Project – 2
Website Orchestration

Contact us: support@intellipaat.com / © Copyright Intellipaat / All rights

Industry: Internet related

Problem Statement:

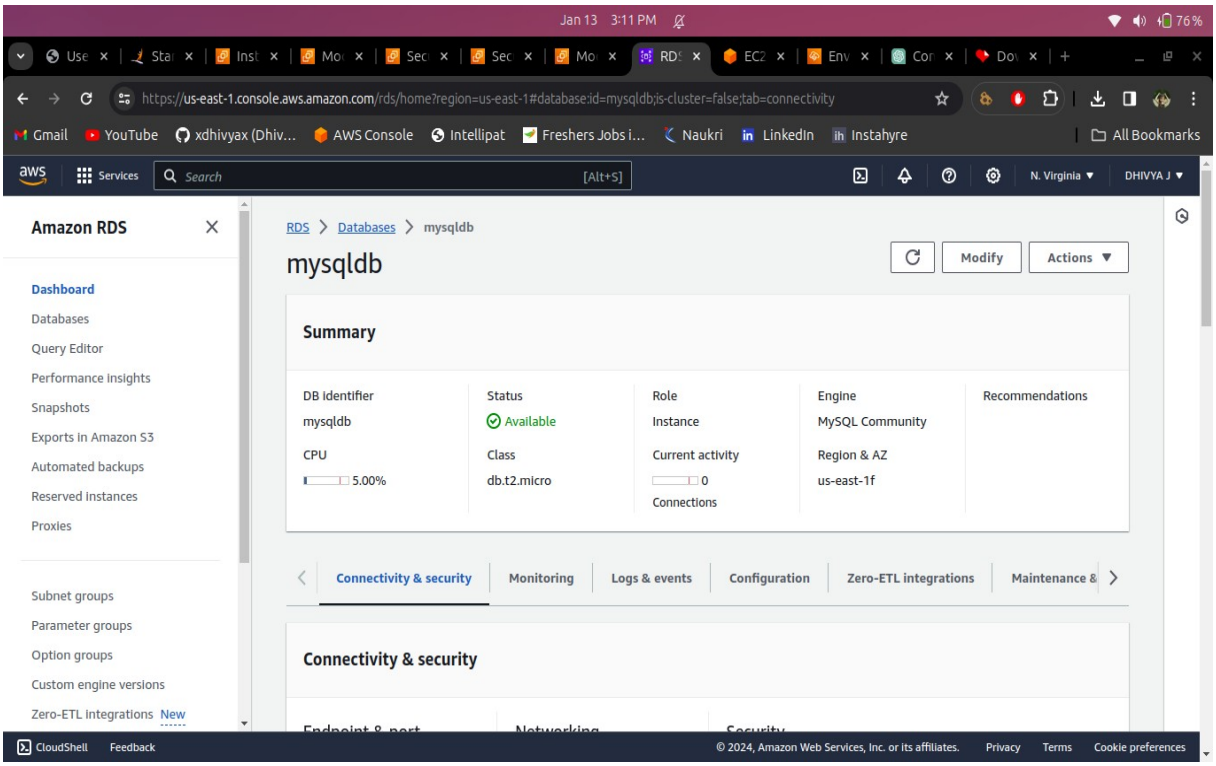
How to orchestrate a website with lesser time and higher availability along with Auto Scaling.

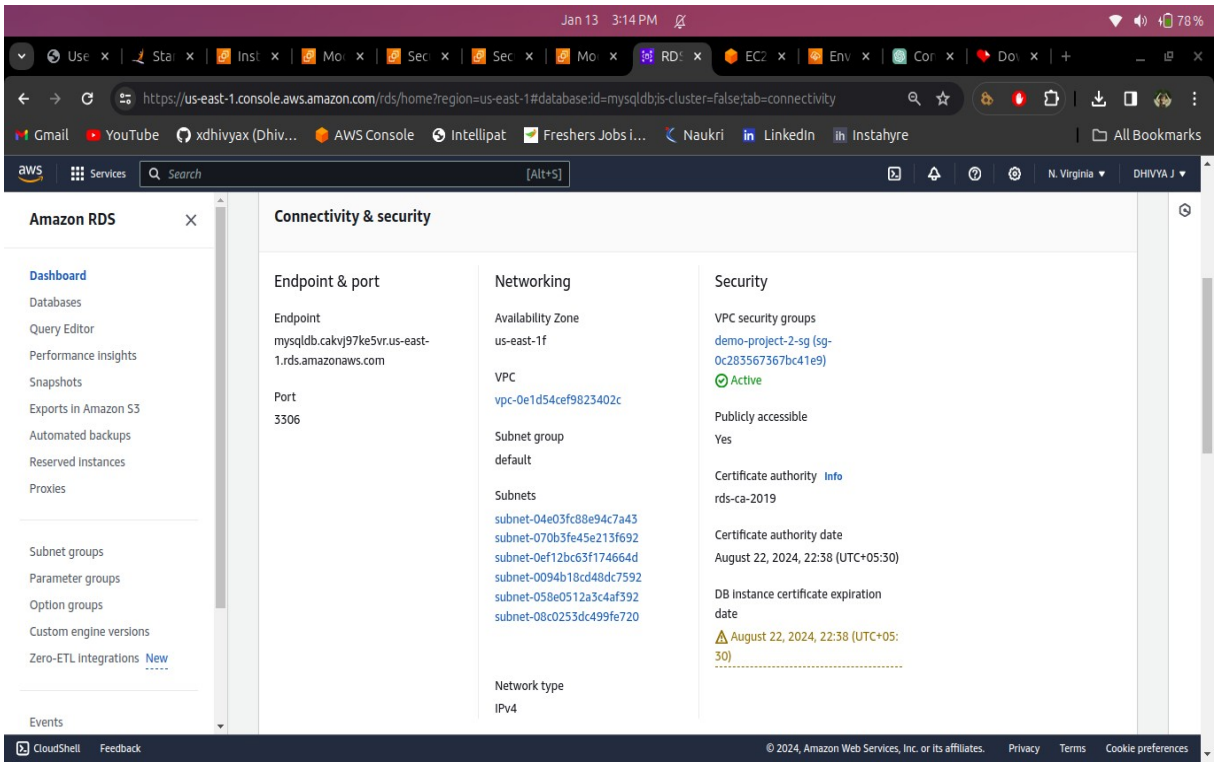
Topics:

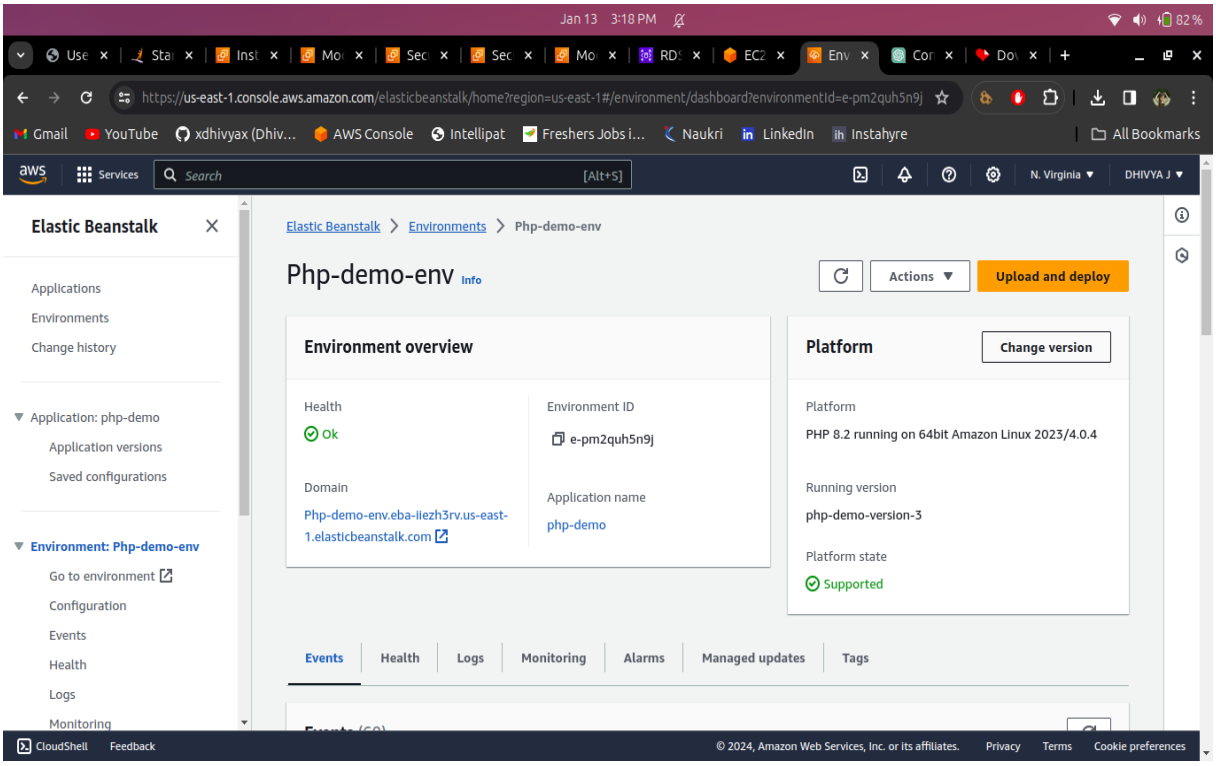
In this AWS project, you have to deploy a high-availability PHP application with an external Amazon RDS database to Elastic Beanstalk. Running a DB instance external to Elastic Beanstalk decouples the database from the lifecycle of your environment. This lets you connect to the same database from multiple environments, swap one database for another, or perform a blue/green deployment without affecting your database.

