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 monolith: 1 EC2 instance, deploy WordPress and MYSQL on the same instances

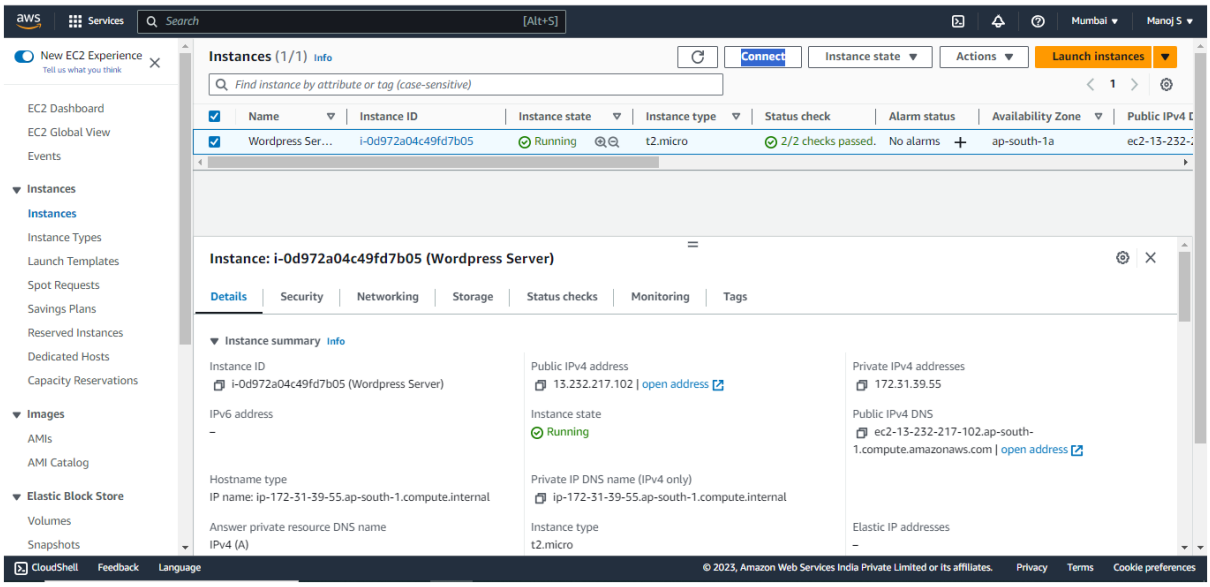
- Configure the necessary security group for the instances
- EC2 instance type: t2-micro, AMI: ubuntu-*

Task 1

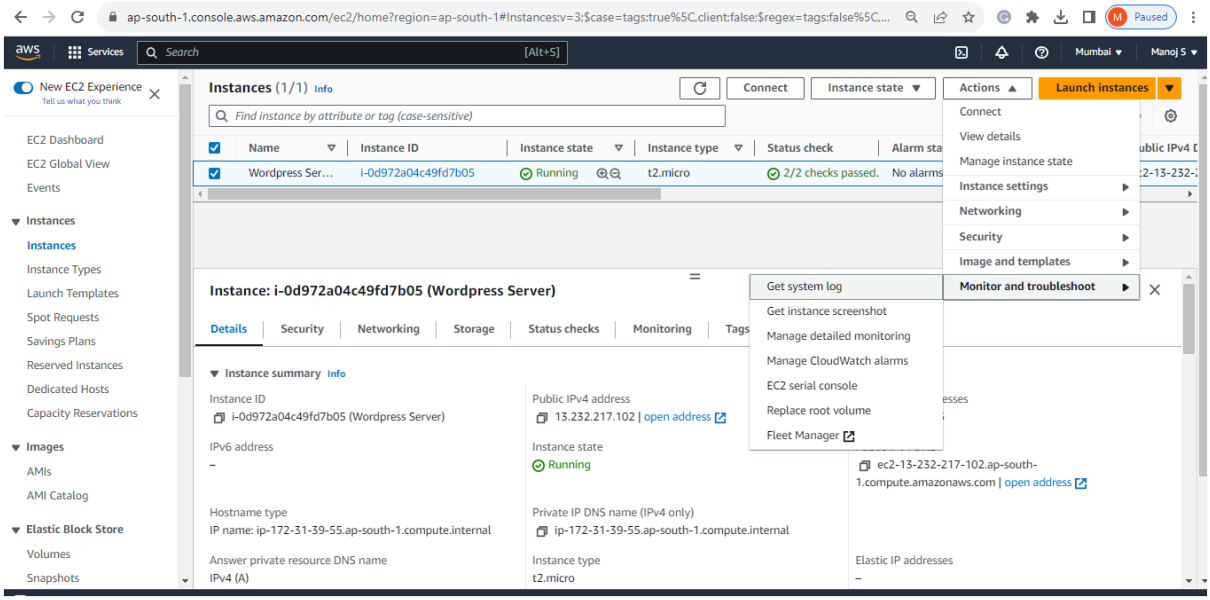
1) For Microservice: 2 EC2 instances, 1 for WordPress and 1 for MYSQL

i. 1 EC2 instance for WordPress

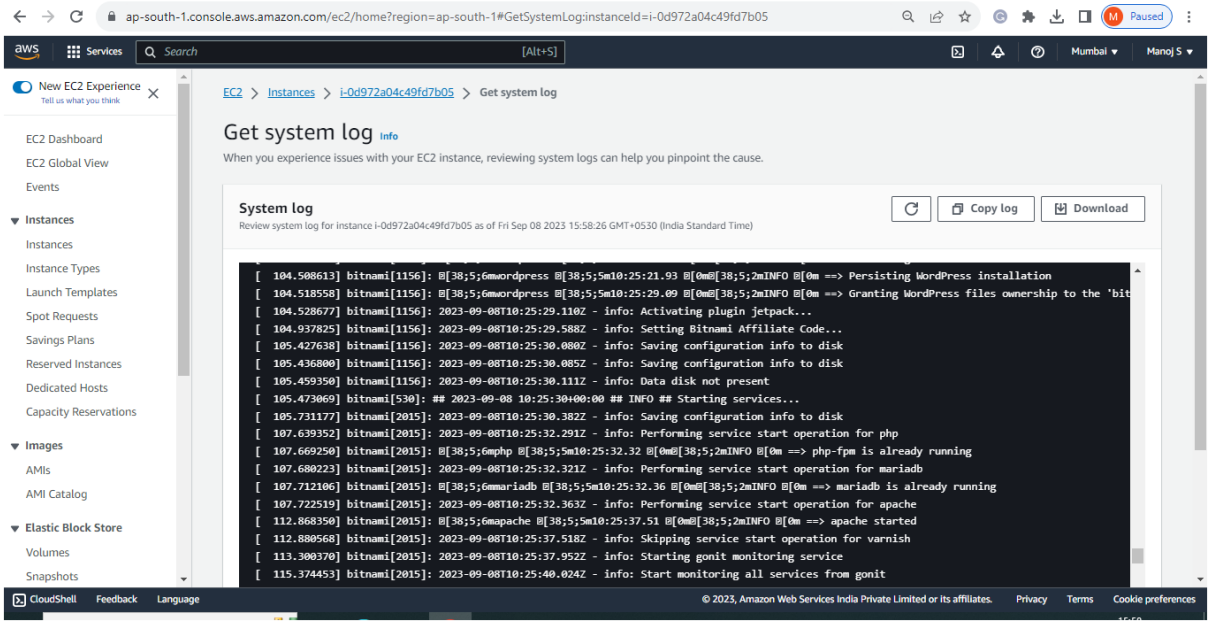
Create a WordPress instance Launch



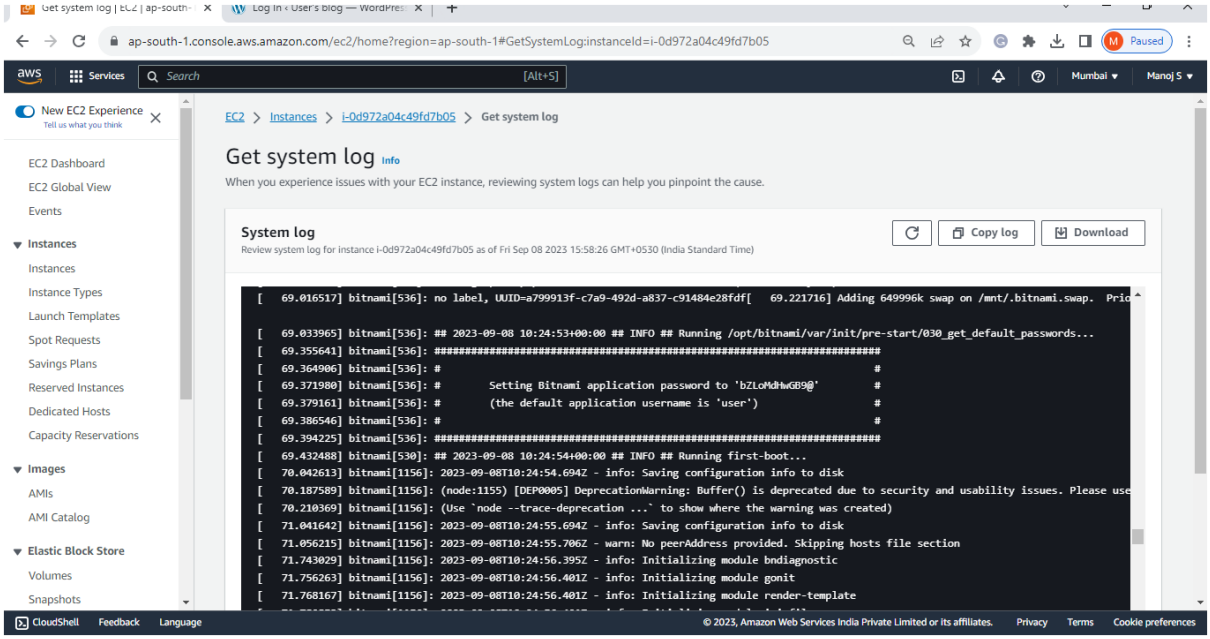
Click actions and monitor troubleshoot and access Get the system log



