Managed Services on AWS - Hands on Submission 1

CloudWithAWS-TIO-20 from week 1 module

1. Create Database

2. Templates and Availability & Durability

3. Settings

Settings

DB instance identifier Info
Type a name for your DB instance. The name must be unique across all DB instances owned by your AWS account in the current AWS Region.

```
gl-rds
```

The DB instance identifier is case-insensitive, but is stored as all lowercase (as in "mydbinstance"). Constraints: 1 to 60 alphanumeric characters or hyphens. First character must be a letter. Can't contain two consecutive hyphens. Can't end with a hyphen.

▼ Credentials Settings

Master username Info
Type a login ID for the master user of your DB instance.

```
root
```

1 to 16 alphanumeric characters. First character must be a letter.

☐ Manage master credentials in AWS Secrets Manager
Manage master user credentials in Secrets Manager. RDS can generate a password for you and manage it throughout its lifecycle.

ⓘ If you manage the master user credentials in Secrets Manager, some RDS features aren't supported.
Learn more ↗

☐ Auto generate a password
Amazon RDS can generate a password for you, or you can specify your own password.

Master password Info

```
••••••••
```

Constraints: At least 8 printable ASCII characters. Can't contain any of the following: / (slash), '(single quote), "(double quote) and @ (at sign).

Confirm master password Info

```

```

4. Instance Configuration & Storage

Instance configuration

The DB instance configuration options below are limited to those supported by the engine that you selected above.

DB instance class Info
○ Standard classes (includes m classes)
○ Memory optimized classes (includes r and x classes)
● Burstable classes (includes t classes)

```
db.t3.micro
2 vCPUs    1 GiB RAM    Network: 2,085 Mbps              ▼
```

⊙ Include previous generation classes

Storage

Storage type Info

```
General Purpose SSD (gp2)
Baseline performance determined by volume size              ▼
```

Allocated storage Info

```
200
```
GiB

The minimum value is 20 GiB and the maximum value is 6,144 GiB

Storage autoscaling Info
Provides dynamic scaling support for your database's storage based on your application's needs.

☐ Enable storage autoscaling
Enabling this feature will allow the storage to increase after the specified threshold is exceeded.

5. Connectivity

Connectivity Info

Compute resource

Choose whether to set up a connection to a compute resource for this database. Setting up a connection will automatically change connectivity settings so that the compute resource can connect to this database.

- ⦿ **Don't connect to an EC2 compute resource**
  Don't set up a connection to a compute resource for this database. You can manually set up a connection to a compute resource later.

- ○ **Connect to an EC2 compute resource**
  Set up a connection to an EC2 compute resource for this database.

Network type Info

To use dual-stack mode, make sure that you associate an IPv6 CIDR block with a subnet in the VPC you specify.

- ⦿ **IPv4**
  Your resources can communicate only over the IPv4 addressing protocol.

- ○ **Dual-stack mode**
  Your resources can communicate over IPv4, IPv6, or both.

Virtual private cloud (VPC) Info

Choose the VPC. The VPC defines the virtual networking environment for this DB instance.

```
Default VPC (vpc-0e5490ce6d9387532)          ▼
```

Only VPCs with a corresponding DB subnet group are listed.

> ⓘ After a database is created, you can't change its VPC.

DB subnet group Info

Choose the DB subnet group. The DB subnet group defines which subnets and IP ranges the DB instance can use in the VPC that you selected.

```
default                                       ▼
```

Public access Info

- ○ Yes
  RDS assigns a public IP address to the database. Amazon EC2 instances and other resources outside of the VPC can connect to your database. Resources inside the VPC can also connect to the database. Choose one or more VPC security groups that specify which resources can connect to the database.

- ⦿ No
  RDS doesn't assign a public IP address to the database. Only Amazon EC2 instances and other resources inside the VPC can connect to your database. Choose one or more VPC security groups that specify which resources can connect to the database.

VPC security group (firewall) Info

Choose one or more VPC security groups to allow access to your database. Make sure that the security group rules allow the appropriate incoming traffic.

- ○ **Choose existing**
  Choose existing VPC security groups

- ⦿ **Create new**
  Create new VPC security group

New VPC security group name

```
rds-sg
```

Availability Zone Info

```
No preference                                 ▼
```

RDS Proxy

RDS Proxy is a fully managed, highly available database proxy that improves application scalability, resiliency, and security.

- ☐ **Create an RDS Proxy** Info
  RDS automatically creates an IAM role and a Secrets Manager secret for the proxy. RDS Proxy has additional costs. For more information, see Amazon RDS Proxy pricing ↗.

Certificate authority - *optional* Info

Using a server certificate provides an extra layer of security by validating that the connection is being made to an Amazon database. It does so by checking the server certificate that is automatically installed on all databases that you provision.

```
rds-ca-2019 (default)                         ▼
```

If you don't select a certificate authority, RDS chooses one for you.

▼ **Additional configuration**

Database port Info

TCP/IP port that the database will use for application connections.

```
3306
```

6. Database Configuration

Database authentication

Database authentication options   Info

- ● Password authentication
  Authenticates using database passwords.

- ○ Password and IAM database authentication
  Authenticates using the database password and user credentials through AWS IAM users and roles.

- ○ Password and Kerberos authentication
  Choose a directory in which you want to allow authorized users to authenticate with this DB instance using Kerberos Authentication.

7. Additional Configuration

▼ Additional configuration
Database options, encryption turned off, backup turned off, backtrack turned off, maintenance, CloudWatch Logs, delete protection turned off.

Database options

Initial database name   Info

    employees

If you do not specify a database name, Amazon RDS does not create a database.

DB parameter group   Info

    default.mysql8.0   ▽

Option group   Info

    default:mysql-8-0   ▽

Backup

- ☐ Enable automated backups
  Creates a point-in-time snapshot of your database

Encryption

- ☐ Enable encryption
  Choose to encrypt the given instance. Master key IDs and aliases appear in the list after they have been created using the AWS Key Management Service console. Info

8. Database created.

Databases   ● Group resources   ↻   Modify   Actions ▽   Restore from S3   Create database

	DB identifier ▲	Role ▽	Engine ▽	Region & AZ ▽	Size ▽	Status ▽	Actions ▽	CPU	Current activity
○	gl-rds	Instance	MySQL Community	us-east-1a	db.t3.micro	⊘ Available	4 Actions	▭ 2.03%	▭ 0 Connections

9. EC2 Installation

Instances (1) Info   ↻   Connect   Instance state ▽   Actions ▽

	Name ▽	Instance ID	Instance state ▽	Instance type ▽	Status check	Alarm status	Availability Zone ▽	Public IPv4 DNS ▽	Public IPv4 ...
☐	RDS-EC2	i-0c999c78fb2869c1c	⊘ Running ⊕⊖	t2.micro	⊘ 2/2 checks passed	No alarms +	us-east-1a	ec2-18-212-65-21.com...	18.212.65.21