Create PHP application on EC2 instance with Amazon RDS as backend.

This is my schema

covid

👤 admin

🔗 mydatabasecovid.clahmvujfeoz.us-e...

This is my endpoint url
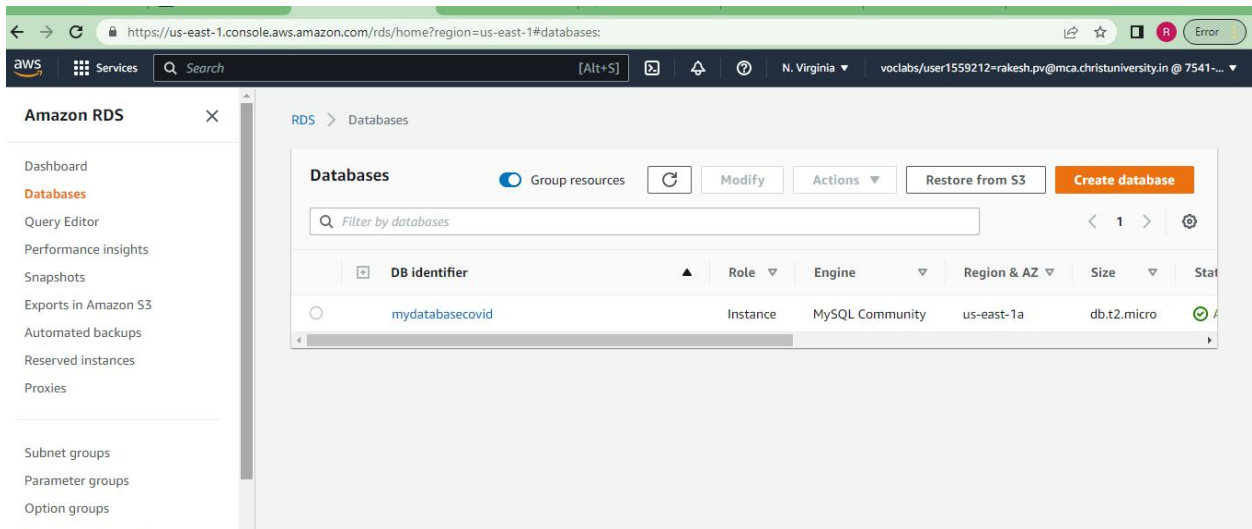
This is my ec2 connected to rds : covid ec2 linux ami

Connected compute resources (1) Info				
Connections to compute resources that were created automatically by RDS are shown here. Connections to compute resources that were created manually aren't shown.				

Resource identifier ▲	Resource type ▽	Availability zone ▽	RDS security group ▽	Compute resource security group ▽
i-05d56c15b183655b0	EC2 Instance	⊘ us-east-1a	rds-ec2-2	ec2-rds-2

This is my network settings in ec2

Setting up my security group:
In security group we have to setup inbound rules

Connectivity & security

Endpoint & port

Endpoint
mydatabasecovid.clahmvujfeoz.us-east-1.rds.amazonaws.com

Port
3306

Networking

Availability Zone
us-east-1a

VPC
vpc-043e0d8c01d28866c

Subnet group
default-vpc-043e0d8c01d28866c

Subnets
subnet-0c243e139f02f558d
subnet-00de81856013eb628
subnet-087f9bf7a9d49b38b
subnet-0f881bd2db6e4979f
subnet-08496a93b6fd32b43
subnet-0ecc488ddbc71d097

Network type
IPv4

Security

VPC security groups
rds-ec2-2 (sg-0564c34e00cb08bce)
⊘ Active
RDS-SG (sg-02a912f4280b146fb)
⊘ Active

Publicly accessible
Yes

Certificate authority
rds-ca-2019

Certificate authority date
August 22, 2024, 22:38 (UTC+05:30)

Security group rules (4)

Step 1: In EC2 service console, go to Security groups in side panel. Click on Create security groups.

Create a Security Group for Linux Server with following configuration:
Click on Create security group.

Configure it as follows:
Security group name: covid
Description: Security Group for EC2 Webserver in custom VPC
Add three rules under Inbound Rules:
1. Type: HTTP
Source: 0.0.0.0/0
2. Type: HTTP
Source: ::/0
3. Type: SSH
Source: 0.0.0.0/0

Inbound rules

Type	Protocol	Port range	Source
HTTP	TCP	80	0.0.0.0/0
HTTP	TCP	80	::/0
SSH	TCP	22	0.0.0.0/0

Click on Create security group button in bottom right corner. Confirm that it is created.

Go back to EC2 service console, go to Security groups in side panel. Click on Create security groups.
Provide Security group name as RDS-SG.
Provide Description as Security Group for Database.
Provide following Inbound rules:
1. Type: SSH
Source: 0.0.0.0/0
2. Type: MySQL/Aurora
Source: 0.0.0.0/0
3. Type: MySQL/Aurora
Source: MyWebServerSG (security group that would be used to create the EC2 instance)

Inbound rules

Type	Protocol	Port range	Source
SSH	TCP	22	0.0.0.0/0
MYSQL/Aurora	TCP	3306	0.0.0.0/0
MYSQL/Aurora	TCP	3306	sg-0ef5565514aef0217 (WebServerSG)

Step 2: Go to RDS service console. Click on Create database.
Choose a Standard create database creation method.

