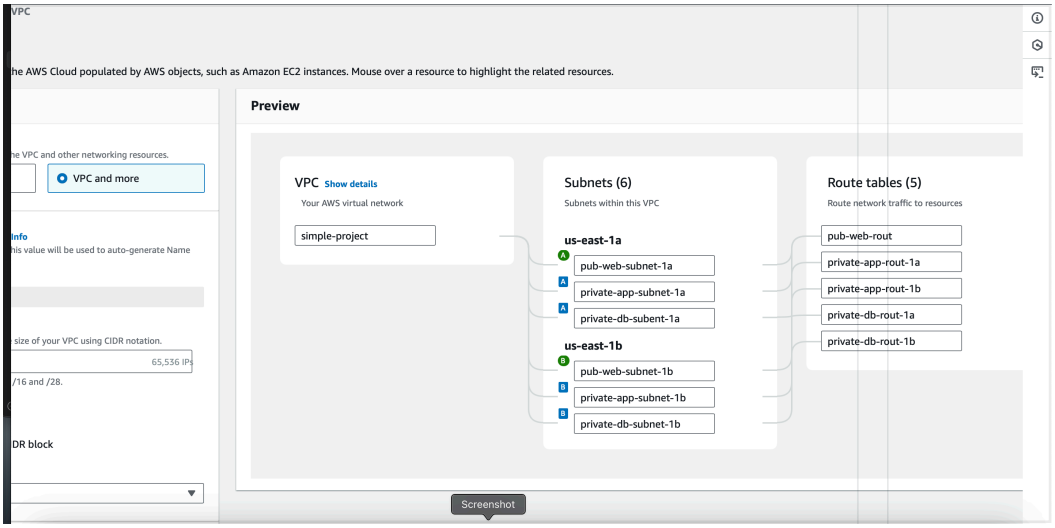
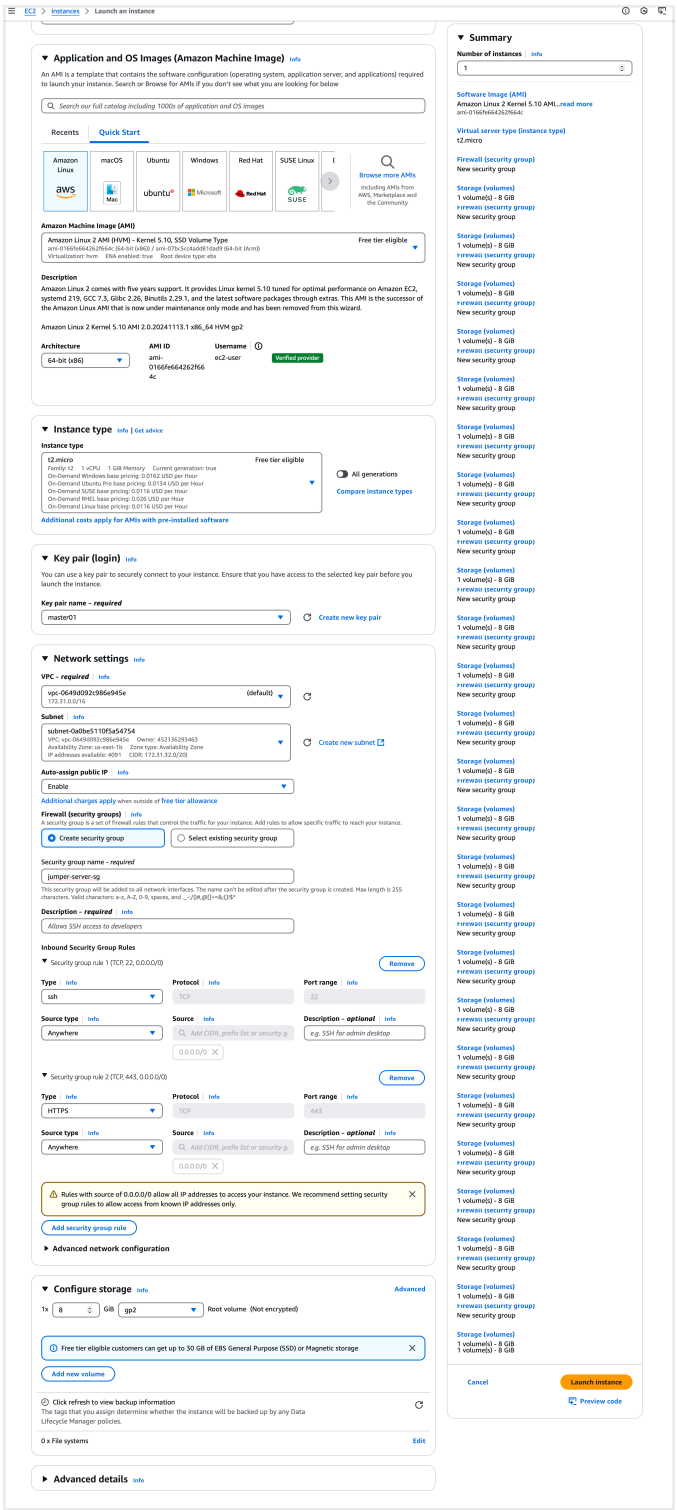
Creating simple 2-tier web architecture using AWS