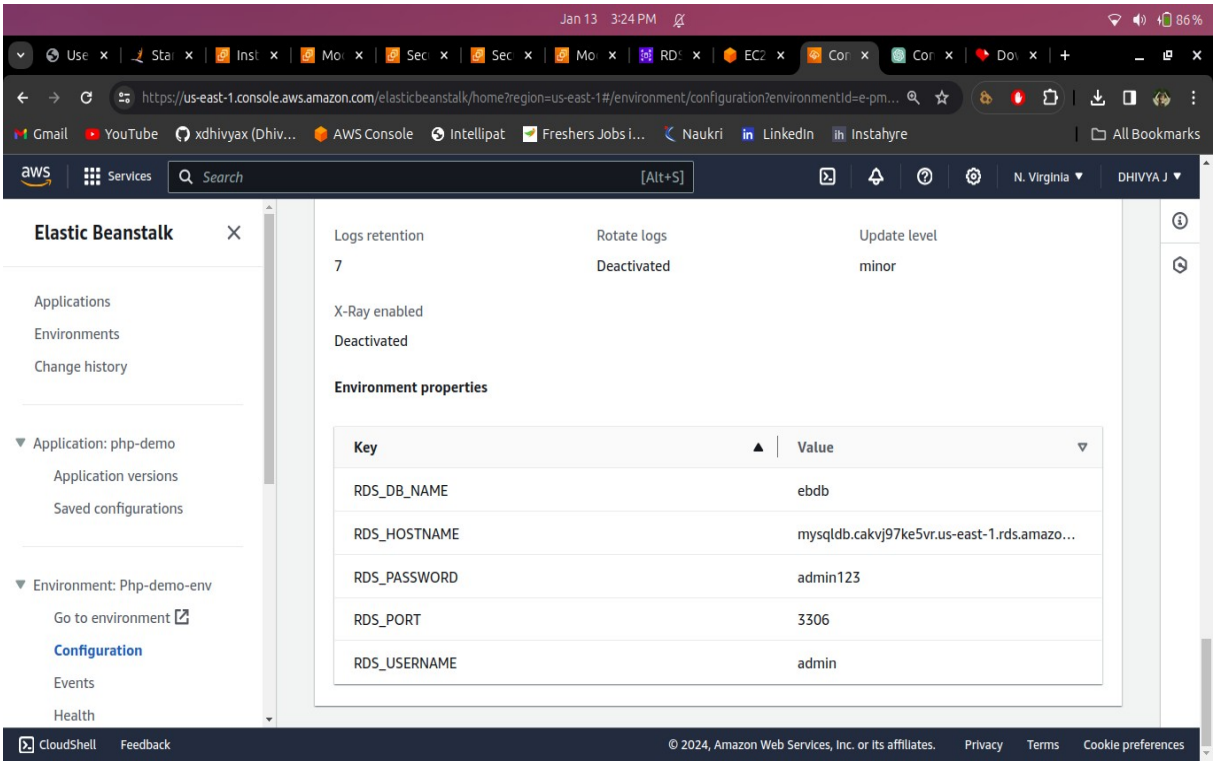
Highlights:

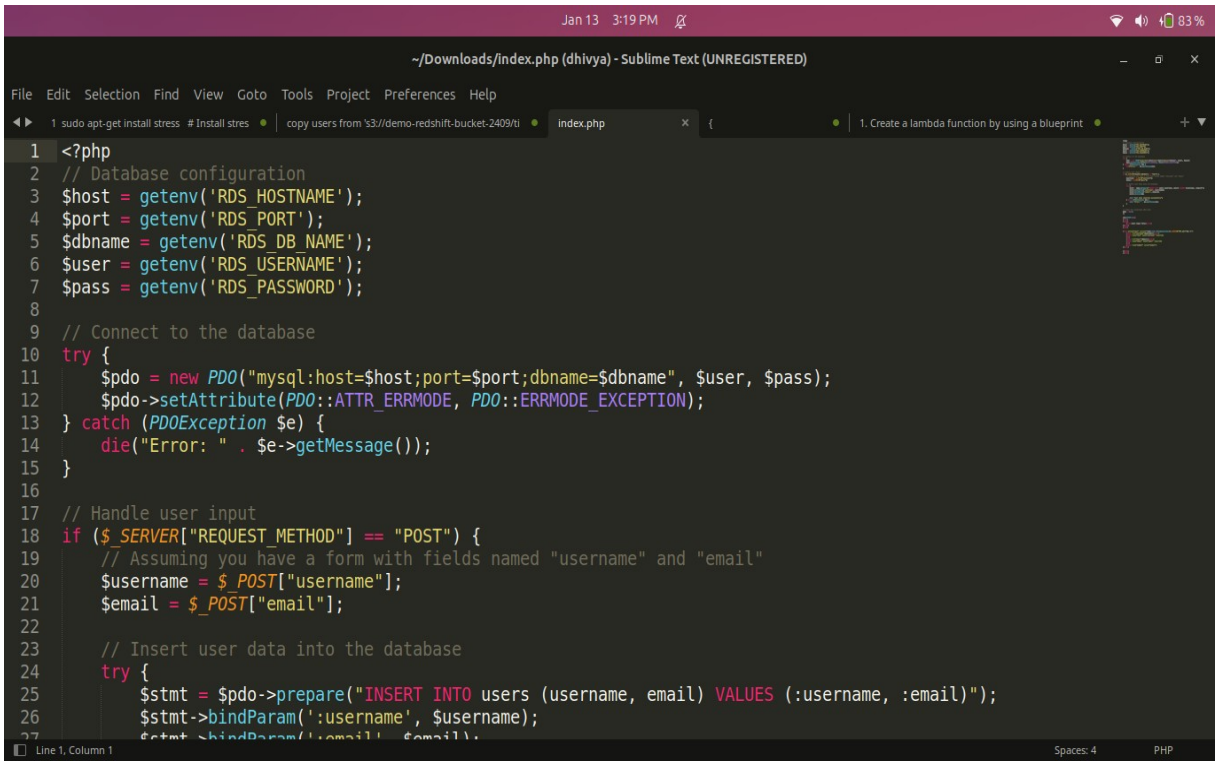
Launch a DB instance in Amazon RDS
Create an Elastic Beanstalk Environment
Configure Security Groups and Scaling

