

School of Computer Science, Engineering and Applications(SCSEA)
B.C.A. TY (CCSA)
Subject: Containers & Orchestration

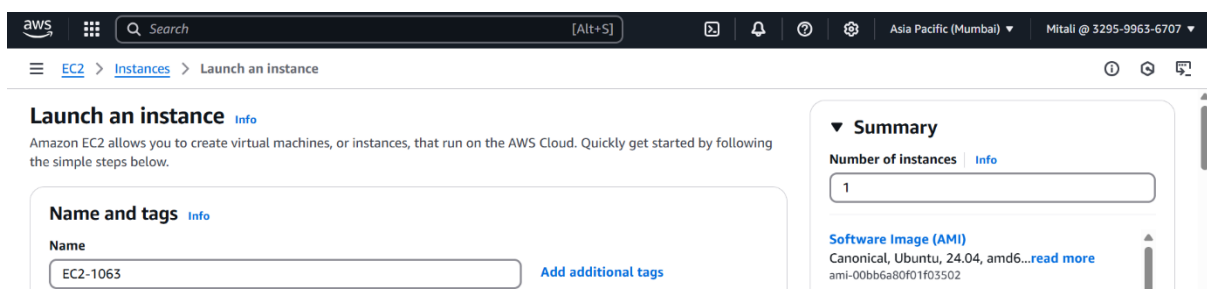
Name of the Student: Mitali Bhattad

PRN: 20220801063

Title of Practical: Setting Up Frontend WordPress and Backend MySQL Containers, Then Logging Into WordPress

Step1: Launch an EC2 Instance

- Name the Instance



aws [Search] [Alt+S] Asia Pacific (Mumbai) Mitali @ 3295-9963-6707

EC2 > Instances > Launch an instance

Launch an instance

Amazon EC2 allows you to create virtual machines, or instances, that run on the AWS Cloud. Quickly get started by following the simple steps below.

Name and tags

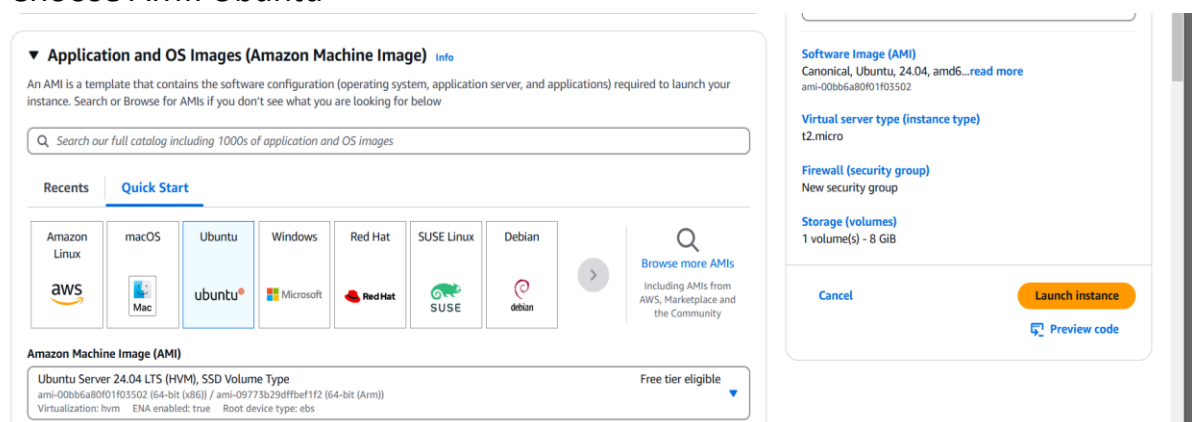
Name: EC2-1063 [Add additional tags](#)

Summary

Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 24.04, amd64...[read more](#)

- Choose AMI: Ubuntu



Application and OS Images (Amazon Machine Image)

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below.

Search our full catalog including 1000s of application and OS images

Recents Quick Start

Amazon Linux macOS Ubuntu Windows Red Hat SUSE Linux Debian

aws Mac ubuntu Microsoft Red Hat SUSE debian

Amazon Machine Image (AMI)

Ubuntu Server 24.04 LTS (HVM), SSD Volume Type
ami-00bb6a80f01f03502 (64-bit (x86)) / ami-09773b29dfbf1f2 (64-bit (Arm))
Virtualization: hvm ENA enabled: true Root device type: ebs