Create a VPC and 6 subnet using this CIDR
170.20.0.0/20 for for your VPC
Use those CIDR for ur subnet (optional)
170.20.1.0/24 170.20.4.0/24 170.20.5.0/24
170.20.2.0/24 170.20.3.0/24 170.20.6.0/24

[PUB-WEB-subnet-01] [private-app-subnet-01] [private-db-subnet]

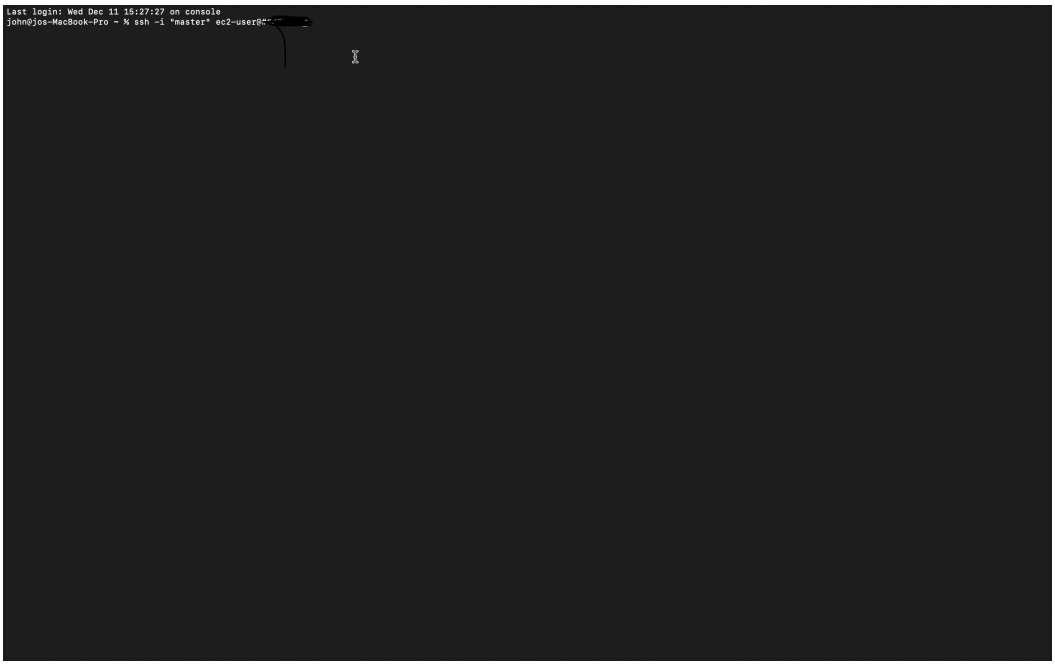


After creating and configure your VPC now, let create a ec2-instances
1, creating ec2 instances
- Give name and choose operating system could-be (ubuntu, os, or amazon linux)
- select instanc type (t2.small)
- create key-pair
- create new security group
- configure your networking



