Cloud (AWS) - Task 1

Deploy applications 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-*

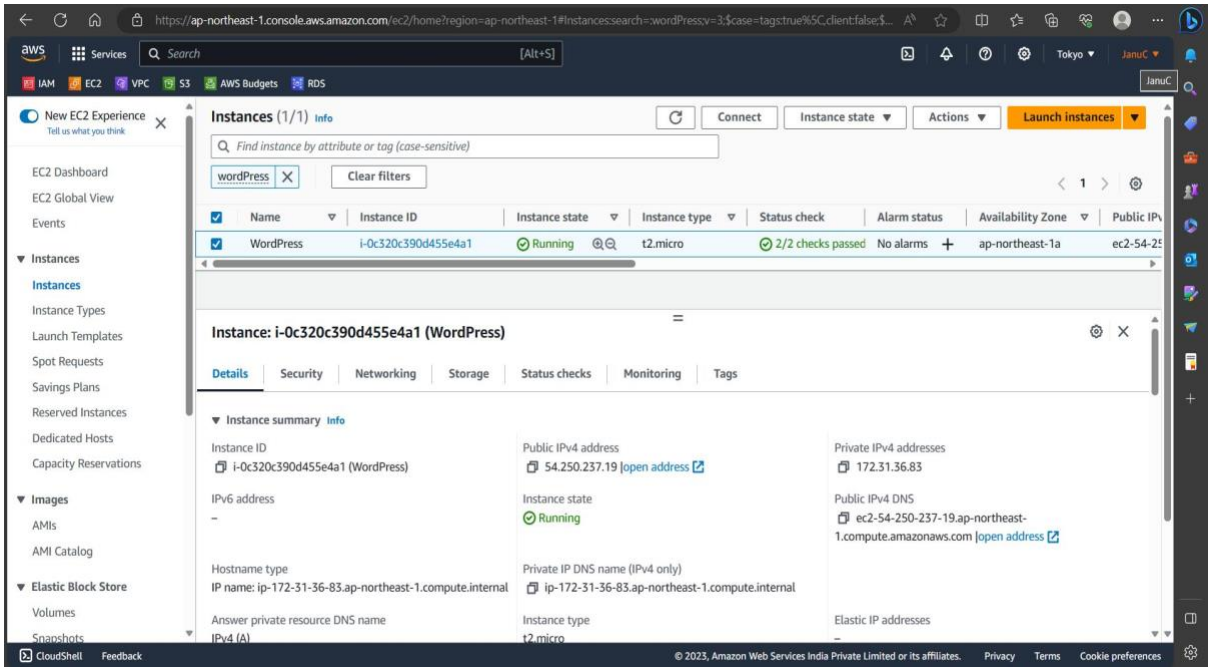
Task 1

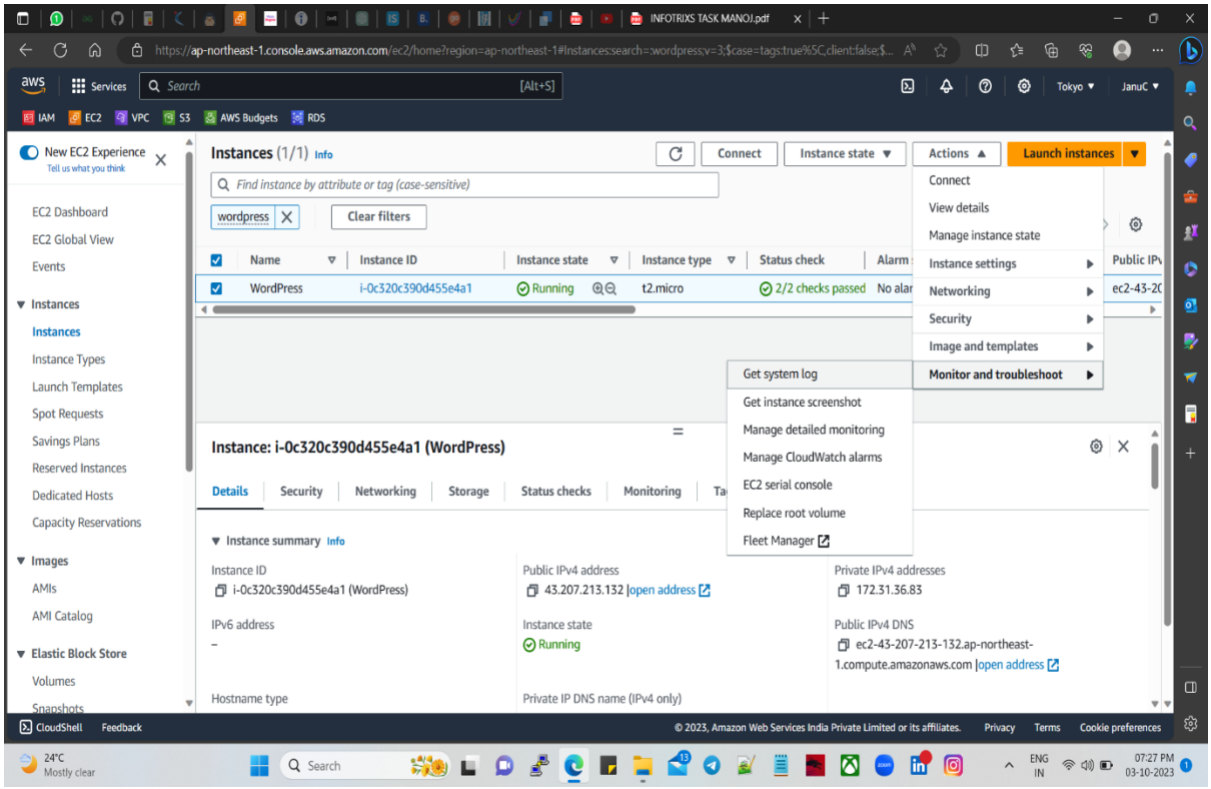
1) **For Microservice: 2 EC2 instances, 1 for WordPress and 1 for MYSQL**