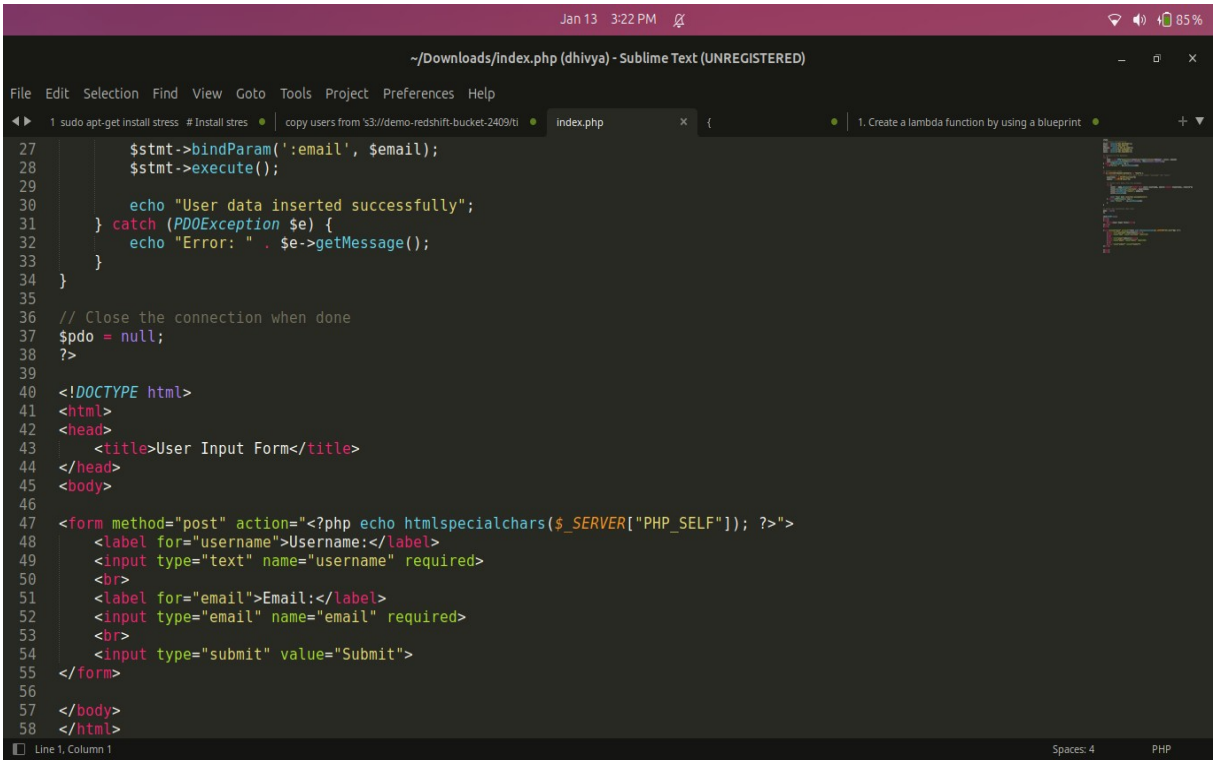

Jan 13 3:11 PM
https://us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#database:id=mysqldb;is-cluster=false;tab=connectivity
Amazon RDS
Dashboard
Databases
Query Editor
Performance Insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
RDS > Databases > mysqldb
mysqldb
Modify
Actions
Summary
DB identifier
mysqldb
Status
Available
Role
Instance
Engine
MySQL Community
Recommendations
CPU
5.00%
Class
db.t2.micro
Current activity
0
Connections
Region & AZ
us-east-1f
Connectivity & security
Monitoring
Logs & events
Configuration
Zero-ETL integrations
Maintenance &
Connectivity & security
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Jan 13 3:14 PM
https://us-east-1.console.aws.amazon.com/rds/home?region=us-east-1#database:id=mysqldb;is-cluster=false;tab=connectivity
Amazon RDS
Dashboard
Databases
Query Editor
Performance Insights
Snapshots
Exports in Amazon S3
Automated backups
Reserved instances
Proxies
Subnet groups
Parameter groups
Option groups
Custom engine versions
Zero-ETL integrations New
Events
Connectivity & security
Endpoint & port
Endpoint
mysqldb.cakvj97ke5vr.us-east-1.rds.amazonaws.com
Port
3306
Networking
Availability Zone
us-east-1f
VPC
vpc-0e1d54cef9823402c
Subnet group
default
Subnets
subnet-04e03fc88e94c7a43
subnet-070b3fe45e213f692
subnet-0ef12bc63f174664d
subnet-0094b18cd48dc7592
subnet-058e0512a3c4af392
subnet-08c0253dc499fe720
Network type
IPv4
Security
VPC security groups
demo-project-2-sg (sg-0c283567367bc41e9)
Active
Publicly accessible
Yes
Certificate authority Info
rds-ca-2019
Certificate authority date
August 22, 2024, 22:38 (UTC+05:30)
DB instance certificate expiration date
August 22, 2024, 22:38 (UTC+05:30)
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Jan 13 3:18 PM
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/environment/dashboard?environmentId=e-pm2quh5n9j
Gmail YouTube xdhivyax (Dhiv... AWS Console Intellipat Freshers Jobs i... Naukri LinkedIn Instahyre All Bookmarks
aws Services Search [Alt+S] N. Virginia DHIVYA J
Elastic Beanstalk
Applications
Environments
Change history
Application: php-demo
Application versions
Saved configurations
Environment: Php-demo-env
Go to environment
Configuration
Events
Health
Logs
Monitoring
Elastic Beanstalk > Environments > Php-demo-env
Php-demo-env Info
Actions
Upload and deploy
Environment overview
Health
Ok
Environment ID
e-pm2quh5n9j
Domain
Php-demo-env.eba-iiezh3rv.us-east-1.elasticbeanstalk.com
Application name
php-demo
Platform
Change version
Platform
PHP 8.2 running on 64bit Amazon Linux 2023/4.0.4
Running version
php-demo-version-3
Platform state
Supported
Events
Health
Logs
Monitoring
Alarms
Managed updates
Tags
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

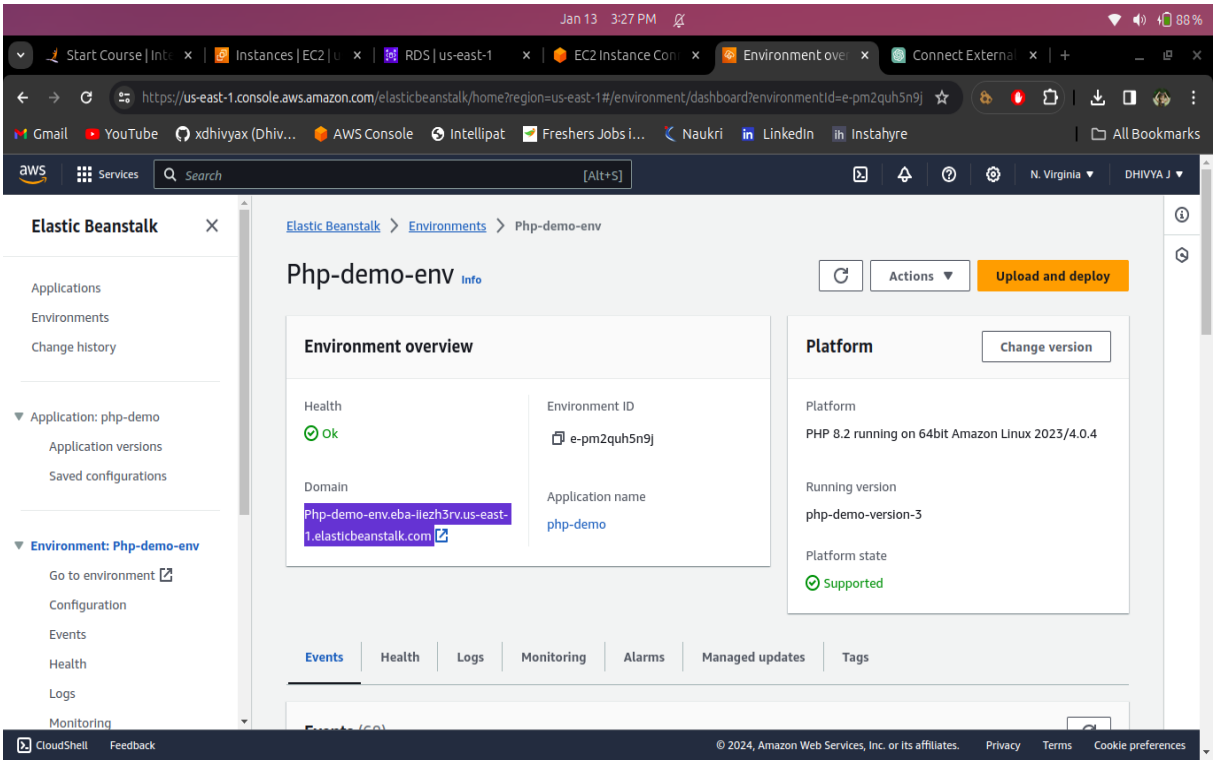

Jan 13 3:24 PM
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/environment/configuration?environmentId=e-pm...
Gmail YouTube xdhivyax (Dhiv... AWS Console Intellipat Freshers Jobs i... Naukri LinkedIn Instahyre All Bookmarks
aws Services Search [Alt+S] N. Virginia DHIVYA J
Elastic Beanstalk
Applications
Environments
Change history
Application: php-demo
Application versions
Saved configurations
Environment: Php-demo-env
Go to environment
Configuration
Events
Health
Logs retention
7
Rotate logs
Deactivated
Update level
minor
X-Ray enabled
Deactivated
Environment properties
Key
Value
RDS_DB_NAME
ebdb
RDS_HOSTNAME
mysqldb.cakvj97ke5vr.us-east-1.rds.amazo...
RDS_PASSWORD
admin123
RDS_PORT
3306
RDS_USERNAME
admin
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