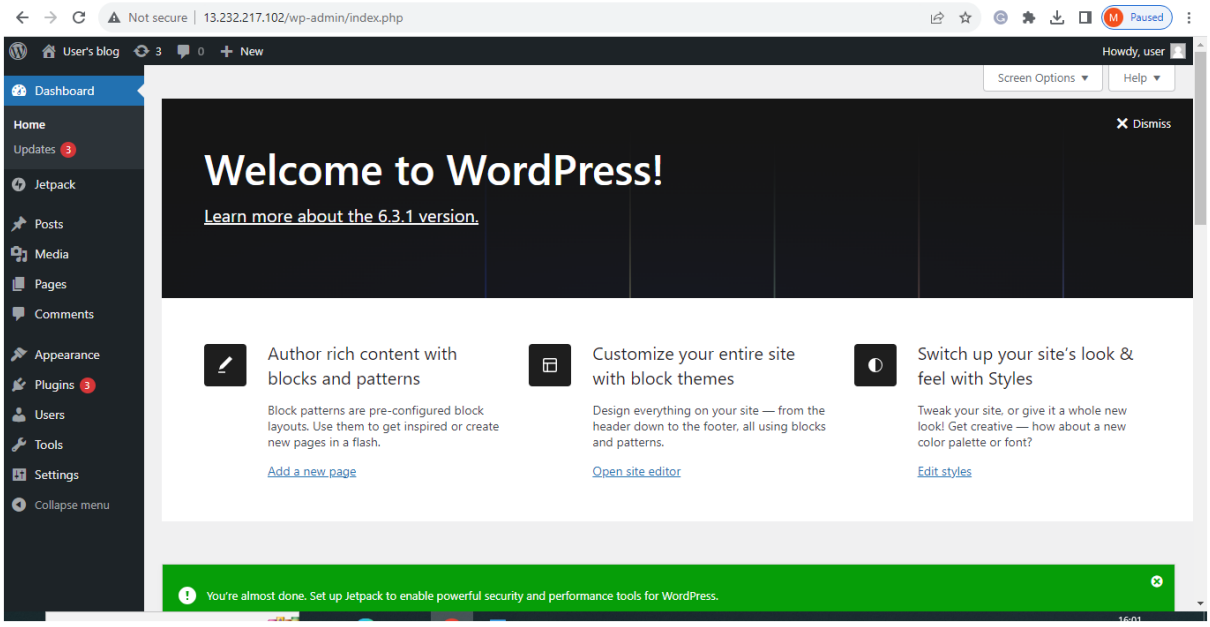
Get system log

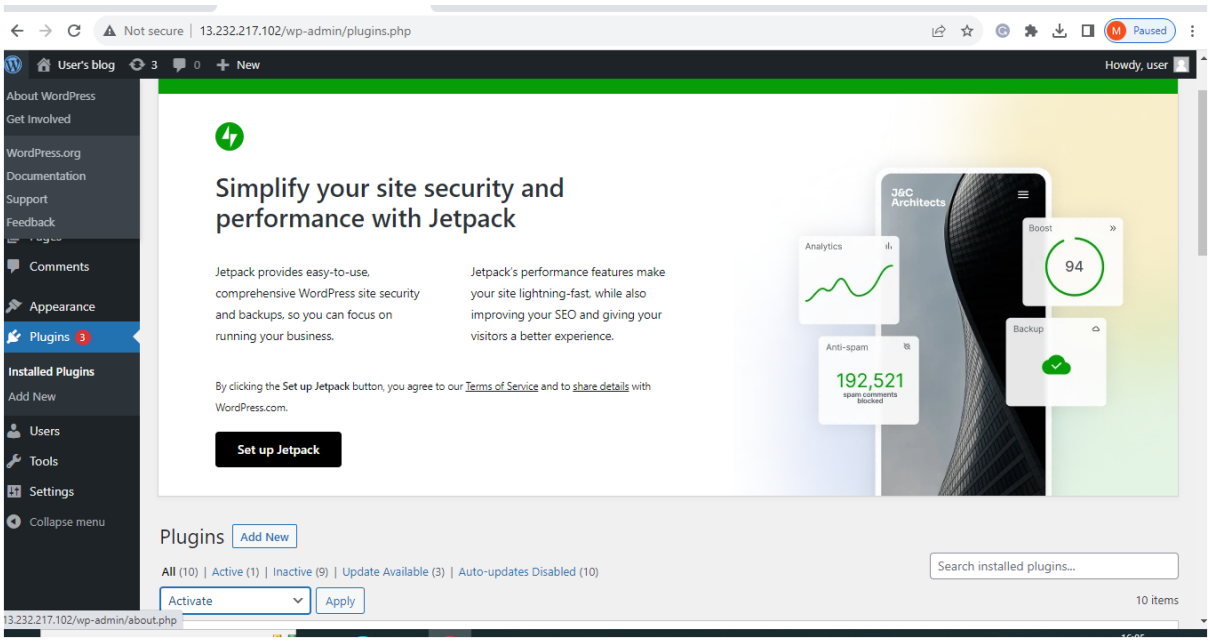


Check the password for the WordPress login



Dashboard showing in WordPress





ii. 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 'Manoj@12';

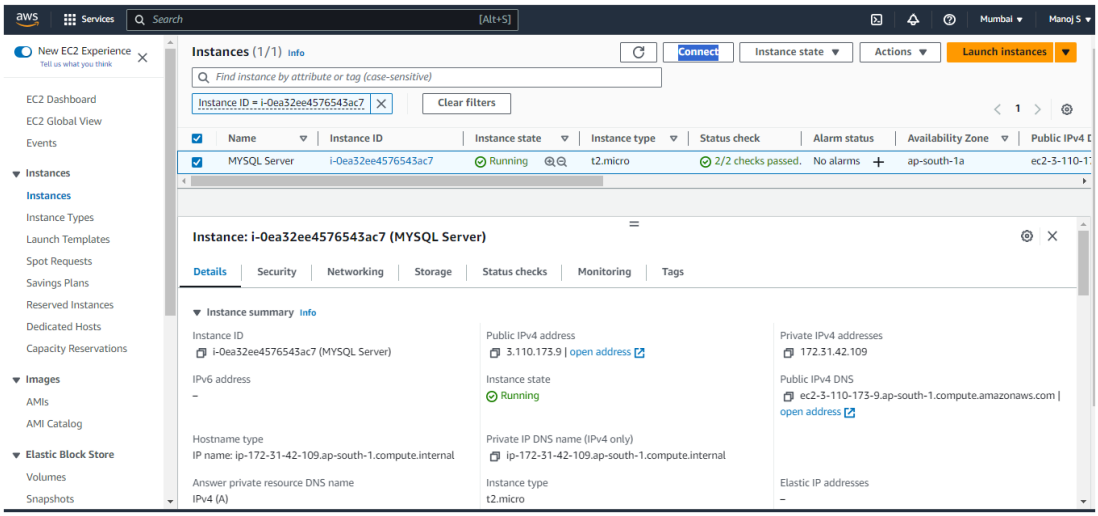
CREATE DATABASE mysql_test;