Free tier eligible

Summary

Number of instances: 1

Software Image (AMI): Canonical, Ubuntu, 24.04, amd64...[read more](#)

ami-00bb6a80f01f03502

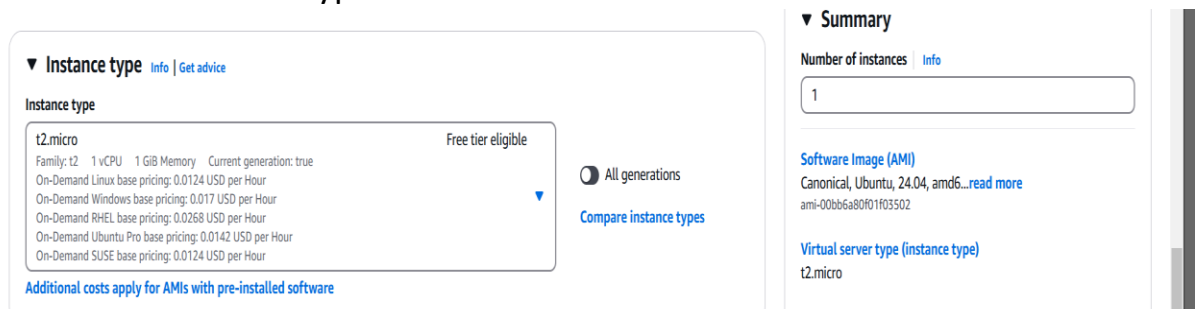
Virtual server type (instance type): t2.micro

Firewall (security group): New security group

Storage (volumes): 1 volume(s) - 8 GiB

[Cancel](#) [Launch instance](#) [Preview code](#)

- Select the instance type: t2 micro



Instance type

Instance type: t2.micro [Free tier eligible](#)

Family: t2 1 vCPU 1 GiB Memory Current generation: true

On-Demand Linux base pricing: 0.0124 USD per Hour

On-Demand Windows base pricing: 0.017 USD per Hour

On-Demand RHEL base pricing: 0.0268 USD per Hour

On-Demand Ubuntu Pro base pricing: 0.0142 USD per Hour

On-Demand SUSE base pricing: 0.0124 USD per Hour

[Additional costs apply for AMIs with pre-installed software](#)

[All generations](#) [Compare instance types](#)

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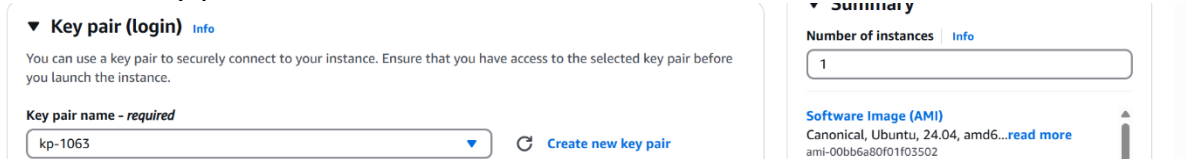
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- Create a Key pair



▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - *required*

kp-1063 [Create new key pair](#)

▼ Summary

Number of instances [Info](#)

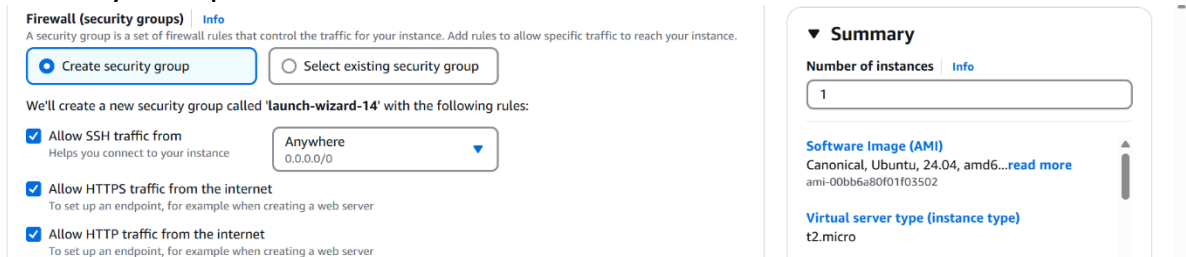
1

Software Image (AMI)

Canonical, Ubuntu, 24.04, amd64...[read more](#)

ami-00bb6a80f01f03502

- Security Group



Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group ☐ Select existing security group

We'll create a new security group called 'launch-wizard-14' with the following rules:

☒ Allow SSH traffic from [0.0.0.0/0](#)

☒ Allow HTTPS traffic from the internet

To set up an endpoint, for example when creating a web server

☒ Allow HTTP traffic from the internet

To set up an endpoint, for example when creating a web server

▼ Summary

Number of instances [Info](#)

1

Software Image (AMI)

Canonical, Ubuntu, 24.04, amd64...[read more](#)

ami-00bb6a80f01f03502

Virtual server type (instance type)

t2.micro

- Launch the instance

Step 2: Connect the EC2 Instance and run the following commands:

