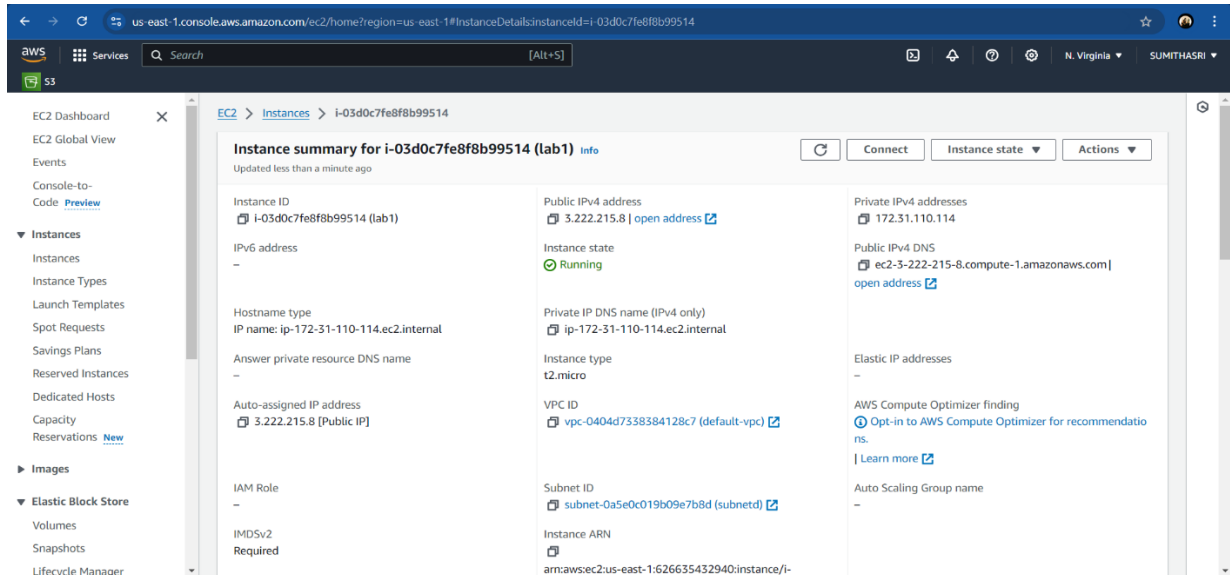


Deploying Apache Web Server with MySQL Integration

1.Launching the EC2 Instance



2.Create Security Group

- Allows SSH Traffics
- Allows HTTP , HTTPS and MySQL Traffics along with Ports.

3. Install Apache web server:

- Open a terminal.
- Use the following commands to install Apache:

```
sudo apt update
```

```
sudo apt install apache2
```

- Apache web server will be installed on your system.

4. Check the version and service status of Apache web server:

- To check the Apache version, use the following command:

```
apache2 -v
```

- To check the status of the Apache service, use:

```
sudo systemctl status apache2
```

5. Create a simple HTML app that can talk to the MySQL database:

- Use a text editor to create an HTML file (e.g., **index.html**):

```
sudo rm -rf /var/www/html/index.html
```

```
sudo vim /var/www/html/index.html
```

- Add a simple HTML form to the file. For example:

```
<!DOCTYPE html>
<html>
<head>
  <title>MySQL App</title>
</head>
<body>
  <h1>MySQL App</h1>
  <form action="process.php" method="POST">
    <label for="name">Name:</label>
    <input type="text" id="name" name="name">
    <input type="submit" value="Submit">
  </form>
</body>
</html>
```

- Open a web browser on another computer or device.
- Enter the IP address of your Ubuntu 20.04 machine in the browser's address bar.
- You should see the "MySQL App" page.



6. Install MySQL and check its status and version:

- Use the following command to install MySQL Server:

```
sudo apt install mysql-server
```

- During the installation, you'll be prompted to set a MySQL root password.
- To check the MySQL version, run:

```
mysql --version
```

- To check the status of the MySQL service, use:

```
sudo systemctl status mysql
```

7. Create a database and a table in MySQL:

- Log in to MySQL as the root user:

```
mysql -u root -p
```

```
CREATE USER 'yourname'@localhost IDENTIFIED WITH  
mysql_native_password BY 'yourpassword';
```

- Enter your MySQL root password.
- Create a database and a table, and grant privileges to a user (replace **<your_database>**, **<your_table>**, **<your_user>**, and **<your_password>** with your preferred values):

```
CREATE DATABASE test;  
USE test;  
CREATE TABLE testtable (  
    id INT AUTO_INCREMENT PRIMARY KEY,  
    name VARCHAR(255) NOT NULL  
);  
CREATE USER 'vboxuser'@'localhost' IDENTIFIED BY '1234';  
GRANT ALL PRIVILEGES ON test.* TO 'vboxuser'@'localhost';  
FLUSH PRIVILEGES;
```