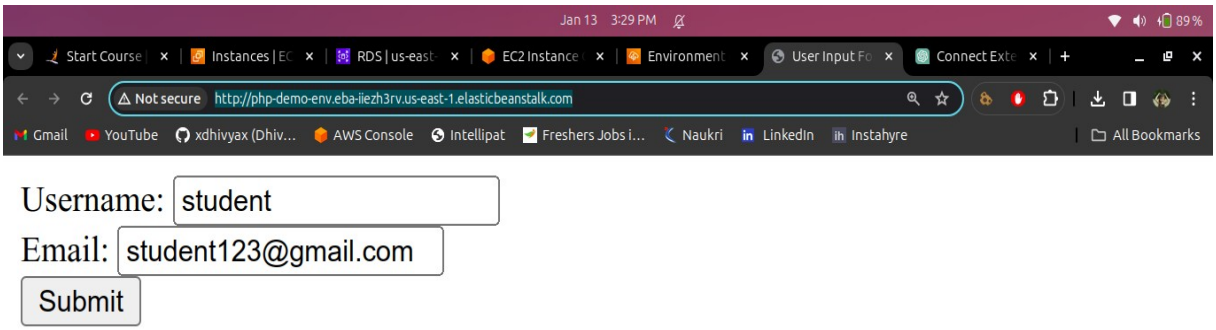

Jan 13 3:19 PM
83 %
~/Downloads/index.php (dhivya) - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
1 sudo apt-get install stress # Install stres
copy users from 's3://demo-redshift-bucket-2409/ti
index.php
1. Create a lambda function by using a blueprint
<?php
// Database configuration
$host = getenv('RDS_HOSTNAME');
$port = getenv('RDS_PORT');
$dbname = getenv('RDS_DB_NAME');
$user = getenv('RDS_USERNAME');
$pass = getenv('RDS_PASSWORD');
// Connect to the database
try {
$pdo = new PDO("mysql:host=$host;port=$port;dbname=$dbname", $user, $pass);
$pdo->setAttribute(PDO::ATTR_ERRMODE, PDO::ERRMODE_EXCEPTION);
} catch (PDOException $e) {
die("Error: " . $e->getMessage());
}
// Handle user input
if ($_SERVER["REQUEST_METHOD"] == "POST") {
// Assuming you have a form with fields named "username" and "email"
$username = $_POST["username"];
$email = $_POST["email"];
// Insert user data into the database
try {
$stmt = $pdo->prepare("INSERT INTO users (username, email) VALUES (:username, :email)");
$stmt->bindParam(':username', $username);
Line 1, Column 1
Spaces: 4
PHP

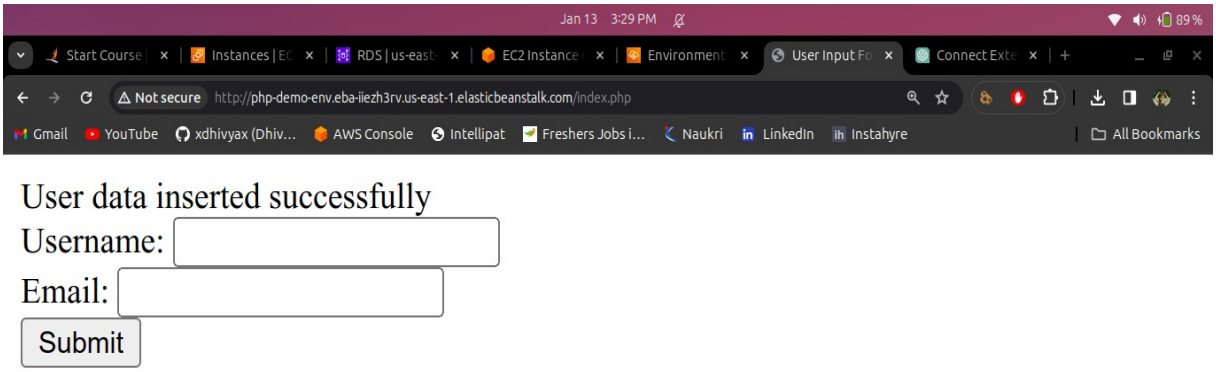

Jan 13 3:22 PM
85 %
~/Downloads/index.php (dhivya) - Sublime Text (UNREGISTERED)
File Edit Selection Find View Goto Tools Project Preferences Help
1 sudo apt-get install stress # Install stres
copy users from 's3://demo-redshift-bucket-2409/ti
index.php
1. Create a lambda function by using a blueprint
$stmt->bindParam(':email', $email);
$stmt->execute();
echo "User data inserted successfully";
} catch (PDOException $e) {
echo "Error: " . $e->getMessage();
}
}
// Close the connection when done
$pdo = null;
?>
<!DOCTYPE html>
<html>
<head>
<title>User Input Form</title>
</head>
<body>
<form method="post" action="<?php echo htmlspecialchars($_SERVER["PHP_SELF"]); ?>">
<label for="username">Username:</label>
<input type="text" name="username" required>

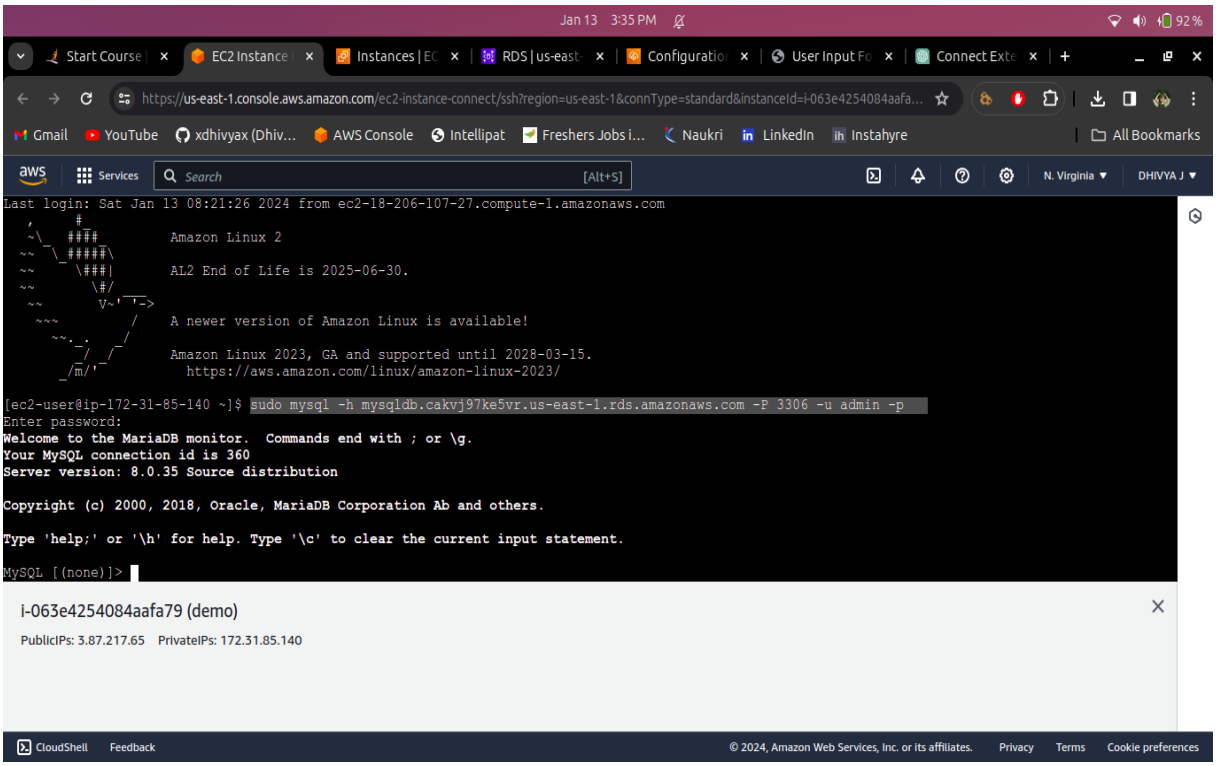
<label for="email">Email:</label>
<input type="email" name="email" required>

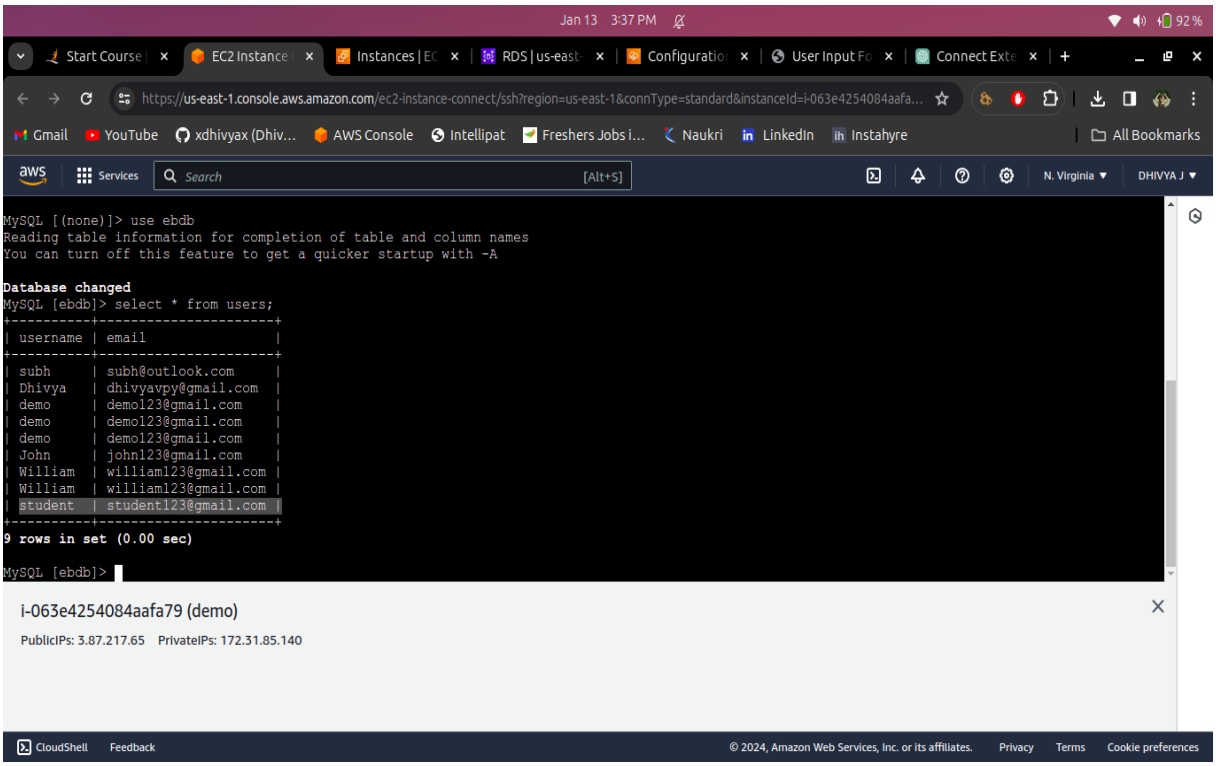
<input type="submit" value="Submit">
</form>
</body>
</html>
Line 1, Column 1
Spaces: 4
PHP