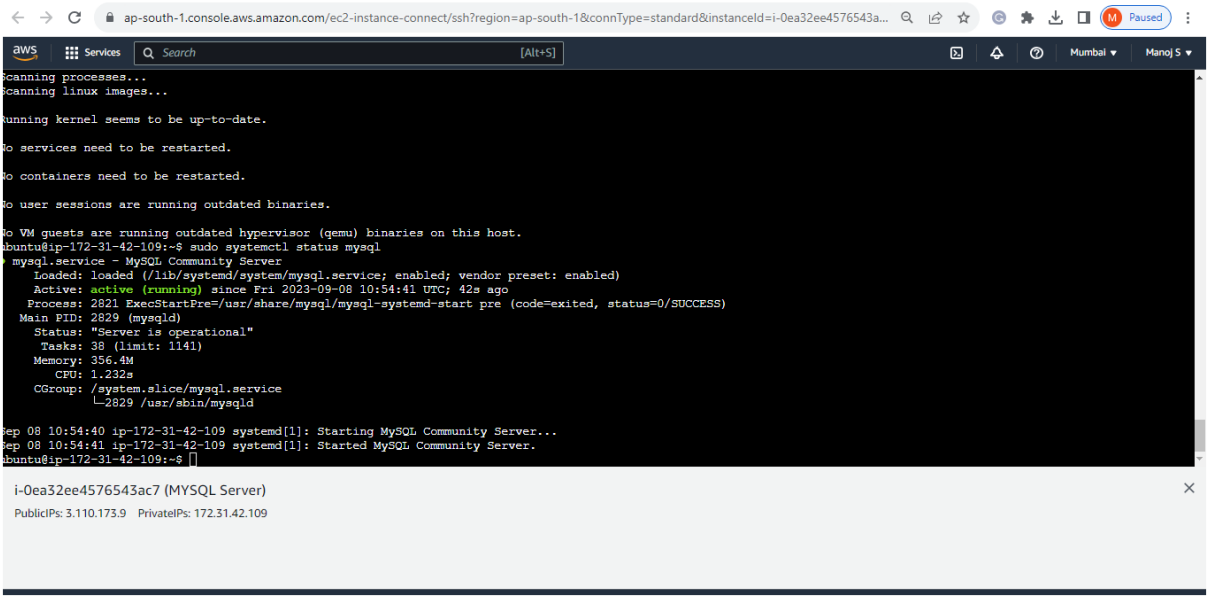
USE mysql_test;

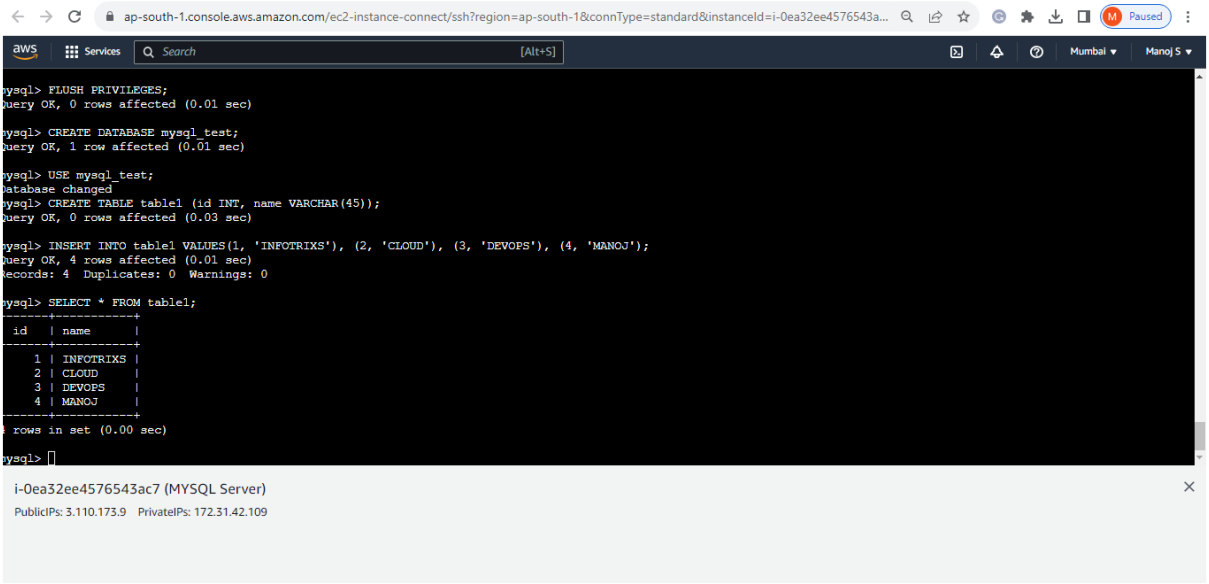
CREATE TABLE table1 (id INT, name VARCHAR(45));

INSERT INTO table1 VALUES(1, 'INFOTRIXS'), (2, 'CLOUD'), (3, 'DEVOPS'), (4, 'MANOJ');

SELECT * FROM table1;


Services
Search
[Alt+S]
Mumbai
Manoj S
New EC2 Experience
Tell us what you think
EC2 Dashboard
EC2 Global View
Events
Instances
Instances
Instance Types
Launch Templates
Spot Requests
Savings Plans
Reserved Instances
Dedicated Hosts
Capacity Reservations
Images
AMIs
AMI Catalog
Elastic Block Store
Volumes
Snapshots
Instances (1/1) Info
Connect
Instance state
Actions
Launch instances
Find instance by attribute or tag (case-sensitive)
Instance ID = i-0ea32ee4576543ac7
Clear filters
Name
Instance ID
Instance state
Instance type
Status check
Alarm status
Availability Zone
Public IPv4 D
MYSQL Server
i-0ea32ee4576543ac7
Running
t2.micro
2/2 checks passed.
No alarms
ap-south-1a
Instance: i-0ea32ee4576543ac7 (MYSQL Server)
Details
Security
Networking
Storage
Status checks
Monitoring
Tags
Instance summary Info
Instance ID
i-0ea32ee4576543ac7 (MYSQL Server)
Public IPv4 address
3.110.173.9 | open address
Private IPv4 addresses
172.31.42.109
IPv6 address
–
Instance state
Running
Public IPv4 DNS
ec2-3-110-173-9.ap-south-1.compute.amazonaws.com | open address
Hostname type
IP name: ip-172-31-42-109.ap-south-1.compute.internal
Private IP DNS name (IPv4 only)
ip-172-31-42-109.ap-south-1.compute.internal
Answer private resource DNS name
IPv4 (A)
Instance type
t2.micro
Elastic IP addresses
–


ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0ea32ee4576543a...
Paused
Services
Search
[Alt+S]
Mumbai
Manoj S
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-42-109:~$ sudo systemctl status mysql
mysql.service - MySQL Community Server
Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)
Active: active (running) since Fri 2023-09-08 10:54:41 UTC; 42s ago
Process: 2821 ExecStartPre=/usr/share/mysql/mysql-systemd-start pre (code=exited, status=0/SUCCESS)
Main PID: 2829 (mysqld)
Status: "Server is operational"
Tasks: 38 (limit: 1141)
Memory: 356.4M
CPU: 1.232s
CGroup: /system.slice/mysql.service
└─2829 /usr/sbin/mysqld
Sep 08 10:54:40 ip-172-31-42-109 systemd[1]: Starting MySQL Community Server...
Sep 08 10:54:41 ip-172-31-42-109 systemd[1]: Started MySQL Community Server.
ubuntu@ip-172-31-42-109:~$
i-0ea32ee4576543ac7 (MYSQL Server)
PublicIPs: 3.110.173.9 PrivateIPs: 172.31.42.109


ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0ea32ee4576543a...
Paused
aws
Services
Search
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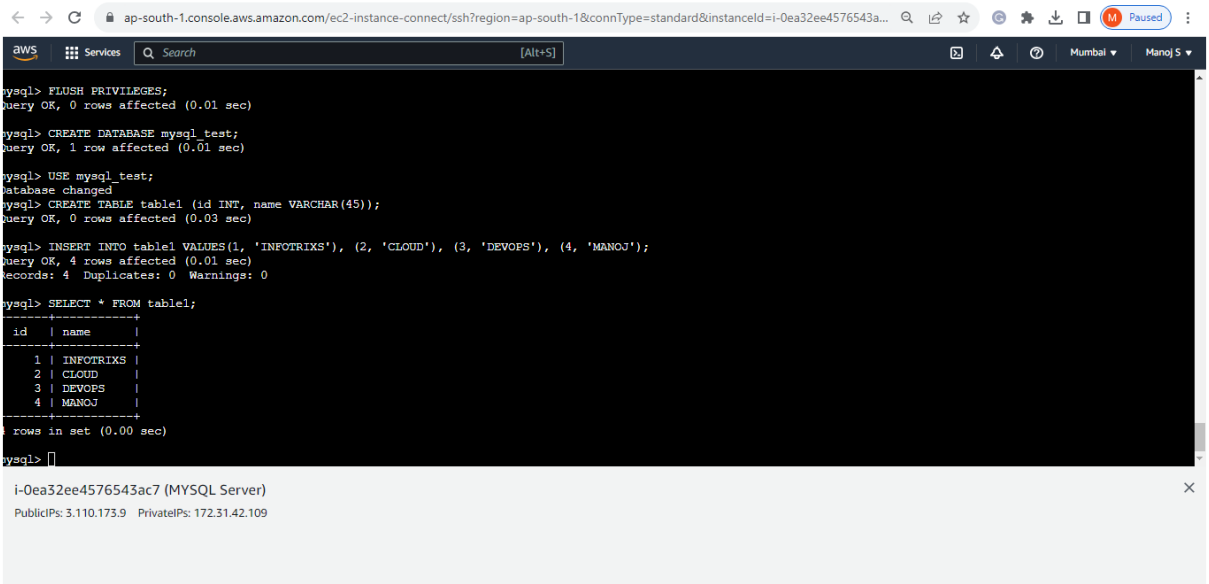
mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.01 sec)
mysql> CREATE DATABASE mysql_test;
Query OK, 1 row affected (0.01 sec)
mysql> USE mysql_test;
Database changed
mysql> CREATE TABLE table1 (id INT, name VARCHAR(45));
Query OK, 0 rows affected (0.03 sec)
mysql> INSERT INTO table1 VALUES(1, 'INFOTRIXS'), (2, 'CLOUD'), (3, 'DEVOPS'), (4, 'MANOJ');
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	MANOJ
+------+-----------+
4 rows in set (0.00 sec)
mysql>
i-0ea32ee4576543ac7 (MYSQL Server)
PublicIPs: 3.110.173.9 PrivateIPs: 172.31.42.109

