

Desafío #4 - AWS VPC + RDS



1. Introducción

Este documento detalla paso a paso cómo crear un entorno de desarrollo en AWS utilizando VPC y RDS dentro del Free Tier, siguiendo las consignas del desafío #4. Incluye creación de red, configuración de seguridad y despliegue de una base de datos MariaDB accesible desde Internet.

2. Pasos Detallados

2.1 Crear VPC Manualmente

1. Ir a Amazon VPC > Your VPCs > Create VPC
2. Configurar:
 - Name tag: tutorial-vpc
 - IPv4 CIDR block: 10.0.0.0/16
 - IPv6: No
 - Tenancy: Default
3. Click en Create VPC

<input checked="" type="checkbox"/>	tutorial-vpc	vpc-0604ff3df4581d983	 Available	 Off	10.0.0.0/16
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2.2 Crear Subred Pública

1. Ir a Subnets > Create subnet
2. Configurar:
 - Name tag: Tutorial public
 - VPC: tutorial-vpc
 - Availability Zone: us-west-2a
 - IPv4 CIDR: 10.0.0.0/24
3. Crear

Details			
Subnet ID subnet-07aa29faa9d3738ca	Subnet ARN arn:aws:ec2:us-east-1:672390184954:subnet/subnet-07aa29faa9d3738ca	State ✔ Available	Block Public Access ⊖ Off
IPv4 CIDR 10.0.0.0/24	Available IPv4 addresses 251	IPv6 CIDR -	IPv6 CIDR association ID -
Availability Zone us-east-1a	Availability Zone ID use1-az1	Network border group us-east-1	VPC vpc-0604ff3df4581d983 tutorial-vpc
Route table rtb-04548fd1f58598cc9 tutorial-public-rt	Network ACL acl-0ed57081becd470d0	Default subnet No	Auto-assign public IPv4 address No
Auto-assign IPv6 address No	Auto-assign customer-owned IPv4 address No	Customer-owned IPv4 pool -	Outpost ID -
IPv4 CIDR reservations -	IPv6 CIDR reservations -	IPv6-only No	Hostname type IP name
Resource name DNS A record Disabled	Resource name DNS AAAA record Disabled	DNS64 Disabled	Owner 672390184954

2.3 Crear y Asociar Internet Gateway

1. Ir a Internet Gateways > Create
2. Name tag: tutorial-igw
3. Attach to VPC: tutorial-vpc

<input type="checkbox"/> tutorial-igw	igw-0cf261e791f016b6c	✔ Attached	vpc-0604ff3df4581d983 tutorial-vpc	672390184954
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2.4 Crear Route Table y Asociar a Subred Pública

1. Crear route table: tutorial-public-rt para tutorial-vpc
2. Asociar a Tutorial public subnet
3. En Routes:
 - Destination: 0.0.0.0/0
 - Target: tutorial-igw

rtb-04548fd1f58598cc9 / tutorial-public-rt

Actions

Details

Route table ID

rtb-04548fd1f58598cc9

Main

No

Explicit subnet associations

2 subnets

Edge associations

-

VPC

vpc-0604ff3df4581d983 | tutorial-vpc

Owner ID

672390184954

Routes

Subnet associations

Edge associations

Route propagation

Tags

Routes (2)

Both

Edit routes

Filter routes

Destination	Target	Status	Propagated
0.0.0.0/0	igw-0cf261e791f016b6c	Active	No
10.0.0.0/16	local	Active	No

2.5 Crear Security Group para RDS

1. Ir a Security Groups > Create
2. Name tag: tutorial-sg
3. Inbound rule:
 - Tipo: MYSQL/Aurora
 - Puerto: 3306
 - Origen: 0.0.0.0/0 (o tu IP)

sg-0f6bf8da83b6acab7 - tutorial-sg

Actions

Details

Security group name

tutorial-sg

Security group ID

sg-0f6bf8da83b6acab7

Description

Allow db Access

VPC ID

vpc-0604ff3df4581d983

Owner

672390184954

Inbound rules count

1 Permission entry

Outbound rules count

1 Permission entry

Inbound rules

Outbound rules

Sharing - new

VPC associations - new

Tags

Inbound rules (1)



Manage tags

Edit inbound rules

Search

Name	Security group rule ID	IP version	Type	Protocol	Port range
-	sgr-0a6c2d6262198b9d8	IPv4	MYSQL/Aurora	TCP	3306

2.6 Habilitar DNS para la VPC(paso necesario para poder crear la db)

1. Ir a Your VPCs > tutorial-vpc > Edit VPC settings
2. Marcar:
 - Enable DNS resolution
 - Enable DNS hostnames

Edit VPC settings

VPC details

VPC ID

vpc-0604ff3df4581d983

Name

tutorial-vpc

DHCP settings

DHCP option set

[Info](#)

dopt-0412e2314e2d7b2bd

DNS settings

☒ Enable DNS resolution [Info](#)

