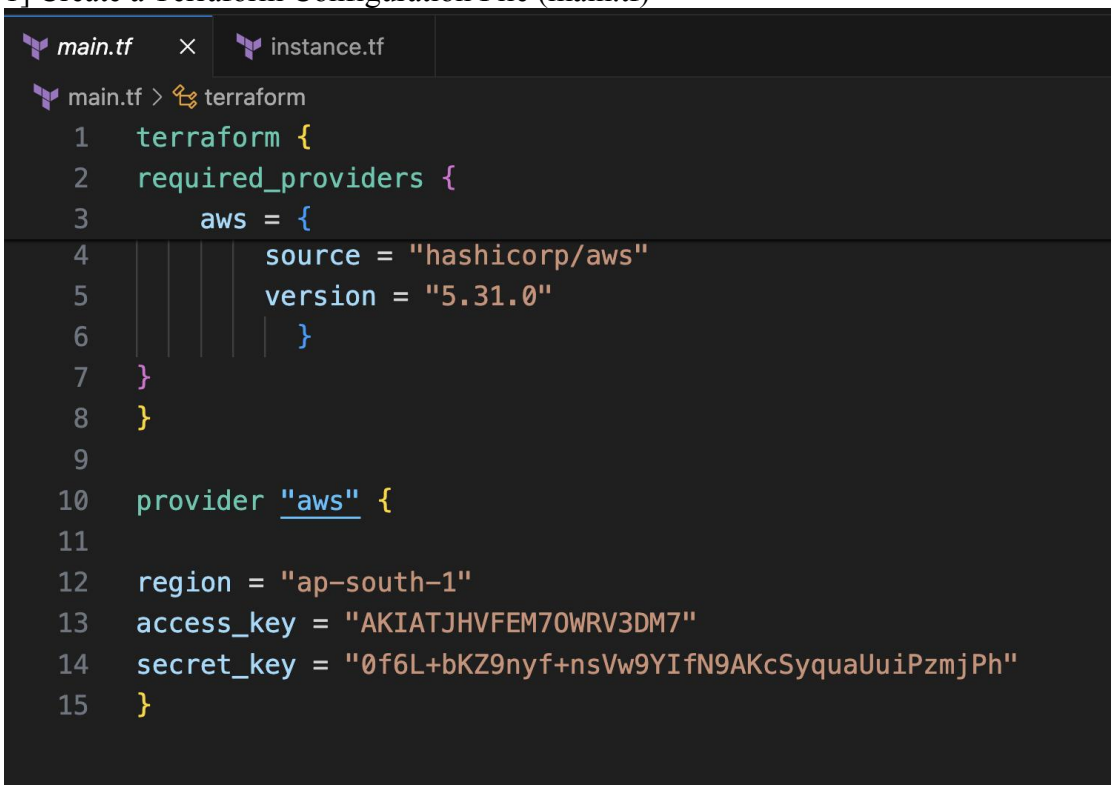
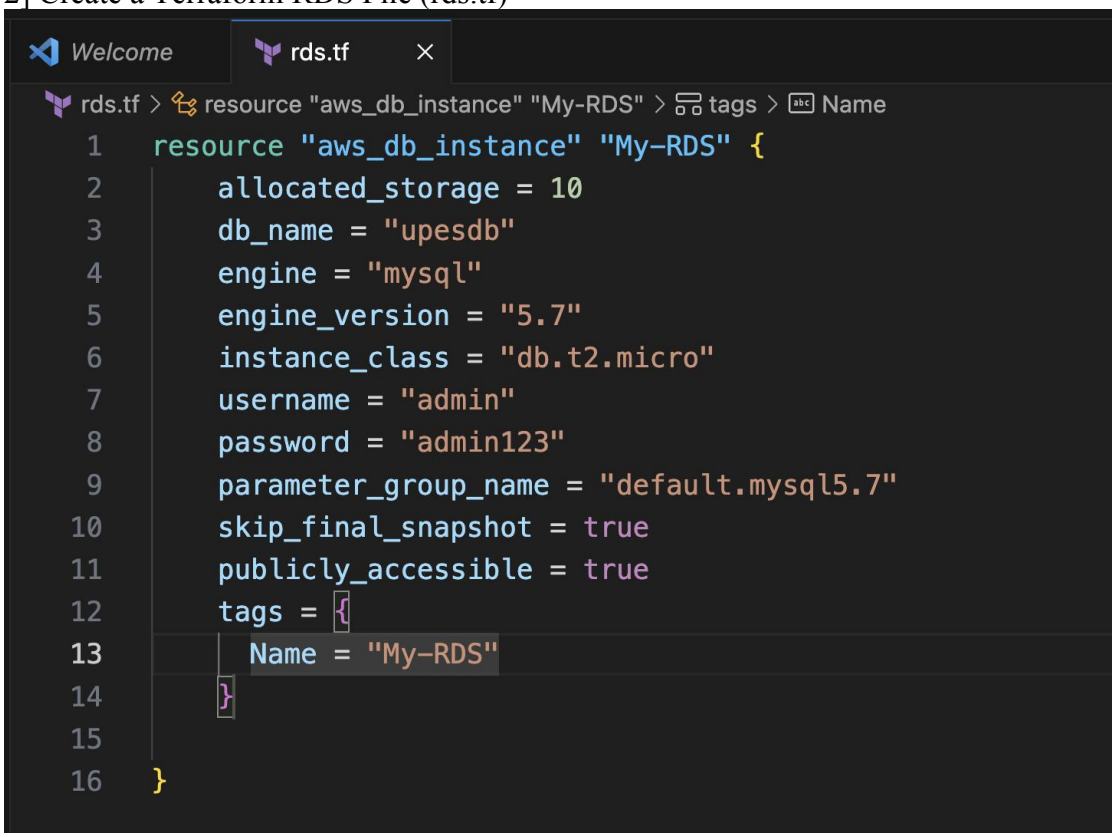
EXPERIMENT – 10

