Terraform State File CLI Commands

Introduction

Terraform manages infrastructure state using a state file (terraform.tfstate). The CLI provides several commands to inspect, modify, and manage this state effectively.

1. Viewing State Information

a. Show State Details

terraform state list

- Lists all resources managed by Terraform in the current state.

terraform state show <resource_type.resource_name>

- Displays details of a specific resource.

Example:

terraform state show aws_s3_bucket.example

2. Managing State File

a. Refresh State File

terraform refresh

- Updates the state file to match the actual infrastructure without applying changes.

b. Move a Resource

terraform state mv <source> <destination>

- Moves a resource in the state file, useful when renaming resources.

Example:

terraform state mv aws_s3_bucket.example aws_s3_bucket.new_example

c. Remove a Resource from State

terraform state rm <resource_type.resource_name>

- Deletes a resource from the state without destroying the actual infrastructure.

Example:

terraform state rm aws_s3_bucket.example

3. Importing Resources into State

terraform import <resource_type.resource_name> <resource_id>

- Brings existing infrastructure under Terraform management.

Example:

terraform import aws_s3_bucket.example my-existing-bucket

4. Backend State Management

a. Pull the Latest State File

terraform state pull

- Downloads the latest remote state file.

b. Push a State File (Not Recommended)

terraform state push <statefile>

- Manually pushes a modified state file (use with caution).

5. State Locking (For Remote State)

terraform force-unlock <lock_id>

- Unlocks a state file if Terraform is stuck due to a failed operation.

Example:

terraform force-unlock 1234567890abcdef

Conclusion

Terraform's state CLI provides essential tools for managing infrastructure efficiently. Properly handling state ensures consistency and avoids unexpected drift. Following best practices for state management, such as using remote backends, improves collaboration and security.