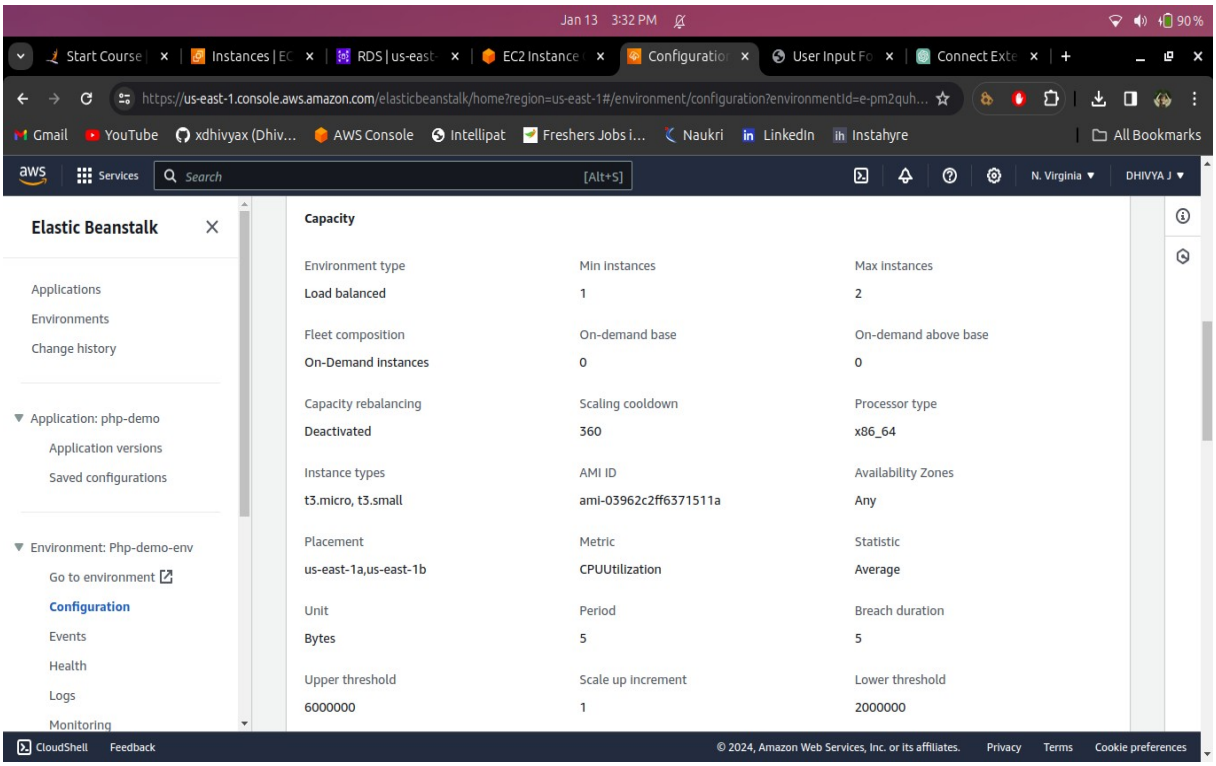

Jan 13 3:27 PM
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/environment/dashboard?environmentId=e-pm2quh5n9j
Elastic Beanstalk
Applications
Environments
Change history
Application: php-demo
Application versions
Saved configurations
Environment: Php-demo-env
Go to environment
Configuration
Events
Health
Logs
Monitoring
Elastic Beanstalk > Environments > Php-demo-env
Php-demo-env Info
Actions
Upload and deploy
Environment overview
Health
Ok
Environment ID
e-pm2quh5n9j
Domain
Php-demo-env.eba-iiezh3rv.us-east-1.elasticbeanstalk.com
Application name
php-demo
Platform
Change version
Platform
PHP 8.2 running on 64bit Amazon Linux 2023/4.0.4
Running version
php-demo-version-3
Platform state
Supported
Events
Health
Logs
Monitoring
Alarms
Managed updates
Tags
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

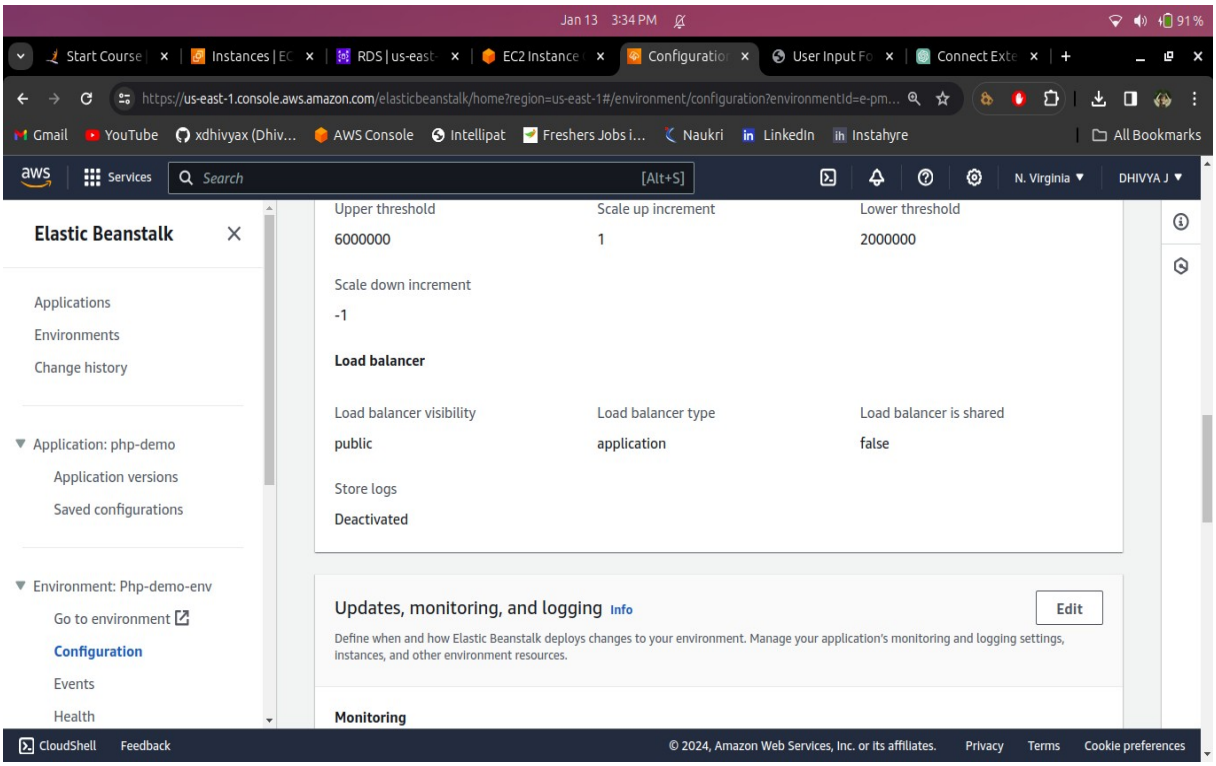

Jan 13 3:29 PM
Not secure
http://php-demo-env.eba-iiezh3rv.us-east-1.elasticbeanstalk.com
Username: student
Email: student123@gmail.com
Submit