Onces you have created your jumper server, now let create anther ec2 instances for our LAMP ApacheMySQLPHP server
Using the above steps create anther instances (one thing to remember use the private-app-subnet. And create them on both Availability Zones

Once completed navigate to your terminal login to ur server using SSH-keys, and deploy LAMP server using this documentation (https://docs.aws.amazon.com/linux/al2/ug/ec2-lamp-amazon-linux-2.html)

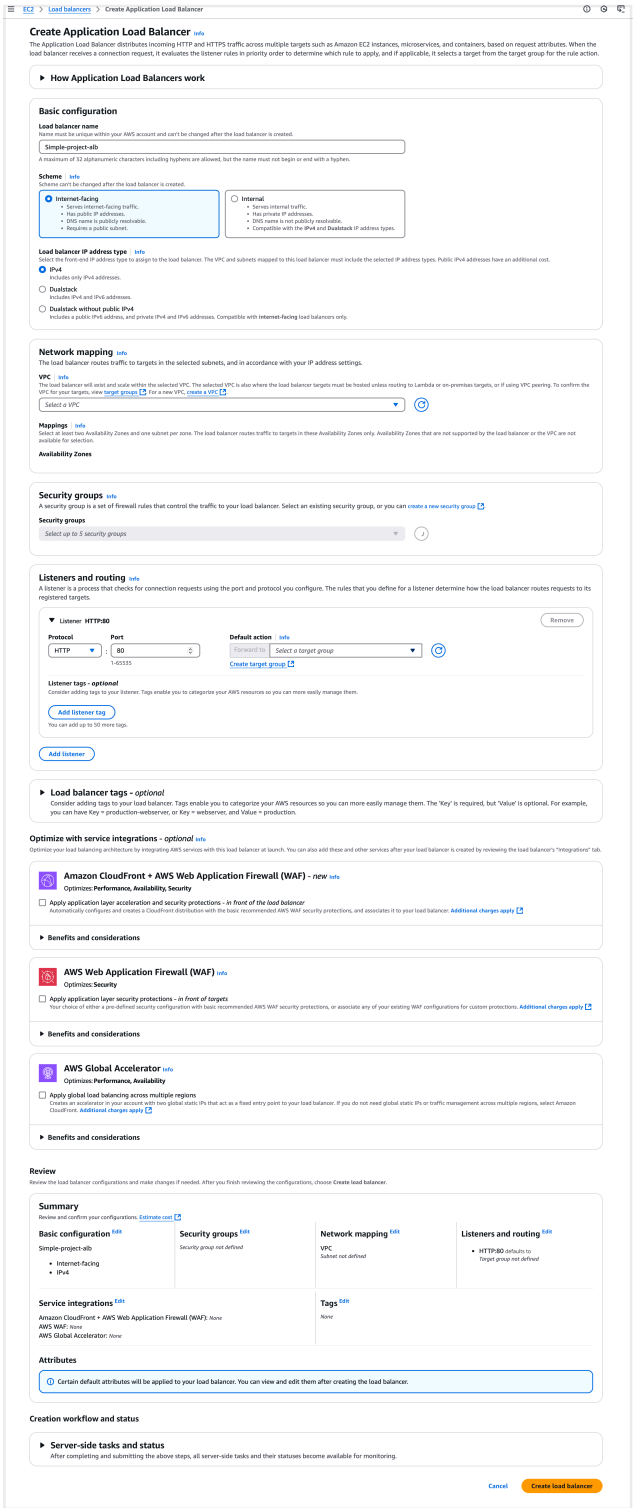


Once you have completed configure you apache and php server, on both Availability Zones now lets
Create Application-load-balancer and RDS MySQL-database\

