

3 Tier assignment

Task: Complete the list of tasks below.

Task 1:

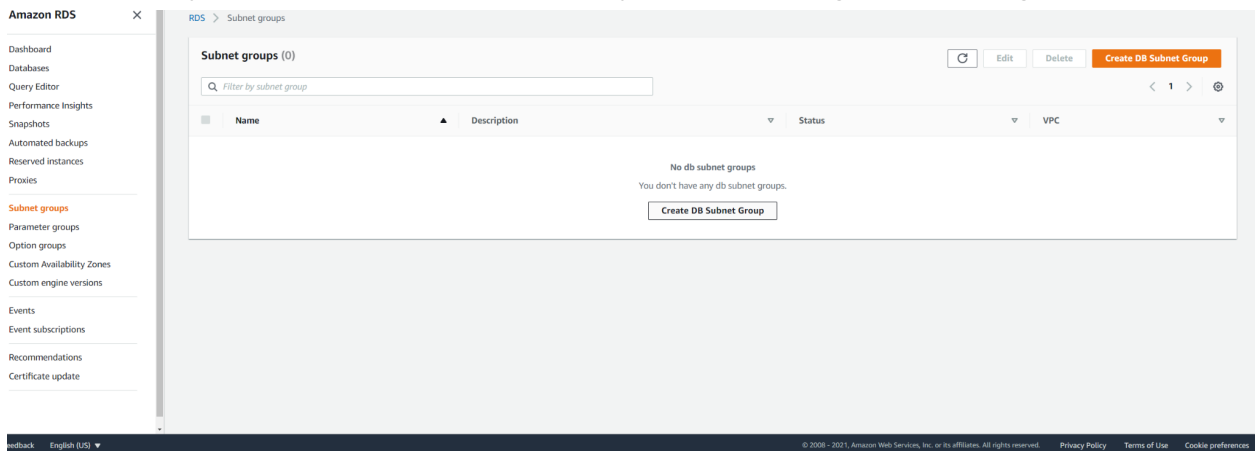
- Create a VPC with a public subnet and private subnet(hint: <https://docs.aws.amazon.com/codebuild/latest/userguide/cloudformati-on-vpc-template.html>).
- Create a new phpmyadmin EC2 and make sure it's secure
- Create a Web proxy for caching and make sure it's secure

Task 2:

- Create an AWS load balancer to connect to your reverse proxy.

Task 3:

- Create a MySQL database on AWS by first creating a subnet group



- Select your vpc and subnets

Amazon RDS

Dashboard

Databases

Query Editor

Performance Insights

Snapshots

Automated backups

Reserved instances

Proxies

Subnet groups

Parameter groups

Option groups

Custom Availability Zones

Custom engine versions

Events

Event subscriptions

Recommendations

Certificate update

Subnet group details

Name

You won't be able to modify the name after your subnet group has been created.

phpmyadmin

Must contain from 1 to 255 characters. Alphanumeric characters, spaces, hyphens, underscores, and periods are allowed.

Description

Tier 3

VPC

Choose a VPC identifier that corresponds to the subnets you want to use for your DB subnet group. You won't be able to choose a different VPC identifier after your subnet group has been created.

company-vpc (vpc-0779460a6cfd971aa)

Add subnets

Availability Zones

Choose the Availability Zones that include the subnets you want to add.

Choose an availability zone

us-east-1a X us-east-1b X us-east-1c X

Subnets

Choose the subnets that you want to add. The list includes the subnets in the selected Availability Zones.

Select subnets

Feedback

English (US)

Amazon RDS

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Certificate update

Availability Zones

Choose the Availability Zones that include the subnets you want to add.

Choose an availability zone

us-east-1a X us-east-1b X us-east-1c X

Subnets

Choose the subnets that you want to add. The list includes the subnets in the selected Availability Zones.