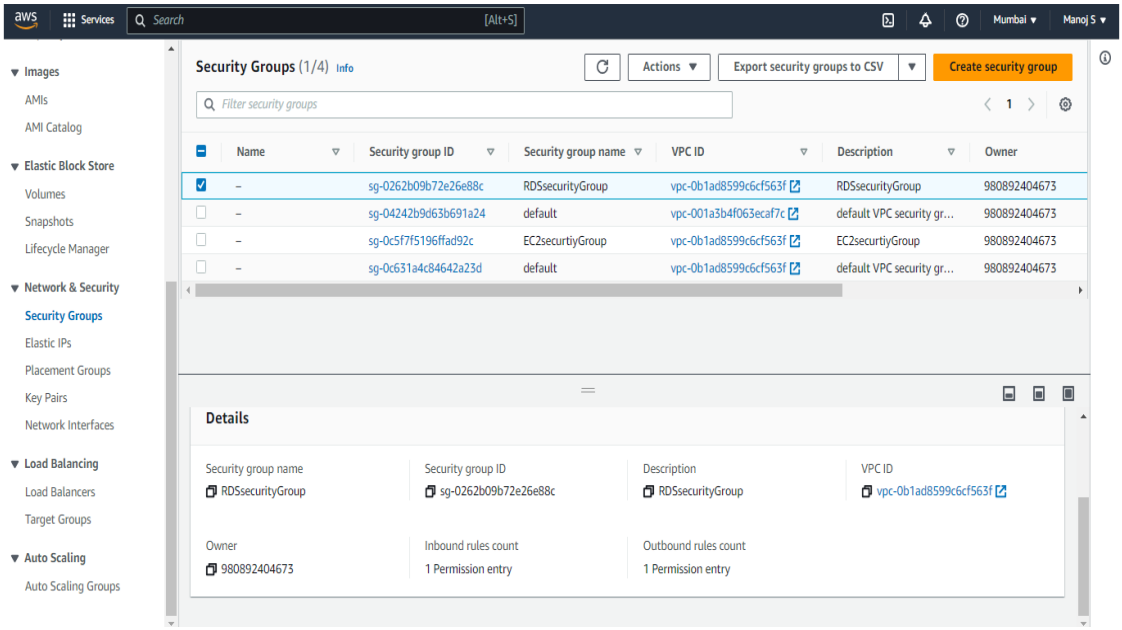

ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0ea32ee4576543a...
Paused
aws
Services
Search
[Alt+S]
Mumbai
Manoj S
mysql> FLUSH PRIVILEGES;
Query OK, 0 rows affected (0.01 sec)
mysql> CREATE DATABASE mysql_test;
Query OK, 1 row affected (0.01 sec)
mysql> USE mysql_test;
Database changed
mysql> CREATE TABLE table1 (id INT, name VARCHAR(45));
Query OK, 0 rows affected (0.03 sec)
mysql> INSERT INTO table1 VALUES(1, 'INFOTRIXS'), (2, 'CLOUD'), (3, 'DEVOPS'), (4, 'MANOJ');
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	MANOJ
+------+-----------+
4 rows in set (0.00 sec)
mysql>
i-0ea32ee4576543ac7 (MYSQL Server)
PublicIPs: 3.110.173.9 PrivateIPs: 172.31.42.109

Task – 2

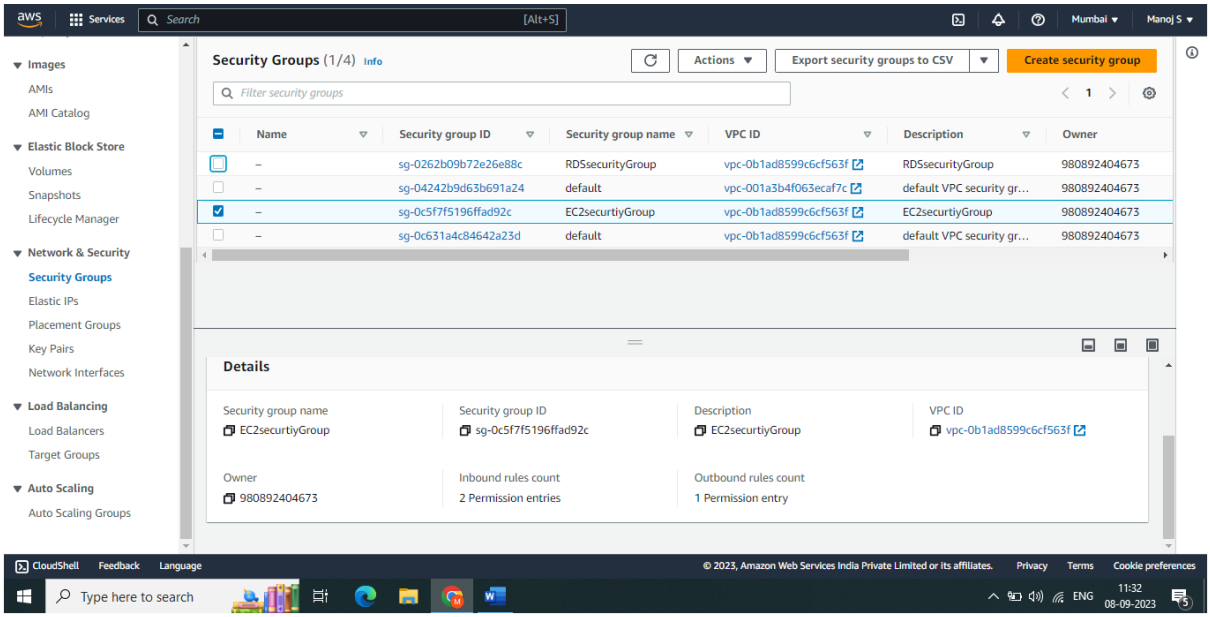
2) For Monolith : 1 EC2 instance, deploy wordpress and MYSQL on the same instances