Creating application load balancer

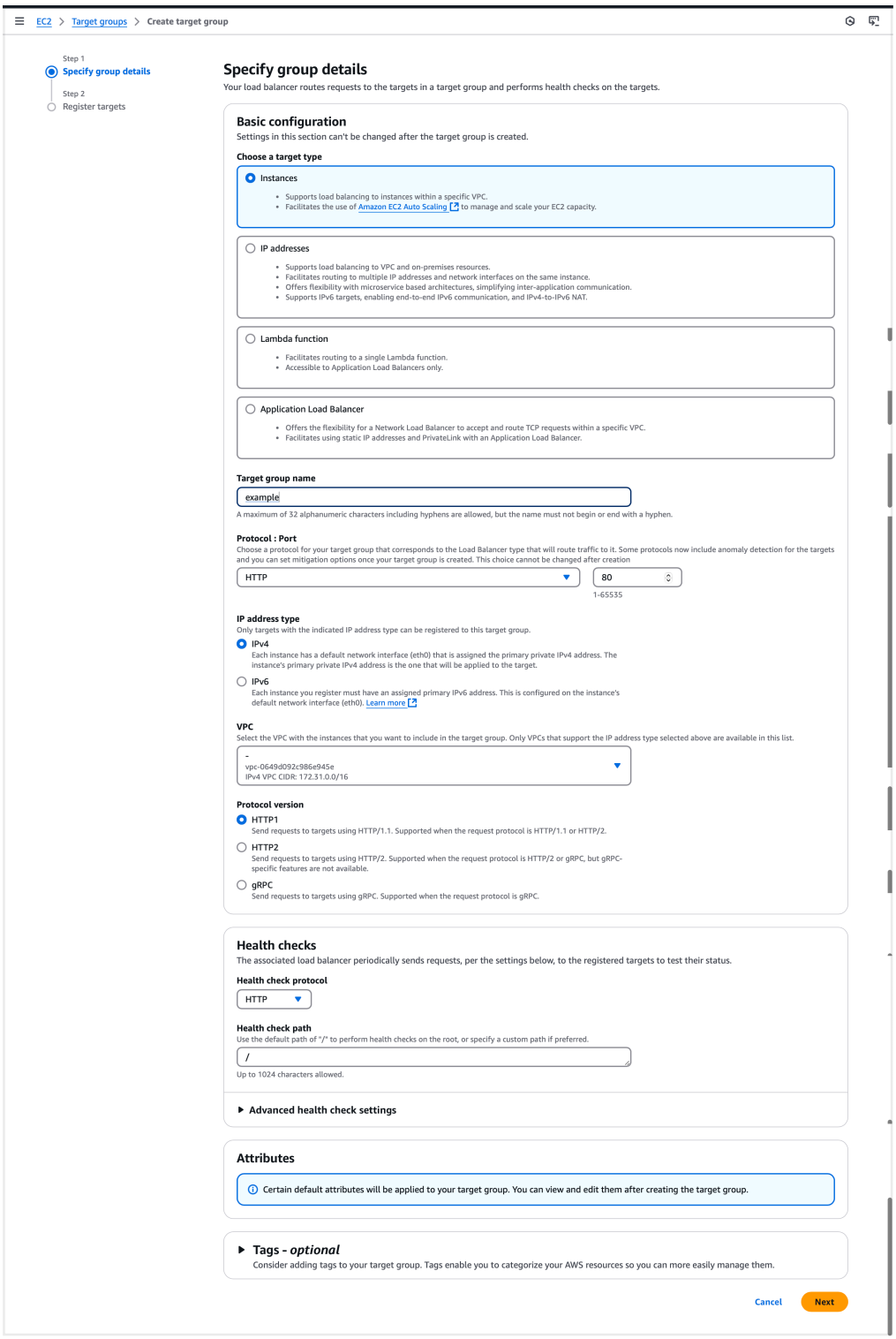
- Give name
- Load balance type = internet facing (HTTP-HTTPS)
- Select ip adders of = ipv4
- Chose your preview VPC
- Create a security group (alb-security.sg) allow request of =HTTP / HTTPS
- Add listeners (create target groups

You can configure cloud front, WAF and global accelerator.(optional)