Aim: Creating an AWS RDS Instance in Terraform.

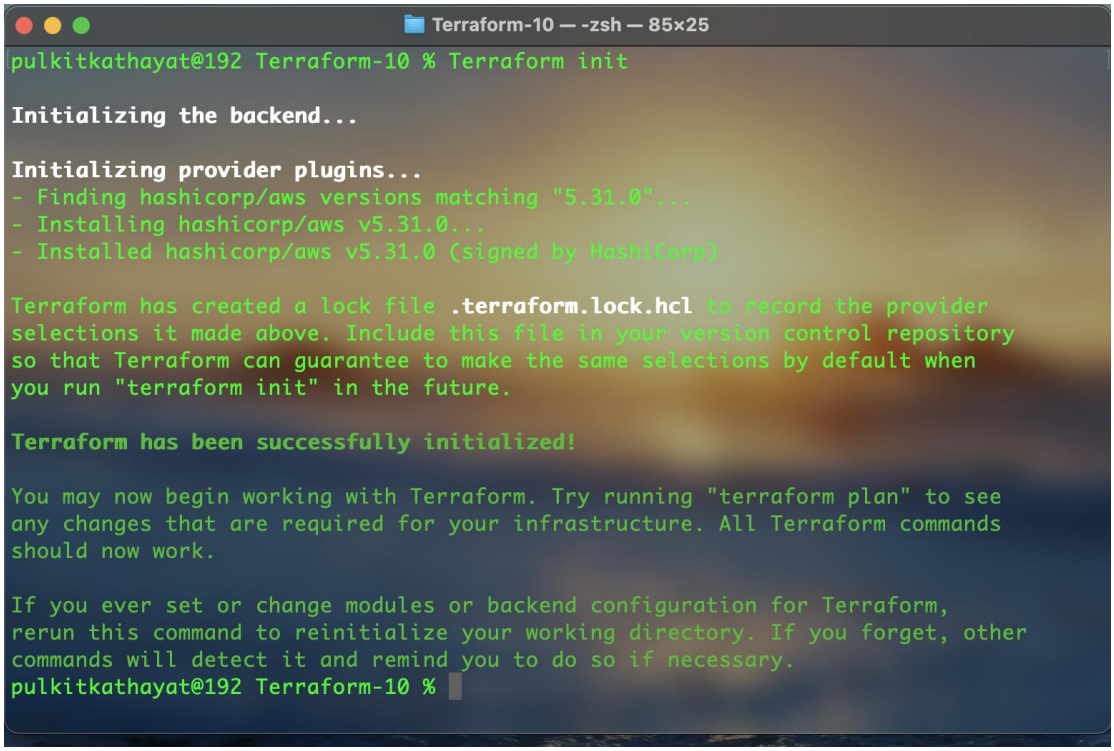
1] Create a Terraform Configuration File (main.tf)