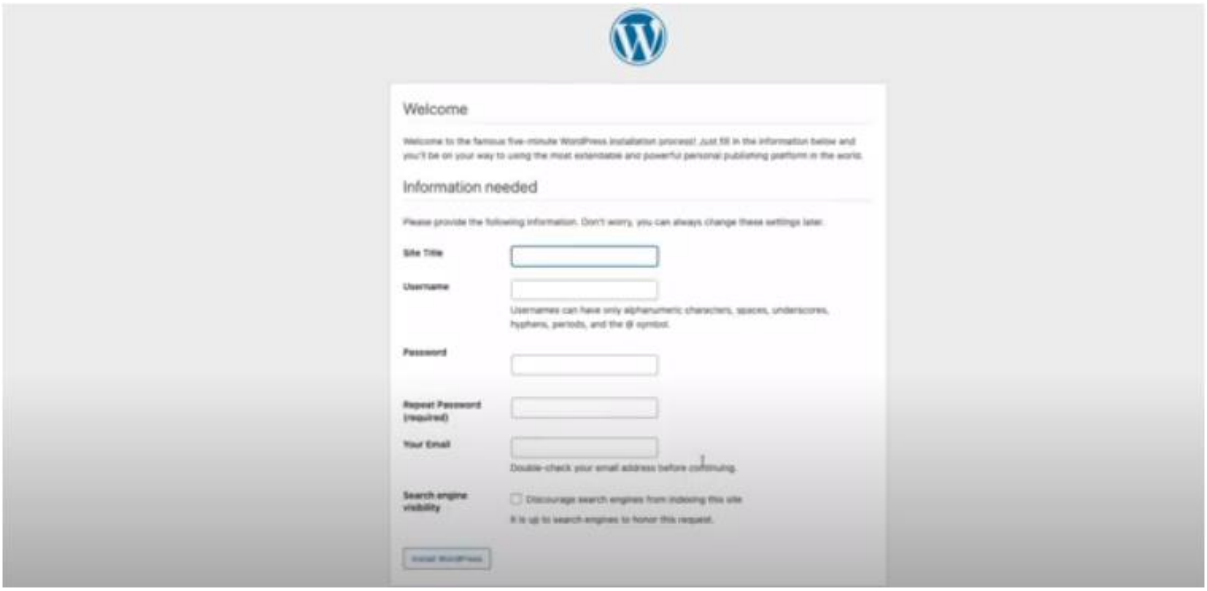
Create 2 Security Groups

RDS Security Group

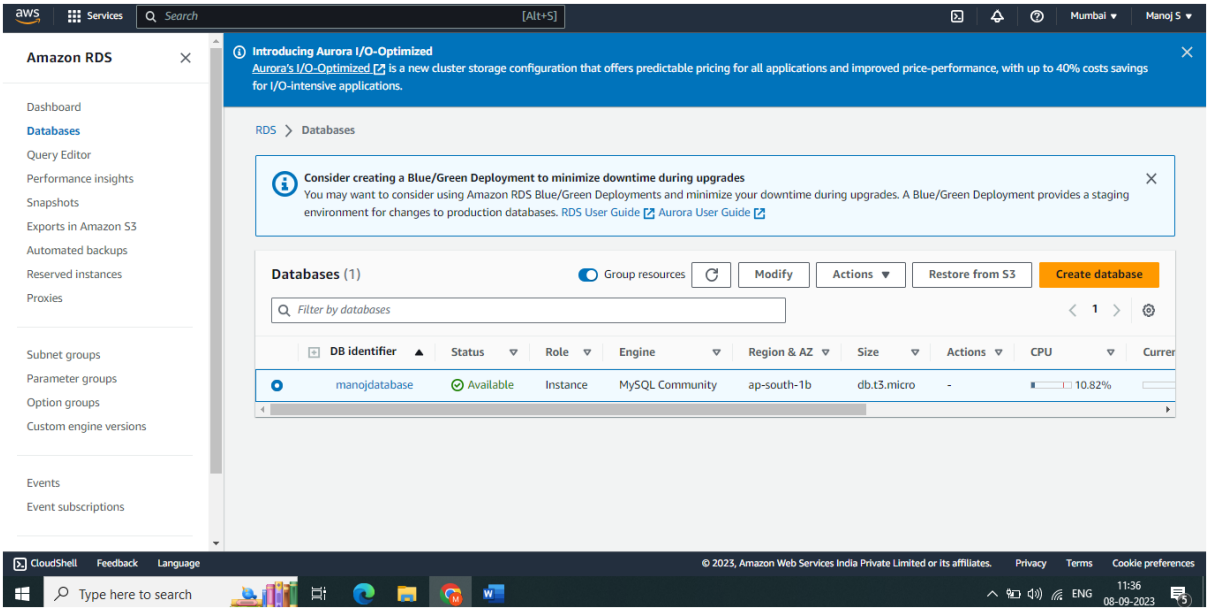


EC2 Security Group





Create Database



Commands :

sudo apt update

sudo apt install apache2

sudo systemctl start apache2

sudo apt-get install software-properties-common -y

sudo apt-get install php libapache2-mod-php php-mysql php-curl php-gd php-json php-zip