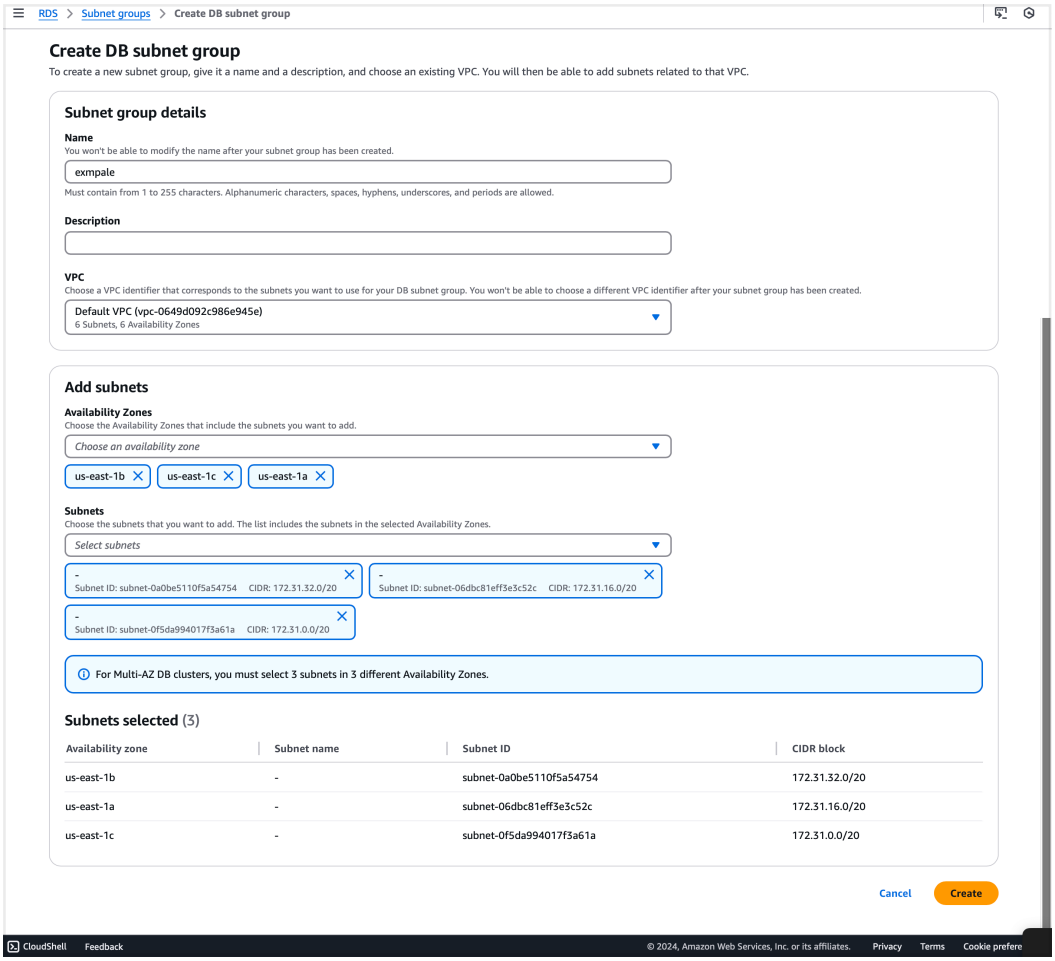
Create target group for your alb listener

- Give name
- Choose a target type (instance)
- Choose Protocol : HTTP
- Choose ip address type = ipv4
- Choose preview VPC
- After that Register you instance that we created earlier

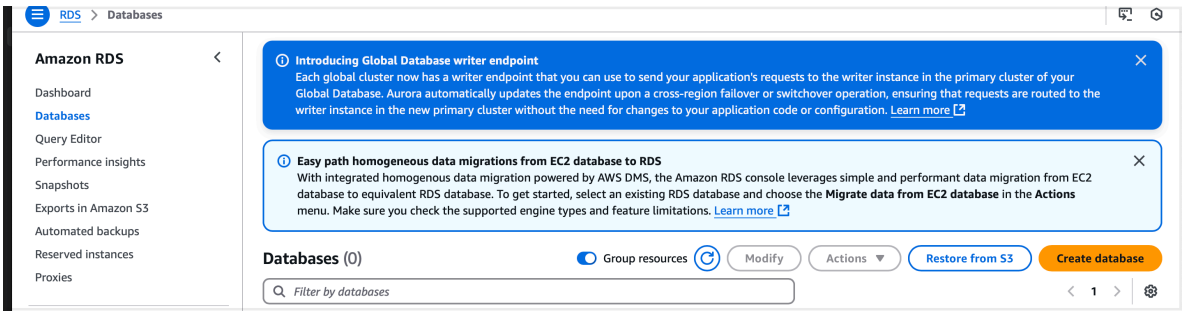


Once we confirm our traffic request is been distributed we can continue on creating our database subnet groups for Multi-AZ DB clusters