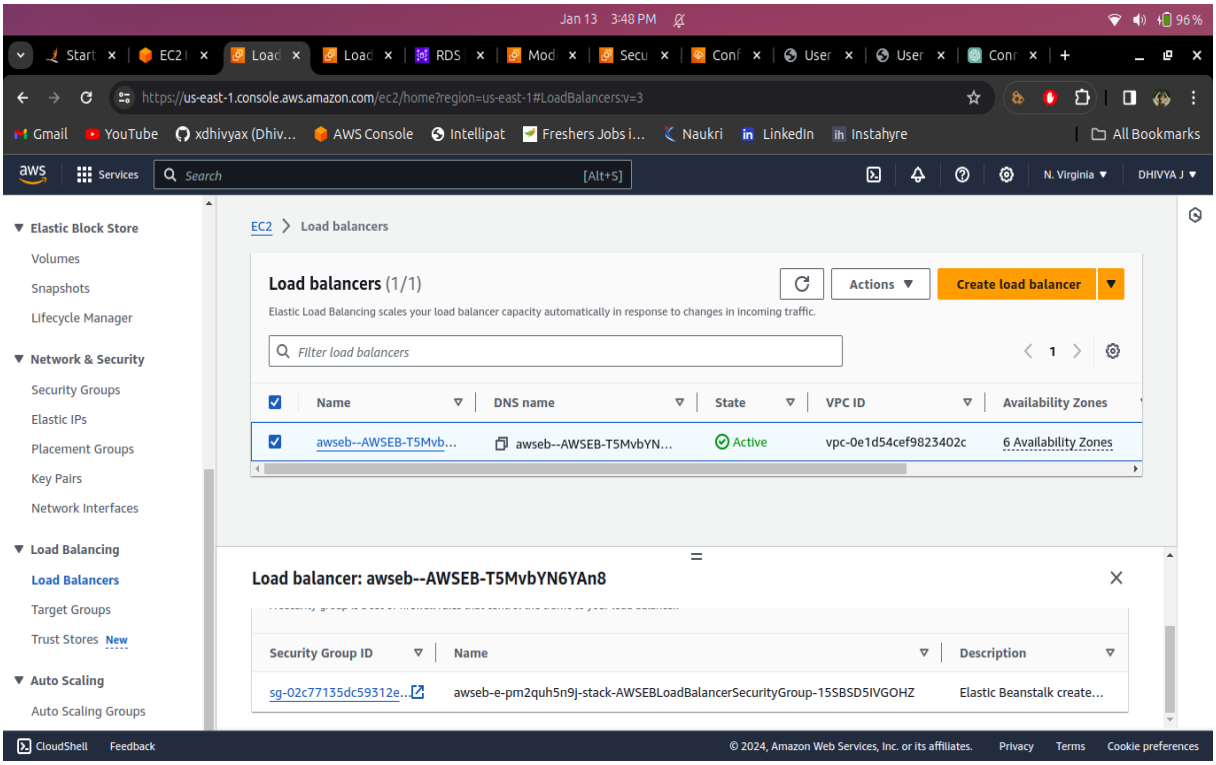

Jan 13 3:29 PM
89 %
Start Course
Instances | EC
RDS | us-east
EC2 Instance
Environment
User Input Fo
Connect Exte
Not secure
http://php-demo-env.eba-iiezh3rv.us-east-1.elasticbeanstalk.com/index.php
Gmail
YouTube
xdhivyax (Dhiv...
AWS Console
Intellipat
Freshers Jobs i...
Naukri
LinkedIn
Instahyre
All Bookmarks
User data inserted successfully
Username:
Email:
Submit

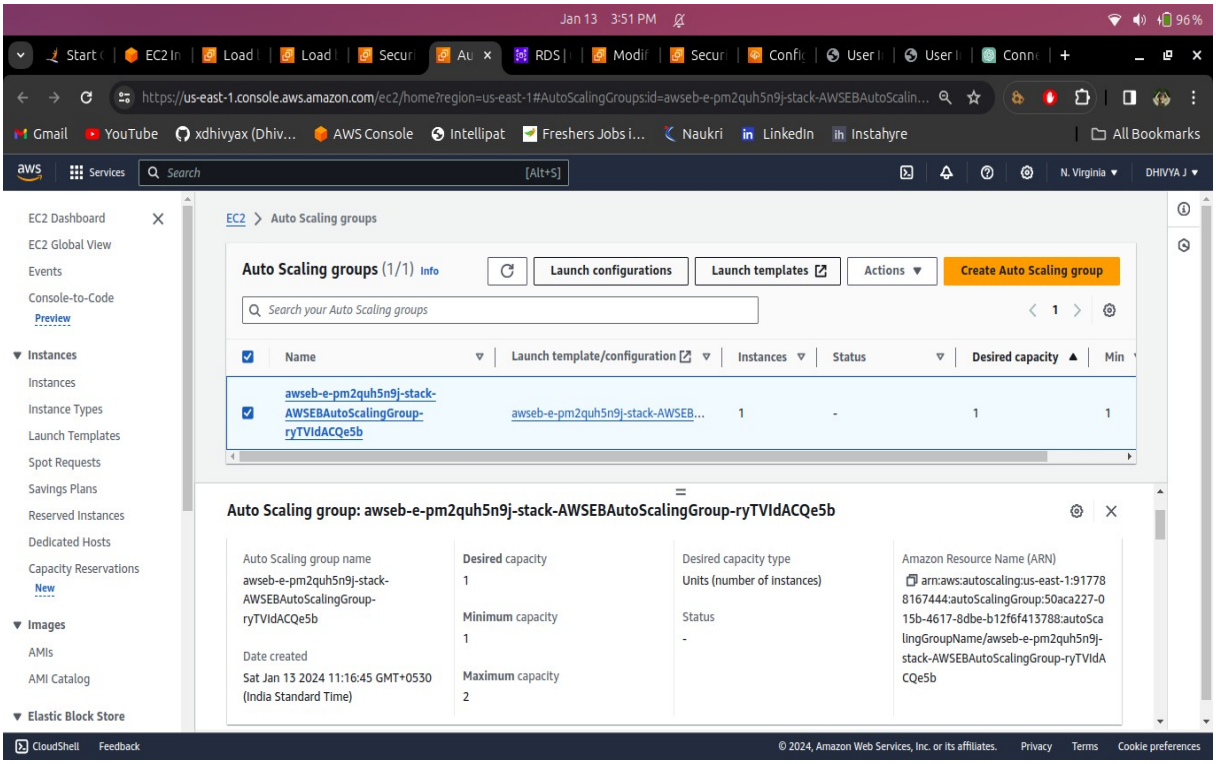

Jan 13 3:35 PM
92 %
Start Course
EC2 Instance
Instances | EC
RDS | us-east
Configuratio
User Input Fo
Connect Exte
https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-063e4254084aafa...
Gmail
YouTube
xdhivyax (Dhiv...
AWS Console
Intellipat
Freshers Jobs i...
Naukri
LinkedIn
Instahyre
All Bookmarks
aws
Services
Search
[Alt+S]
N. Virginia
DHIVYA J
Last login: Sat Jan 13 08:21:26 2024 from ec2-18-206-107-27.compute-1.amazonaws.com
Amazon Linux 2
AL2 End of Life is 2025-06-30.
A newer version of Amazon Linux is available!
Amazon Linux 2023, GA and supported until 2028-03-15.
https://aws.amazon.com/linux/amazon-linux-2023/
[ec2-user@ip-172-31-85-140 ~]$ sudo mysql -h mysqldb.cakvj97ke5vr.us-east-1.rds.amazonaws.com -P 3306 -u admin -p
Enter password:
Welcome to the MariaDB monitor. Commands end with ; or \g.
Your MySQL connection id is 360
Server version: 8.0.35 Source distribution
Copyright (c) 2000, 2018, Oracle, MariaDB Corporation Ab and others.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
MySQL [(none)]>
i-063e4254084aafa79 (demo)
PublicIPs: 3.87.217.65 PrivateIPs: 172.31.85.140
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Jan 13 3:37 PM
https://us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-063e4254084aafa...
MySQL [(none)]> use ebdb
Reading table information for completion of table and column names
You can turn off this feature to get a quicker startup with -A
Database changed
MySQL [ebdb]> select * from users;
username	email
subh	subh@outlook.com
Dhivya	dhivyavpy@gmail.com
demo	demo123@gmail.com
demo	demo123@gmail.com
demo	demo123@gmail.com
John	john123@gmail.com
William	william123@gmail.com
William	william123@gmail.com
student	student123@gmail.com
9 rows in set (0.00 sec)
MySQL [ebdb]>
i-063e4254084aafa79 (demo)
PublicIPs: 3.87.217.65 PrivateIPs: 172.31.85.140
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