8. Create a PHP script to connect the app and MySQL DB:

- Install PHP if not already installed:

```
sudo apt install php
```

- Install this extension

```
sudo apt-get install php-mysqli
```

- Create a PHP script (**process.php**):

```
nano /var/www/html/process.php
```

- Add PHP code to connect to the MySQL database and insert data (replace placeholders with your actual values):

```

<?php
$servername = "localhost";
$username = "<your_user>";
$password = "<your_password>";
$dbname = "<your_database>";

$conn = new mysqli($servername, $username, $password, $dbname);

if ($conn->connect_error) {
    die("Connection failed: " . $conn->connect_error);
}

$name = $_POST["name"];

$sql = "INSERT INTO <your_tablename> (name) VALUES ('$name')";

if ($conn->query($sql) === TRUE) {
    echo "Record inserted successfully!";
} else {
    echo "Error: " . $sql . "<br>" . $conn->error;
}

$conn->close();
?>

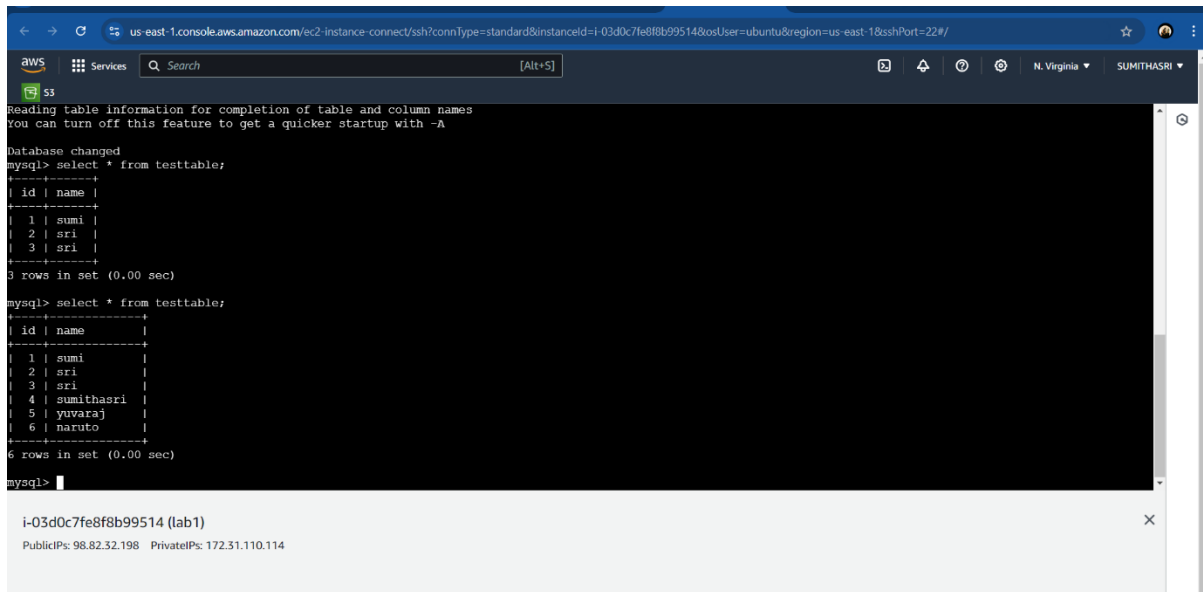
```

9. Access the site with the IP of the Ubuntu box:

- Open a web browser on another computer or device.
- Enter the IP address of your Ubuntu 20.04 machine in the browser's address bar.
- You should see the "MySQL App" page created in step 5.
- Fill in the form and submit it to insert data into the MySQL database.



- Data's are stored in MySQL database .



The screenshot shows an AWS Management Console terminal window connected to an EC2 instance. The terminal displays the output of a MySQL query. The first query returns 3 rows, and the second query returns 6 rows. The terminal output is as follows:

```
us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-03d0c7fe8f8b99514&osUser=ubuntu&region=us-east-1&sshPort=22#/  
53  
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> select * from testtable;  
+----+-----+  
| id | name |  
+----+-----+  
| 1 | sumi |  
| 2 | sri |  
| 3 | sri |  
+----+-----+  
3 rows in set (0.00 sec)  
  
mysql> select * from testtable;  
+----+-----+  
| id | name |  
+----+-----+  
| 1 | sumi |  
| 2 | sri |  
| 3 | sri |  
| 4 | sumithasri |  
| 5 | yuvaraj |  
| 6 | naruto |  
+----+-----+  
6 rows in set (0.00 sec)  
  
mysql>
```

Below the terminal window, the instance details are visible:

i-03d0c7fe8f8b99514 (lab1)
PublicIPs: 98.82.32.198 PrivateIPs: 172.31.110.114