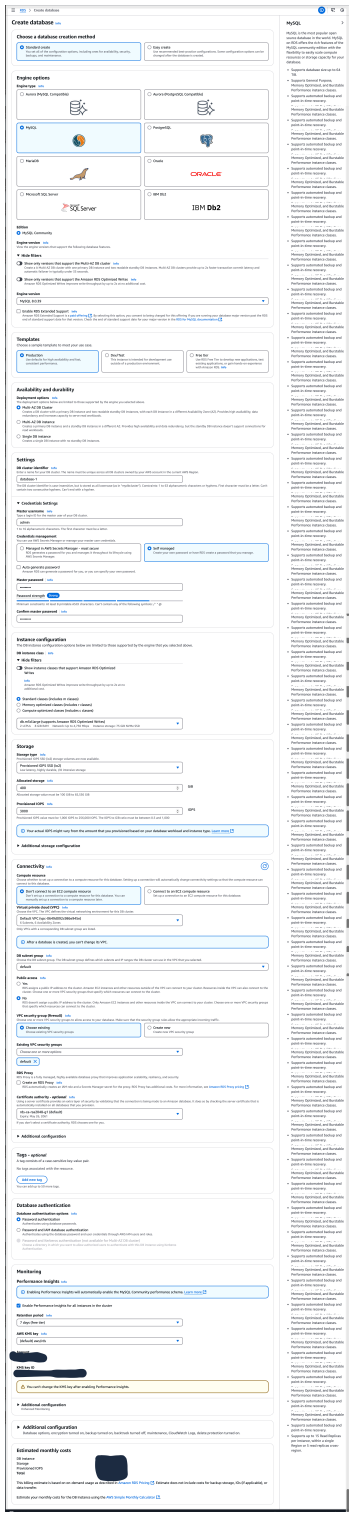
- Give name and select 3 AZ (“us-east-1a”, “us-east-1b”, “us-east-1c”)
- Select you preview VPC
- And choose subnet (“private-db-subnet-1a”, “private-db-subnet-1b”, “private-db-subnet-1c”)



Now let crate our database



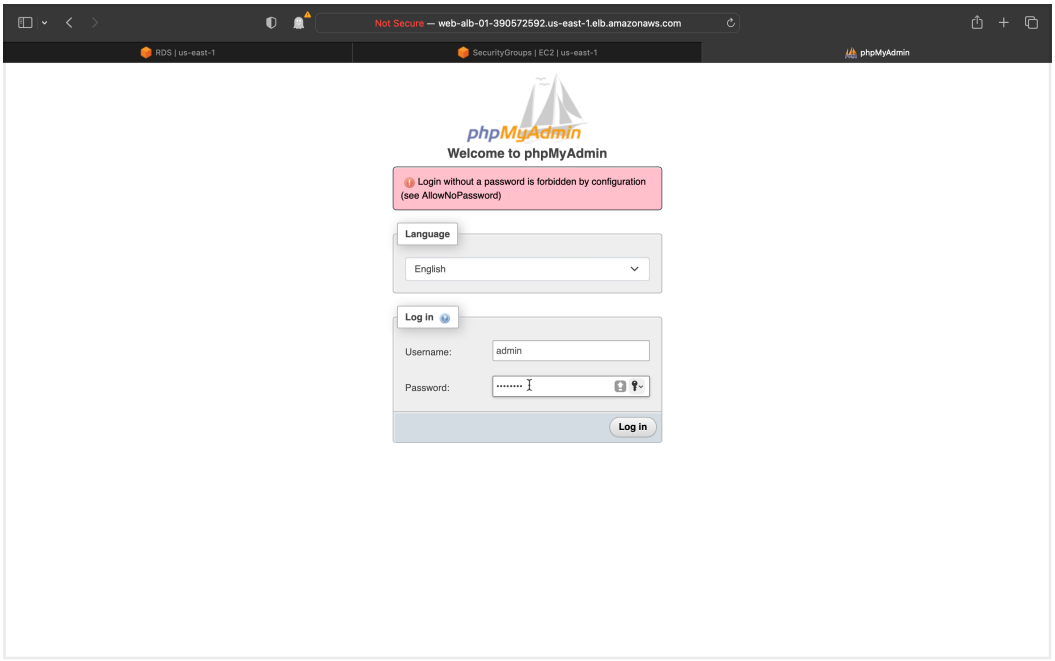
- Select MySQL data base
- Choose template = production
- Deployment options = Mulit-AZ DB cluster and Choose name
- Give credentials (username and password)
- Select your database Instance type and storage type as well
- Configure your VPC, subnet groups and dined public access
- Create security groups, (optional) you can create RDS proxy.
- Monitoring is optional it’s best to turn it on