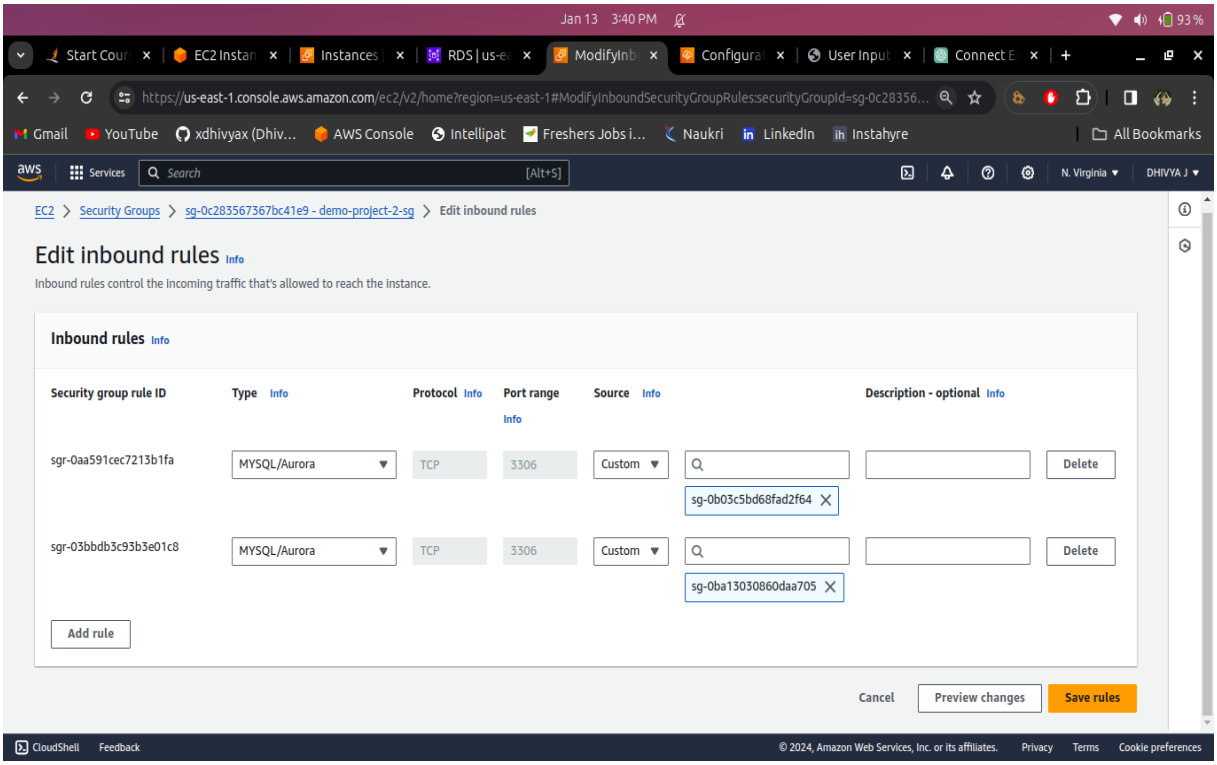

Jan 13 3:32 PM
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/environment/configuration?environmentId=e-pm2quh...
Elastic Beanstalk
Applications
Environments
Change history
Application: php-demo
Application versions
Saved configurations
Environment: Php-demo-env
Go to environment
Configuration
Events
Health
Logs
Monitoring
Capacity
Environment type
Load balanced
Min instances
1
Max instances
2
Fleet composition
On-Demand Instances
On-demand base
0
On-demand above base
0
Capacity rebalancing
Deactivated
Scaling cooldown
360
Processor type
x86_64
Instance types
t3.micro, t3.small
AMI ID
ami-03962c2ff6371511a
Availability Zones
Any
Placement
us-east-1a,us-east-1b
Metric
CPUUtilization
Statistic
Average
Unit
Bytes
Period
5
Breach duration
5
Upper threshold
6000000
Scale up increment
1
Lower threshold
2000000
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

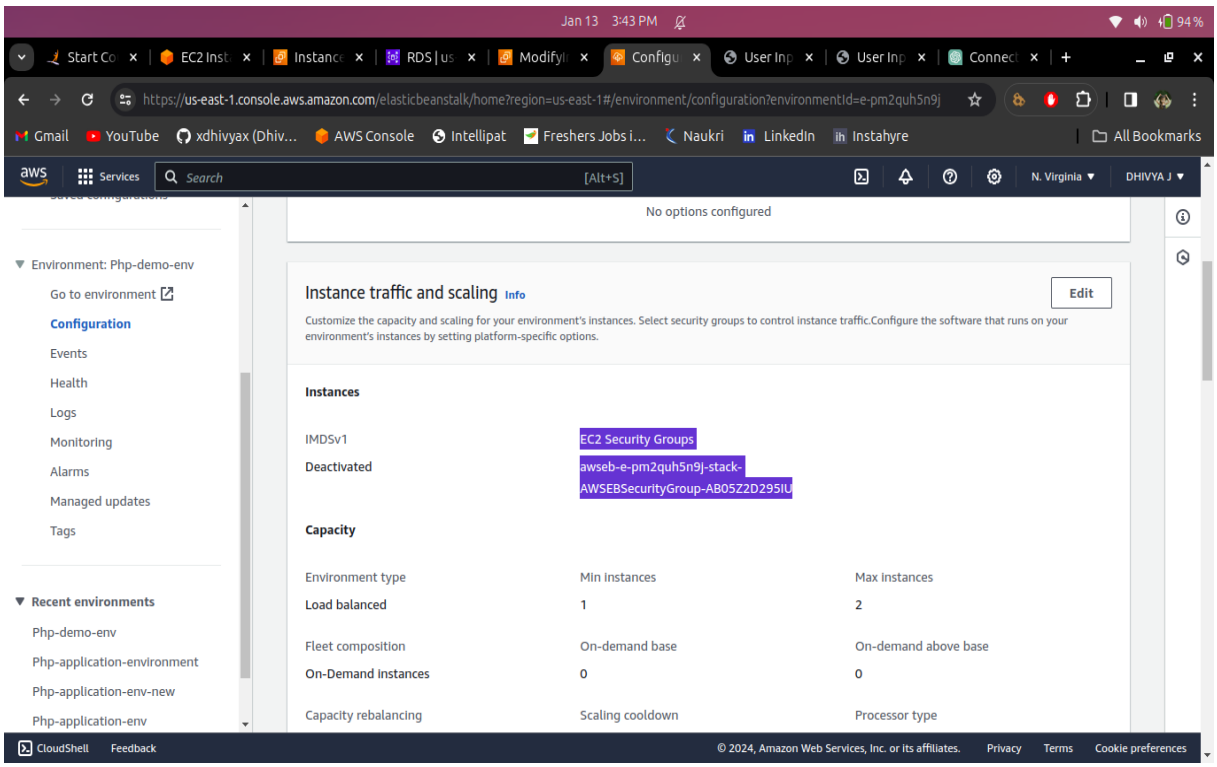

Jan 13 3:34 PM
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/environment/configuration?environmentId=e-pm...
Elastic Beanstalk
Applications
Environments
Change history
Application: php-demo
Application versions
Saved configurations
Environment: Php-demo-env
Go to environment
Configuration
Events
Health
Upper threshold
6000000
Scale up increment
1
Lower threshold
2000000
Scale down increment
-1
Load balancer
Load balancer visibility
public
Load balancer type
application
Load balancer is shared
false
Store logs
Deactivated
Updates, monitoring, and logging Info
Edit
Define when and how Elastic Beanstalk deploys changes to your environment. Manage your application's monitoring and logging settings, instances, and other environment resources.
Monitoring
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