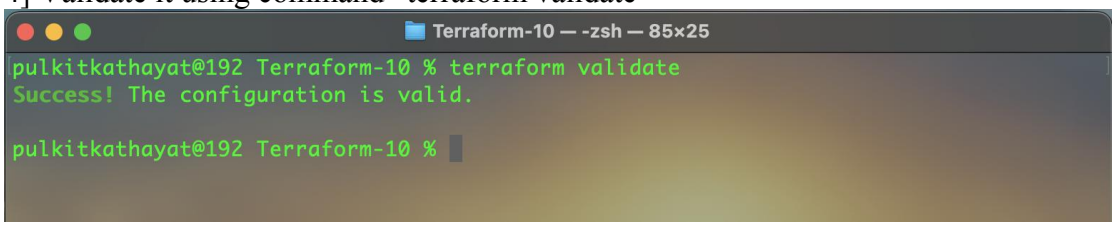
2] Create a Terraform RDS File (rds.tf)



3] Initialize Terraform using command “terraform init”

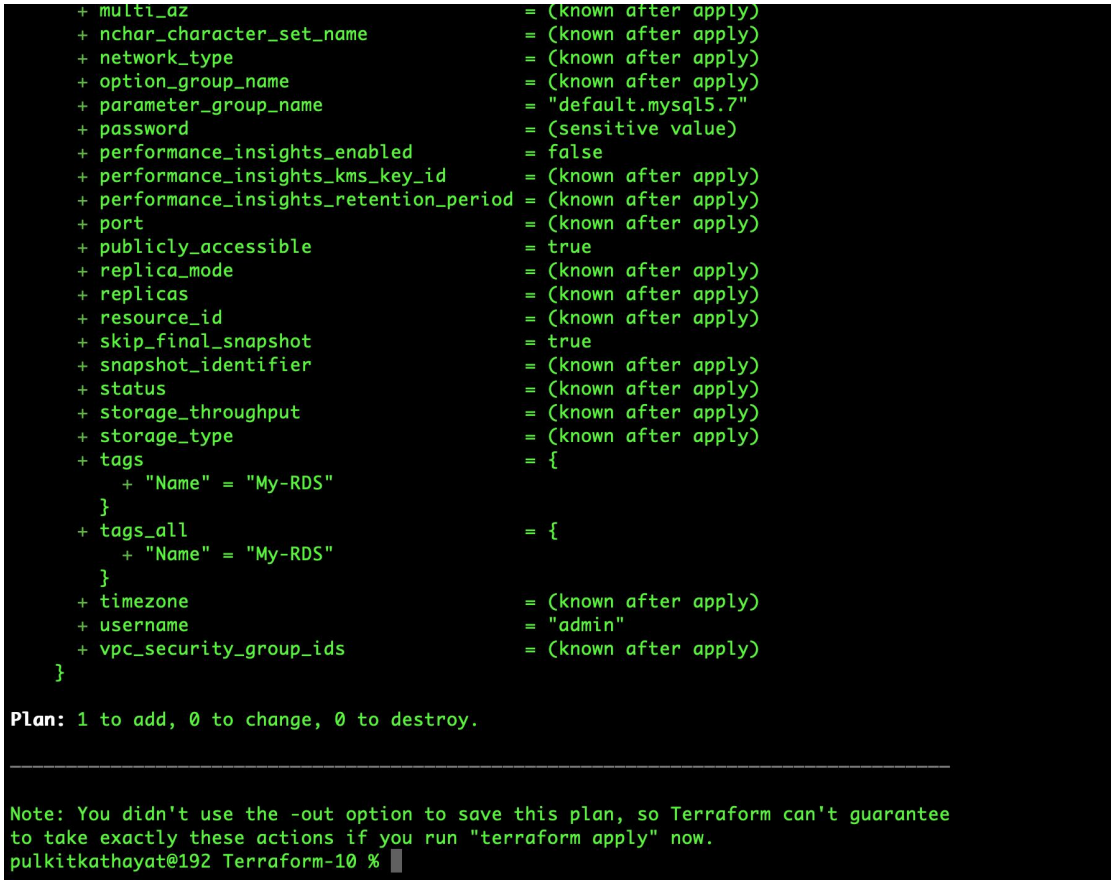


4] Validate it using command “terraform validate”



5] Check the Plan using command “terraform plan”

```
pulkitkathayat@192 Terraform-10 % terraform plan

Terraform used the selected providers to generate the following execution plan.
Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_db_instance.My-RDS will be created
  + resource "aws_db_instance" "My-RDS" {
      + address                               = (known after apply)
      + allocated_storage                     = 10
      + apply_immediately                     = false
      + arn                                   = (known after apply)
      + auto_minor_version_upgrade            = true
      + availability_zone                     = (known after apply)
      + backup_retention_period               = (known after apply)
      + backup_target                         = (known after apply)
      + backup_window                         = (known after apply)
      + ca_cert_identifier                    = (known after apply)
      + character_set_name                    = (known after apply)
      + copy_tags_to_snapshot                 = false
      + db_name                               = "upesdb"
      + db_subnet_group_name                  = (known after apply)
      + delete_automated_backups              = true
      + endpoint                              = (known after apply)
      + engine                                = "mysql"
      + engine_version                        = "5.7"
      + engine_version_actual                 = (known after apply)
      + hosted_zone_id                        = (known after apply)
      + id                                    = (known after apply)
      + identifier                            = (known after apply)
      + identifier_prefix                     = (known after apply)
      + instance_class                        = "db.t2.micro"
      + iops                                  = (known after apply)
      + kms_key_id                            = (known after apply)
      + latest_restorable_time                = (known after apply)
      + license_model                         = (known after apply)
      + listener_endpoint                     = (known after apply)
      + maintenance_window                    = (known after apply)
      + master_user_secret                    = (known after apply)
      + master_user_secret_kms_key_id         = (known after apply)
      + monitoring_interval                   = 0
      + monitoring_role_arn                   = (known after apply)
      + multi_az                              = (known after apply)
```

