo ${self.private\_ip}, ${self.public\_ip} >> private\_and\_public\_ips.txt"
10. }

Here self is read the running resources.

1. **Remote provisioner** : remote provisioner is used to run any scripts on created resources . we use remote provisioner.

<https://github.com/DeekshithSN/Terraform/tree/master/Provisioner/remote-Provisioner>

provisioner "remote-exec" {

inline = [

"sudo chmod 777 /tmp/httpd.sh",

"sh /tmp/httpd.sh",

]

On failures of any provisioners still if we want to continue to create resources and shouldn’t fail terraform apply , we can have option in provisioners to skip incase of failure.

**On\_failure = continue**

1. State file:
   1. Local – one developer or if ur implementing POC
   2. Remote – working with team, then keep state file in remote – storage account
2. Created resource with terraform :
   1. Dev1 created resource
   2. Dev2 deleted resource try adding new resource

2) dev3 created new resource from UI portal, where the changes are not there in terraform script how ur going to resolve.

3) Using terraform import we can import the changes to local file with resource ID.

4) how wil u sync local and remote state file? 🡪 By import lets have changes in local state file, which we can **copy to remote simply**.

5) **various provider versions**? 🡪 compatible versions are imp, whenever new features come in those version we have use the versions properly.

6) **various cloud providers u use in proj:**

1) azurerm, azuread, random

7) terraform init -

terraform

* 1. How to define terraform to take above 2 version — can give version in terraform provider with > 2 which takes above version (latest)
  2. Why terraform state file and why we need to keep in remote - This state file **keeps track of resources created by your configuration and maps them to real-world resources**.
  3. If we have created resource from command line and how will you sync that with terraform state file?
  4. T**erraform init :** The terraform init command is **used to initialize a working directory containing Terraform configuration files**. Prepare your working directory for other commands
  5. How does terraform work?
  6. Define null resource in terraform
  7. Terraform state file - it will track the status of infra - store state about your managed infrastructure and configuration.
  8. Remote backend in terraform
  9. What do you understand by terraform backend?
  10. What are modules in Terraform?
  11. How is duplicate resource error ignored during terraform apply?
  12. terraform architecture?
  13. Define Resource Graph in Terraform.
  14. **What is Terragrunt, and what are its uses?** - is a thin wrapper that provides extra tools for keeping your configurations DRY, working with multiple Terraform modules, and managing remote state. 1) terraform config and terraform state
  15. Explain State File Locking?
  16. **What do you understand by a Tainted Resource?** - tainted resources are those resources that are forced to be destroyed and recreated on the next apply command. When you mark a resource as tainted, nothing changes on infrastructure but the state file is updated with this information(destroy and create).
  17. How will you make an object of one module available for the other module at a high level?
  18. **Provisioners** : Provisioners are **used to execute scripts on a local or remote machine as part of resource creation or destruction**. Provisioners can be used to bootstrap a resource, cleanup before destroy, run configuration management, etc.
  19. **Provider** : **responsible for understanding API interactions with the underlying infrastructure**, such as a public cloud service (AWS, GCP, Azure),
  20. Terraform state list?

It will show the list of resources u created from folder from where u ran terraform apply.

21) terraform refresh :

It will check the resources with remote resources and it will keep same as remote cluster in local. Example : if we delete any resource from UI and to syncup with that run refresh command so that our state file also will be removed that resource.

22) How to create a specific resource or resources related to a modules using terraform command

Terraform apply –target=resourceGroup.name

Terraform destroy –target=resourceGroup.name –> to destroy

The terraform state push command is used to manually upload a local state file to [remote state](https://www.terraform.io/docs/language/state/remote.html). This command also works with local state.

The terraform state pull command is used to manually download and output the state from [remote state](https://www.terraform.io/docs/language/state/remote.html). This command also works with local state.

The terraform state list command is used to list resources within a [Terraform state](https://www.terraform.io/docs/language/state/index.html).

terraform force-unlock

This will not modify your infrastructure. This command removes the lock on the state for the current configuration. The behavior of this lock is dependent on the backend being used. Local state files cannot be unlocked by another process.

terraform console [options]

This command provides an interactive command-line console for evaluating and experimenting with [expressions](https://www.terraform.io/docs/language/expressions/index.html). This is useful for testing interpolations before using them in configurations, and for interacting with any values currently saved in [state](https://www.terraform.io/docs/language/state/index.html).

**Example**: when we do terraform apply, and then if we wanted to see particular resource id. We can do terraform console and provide resource.id which provides the value.

1. Existing storage account is there and it has some rules? Writing terraform script can we append new rules to it? I said yes, we can import the existing resource and add new rules
2. i have a storage account and how to create a rule allow only particular IP to that storage?