RDS > Create database

Create database

Choose a database creation method Info

○ **Standard create**
You set all of the configuration options, including ones for availability, security, backups, and maintenance.

○ **Easy create**
Use recommended best-practice configurations. Some configuration options can be changed after the database is created.

Engine options

Engine type Info

○ Amazon Aurora

○ MySQL

○ MariaDB

○ PostgreSQL

○ Oracle

○ Microsoft SQL Server

Edition
○ MySQL Community

ⓘ **Known Issues/Limitations**
Review the Known Issues/Limitations ☑ to learn about potential compatibility issues with specific database versions.

Version

MySQL 8.0.20

Select the free tier in Templates.

Under Settings:
Give DB instance identifier as mycovid_latest
Provide Credentials Settings as per your choice and store it in a secure place. We refer to following values for this document:

- Master Username: admin
- Master password: admin123

Confirm the default Storage settings as Storage type: General type- General Purpose (SSD) and Allocated storage 20 GiB.

Uncheck the Enable storage autoscaling.

Under Availability & durability select Do not create a standby instance radio button.

Connectivity section will have Default VPC selected.

Click on Additional connectivity configuration for drop down.

- Select default-vpc Subnet group.
- Select Yes radio button under Public access.
- Select Choose Existing radio button in VPC security group.
- In the Existing VPC security groups default will be selected. Remove this security group by clicking on the cross sign. Select the RDS-SG created in previous step.
- In Availability Zone select 1a which should be same as the AZ of Linux Instance.
- The Database port will be default 3306.

Database authentication is set to Password authentication.

This is my home page .
(select * from MyGuests) : it displays the records present in that table
Here only 1 record is inserted and displayed

id	State Name	No of sample	No of Death	No of positive	No of negative	No of discharge	Reg Date
1	ka	0	2	6	3	1	2022-12-01 10:56:00

This page shows all covid details (used covid api)

This is to add new record into table
Insert into Myguest vales('ka',0,2,6,3,1)
As of now 1 data is inserted and is displayed below

Create Record

Please fill this form and submit to add new record to the database.

State Name

[   ]

no of samples

[   ]

no of death

[   ]

no of positive

[   ]

no of Negative

[   ]

no of Discharge

[   ]

[Submit] [Cancel]

COVID DATA

id	State Name	No of sample	No of Death	No of positive	No of negative	No of discharge	Reg Date
1	ka	0	2	6	3	1	2022-12-01 10:56:00

Here we can add new user to covid database

COVID DATABASE

[👤 Create New User]

ID	Username	Email	Password	CRUD Operations

[Back]

Navigator

SCHEMAS

Filter objects

▶ mycovid_latest
▶ sys

Query 1 × SQL File 1*

Limit to 1000 rows

```
1 •  use mycovid_latest
2 ⊠  select * from MyGuests
3
```

Now data is inserted

Data updation (rakesh -> rakesh pv)

Update confirmation

← → X | ⚠ Not secure | http://ec2-54-224-44-24.compute-1.amazonaws.com/php_crud/includes/update.php?edit&user_id=39

ec2-54-224-44-24.compute-1.amazonaws.com says

User data updated successfully!

OK
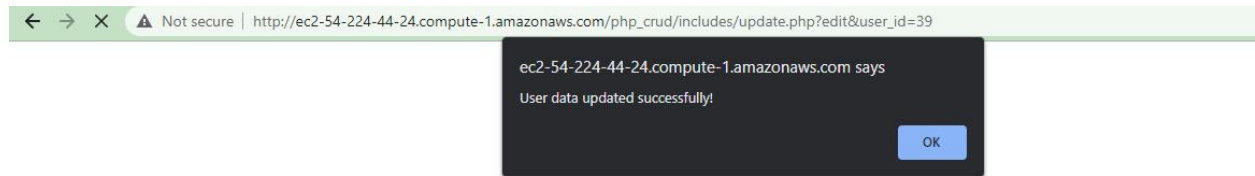
Now im deleting record with ID 1

← → C | ⚠ Not secure | http://ec2-54-208-158-18.compute-1.amazonaws.com/inc/delete.php

ID [   ]

Delete

RECORD IS DELETED

← → C | ⚠ Not secure | http://ec2-54-208-158-18.compute-1.amazonaws.com/inc/covid.php   G Q ⤢ ☆ ◻ Ⓡ (Error)

Covid Details   **+ Add New Entries**

PLEASE MAINTAIN ALL COVID SOP

COVID DATA

id	State Name	No of sample	No of Death	No of positive	No of negative	No of discharge	Reg Date