Select subnets

subnet-0f2de0a8ec5bed78e (192.168.96.0/19) X

subnet-00d7d052ba039f7e5 (192.168.160.0/19) X

subnet-0b20e6de6f3fe17a9 (192.168.0.0/19) X

Subnets selected (3)

Availability zone	Subnet ID	CIDR block
us-east-1b	subnet-0f2de0a8ec5bed78e	192.168.96.0/19
us-east-1c	subnet-00d7d052ba039f7e5	192.168.160.0/19
us-east-1a	subnet-0b20e6de6f3fe17a9	192.168.0.0/19

Cancel

Create

- Now create your 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



- Select the free tier, set a password, you can keep admin as a username, and choose your VPC.

MySQL 8.0.23

Templates

Choose a sample template to meet your use case.

☐ Production
Use defaults for high availability and fast, consistent performance.

☐ Dev/Test
This instance is intended for development use outside of a production environment.

☒ Free tier
Use RDS Free Tier to develop new applications, test existing applications, or gain hands-on experience with Amazon RDS.
[Info](#)

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.

database-1

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.

admin

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

Services
Search for services, featu

Connectivity

Virtual private cloud (VPC) [Info](#)
VPC that defines the virtual networking environment for this DB instance.

Default VPC (vpc-75f18308)

Only VPCs with a corresponding DB subnet group are listed.

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

Subnet group [Info](#)
DB subnet group that defines which subnets and IP ranges the DB instance can use in the VPC you selected.

db

Public access [Info](#)

☐ Yes
Amazon EC2 instances and devices outside the VPC can connect to your database. Choose one or more VPC security groups that specify which EC2 instances and devices inside the VPC can connect to the database.

☒ No
RDS will not assign a public IP address to the database. Only Amazon EC2 instances and devices inside the VPC can connect to your database.

VPC security group
Choose a VPC security group to allow access to your database. Ensure that the security group rules allow the appropriate incoming traffic.

☒ Choose existing
Choose existing VPC security groups

☐ Create new
Create new VPC security group

Existing VPC security groups

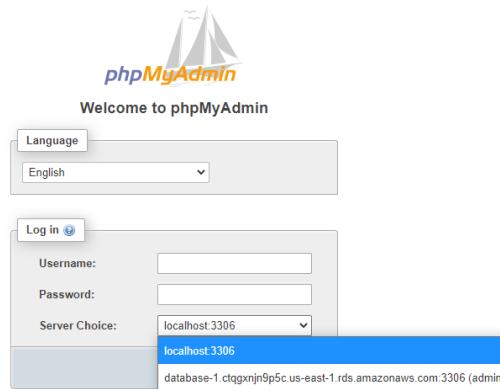
- Once you have created your database, wait for it to create and then move on to the next task.

Task 4:

- Connect the MySQL database to your application (phpmyadmin) by logging into your phpmyadmin EC2 and following the next step below:
- Below line 102 add these lines of code to the file /etc/phpmyadmin/config.inc.php:

```
$i++;  
$cfg['Servers'][$i]['host']           = '__FILL_IN_DETAILS__';  
$cfg['Servers'][$i]['port']           = '3306';  
$cfg['Servers'][$i]['socket']         = '';  
$cfg['Servers'][$i]['connect_type']   = 'tcp';  
$cfg['Servers'][$i]['extension']      = 'mysql';  
$cfg['Servers'][$i]['compress']       = FALSE;  
$cfg['Servers'][$i]['auth_type']      = 'config';  
$cfg['Servers'][$i]['user']           = '__FILL_IN_DETAILS__';  
$cfg['Servers'][$i]['password']       = '__FILL_IN_DETAILS__';
```

- You will have to enter your information in the lines that read __FILL_IN_DETAILS__
- Host is your endpoint url.
- Enter your username and password in the user and password lines of code.
- Test the connection to your new database. You should be able to log into your AWS RDS:



- Hooray!!! All Done!!

Task 4:

- Create a topology of what you just created and add port, security group, AWS services, and IP addresses to the topology.