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

sudo tar -xvzf latest.tar.gz

sudo cp wp-config-sample.php wp-config.php

sudo chown -R www-data:www-data /var/www/wordpress

sudo cd /var/www/wordpress

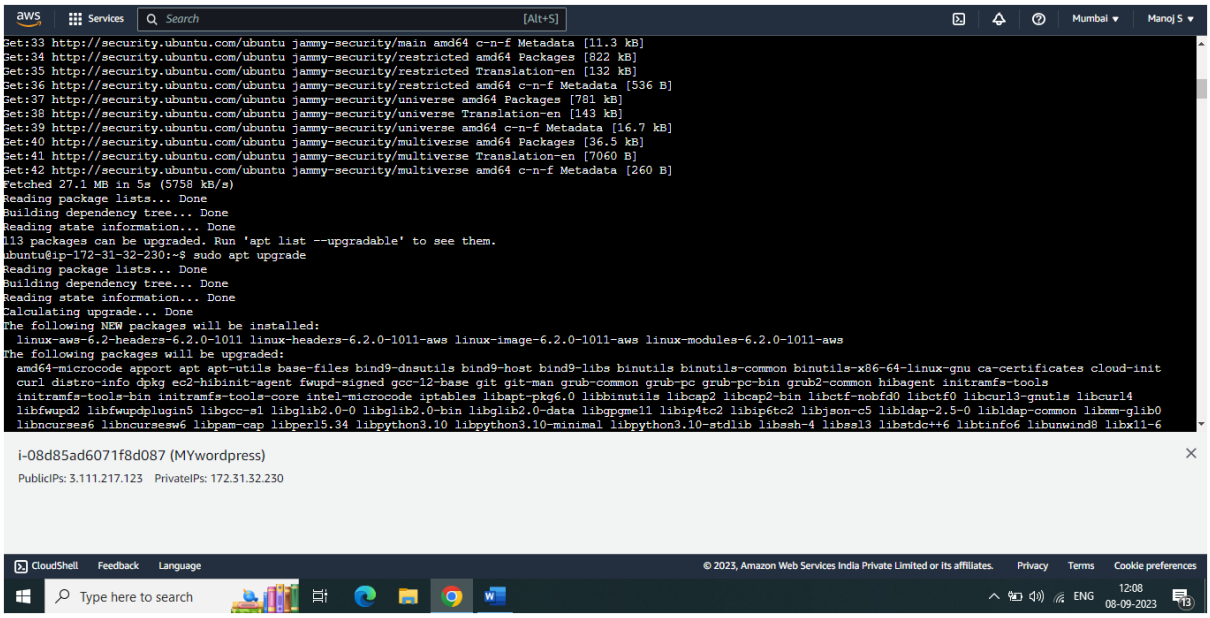
sudo vim wp-config.php

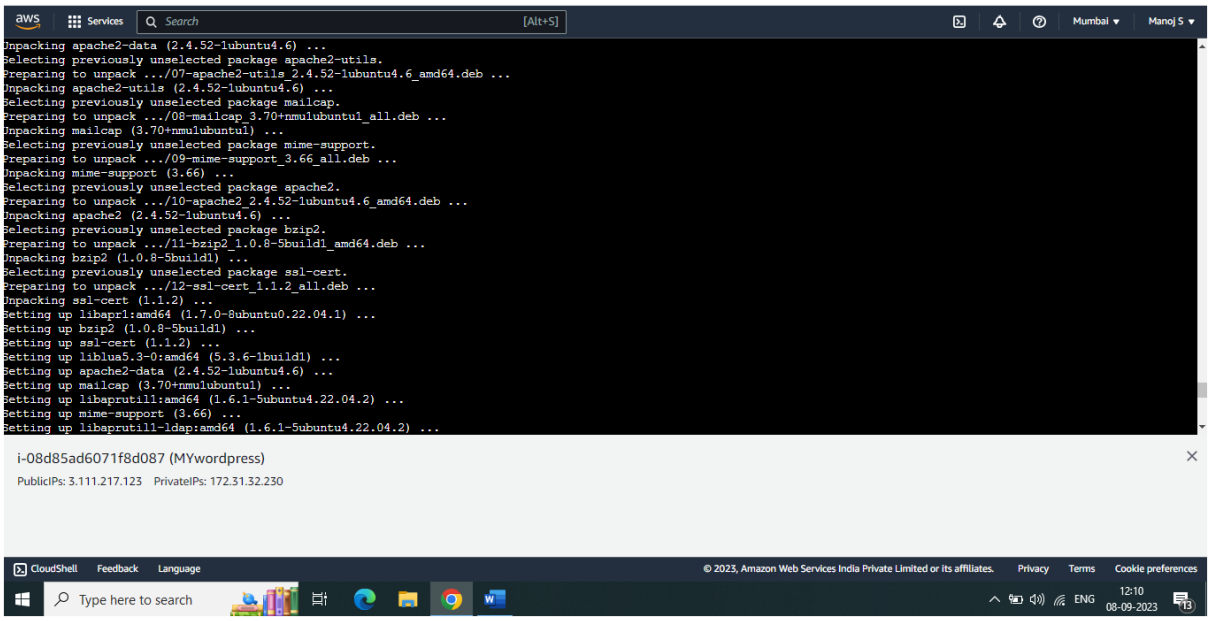
sudo a2ensite wordpress.conf

sudo a2enmod rewrite

sudo apache2ctl configtest

sudo service apache2 restart




aws
Services
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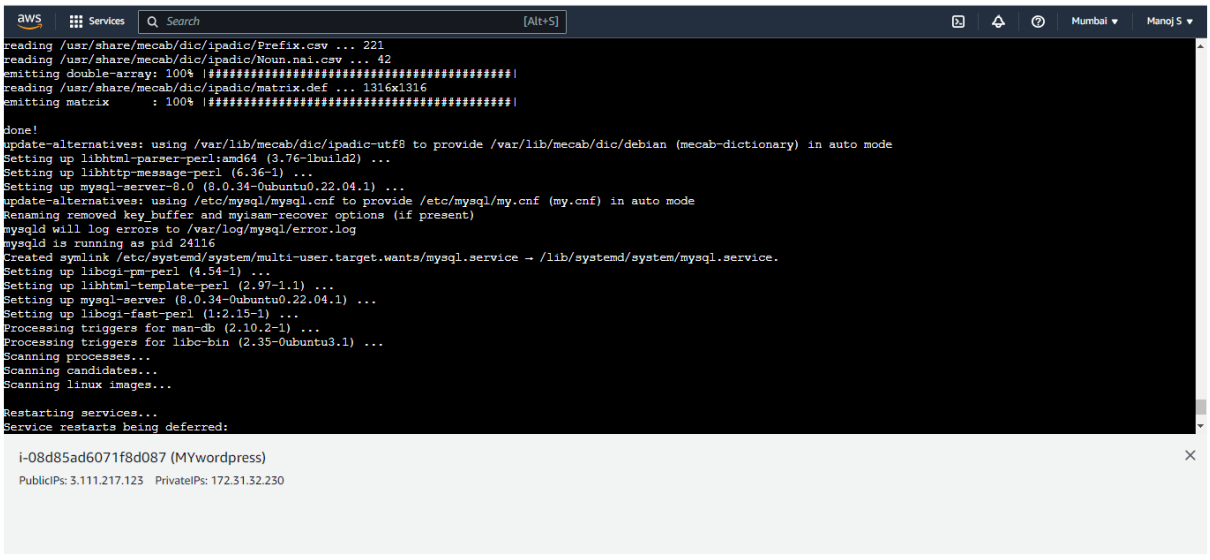
Unpacking apache2-data (2.4.52-1ubuntu4.6) ...
Selecting previously unselected package apache2-utils.
Preparing to unpack .../07-apache2-utils_2.4.52-1ubuntu4.6_amd64.deb ...
Unpacking apache2-utils (2.4.52-1ubuntu4.6) ...
Selecting previously unselected package mailcap.
Preparing to unpack .../08-mailcap_3.70+nmu1ubuntu1_all.deb ...
Unpacking mailcap (3.70+nmu1ubuntu1) ...
Selecting previously unselected package mime-support.
Preparing to unpack .../09-mime-support_3.66_all.deb ...
Unpacking mime-support (3.66) ...
Selecting previously unselected package apache2.
Preparing to unpack .../10-apache2_2.4.52-1ubuntu4.6_amd64.deb ...
Unpacking apache2 (2.4.52-1ubuntu4.6) ...
Selecting previously unselected package bzip2.
Preparing to unpack .../11-bzip2_1.0.8-5build1_amd64.deb ...
Unpacking bzip2 (1.0.8-5build1) ...
Selecting previously unselected package ssl-cert.
Preparing to unpack .../12-ssl-cert_1.1.2_all.deb ...
Unpacking ssl-cert (1.1.2) ...
Setting up libapr1:amd64 (1.7.0-8ubuntu0.22.04.1) ...
Setting up bzip2 (1.0.8-5build1) ...
Setting up ssl-cert (1.1.2) ...
Setting up liblua5.3-0:amd64 (5.3.6-1build1) ...
Setting up apache2-data (2.4.52-1ubuntu4.6) ...
Setting up mailcap (3.70+nmu1ubuntu1) ...
Setting up libaprutil1:amd64 (1.6.1-5ubuntu4.22.04.2) ...
Setting up mime-support (3.66) ...
Setting up libaprutil1-ldap:amd64 (1.6.1-5ubuntu4.22.04.2) ...
i-08d85ad6071f8d087 (MYwordpress)
PublicIPs: 3.111.217.123 PrivateIPs: 172.31.32.230
CloudShell
Feedback
Language
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences
Type here to search
ENG
12:10
08-09-2023


aws
Services
Search
[Alt+S]
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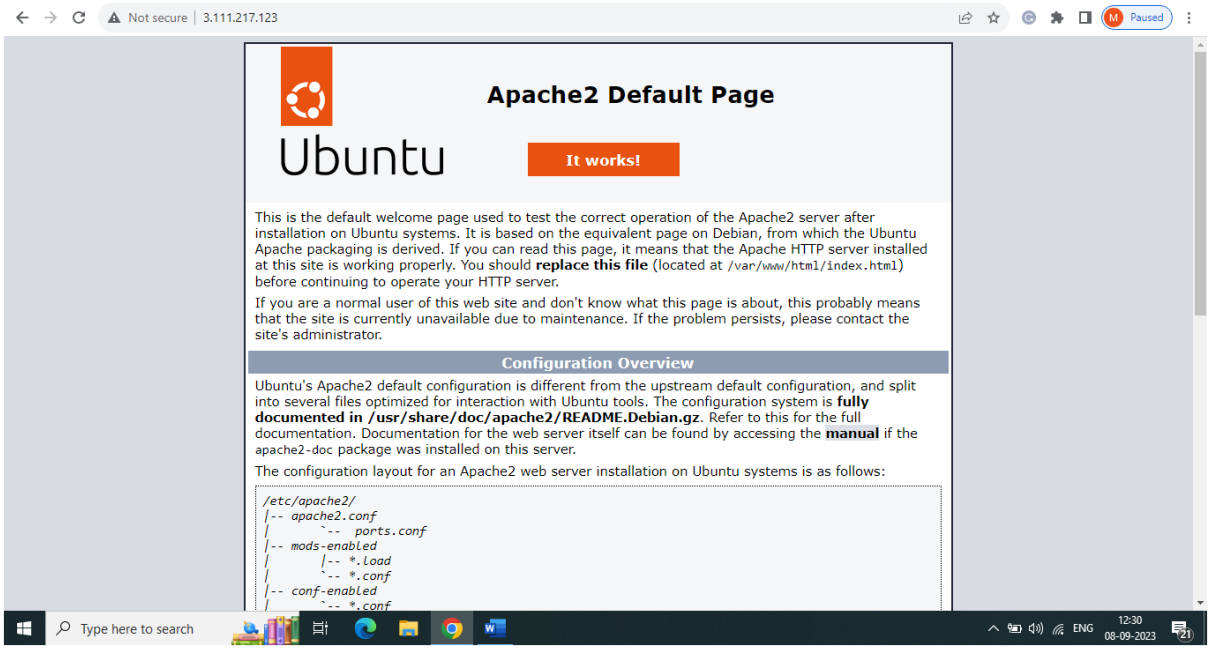
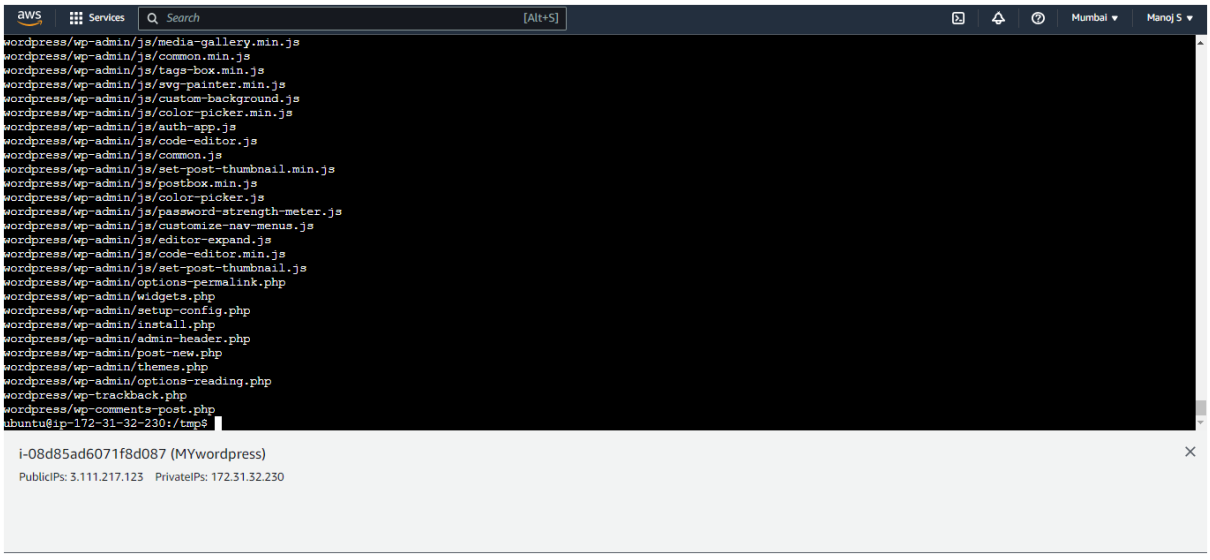
reading /usr/share/mecab/dic/ipadic/Prefix.csv ... 221
reading /usr/share/mecab/dic/ipadic/Noun.nai.csv ... 42
emitting double-array: 100% |###|
reading /usr/share/mecab/dic/ipadic/matrix.def ... 1316x1316
emitting matrix   : 100% |###|
done!
update-alternatives: using /var/lib/mecab/dic/ipadic-utf8 to provide /var/lib/mecab/dic/debian (mecab-dictionary) in auto mode
Setting up libhtml-parser-perl:amd64 (3.76-1build2) ...
Setting up libhttp-message-perl (6.36-1) ...
Setting up mysql-server-8.0 (8.0.34-0ubuntu0.22.04.1) ...
update-alternatives: using /etc/mysql/mysql.cnf to provide /etc/mysql/my.cnf (my.cnf) in auto mode
Renaming removed key_buffer and myisam-recover options (if present)
mysqld will log errors to /var/log/mysql/error.log
mysqld is running as pid 24116
Created symlink /etc/systemd/system/multi-user.target.wants/mysql.service → /lib/systemd/system/mysql.service.
Setting up libcgi-pm-perl (4.54-1) ...
Setting up libhtml-template-perl (2.97-1.1) ...
Setting up mysql-server (8.0.34-0ubuntu0.22.04.1) ...
Setting up libcgi-fast-perl (1:2.15-1) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.1) ...
Scanning processes...
Scanning candidates...
Scanning linux images...
Restarting services...
Service restarts being deferred:
i-08d85ad6071f8d087 (MYwordpress)
PublicIPs: 3.111.217.123 PrivateIPs: 172.31.32.230