1. Switch to root user and update and upgrade system packages

- sudo -i

- sudo apt update -y

```
ubuntu@ip-172-31-0-92:~$ sudo -i
root@ip-172-31-0-92:~# sudo apt update -y
```

2. Install Docker:

- sudo apt install docker.io -y

```
root@ip-172-31-0-92:~# sudo apt install docker.io -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
```



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3. Start and enable Docker and verify the version:

- sudo systemctl start docker
- sudo systemctl enable docker
- docker --version

```
root@ip-172-31-0-92:~# sudo systemctl start docker
root@ip-172-31-0-92:~# sudo systemctl enable docker
root@ip-172-31-0-92:~# docker --version
Docker version 26.1.3, build 26.1.3-0ubuntu1~24.04.1
```

4. Deploy MariaDB Container

docker pull mariadb

docker run -d --name mariadb \

- e MYSQL_ROOT_PASSWORD=rootpassword \
 - e MYSQL_DATABASE=wordpress \
 - e MYSQL_USER=wordpressuser \
 - e MYSQL_PASSWORD=wordpresspassword \
- mariadb

```
root@ip-172-31-0-92:~# docker pull mariadb
Using default tag: latest
latest: Pulling from library/mariadb
5a7813e071bf: Pull complete
bdec990c29c: Pull complete
5db80086e4da: Pull complete
901fe9394c00: Pull complete
43eb19e1b102: Pull complete
597f7afe50fe: Pull complete
e1dede558384: Pull complete
5c3a22df929b: Pull complete
Digest: sha256:310d29fbb58169dcddb384b0ff138edb081e2773d6e2eceb976b3668089f2f84
Status: Downloaded newer image for mariadb:latest
docker.io/library/mariadb:latest
```

```
root@ip-172-31-0-92:~# docker run -d --name mariadb \
-e MYSQL_ROOT_PASSWORD=rootpassword \
-e MYSQL_DATABASE=wordpress \
-e MYSQL_USER=wordpressuser \
-e MYSQL_PASSWORD=wordpresspassword \
mariadb
cde88660d3c9026068a92a408c72e93e2da29bc325e817df3379e548d9240da4
```



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5. Deploy WordPress Container

docker pull wordpress

docker run -d --name wordpress \

-e WORDPRESS_DB_HOST=mariadb \

-e WORDPRESS_DB_NAME=wordpress \

-e WORDPRESS_DB_USER=wordpressuser \

-e WORDPRESS_DB_PASSWORD=wordpresspassword \

-p 80:80 \

--link mariadb:mariadb \

wordpress

```
root@ip-172-31-0-92:~# docker pull wordpress
Using default tag: latest
latest: Pulling from library/wordpress
7cf63256a31a: Pull complete
859c077b5003: Pull complete
59e01f001c00: Pull complete
7d7543348a2e: Pull complete
ee6fbc7f6010: Pull complete
7ac282ed1b18: Pull complete
ac27bee4c1: Pull complete
848a107069e4: Pull complete
a02f50ccc1f1: Pull complete
897474ecb9dc: Pull complete
7b3a864a341f: Pull complete
5b3467e0601d: Pull complete
9e27623ff1e4: Pull complete
4f4fb700ef54: Pull complete
115a3dfab727: Pull complete
4cdbe039bbf5: Pull complete
0af0c10e3a6a: Pull complete
e9ab1aacf4f2: Pull complete
2e0cbc7f9407: Pull complete
9b2cf0bfcabcd: Pull complete
ecf9e78007a4: Pull complete
33569abf5deb: Pull complete
Digest: sha256:c31edd83f61ee9f524ff6a36357bd3bf6bdd4c397c32e15d7ce4708b717569e9
Status: Downloaded newer image for wordpress:latest
docker.io/library/wordpress:latest
```

```
root@ip-172-31-0-92:~# docker run -d --name wordpress \
-e WORDPRESS_DB_HOST=mariadb \
-e WORDPRESS_DB_NAME=wordpress \
-e WORDPRESS_DB_USER=wordpressuser \
-e WORDPRESS_DB_PASSWORD=wordpresspassword \
-p 80:80 \
--link mariadb:mariadb \
wordpress
5fc14f989b5e37559bc7bbcd94ed25527338a7c4fdccaca14ea3a767e8934123
```

