TERRAFORM OVERVIEW

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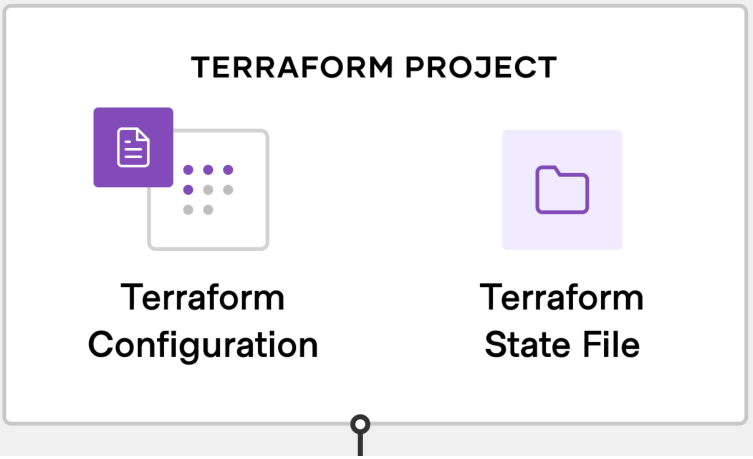
WHAT IS TERRAFORM?

- Open Source software from hashicorp
- Create, update, manage infrastructure from code
- Because it's code, it can be versionned (using git for ex.)
- Intent driven

TERRAFORM WORKFLOW

Write

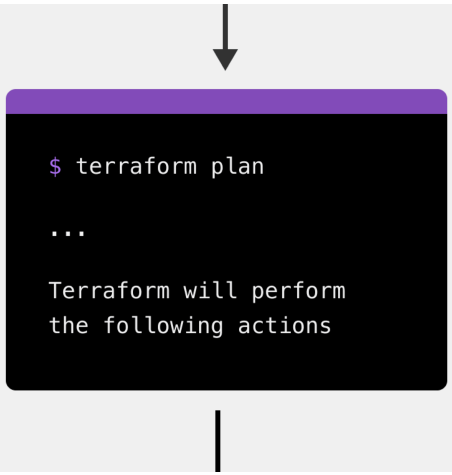
Define infrastructure in configuration files



TERRAFORM WORKFLOW

Plan

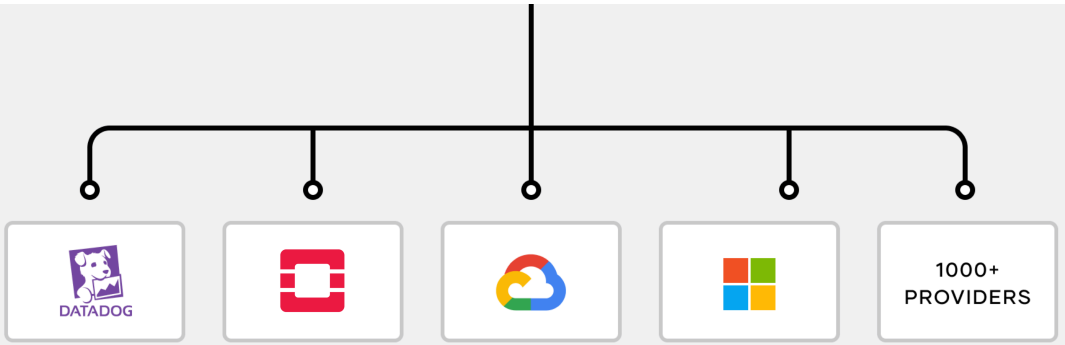
Review the changes Terraform will make to your infrastructure



TERRAFORM WORKFLOW

Apply

Terraform provisions your infrastructure and updates the state file.



INFRASTRUCTURE AS CODE

```
provider "openstack" {
}
resource "openstack_compute_instance_v2" "server1" {
  name            = "server1"
  image_name      = "Debian 11"
  flavor_name     = "small"
  network {
    name = "public"
  }
}
```

TERRAFORM PLAN

```
Terraform will perform the following actions:

  # openstack_compute_instance_v2.server1 will be created
  + resource "openstack_compute_instance_v2" "server1" {
      + access_ip_v4        = (known after apply)
      + access_ip_v6        = (known after apply)
      + all_metadata        = (known after apply)
      + all_tags            = (known after apply)
      + availability_zone   = (known after apply)
      + flavor_id           = (known after apply)
      + flavor_name         = "small"
      + force_delete        = false
      + id                  = (known after apply)
      + image_id            = (known after apply)
      + image_name          = "Debian 11"
```

TERRAFORM APPLY

```
openstack_compute_instance_v2.server1: Creating...
openstack_compute_instance_v2.server1: Still creating... [10s
openstack_compute_instance_v2.server1: Creation complete after

Apply complete! Resources: 1 added, 0 changed, 1 destroyed.
```

TERRAFORM DESTROY

```
Terraform will perform the following actions:

  # openstack_compute_instance_v2.server1 will be destroyed
  - resource "openstack_compute_instance_v2" "server1" {
      - access_ip_v4         = "193.70.24.7" -> null
      - all_metadata         = {} -> null
      - all_tags             = [] -> null
      - availability_zone    = "nova" -> null
      - flavor_id            = "93f96757-ea92-44bf-8204-da2eaf5
      - flavor_name          = "small" -> null
      - force_delete         = false -> null
      - id                   = "005ae25d-ce0a-425b-94e6-fb0cb27
      - image_id             = "3a2089f1-9b9d-4dc1-970a-9dcb785
      - image_name           = "Debian 11" -> null
      - name                 = "server1" -> null
```

DOCUMENTATION OPENSTACK

https://registry.terraform.io/providers/terraform-provider-openstack/openstack/latest/docs

QUESTIONS ?