Not secure | 3.111.217.123
Paused
Apache2 Default Page
Ubuntu
It works!
This is the default welcome page used to test the correct operation of the Apache2 server after installation on Ubuntu systems. It is based on the equivalent page on Debian, from which the Ubuntu Apache packaging is derived. If you can read this page, it means that the Apache HTTP server installed at this site is working properly. You should replace this file (located at /var/www/html/index.html) before continuing to operate your HTTP server.
If you are a normal user of this web site and don't know what this page is about, this probably means that the site is currently unavailable due to maintenance. If the problem persists, please contact the site's administrator.
Configuration Overview
Ubuntu's Apache2 default configuration is different from the upstream default configuration, and split into several files optimized for interaction with Ubuntu tools. The configuration system is fully documented in /usr/share/doc/apache2/README.Debian.gz. Refer to this for the full documentation. Documentation for the web server itself can be found by accessing the manual if the apache2-doc package was installed on this server.
The configuration layout for an Apache2 web server installation on Ubuntu systems is as follows:
/etc/apache2/
|-- apache2.conf
| `-- ports.conf
|-- mods-enabled
| |-- *.load
| `-- *.conf
|-- conf-enabled
| `-- *.conf
Type here to search
ENG
12:30
08-09-2023


aws
Services
Search
[Alt+S]
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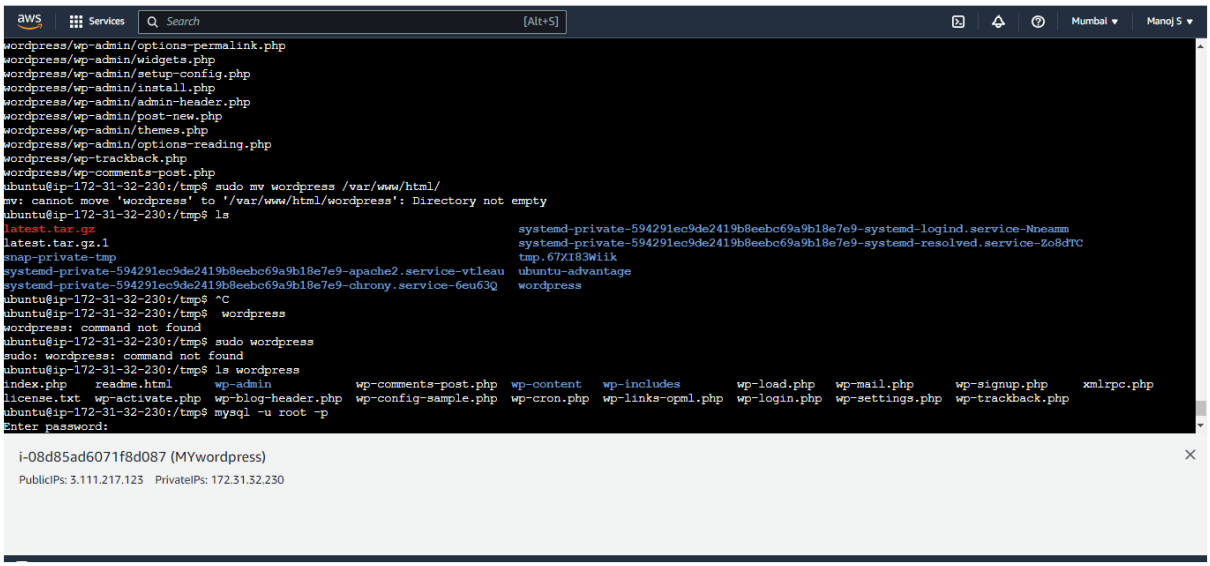
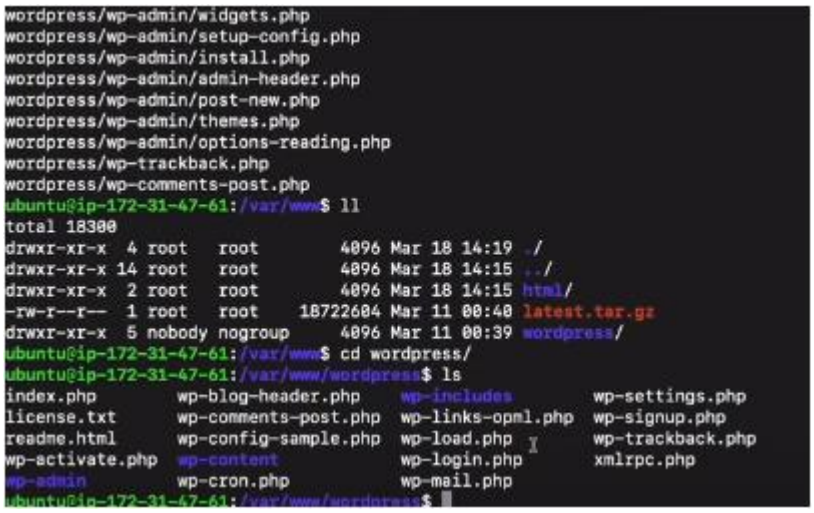
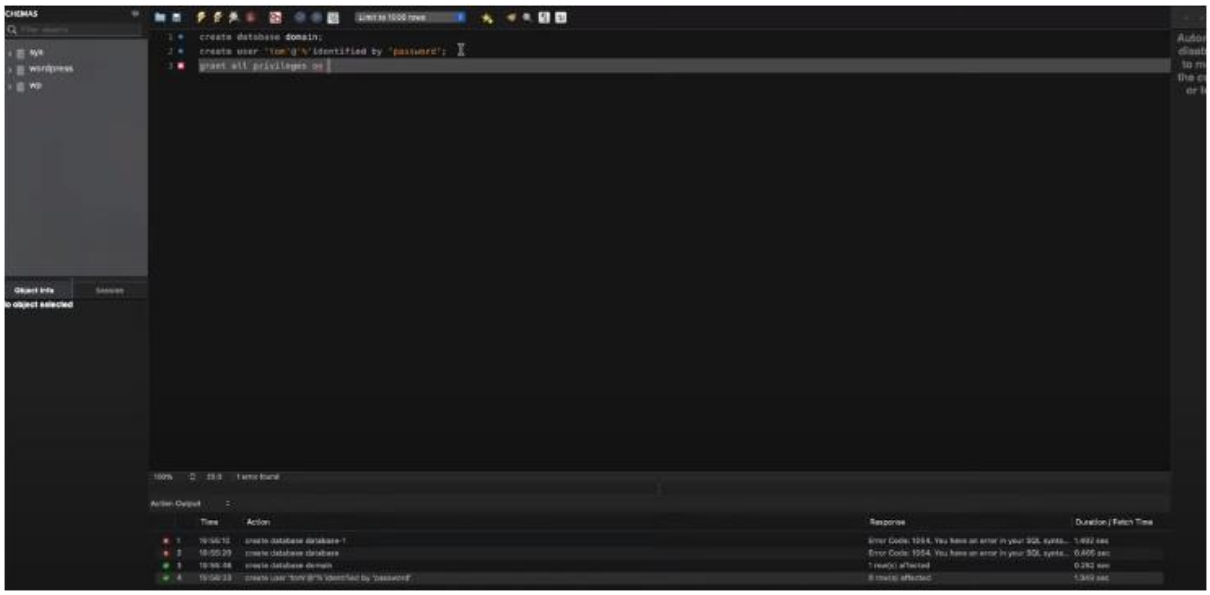
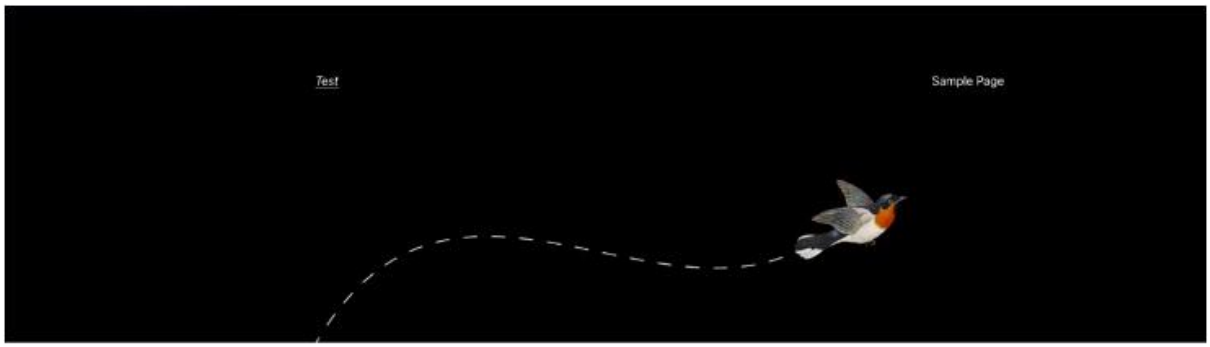
wordpress/wp-admin/js/media-gallery.min.js
wordpress/wp-admin/js/common.min.js
wordpress/wp-admin/js/tags-box.min.js
wordpress/wp-admin/js/svg-painter.min.js
wordpress/wp-admin/js/custom-background.js
wordpress/wp-admin/js/color-picker.min.js
wordpress/wp-admin/js/auth-app.js
wordpress/wp-admin/js/code-editor.js
wordpress/wp-admin/js/common.js
wordpress/wp-admin/js/set-post-thumbnail.min.js
wordpress/wp-admin/js/postbox.min.js
wordpress/wp-admin/js/color-picker.js
wordpress/wp-admin/js/password-strength-meter.js
wordpress/wp-admin/js/customize-nav-menus.js
wordpress/wp-admin/js/editor-expand.js
wordpress/wp-admin/js/code-editor.min.js
wordpress/wp-admin/js/set-post-thumbnail.js
wordpress/wp-admin/options-permalink.php
wordpress/wp-admin/widgets.php
wordpress/wp-admin/setup-config.php
wordpress/wp-admin/install.php
wordpress/wp-admin/admin-header.php
wordpress/wp-admin/post-new.php
wordpress/wp-admin/themes.php
wordpress/wp-admin/options-reading.php
wordpress/wp-trackback.php
wordpress/wp-comments-post.php
ubuntu@ip-172-31-32-230:/tmp$
i-08d85ad6071f8d087 (MYwordpress)
PublicIPs: 3.111.217.123 PrivateIPs: 172.31.32.230