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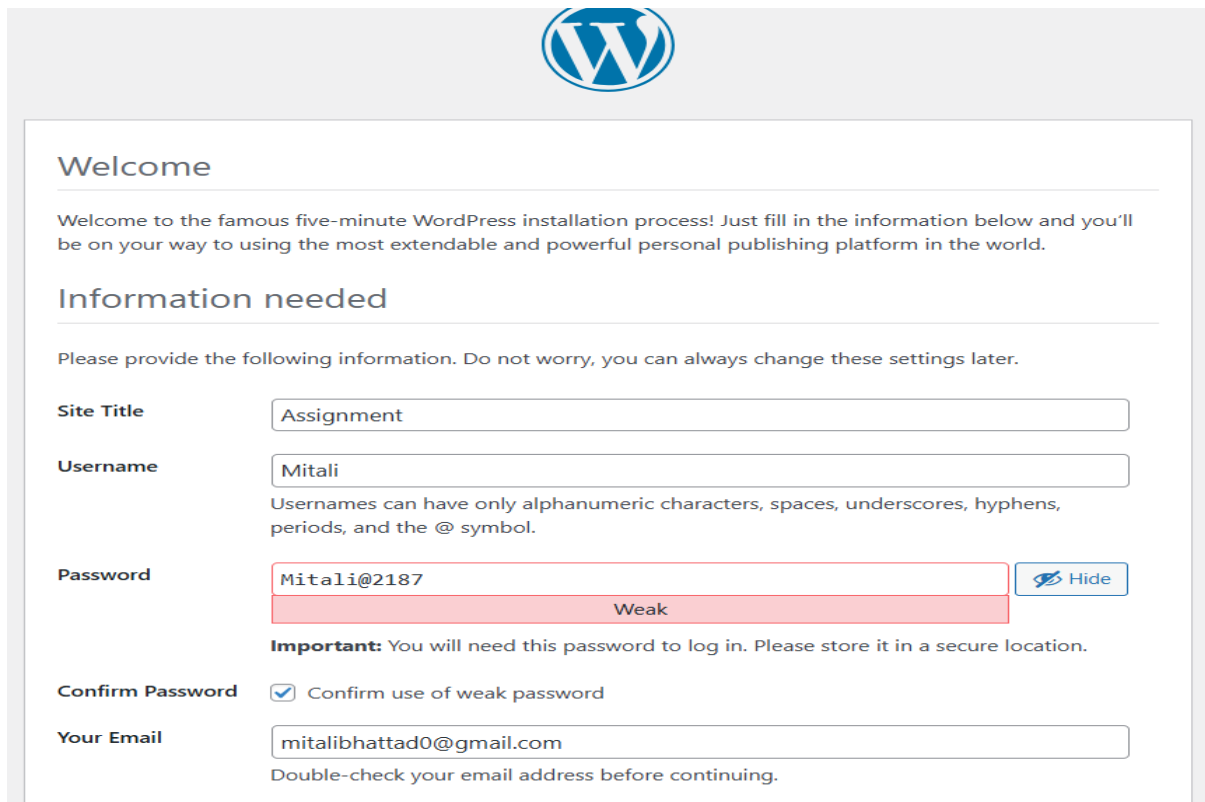
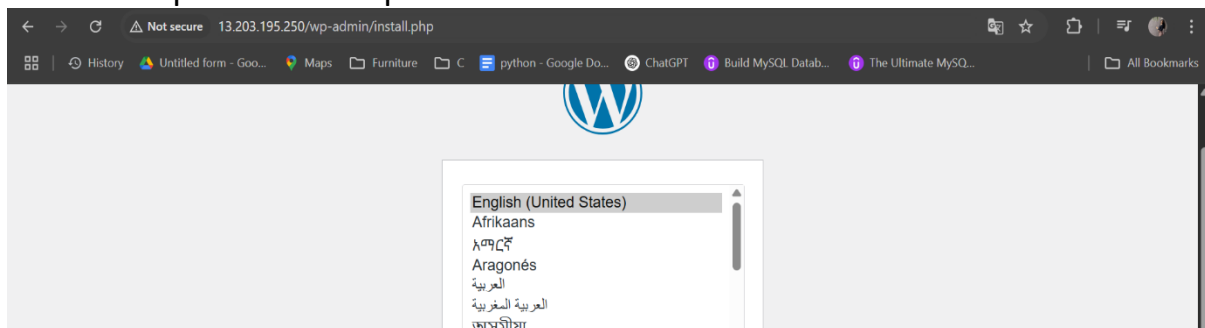
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6. Access WordPress

1. Open **http://<public-ip>** in a browser.
2. Complete the setup wizard.



Welcome

Welcome to the famous five-minute WordPress installation process! Just fill in the information below and you'll be on your way to using the most extendable and powerful personal publishing platform in the world.

Information needed

Please provide the following information. Do not worry, you can always change these settings later.

Site Title

Username
Usernames can have only alphanumeric characters, spaces, underscores, hyphens, periods, and the @ symbol.

Password [Hide](#)
Weak

Important: You will need this password to log in. Please store it in a secure location.

Confirm Password ☒ Confirm use of weak password

Your Email
Double-check your email address before continuing.

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