Once the database initialization is completed copy the end point url and place it in config.inc.php this file is located in /var/www/html/phpMyAdmin/)

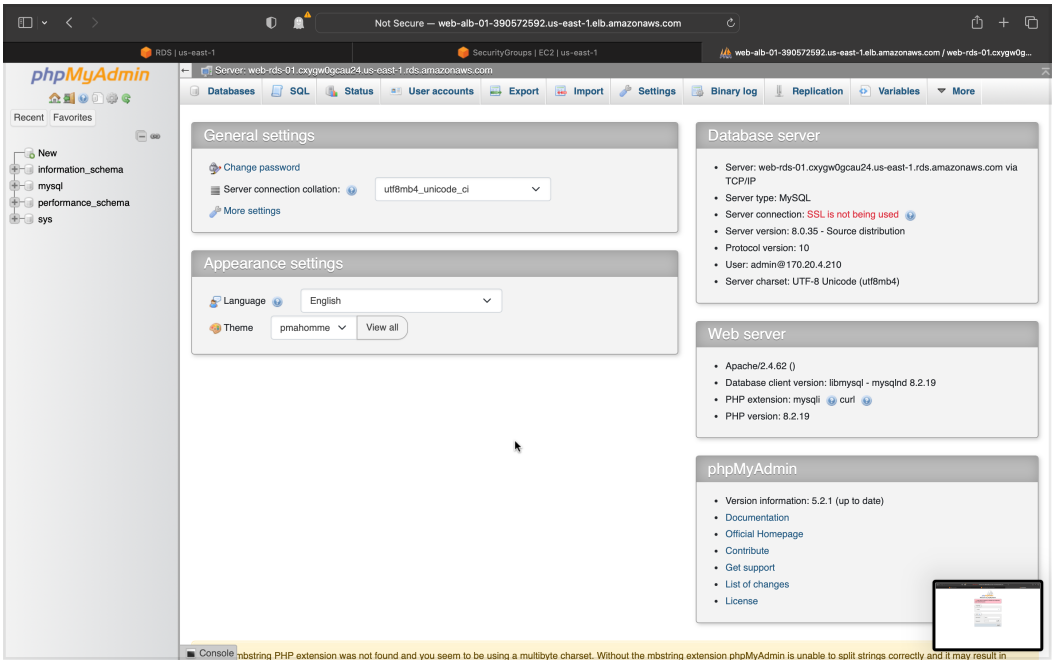
```
<?php
/**
 * phpMyAdmin sample configuration, you can use it as base for
 * manual configuration. For easier setup you can use setup/
 *
 * All directives are explained in documentation in the doc/ folder
 * or at <https://docs.phpmyadmin.net/>.
 */

declare(strict_types=1);

/**
 * This is needed for cookie based authentication to encrypt the cookie.
 * Needs to be a 32-bytes long string of random bytes. See FAQ 2.10.
 */
$cfg['blowfish_secret'] = ''; /* YOU MUST FILL IN THIS FOR COOKIE AUTH! */

/**
 * Servers configuration
 */
$i = 0;

/**
 * First server
 */
$i++;
/* Authentication type */
$cfg['Servers'][$i]['auth_type'] = 'cookie';
/* Server parameters */
$cfg['Servers'][$i]['host'] = 'web-rds-01.cxygw0gcau24.us-east-1.rds.amazonaws.com';
$cfg['Servers'][$i]['compress'] = false;
$cfg['Servers'][$i]['AllowNoPassword'] = false;

/*
 * phpMyAdmin configuration storage settings.
 */

/* User used to manipulate with storage */
// $cfg['Servers'][$i]['controlhost'] = '';
// $cfg['Servers'][$i]['controlport'] = '';
// $cfg['Servers'][$i]['controluser'] = 'pma';
// $cfg['Servers'][$i]['controlpass'] = 'pmapass';

/* Storage database and tables */
// $cfg['Servers'][$i]['pmadb'] = 'phpmyadmin';
// $cfg['Servers'][$i]['bookmarktable'] = 'pma__bookmark';
// $cfg['Servers'][$i]['relation'] = 'pma__relation';
// $cfg['Servers'][$i]['table_info'] = 'pma__table_info';
// $cfg['Servers'][$i]['table_coords'] = 'pma__table_coords';
// $cfg['Servers'][$i]['pdf_pages'] = 'pma__pdf_pages';
// $cfg['Servers'][$i]['column_info'] = 'pma__column_info';
// $cfg['Servers'][$i]['history'] = 'pma__history';
// $cfg['Servers'][$i]['table_uiprefs'] = 'pma__table_uiprefs';
// $cfg['Servers'][$i]['tracking'] = 'pma__tracking';
// $cfg['Servers'][$i]['userconfig'] = 'pma__userconfig';
// $cfg['Servers'][$i]['recent'] = 'pma__recent';
// $cfg['Servers'][$i]['favorite'] = 'pma__favorite';
// $cfg['Servers'][$i]['users'] = 'pma__users';
// $cfg['Servers'][$i]['usergroups'] = 'pma__usergroups';
// $cfg['Servers'][$i]['navigationhiding'] = 'pma__navigationhiding';
// $cfg['Servers'][$i]['savedsearches'] = 'pma__savedsearches';
// $cfg['Servers'][$i]['central_columns'] = 'pma__central_columns';
                                                                34,3          Top
```

