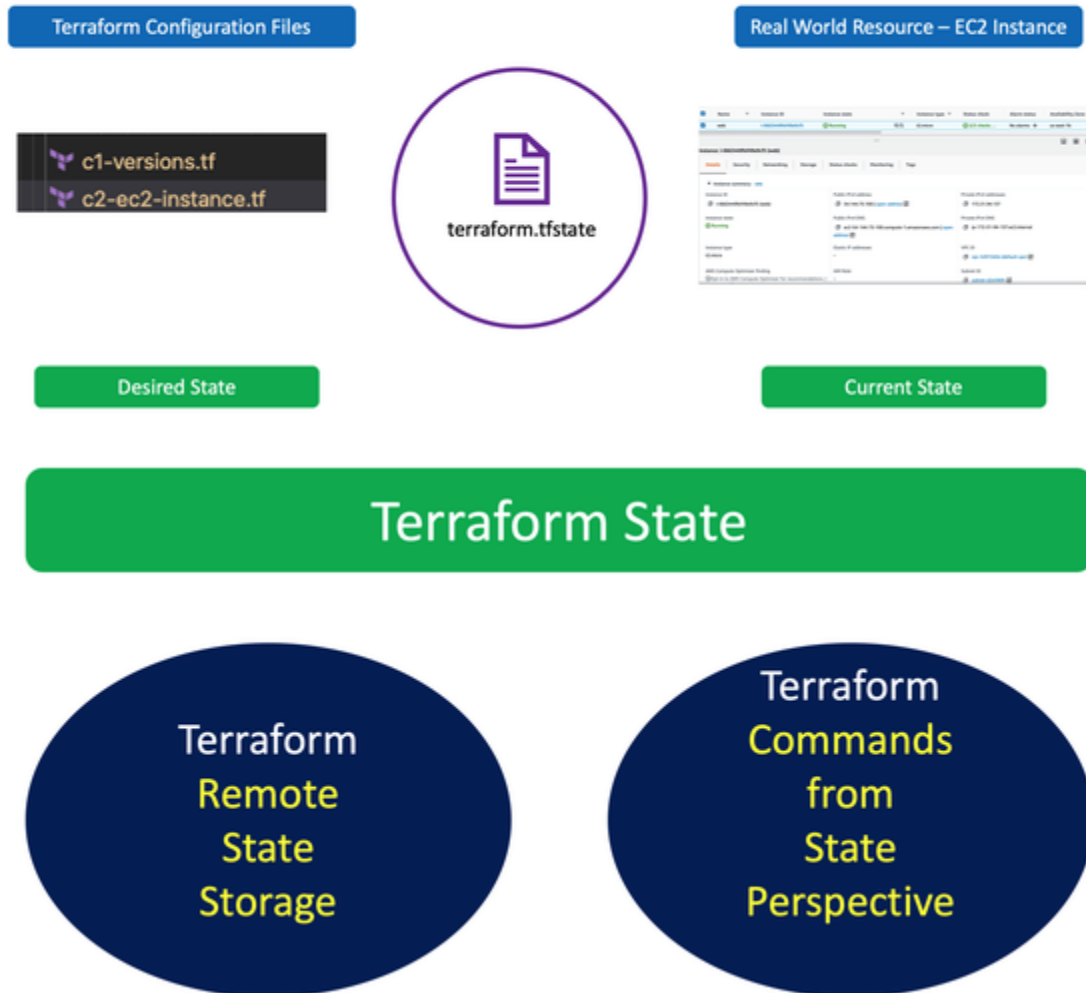


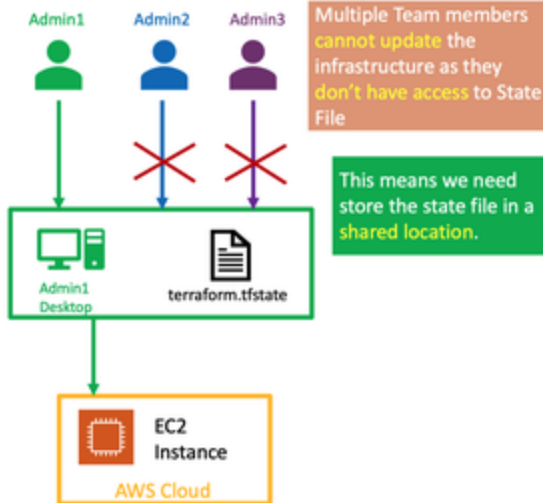
Terraform Backend With S3 and DynamoDB

Terraform Remote State Storage and State Locking with AWS S3 and DynamoDB

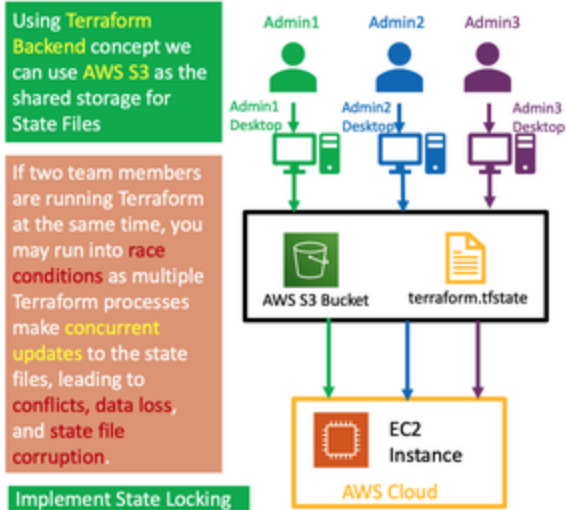
Desired & Current Terraform States



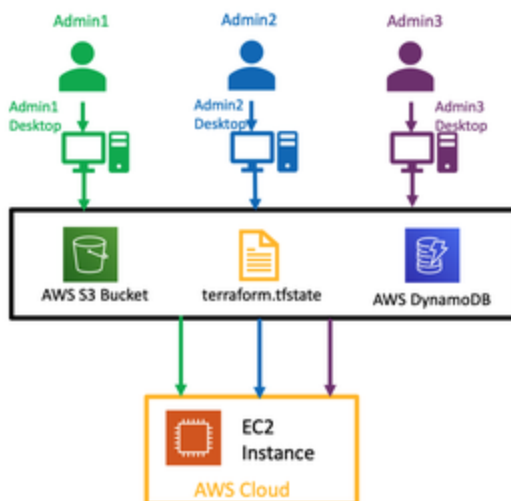
Local State File



Remote State File



Terraform Remote State File with State Locking



Not all backends support State Locking. AWS S3 supports State Locking

State locking happens automatically on all operations that could write state.

If state locking fails, Terraform will not continue.

You can disable state locking for most commands with the -lock flag but it is not recommended.

If acquiring the lock is taking longer than expected, Terraform will output a status message.

If Terraform doesn't output a message, state locking is still occurring if your backend supports it.

Terraform has a force-unlock command to manually unlock the state if unlocking failed.

Create S3 Bucket

- Go to Services -> S3 -> Create Bucket
- Bucket name:** terraform-development-state
- Region:** US-East (N.Virginia)
- Bucket settings for Block Public Access:** leave to defaults
- Bucket Versioning:** Enable
- Leave another setting as defaults
- Click on **Create Bucket**
- Create Folder**
 - Folder Name:** development