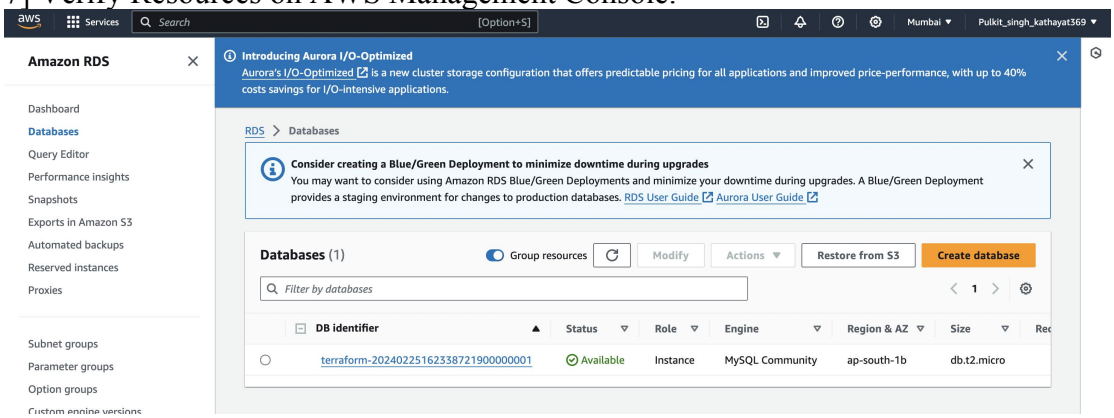


6] Apply it using command “Terraform apply -auto-approve”

```
pulkitkathayat@192 Terraform-10 % Terraform apply -auto-approve

Terraform used the selected providers to generate the following execution plan.
Resource actions are indicated with the following symbols:
  + create

Terraform will perform the following actions:

  # aws_db_instance.My-RDS will be created
  + resource "aws_db_instance" "My-RDS" {
      + address                               = (known after apply)
      + allocated_storage                     = 10
      + apply_immediately                     = false
      + arn                                   = (known after apply)
      + auto_minor_version_upgrade            = true
      + availability_zone                     = (known after apply)
      + backup_retention_period               = (known after apply)
      + backup_target                         = (known after apply)
      + backup_window                         = (known after apply)
      + ca_cert_identifier                    = (known after apply)
      + character_set_name                    = (known after apply)
      + copy_tags_to_snapshot                 = false
      + db_name                               = "upesdb"
      + db_subnet_group_name                  = (known after apply)
      + delete_automated_backups              = true
      + endpoint                              = (known after apply)
      + engine                                = "mysql"
      + engine_version                        = "5.7"
      + engine_version_actual                 = (known after apply)
      + hosted_zone_id                        = (known after apply)
      + id                                    = (known after apply)
      + identifier                            = (known after apply)
      + identifier_prefix                     = (known after apply)
      + instance_class                        = "db.t2.micro"
      + iops                                  = (known after apply)
      + kms_key_id                            = (known after apply)
      + latest_restorable_time                = (known after apply)
      + license_model                         = (known after apply)
      + listener_endpoint                     = (known after apply)
      + maintenance_window                    = (known after apply)
      + master_user_secret                    = (known after apply)
      + master_user_secret_kms_key_id         = (known after apply)
      + monitoring_interval                   = 0
      + monitoring_role_arn                   = (known after apply)
      + multi_az                              = (known after apply)
      + nchar_character_set_name              = (known after apply)
      + network_type                          = (known after apply)
      + option_group_name                     = (known after apply)
```

```
}

Plan: 1 to add, 0 to change, 0 to destroy.
aws_db_instance.My-RDS: Creating...
aws_db_instance.My-RDS: Still creating... [10s elapsed]
aws_db_instance.My-RDS: Still creating... [20s elapsed]
aws_db_instance.My-RDS: Still creating... [30s elapsed]
aws_db_instance.My-RDS: Still creating... [40s elapsed]
aws_db_instance.My-RDS: Still creating... [50s elapsed]
aws_db_instance.My-RDS: Still creating... [1m0s elapsed]
aws_db_instance.My-RDS: Still creating... [1m10s elapsed]
aws_db_instance.My-RDS: Still creating... [1m20s elapsed]
aws_db_instance.My-RDS: Still creating... [1m30s elapsed]
aws_db_instance.My-RDS: Still creating... [1m40s elapsed]
aws_db_instance.My-RDS: Still creating... [1m50s elapsed]
aws_db_instance.My-RDS: Still creating... [2m0s elapsed]
aws_db_instance.My-RDS: Still creating... [2m10s elapsed]
aws_db_instance.My-RDS: Still creating... [2m20s elapsed]
aws_db_instance.My-RDS: Still creating... [2m30s elapsed]
aws_db_instance.My-RDS: Still creating... [2m40s elapsed]
aws_db_instance.My-RDS: Still creating... [2m50s elapsed]
aws_db_instance.My-RDS: Still creating... [3m0s elapsed]
aws_db_instance.My-RDS: Still creating... [3m10s elapsed]
aws_db_instance.My-RDS: Still creating... [3m20s elapsed]
aws_db_instance.My-RDS: Still creating... [3m30s elapsed]
aws_db_instance.My-RDS: Still creating... [3m40s elapsed]
aws_db_instance.My-RDS: Still creating... [3m50s elapsed]
aws_db_instance.My-RDS: Still creating... [4m0s elapsed]
aws_db_instance.My-RDS: Still creating... [4m10s elapsed]
aws_db_instance.My-RDS: Still creating... [4m20s elapsed]
aws_db_instance.My-RDS: Creation complete after 4m28s [id=db-2UZYCGYQOWXTJNVF52APRUTA4E]

Apply complete! Resources: 1 added, 0 changed, 0 destroyed.
pulkitkathayat@192 Terraform-10 %
```