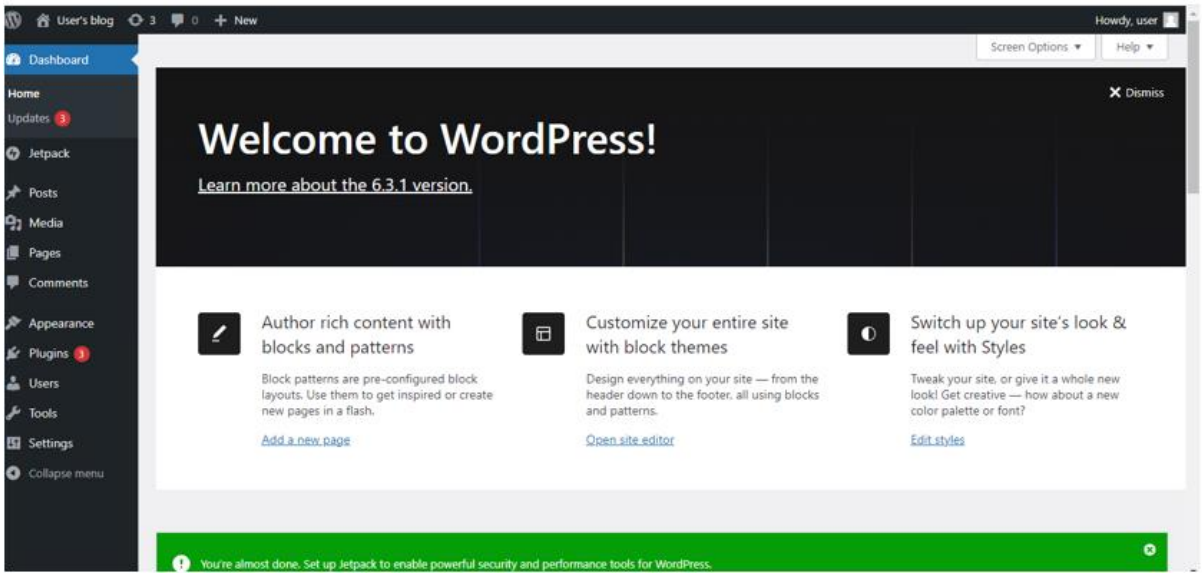

aws
Services
Search
[Alt+S]
Mumbai
Manoj S
wordpress/wp-admin/options-permalink.php
wordpress/wp-admin/widgets.php
wordpress/wp-admin/setup-config.php
wordpress/wp-admin/install.php
wordpress/wp-admin/admin-header.php
wordpress/wp-admin/post-new.php
wordpress/wp-admin/themes.php
wordpress/wp-admin/options-reading.php
wordpress/wp-trackback.php
wordpress/wp-comments-post.php
ubuntu@ip-172-31-32-230:/tmp$ sudo mv wordpress /var/www/html/
mv: cannot move 'wordpress' to '/var/www/html/wordpress': Directory not empty
ubuntu@ip-172-31-32-230:/tmp$ ls
latest.tar.gz
latest.tar.gz.1
snap-private-tmp
systemd-private-594291ec9de2419b8eebc69a9b18e7e9-apache2.service-vtleau
systemd-private-594291ec9de2419b8eebc69a9b18e7e9-chrony.service-6eu63Q
systemd-private-594291ec9de2419b8eebc69a9b18e7e9-systemd-logind.service-Nneamm
systemd-private-594291ec9de2419b8eebc69a9b18e7e9-systemd-resolved.service-Zo8dTC
tmp.67XI83Wiik
ubuntu-advantage
wordpress
ubuntu@ip-172-31-32-230:/tmp$ ^C
ubuntu@ip-172-31-32-230:/tmp$ wordpress
wordpress: command not found
ubuntu@ip-172-31-32-230:/tmp$ sudo wordpress
sudo: wordpress: command not found
ubuntu@ip-172-31-32-230:/tmp$ ls wordpress
index.php readme.html wp-admin wp-comments-post.php wp-content wp-includes wp-load.php wp-mail.php wp-signup.php xmlrpc.php
license.txt wp-activate.php wp-blog-header.php wp-config-sample.php wp-cron.php wp-links-opml.php wp-login.php wp-settings.php wp-trackback.php
ubuntu@ip-172-31-32-230:/tmp$ mysql -u root -p
Enter password:
i-08d85ad6071f8d087 (MYwordpress)
PublicIPs: 3.111.217.123 PrivateIPs: 172.31.32.230


wordpress/wp-admin/widgets.php
wordpress/wp-admin/setup-config.php
wordpress/wp-admin/install.php
wordpress/wp-admin/admin-header.php
wordpress/wp-admin/post-new.php
wordpress/wp-admin/themes.php
wordpress/wp-admin/options-reading.php
wordpress/wp-trackback.php
wordpress/wp-comments-post.php
ubuntu@ip-172-31-47-61:/var/www$ ll
total 18300
drwxr-xr-x 4 root root 4096 Mar 18 14:19 ./
drwxr-xr-x 14 root root 4096 Mar 18 14:15 ../
drwxr-xr-x 2 root root 4096 Mar 18 14:15 html/
-rw-r--r-- 1 root root 18722604 Mar 11 00:40 latest.tar.gz
drwxr-xr-x 5 nobody nogroup 4096 Mar 11 00:39 wordpress/
ubuntu@ip-172-31-47-61:/var/www$ cd wordpress/
ubuntu@ip-172-31-47-61:/var/www/wordpress$ ls
index.php wp-blog-header.php wp-includes wp-settings.php
license.txt wp-comments-post.php wp-links-opml.php wp-signup.php
readme.html wp-config-sample.php wp-load.php wp-trackback.php
wp-activate.php wp-content wp-login.php xmlrpc.php
wp-admin wp-cron.php wp-mail.php
ubuntu@ip-172-31-47-61:/var/www/wordpress$


SCHEMAS
sys
wordpress
wp
create database domain;
create user 'tom'@'%' identified by 'password';
grant all privileges on
Object Info
Session
No object selected
Action Output
Time
Action
Response
Duration / Fetch Time



Hello world!

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

March 18, 2022