TERRAFORM STATE

statefile

↓ ↳ TF

record/store

terraform.tfstate

ADV OF STATEFILE

terraform plan
or
terraform apply

TF checks in statefile

- what is created
- what has to be created

terraform destroy

TF checks in statefile and understands what action it has to perform

↓

will ask for conformation

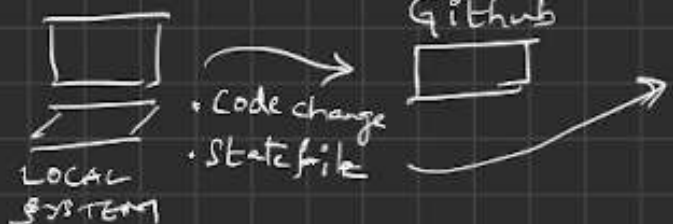
CHALLENGES WITH STATEFILE

(1) TF doesn't differentiate between sensitive info and non-sensitive info.
All the info (including sensitive) will be recorded in statefile.

↳ · keys
· passwords
· API tokens
· secrets ...

(2) If statefile is used in version control system, sensitive info is compromised.

(3)



if you forget this, then your entire configuration is messed up.

How To Solve These Challenges

remote backend

↓

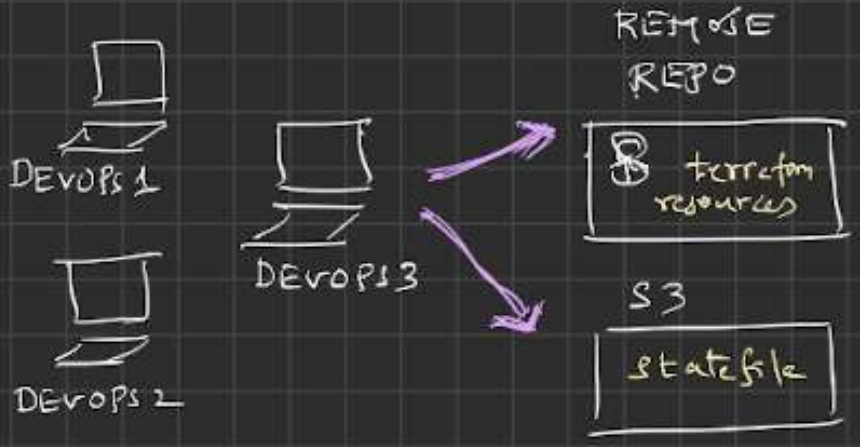
if this option is enabled, statefile will be created in any remote location (S3 bucket) instead of storing in your local system

Examples

terraform backend options

Azure → Azure storage

AWS → S3



(remote backend enabled)

When you run "terraform apply" first time, a statefile is created.

How to read statefile → "terraform show"

example:

how to enable S3 bucket for remote backend

backend.tf ← this is one time configuration

```
terraform {
  backend "s3" {
    bucket = "value"
    region = "value"
    key    = "value"
    dynamo_table = "terraform_lock"
  }
}
```

← No need to remember; refer documentation

LOCKING MECHANISM IN TERRAFORM

example

DevOps 01

s3_bucket_access = "private"

DevOps 02

s3_bucket_access = "public"

- Terraform locks 'state file'.
- First it will allow one change
- Then it will allow other changes

HOW TO IMPLEMENT LOCK?

```
resource "aws_dynamodb_table" "terraform-lock" {
  name = "terraform-lock"
  billing_mode = "PAY_PER_REQUEST"
  hash_key = "LockID"
  attribute {
    name = "LockID"
    type = "S"
  }
}
```

← You can use dynamo DB