

Lab-10

Creating an Aws RDS Instance in Terraform

Step 1: Create a Terraform Directory

```
C:\Users\hp>mkdir terraform-rds  
C:\Users\hp>cd terraform-rds
```

Step 2: Create a Terraform Configuration Files

```
main.tf  
1  provider "aws" {  
2    region = "us-east-1"  
3    access_key = "AKIAV2D7UZ5ZFRSTHQBK"  
4    secret_key = "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"  
5  }  
6  resource "aws_db_instance" "My-RDS" {  
7    allocated_storage = 10  
8    db_name = "upesdb"  
9    engine = "mysql"  
10   engine_version = "5.7"  
11   instance_class = "db.t2.micro"  
12   username = "admin"  
13   password = "AWS123"  
14   parameter_group_name = "default.mysql5.7"  
15   skip_final_snapshot = true  
16 }
```

Step 3: Initialize and Apply

```
C:\Users\hp\terraform-rds>terraform init

Initializing the backend...

Initializing provider plugins...
- Finding latest version of hashicorp/aws...
- Installing hashicorp/aws v5.37.0...
- Installed hashicorp/aws v5.37.0 (signed by HashiCorp)

Terraform has created a lock file .terraform.lock.hcl to record the provider
selections it made above. Include this file in your version control repository
so that Terraform can guarantee to make the same selections by default when
you run "terraform init" in the future.

Terraform has been successfully initialized!

You may now begin working with Terraform. Try running "terraform plan" to see
any changes that are required for your infrastructure. All Terraform commands
should now work.

If you ever set or change modules or backend configuration for Terraform,
rerun this command to reinitialize your working directory. If you forget, other
commands will detect it and remind you to do so if necessary.

C:\Users\hp\terraform-rds>
```

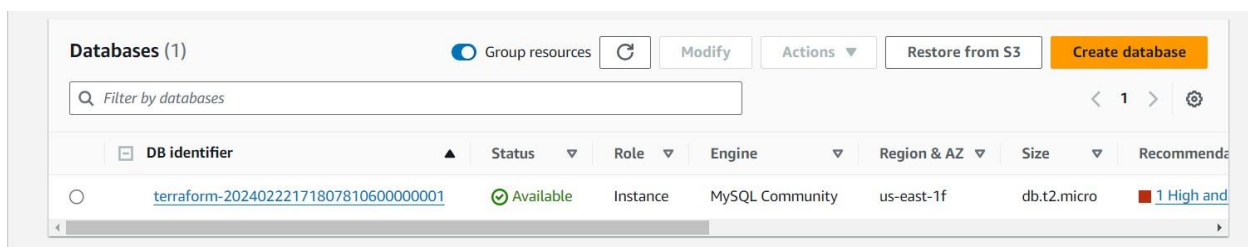
```
C:\Users\hp\terraform-rds>terraform apply
aws_db_instance.Lab10: Refreshing state... [id=db-YRW7H7N6UYFJKZCRUOH34WFU4E]

No changes. Your infrastructure matches the configuration.

Terraform has compared your real infrastructure against your configuration and found no differences, so no changes are
needed.

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

Step 4: Verify RDS Instance in AWS console



The screenshot shows the AWS Management Console 'Databases' page. At the top, there are buttons for 'Group resources', 'Modify', 'Actions', 'Restore from S3', and 'Create database'. Below these is a search bar labeled 'Filter by databases'. A table lists the database instances. The table has columns: DB identifier, Status, Role, Engine, Region & AZ, Size, and Recommendations. One instance is listed with the identifier 'terraform-20240222171807810600000001', status 'Available', role 'Instance', engine 'MySQL Community', region 'us-east-1f', and size 'db.t2.micro'. A red square icon with the number '1' is next to the Recommendations column header.

DB identifier	Status	Role	Engine	Region & AZ	Size	Recommendations
terraform-20240222171807810600000001	Available	Instance	MySQL Community	us-east-1f	db.t2.micro	1 High and

Step 5: MYSQL Workbench Connection

Setup New Connection

Connection Name: Type a name for the connection

Connection Method: Method to use to connect to the RDBMS

Parameters SSL Advanced

Hostname: Port: Name or IP address of the server host - and TCP/IP port.

Username: Name of the user to connect with.

Password: The user's password. Will be requested later if it's not set.

Default Schema: The schema to use as default schema. Leave blank to select it later.

Step 6: Clean up

```
C:\Users\hp\terraform-rds>terraform destroy
aws_db_instance.Lab10: Refreshing state... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E]

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.Lab10 will be destroyed
- resource "aws_db_instance" "Lab10" {
  - address                               = "terraform-20240222171807810600000001.chsoy464ksew.us-east-1.rds.amazona
ws.com" -> null
  - allocated_storage                     = 10 -> null
  - apply_immediately                     = false -> null
  - arn                                   = "arn:aws:rds:us-east-1:399699660658:db:terraform-20240222171807810600000
001" -> null
  - auto_minor_version_upgrade           = true -> null
  - availability_zone                     = "us-east-1f" -> null
  - backup_retention_period               = 0 -> null
  - backup_target                         = "region" -> null
  - backup_window                         = "08:12-08:42" -> 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
}
```

```
aws_db_instance.Lab10: Destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 10s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 20s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 30s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 40s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 50s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 1m0s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 1m10s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 1m20s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 1m30s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 1m40s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 1m50s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 2m1s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 2m11s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 2m21s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 2m31s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 2m41s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 2m51s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 3m1s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 3m11s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 3m21s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 3m31s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 3m41s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 3m51s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 4m1s elapsed]
aws_db_instance.Lab10: Still destroying... [id=db-YRW7H7N6UYFJKZCRUOH34WPU4E, 4m11s elapsed]
aws_db_instance.Lab10: Destruction complete after 4m13s
```