7] Verify Resources on AWS Management Console.



8] Connect with MySQL Workbench with proper Configuration and save it.

9] Cleanup Resources using command “Terraform destroy”

```
pulkitkathayat@192 Terraform-10 % terraform destroy
aws_db_instance.My-RDS: Refreshing state... [id=db-2UZYCGYQOWXTJNVF52APRUTA4E]

Terraform used the selected providers to generate the following execution plan.
Resource actions are indicated with the following symbols:
  - destroy

Terraform will perform the following actions:

  # aws_db_instance.My-RDS will be destroyed
  - resource "aws_db_instance" "My-RDS" {
      - address                               = "terraform-20240225162338721900000001.c5qsugycspfp.ap-south-1.rds.amazonaws.com" -> null
      - allocated_storage                     = 10 -> null
      - apply_immediately                     = false -> null
      - arn                                   = "arn:aws:rds:ap-south-1:225999921982:db:terraform-20240225162338721900000001" -> null
      - auto_minor_version_upgrade            = true -> null
      - availability_zone                     = "ap-south-1b" -> null
      - backup_retention_period               = 0 -> null
      - backup_target                         = "region" -> null
      - backup_window                         = "21:49-22:19" -> null
      - ca_cert_identifier                    = "rds-ca-rsa2048-g1" -> null
      - copy_tags_to_snapshot                 = false -> null
      - customer_owned_ip_enabled             = false -> null
      - db_name                               = "upesdb" -> null
      - db_subnet_group_name                  = "default" -> null
      - delete_automated_backups              = true -> null
      - deletion_protection                   = false -> null
      - enabled_cloudwatch_logs_exports       = [] -> null
      - endpoint                              = "terraform-20240225162338721900000001.c5qsugycspfp.ap-south-1.rds.amazonaws.com:3306" -> null
      - engine                                = "mysql" -> null
      - engine_version                        = "5.7" -> null
      - engine_version_actual                 = "5.7.44" -> null
      - hosted_zone_id                        = "Z2VFMSZA74J7XZ" -> null
      - iam_database_authentication_enabled   = false -> null
      - id                                    = "db-2UZYCGYQOWXTJNVF52APRUTA4E" -> null
      - identifier                            = "terraform-20240225162338721900000001" -> null
      - identifier_prefix                     = "terraform-" -> null
      - instance_class                        = "db.t2.micro" -> null
      - iops                                  = 0 -> null
      - license_model                         = "general-public-license" -> null
      - listener_endpoint                     = [] -> null
      - maintenance_window                    = "fri:12:31-fri:13:01" -> null
      - master_user_secret                    = [] -> null
      - max_allocated_storage                 = 0 -> null
      - monitoring_interval                   = 0 -> null
      - multi_az                              = false -> null
      - network_type                          = "IPV4" -> null
      - option_group_name                     = "default:mysql-5-7" -> null
```

```
  Enter a value: yes

aws_db_instance.My-RDS: Destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 1m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 1m10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 1m20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 1m30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 1m40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 1m50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 2m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 2m10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 2m20s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 2m30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 2m40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 2m50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 3m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 3m10s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 3m20s elapsed]









aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 3m30s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 3m40s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 3m50s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 4m0s elapsed]
aws_db_instance.My-RDS: Still destroying... [id=db-2UZYCGYQOWXTJNVFS2APRUTA4E, 4m10s elapsed]
```