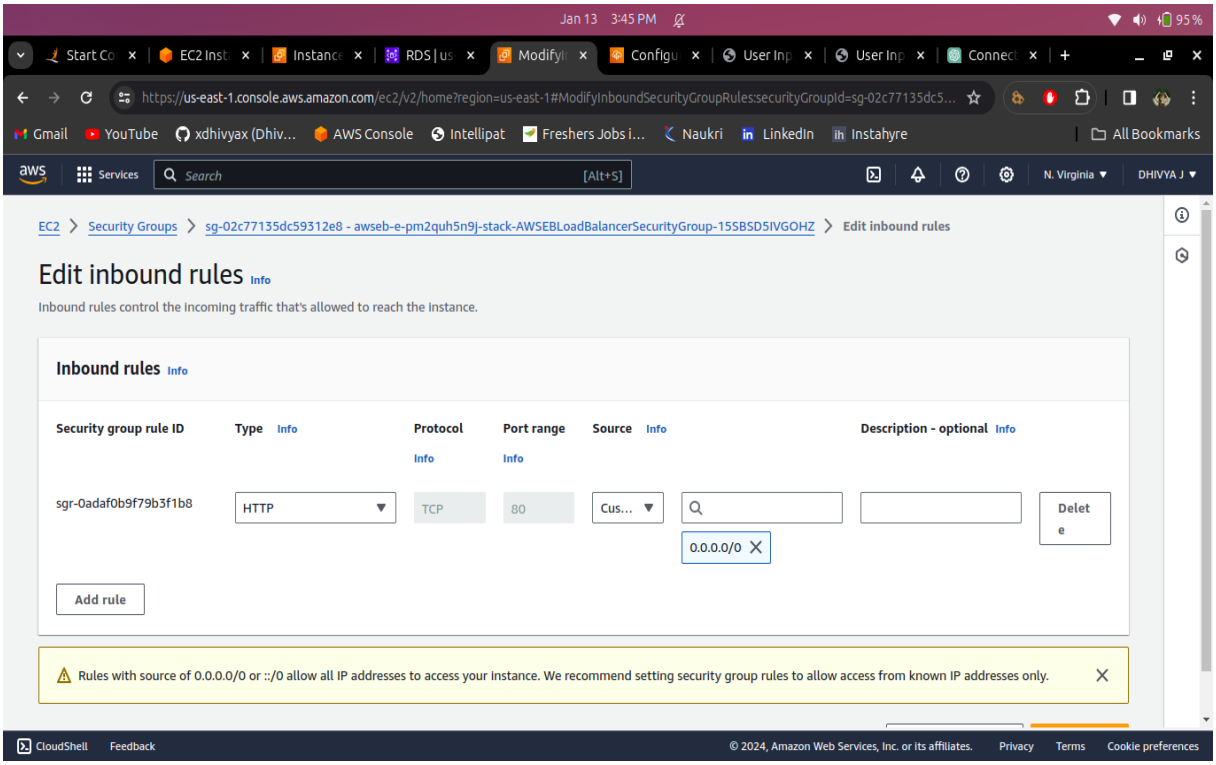

Jan 13 3:48 PM
https://us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#LoadBalancers:v=3
Elastic Block Store
Volumes
Snapshots
Lifecycle Manager
Network & Security
Security Groups
Elastic IPs
Placement Groups
Key Pairs
Network Interfaces
Load Balancing
Load Balancers
Target Groups
Trust Stores New
Auto Scaling
Auto Scaling Groups
EC2 > Load balancers
Load balancers (1/1)
Actions
Create load balancer
Elastic Load Balancing scales your load balancer capacity automatically in response to changes in incoming traffic.
Filter load balancers
Name
DNS name
State
VPC ID
Availability Zones
awseb--AWSEB-T5Mvb...
awseb--AWSEB-T5MvbYN...
Active
vpc-0e1d54cef9823402c
6 Availability Zones
Load balancer: awseb--AWSEB-T5MvbYN6YAn8
Security Group ID
Name
Description
sg-02c77135dc59312e...
awseb-e-pm2quh5n9j-stack-AWSEBLoadBalancerSecurityGroup-15SBSD5IVGOHZ
Elastic Beanstalk create...
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences

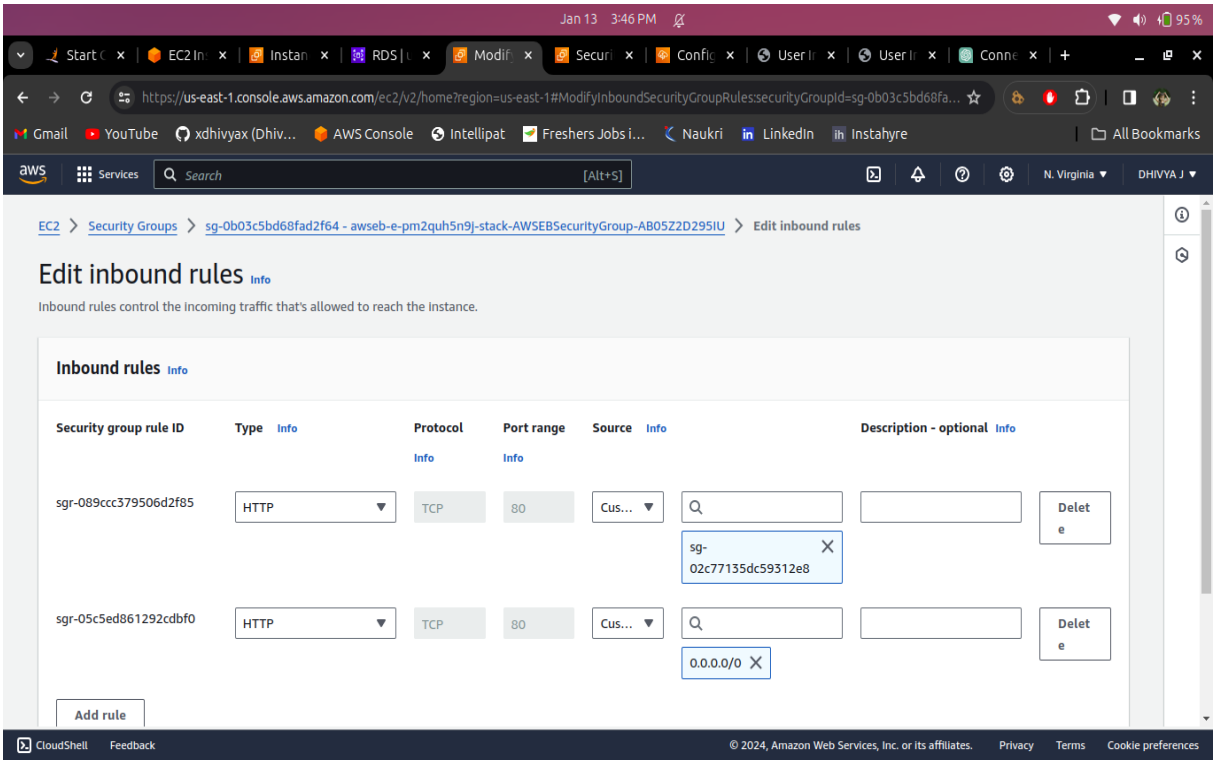


To connect my database using ec2 instance so I want connect the rds instance so I add the inbound rule of mysql in rds instance security group from ec2 security group


Jan 13 3:40 PM
https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-0c28356...
EC2 > Security Groups > sg-0c283567367bc41e9 - demo-project-2-sg > Edit inbound rules
Edit inbound rules Info
Inbound rules control the incoming traffic that's allowed to reach the instance.
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-0aa591cec7213b1fa
MYSQL/Aurora
TCP
3306
Custom
sg-0b03c5bd68fad2f64
Delete
sgr-03bbdb3c93b3e01c8
MYSQL/Aurora
TCP
3306
Custom
sg-0ba13030860daa705
Delete
Add rule
Cancel
Preview changes
Save rules
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Jan 13 3:43 PM
https://us-east-1.console.aws.amazon.com/elasticbeanstalk/home?region=us-east-1#/environment/configuration?environmentId=e-pm2quh5n9j
No options configured
Environment: Php-demo-env
Go to environment
Configuration
Events
Health
Logs
Monitoring
Alarms
Managed updates
Tags
Recent environments
Php-demo-env
Php-application-environment
Php-application-env-new
Php-application-env
Instance traffic and scaling Info
Edit
Customize the capacity and scaling for your environment's instances. Select security groups to control instance traffic.Configure the software that runs on your environment's instances by setting platform-specific options.
Instances
IMDSv1
Deactivated
EC2 Security Groups
awseb-e-pm2quh5n9j-stack-AWSEBSecurityGroup-AB05Z2D295IU
Capacity
Environment type
Load balanced
Min instances
1
Max instances
2
Fleet composition
On-Demand Instances
On-demand base
0
On-demand above base
0
Capacity rebalancing
Scaling cooldown
Processor type
CloudShell
Feedback
© 2024, Amazon Web Services, Inc. or its affiliates.
Privacy
Terms
Cookie preferences


Jan 13 3:45 PM
https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-02c77135dc5...
Gmail YouTube xdhivyax (Dhiv... AWS Console Intellipat Freshers Jobs i... Naukri LinkedIn Instahyre All Bookmarks
aws Services Search [Alt+S] N. Virginia DHIVYA J
EC2 > Security Groups > sg-02c77135dc59312e8 - awseb-e-pm2quh5n9j-stack-AWSEBLoadBalancerSecurityGroup-15SBSD5IVGOHZ > Edit inbound rules
Edit inbound rules Info
Inbound rules control the incoming traffic that's allowed to reach the instance.
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-0adaf0b9f79b3f1b8
HTTP
TCP
80
Cus...
0.0.0.0/0
Delet e
Add rule
Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences


Jan 13 3:46 PM
https://us-east-1.console.aws.amazon.com/ec2/v2/home?region=us-east-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-0b03c5bd68fa...
Gmail YouTube xdhivyax (Dhiv... AWS Console Intellipat Freshers Jobs i... Naukri LinkedIn Instahyre All Bookmarks
aws Services Search [Alt+S] N. Virginia DHIVYA J
EC2 > Security Groups > sg-0b03c5bd68fad2f64 - awseb-e-pm2quh5n9j-stack-AWSEBSecurityGroup-AB05Z2D295IU > Edit inbound rules
Edit inbound rules Info
Inbound rules control the incoming traffic that's allowed to reach the instance.
Inbound rules Info
Security group rule ID
Type Info
Protocol Info
Port range Info
Source Info
Description - optional Info
sgr-089ccc379506d2f85
HTTP
TCP
80
Cus...
sg-02c77135dc59312e8
Delet e
sgr-05c5ed861292cdbf0
HTTP
TCP
80
Cus...
0.0.0.0/0
Delet e
Add rule
CloudShell Feedback
© 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences