

## Cloud (AWS) Week 1 Task

### Deploy Application in monolithic and Microservices Architecture

**\*Description:**

**Task 1:** For Microservices: 2 EC2 instances , 1 for Wordpress and EC2 instances, 1 for MYSQL.

**Task 2:** For Monolithic: 1 EC2 instance ,deploy Wordpress and MYSQL on the same instance.

-Configure the necessary security group for the instances

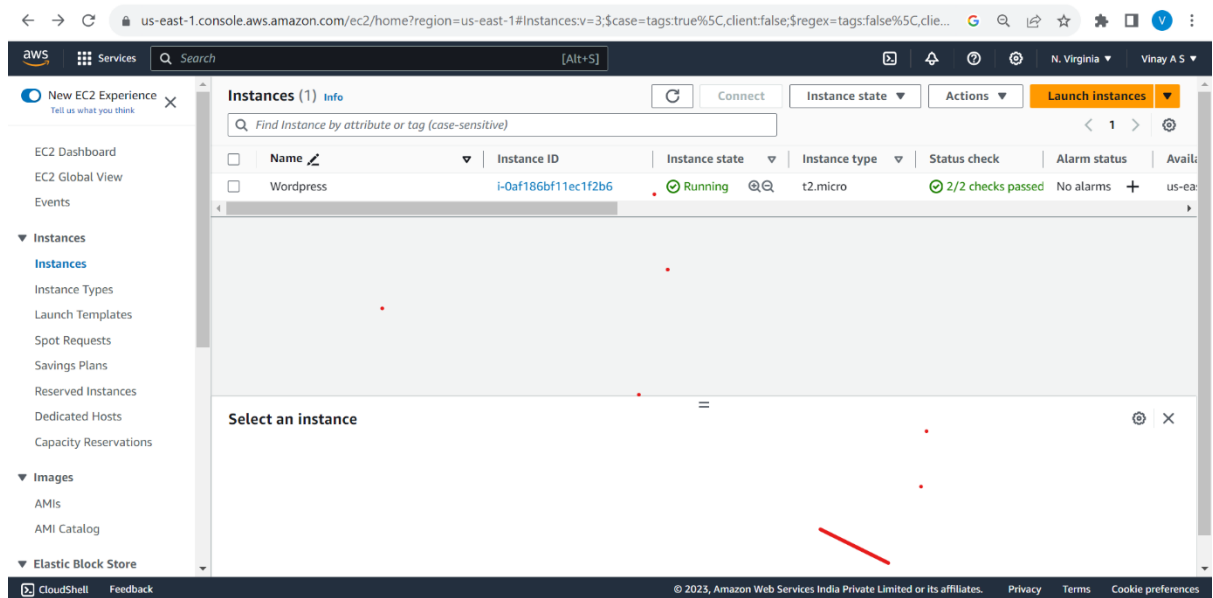
-EC2 instance type:t2 micro,AMI-Ubuntu-\*

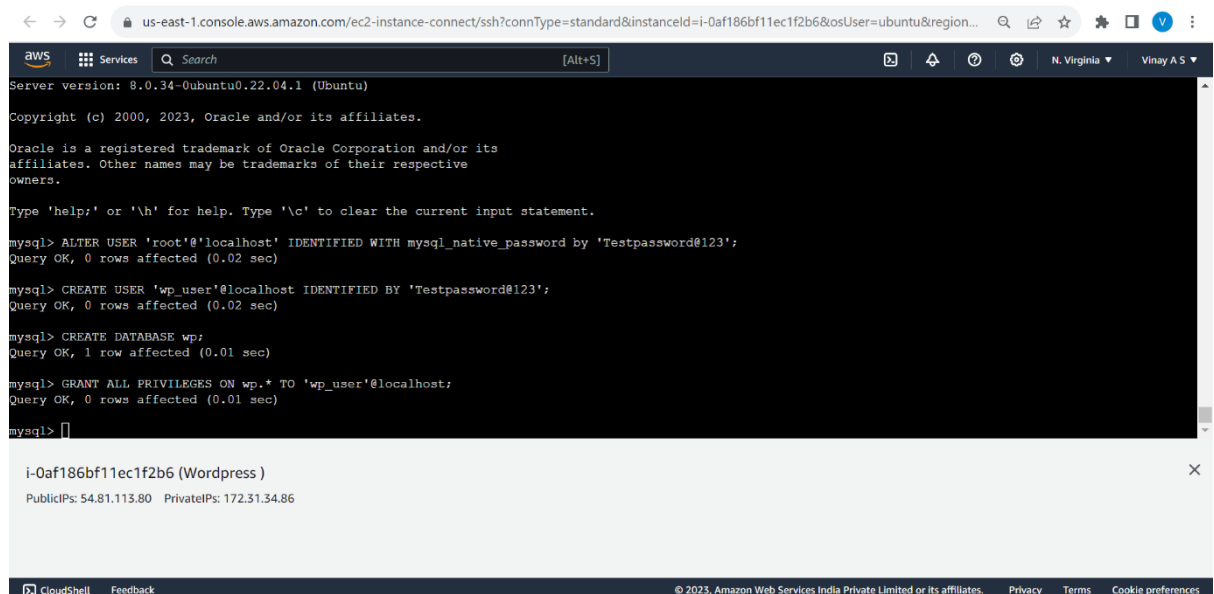
#### Task 1

**For Microservices: 2 EC2 instances , 1 for Wordpress and 1 EC2 instances, 1 for MYSQL.**

##### a) 1 EC2 instance for Wordpress

Create a Wordpress instance launch





The screenshot shows an AWS CloudShell terminal window. The top bar indicates the connection is to an EC2 instance in the us-east-1 region. The terminal output shows the MySQL prompt and several commands being executed: ALTER USER, CREATE USER, CREATE DATABASE, and GRANT ALL PRIVILEGES. The output for each command is displayed below the prompt.

```
Server version: 8.0.34-0ubuntu0.22.04.1 (Ubuntu)
Copyright (c) 2000, 2023, Oracle and/or its affiliates.
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affiliates. Other names may be trademarks of their respective
owners.
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password by 'Testpassword@123';
Query OK, 0 rows affected (0.02 sec)
mysql> CREATE USER 'wp_user'@'localhost' IDENTIFIED BY 'Testpassword@123';
Query OK, 0 rows affected (0.02 sec)
mysql> CREATE DATABASE wp;
Query OK, 1 row affected (0.01 sec)
mysql> GRANT ALL PRIVILEGES ON wp.* TO 'wp_user'@'localhost';
Query OK, 0 rows affected (0.01 sec)
mysql>
```

Below the terminal window, a summary box for the EC2 instance is visible:

```
i-0af186bf11ec1f2b6 (Wordpress)
PublicIPs: 54.81.113.80 PrivateIPs: 172.31.34.86
```

## 1 EC2 Instance for MYSQL

### Create a MYSQL Server instance Launch

Command:

```
sudo apt update
sudo apt install mysql-server
sudo systemctl status mysql
sudo mysql
ALTER USER 'root'@'localhost' IDENTIFIED WITH
mysql_native_password BY 'Vinay@123';
CREATE DATABASE mysql_test;
USE mysql_test;
CREATE TABLE table1 ( id INT, name VARCHAR(45));
INSERT INTO table1 VALUES(1, 'INFOTRIX'), (2,'CLOUD'), (3,'DEVOPS'), (4,'VINAY');
SELECT *FROM table1;
```

us-east-1.console.aws.amazon.com/ec2/home?region=us-east-1#Instances:v=3,\$case=tags:true%5C,client:false,\$regex=tags:false%5...

aws Services Search [Alt+S]

New EC2 Experience Tell us what you think

EC2 Dashboard  
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Events

▼ Instances

- Instances
- Instance Types
- Launch Templates
- Spot Requests
- Savings Plans
- Reserved Instances
- Dedicated Hosts
- Capacity Reservations

▼ Images

- AMIs
- AMI Catalog

▼ Elastic Block Store

Instances (2) Info

Find Instance by attribute or tag (case-sensitive)

<input type="checkbox"/>	Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone
<input type="checkbox"/>	MySQL_Server	i-0e65880e2f86cbe55	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a
<input type="checkbox"/>	Wordpress	i-0af186bf11ec1f2b6	Running	t2.micro	2/2 checks passed	No alarms	us-east-1a

Select an instance

CloudShell Feedback

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us-east-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=us-east-1&connType=standard&instanceId=i-0e65880e2f86cbe55...

aws Services Search [Alt+S]

Database changed

```
mysql> CREATE TABLE table1 (id INT, name VARCHAR(45));
Query OK, 0 rows affected (0.04 sec)

mysql> ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password BY 'Testpassword@123';
Query OK, 0 rows affected (0.01 sec)

mysql> INSERT INTO table1 VALUES (1, 'INFOTRIXS'), (2, 'CLOUD'), (3, 'DEVOPS'), (4, 'vinay');
Query OK, 4 rows affected (0.01 sec)
Records: 4 Duplicates: 0 Warnings: 0

mysql> SELECT * FROM table1;
+----+-----+
| id | name |
+----+-----+
| 1  | INFOTRIXS |
| 2  | CLOUD |
| 3  | DEVOPS |
| 4  | vinay |
+----+-----+
4 rows in set (0.00 sec)

mysql>
```

i-0e65880e2f86cbe55 (MySQL\_Server)

PublicIPs: 35.174.0.253 PrivateIPs: 172.31.36.253

CloudShell Feedback

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## Task -2

- 1) For Monolithic : 1 EC2 instances,deploy wordpress and MYSQL, on the same instance.

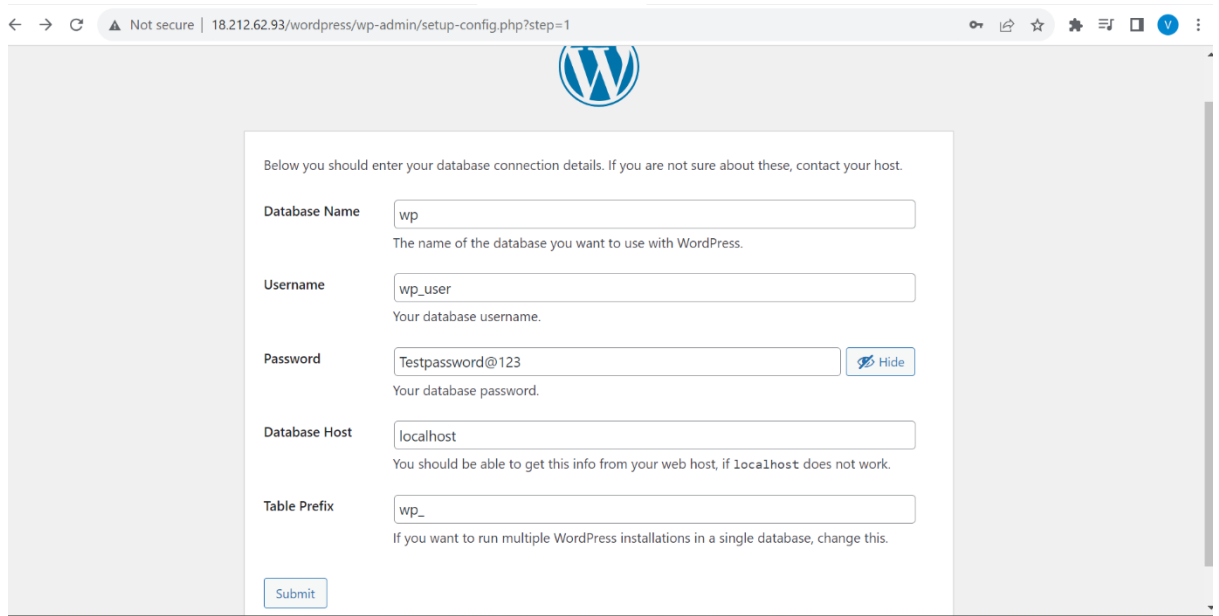
### Create 2 Security Groups RDS Security Group

The screenshot shows the AWS Management Console for the us-east-1 region. The left sidebar contains navigation links for Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, Network & Security, and Load Balancing. The 'Network & Security' section is expanded, showing 'Security Groups'. The main panel displays a list of Security Groups (1/8) with columns: Name, Security group ID, Security group name, VPC ID, Description, and Owner. The 'demo-sg-rds' group is selected. Below the list, the details for 'sg-0bd74f28f41f13679 - demo-sg-rds' are shown, including tabs for Details, Inbound rules, Outbound rules, and Tags.

Name	Security group ID	Security group name	VPC ID	Description	Owner
-	sg-0a7e23aab2925854c	launch-wizard-1	vpc-05d5e363cd79c37ab	launch-wizard-1 create...	80694e...
wordpress_server	sg-0bd74f28f41f13679	demo-sg-rds	vpc-05d5e363cd79c37ab	demo-sg-rds	80694e...
mySql_server	sg-0bf070d123670eff	launch-wizard-6	vpc-05d5e363cd79c37ab	launch-wizard-6 create...	80694e...
-	sg-0eef57062fd11d514	launch-wizard-4	vpc-05d5e363cd79c37ab	launch-wizard-4 create...	80694e...
-	sg-0bcfd46d0ee73efd5	default	vpc-05d5e363cd79c37ab	default VPC security gr...	80694e...
-	sg-05af44671d9ce88db	launch-wizard-3	vpc-05d5e363cd79c37ab	launch-wizard-3 create...	80694e...
-	sg-081e59500a67e8129	launch-wizard-2	vpc-05d5e363cd79c37ab	launch-wizard-2 create...	80694e...
-	sg-094e38cb631bacaf9	launch-wizard-5	vpc-05d5e363cd79c37ab	launch-wizard-5 create...	80694e...

The screenshot shows the AWS Management Console for the us-east-1 region. The left sidebar contains navigation links for Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, Elastic Block Store, Volumes, Snapshots, Lifecycle Manager, Network & Security, and Load Balancing. The 'Network & Security' section is expanded, showing 'Security Groups'. The main panel displays a list of Security Groups (1/8) with columns: Name, Security group ID, Security group name, VPC ID, Description, and Owner. The 'launch-wizard-6' group is selected. Below the list, the details for 'sg-0bf070d123670eff - launch-wizard-6' are shown, including tabs for Details, Inbound rules, Outbound rules, and Tags.

Name	Security group ID	Security group name	VPC ID	Description	Owner
-	sg-0a7e23aab2925854c	launch-wizard-1	vpc-05d5e363cd79c37ab	launch-wizard-1 create...	80694e...
wordpress_server	sg-0bd74f28f41f13679	demo-sg-rds	vpc-05d5e363cd79c37ab	demo-sg-rds	80694e...
mySql_server	sg-0bf070d123670eff	launch-wizard-6	vpc-05d5e363cd79c37ab	launch-wizard-6 create...	80694e...
-	sg-0eef57062fd11d514	launch-wizard-4	vpc-05d5e363cd79c37ab	launch-wizard-4 create...	80694e...
-	sg-0bcfd46d0ee73efd5	default	vpc-05d5e363cd79c37ab	default VPC security gr...	80694e...
-	sg-05af44671d9ce88db	launch-wizard-3	vpc-05d5e363cd79c37ab	launch-wizard-3 create...	80694e...
-	sg-081e59500a67e8129	launch-wizard-2	vpc-05d5e363cd79c37ab	launch-wizard-2 create...	80694e...
-	sg-094e38cb631bacaf9	launch-wizard-5	vpc-05d5e363cd79c37ab	launch-wizard-5 create...	80694e...

A screenshot of a web browser showing the WordPress database configuration page. The browser's address bar shows the URL '18.212.62.93/wordpress/wp-admin/setup-config.php?step=1' and a 'Not secure' warning. The page features the WordPress logo at the top. Below it, a text box instructs the user to enter database connection details. The form contains five input fields: 'Database Name' with the value 'wp', 'Username' with 'wp\_user', 'Password' with 'Testpassword@123' (with a 'Hide' button), 'Database Host' with 'localhost', and 'Table Prefix' with 'wp\_'. Each field has a descriptive label below it. A 'Submit' button is located at the bottom left of the form area.

## Commands:

1. Install Apache server on Ubuntu

```
sudo apt install apache2
```

2. Install php runtime and php mysql connector

```
sudo apt install php libapache2-mod-php php-mysql
```

3. Install MySQL server

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

4. Login to MySQL server

```
sudo mysql -u root
```

5. Change authentication plugin to mysql\_native\_password (change the password to something strong)

```
ALTER USER 'root'@'localhost' IDENTIFIED WITH mysql_native_password by 'Testpassword@123';
```

6. Create a new database user for wordpress (change the password to something strong)

```
CREATE USER 'wp_user'@localhost IDENTIFIED BY 'Testpassword@123';
```

7. Create a database for wordpress

```
CREATE DATABASE wp;
```

8. Grant all privileges on the database 'wp' to the newly created user

```
GRANT ALL PRIVILEGES ON wp.* TO 'wp_user'@localhost;
```

9. Download wordpress

```
cd /tmp
```

```
wget https://wordpress.org/latest.tar.gz
```

10. Unzip

```
tar -xvf latest.tar.gz
```

11. Move wordpress folder to apache document root

```
sudo mv wordpress/ /var/www/html
```

```
cd /var/www/html/
```

```
ls
```

```
cd wordpress
```

```
nano wp-config.php
```

12. Command to restart/reload apache server

```
sudo systemctl restart apache2
```

OR

```
sudo systemctl reload apache2
```

# Mindblown: a blog about philosophy.

Hello world!

Welcome to WordPress. This is your first post.  
Edit or delete it, then start writing!

October 6, 2023

WordPress

my sample website

1 0

New

Howdy, Vinayvarma

Screen Options Help

Dashboard

Home

Updates 1

Posts

Media

Pages

Comments

Appearance

Plugins 1

Users

Tools

Settings

Collapse menu

Welcome to WordPress!

[Learn more about the 6.3.1 version.](#)

✍️

Author rich content with blocks and patterns

Block patterns are pre-configured block layouts. Use them to get inspired or create new pages in a flash.  
[Add a new page](#)

🎨

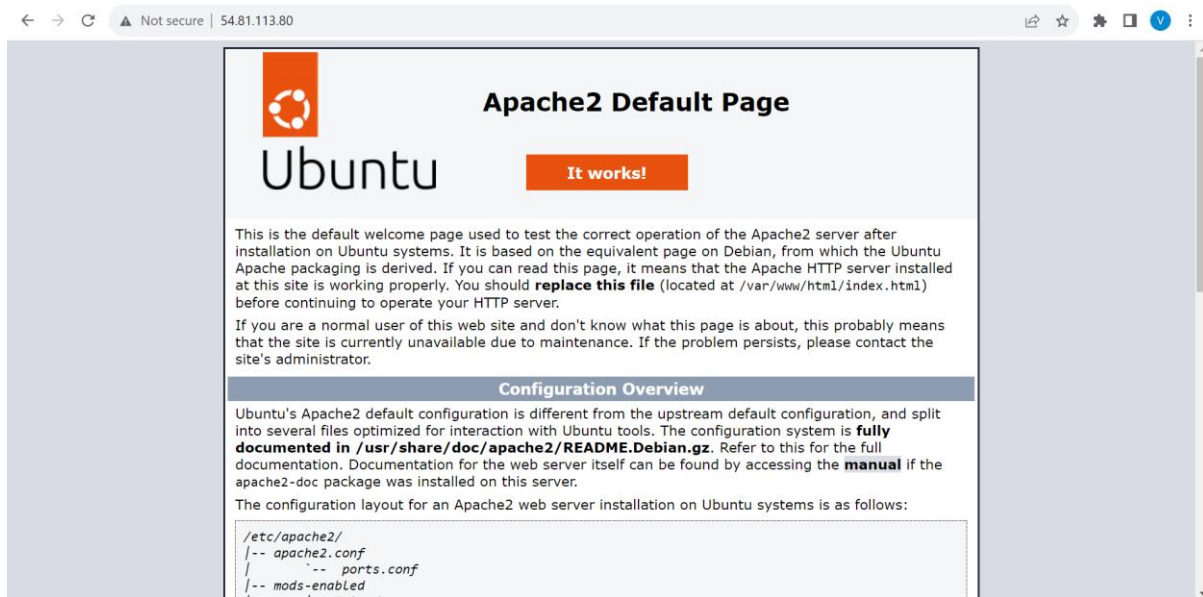
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👁️

Switch up your site's look & feel with Styles

Tweak your site, or give it a whole new look! Get creative — how about a new color palette or font?  
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THANK YOU