Navget to the browser http://web-alb-01-390572592.us-east-1.elb.amazonaws.com



You should receive an output like this now put the credential that you created when lunching mySql database

Once you log-in it should look like this


Not Secure — web-alb-01-390572592.us-east-1.elb.amazonaws.com
RDS | us-east-1
SecurityGroups | EC2 | us-east-1
web-alb-01-390572592.us-east-1.elb.amazonaws.com / web-rds-01.cxygw0g...
phpMyAdmin
Recent
Favorites
New
information_schema
mysql
performance_schema
sys
Server: web-rds-01.cxygw0gcau24.us-east-1.rds.amazonaws.com
Databases
SQL
Status
User accounts
Export
Import
Settings
Binary log
Replication
Variables
More
General settings
Change password
Server connection collation:
utf8mb4_unicode_ci
More settings
Appearance settings
Language
English
Theme
pmahomme
View all
Database server
Server: web-rds-01.cxygw0gcau24.us-east-1.rds.amazonaws.com via TCP/IP
Server type: MySQL
Server connection: SSL is not being used
Server version: 8.0.35 - Source distribution
Protocol version: 10
User: admin@170.20.4.210
Server charset: UTF-8 Unicode (utf8mb4)
Web server
Apache/2.4.62 ()
Database client version: libmysql - mysqlnd 8.2.19
PHP extension: mysqli curl
PHP version: 8.2.19
phpMyAdmin
Version information: 5.2.1 (up to date)
Documentation
Official Homepage
Contribute
Get support
List of changes
License
Console
mbstring PHP extension was not found and you seem to be using a multibyte charset. Without the mbstring extension phpMyAdmin is unable to split strings correctly and it may result in