☒ Enable DNS hostnames [Info](#)

2.7 Crear Segunda Subred Pública

1. Subnet name: Tutorial public 2
2. CIDR: 10.0.2.0/24
3. Availability Zone: us-west-2b
4. Asociar a misma Route Table pública

subnet-0a2f2586d26096720 / Tutorial public 2

[Actions](#)

Details

Subnet ID

subnet-0a2f2586d26096720

IPv4 CIDR

10.0.2.0/24

Availability Zone

us-east-1b

Route table

rtb-04548fd1f58598cc9 | [tutorial-public-rt](#)

Auto-assign IPv6 address

No

IPv4 CIDR reservations

—

Resource name DNS A record

Disabled

Subnet ARN

arn:aws:ec2:us-east-1:672390184954:subnet/subnet-0a2f2586d26096720

Available IPv4 addresses

251

Availability Zone ID

use1-az2

Network ACL

acl-0ed57081becd470d0

Auto-assign customer-owned IPv4 address

No

IPv6 CIDR reservations

—

Resource name DNS AAAA record

Disabled

State

Available

IPv6 CIDR

—

Network border group

us-east-1

Default subnet

No

Customer-owned IPv4 pool

—

IPv6-only

No

DNS64

Disabled

Block Public Access

Off

IPv6 CIDR association ID

—

VPC

vpc-0604ff3df4581d983 | [tutorial-vpc](#)

Auto-assign public IPv4 address

No

Outpost ID

—

Hostname type

IP name

Owner

672390184954

[SubnetDetails](#)

2.8 Crear DB Subnet Group

1. En Amazon RDS > Subnet groups > Create
2. Name: tutorial-db-subnet-group
3. Subnets: Tutorial public + Tutorial public 2

tutorial-db-subnet-group

Subnet group details

VPC ID

[vpc-0604ff3df4581d983](#) 

ARN

arn:aws:rds:us-east-1:672390184954:subgrp:tutorial-db-subnet-group



Supported network types

IPv4

Description

db-subnet-group

Subnets (2)

Availability zone	Subnet name	Subnet ID	CIDR block
us-east-1b	Tutorial public 2	subnet-0a2f2586d26096720 	10.0.2.0/24
us-east-1a	Tutorial public	subnet-07aa29faa9d3738ca 	10.0.0.0/24

2.9 Crear Instancia RDS (MariaDB)

1. Engine: MariaDB
2. Template: Free Tier
3. DB identifier: tutorial-db
4. Usuario: admin / contraseña segura
5. VPC: tutorial-vpc
6. Subnet group: tutorial-db-subnet-group
7. Public access: Yes
8. Security group: tutorial-sg

tutorial-db

Modify

Actions ▾

Summary

DB identifier tutorial-db CPU <div>3.55%</div>	Status <div>Available</div> Class db.t4g.micro	Role Instance Current activity <div>1 Connections</div>	Engine MariaDB Region & AZ us-east-1a	Recommendations
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Connectivity & security

Monitoring

Logs & events

Configuration

Maintenance & backups

Data migrations - n >

Connectivity & security

Endpoint & port Endpoint <div> <div></div> <div>tutorial-db.cm1iaeqiohm.us-east-1.rds.amazonaws.com</div> </div> Port 3306	Networking Availability Zone us-east-1a VPC tutorial-vpc (vpc-0604ff3df4581d983) Subnet group tutorial-db-subnet-group Subnets subnet-07aa29faa9d3738ca subnet-0a2f2586d26096720	Security VPC security groups tutorial-sg (sg-0f6bf8da83b6acab7) <div>Active</div> Publicly accessible Yes Certificate authority Info rds-ca-rsa2048-g1 Certificate authority date May 25, 2061, 20:34 (UTC-03:00) DB instance certificate expiration
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2.10 Conectar a la Base de Datos

Ejemplo de conexión desde terminal:
mariadb -h <ENDPOINT> -u admin -p

Databases (1)

☒ Group resources



Modify

Actions ▾

Create database



Filter by databases

< 1 >

DB identifier	Status	Role	Engine	Region ...	Size
tutorial-db	Available	Instance	MariaDB	us-east-1a	db.t4g.micro

```
mariadb -h tutorial-db.cm1iaeqiohm.us-east-1.rds.amazonaws.com -u admin -p

MariaDB [(none)]> SHOW DATABASES;
+-----+
| Database |
+-----+
| information_schema |
| innodb          |
| mysql           |
| performance_schema |
| sys             |
+-----+
5 rows in set (0.333 sec)

MariaDB [(none)]> 4
```