 - Click on **Create Folder**

Add State Locking Feature using DynamoDB Table

- Create Dynamo DB Table
 - Table Name:** development-state-lock
 - Partition key (Primary Key):** LockID (Type as String)
 - Table settings:** Use default settings (checked)
 - Click on **Create**

Terraform Backend Configuration

- **Reference Sub-folder:** terraform-manifests
- Terraform Backend as S3
- Add the below listed Terraform backend block in Terraform Settings block in main.tf

```
# Adding Backend as S3 for Remote State Storage
backend "s3" {
  bucket = "terraform-development-state"
  key     = "development/terraform.tfstate"
  region  = "us-east-1"

  dynamodb_table = "development-state-lock"
}
```

```
# Terraform Block
terraform {
  required_version = "~> 0.14"
  required_providers {
    aws = {
      source = "hashicorp/aws"
      version = "~> 3.0"
    }
  }
}

# Adding Backend as S3 for Remote State Storage
backend "s3" {
  bucket      = "terraform-development-state"
  key         = "development/terraform.tfstate"
  region      = "us-east-1"
  dynamodb_table = "development-state-lock"
}

# Provider Block
provider "aws" {
  region = var.aws_region
  profile = "default"
}
```

References

- [AWS S3 Backend](#)
- [Terraform Backends](#)
- [Terraform State Storage](#)
- [Terraform State Locking](#)
- [Remote Backends - Enhanced](#)