i) 1 EC2 instance for WordPress

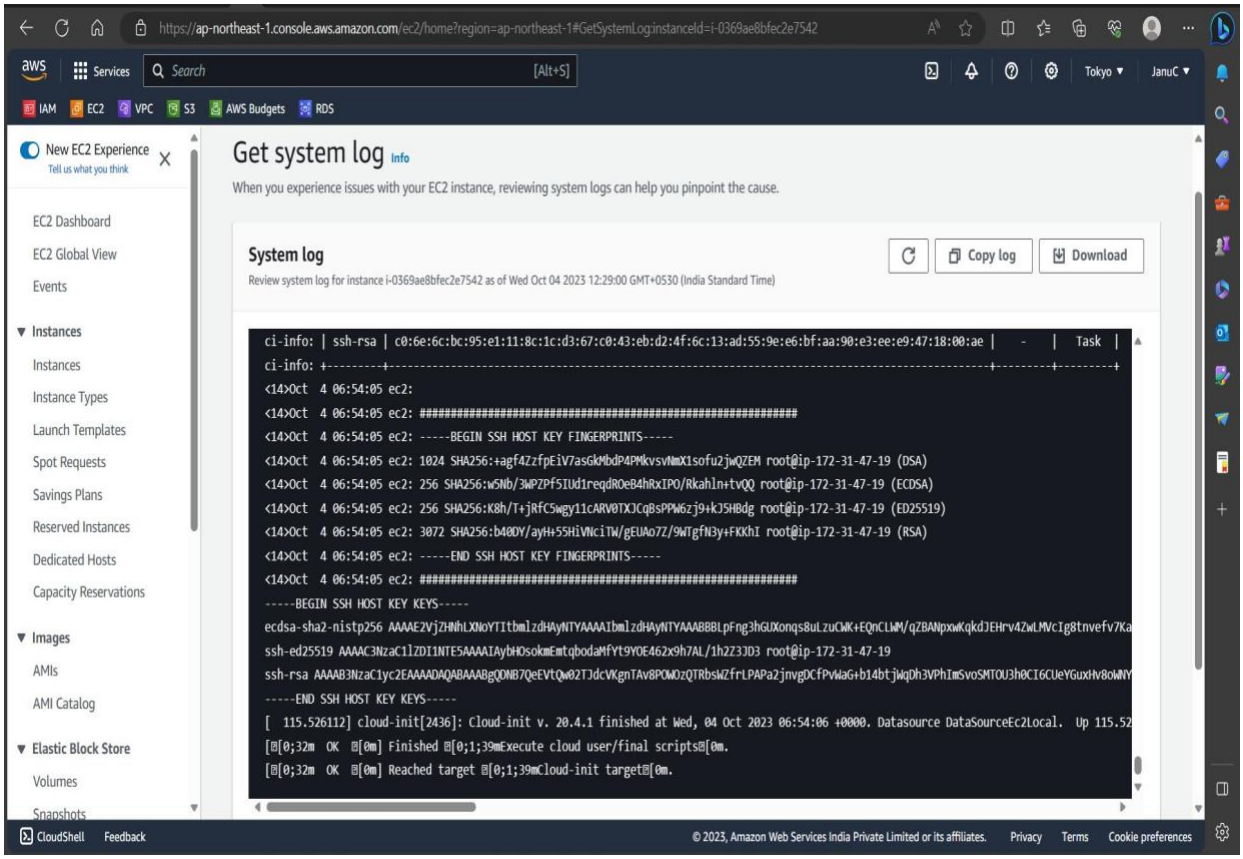
Create a WordPress instance Launch

Click actions and monitor troubleshoot and access Get the system log

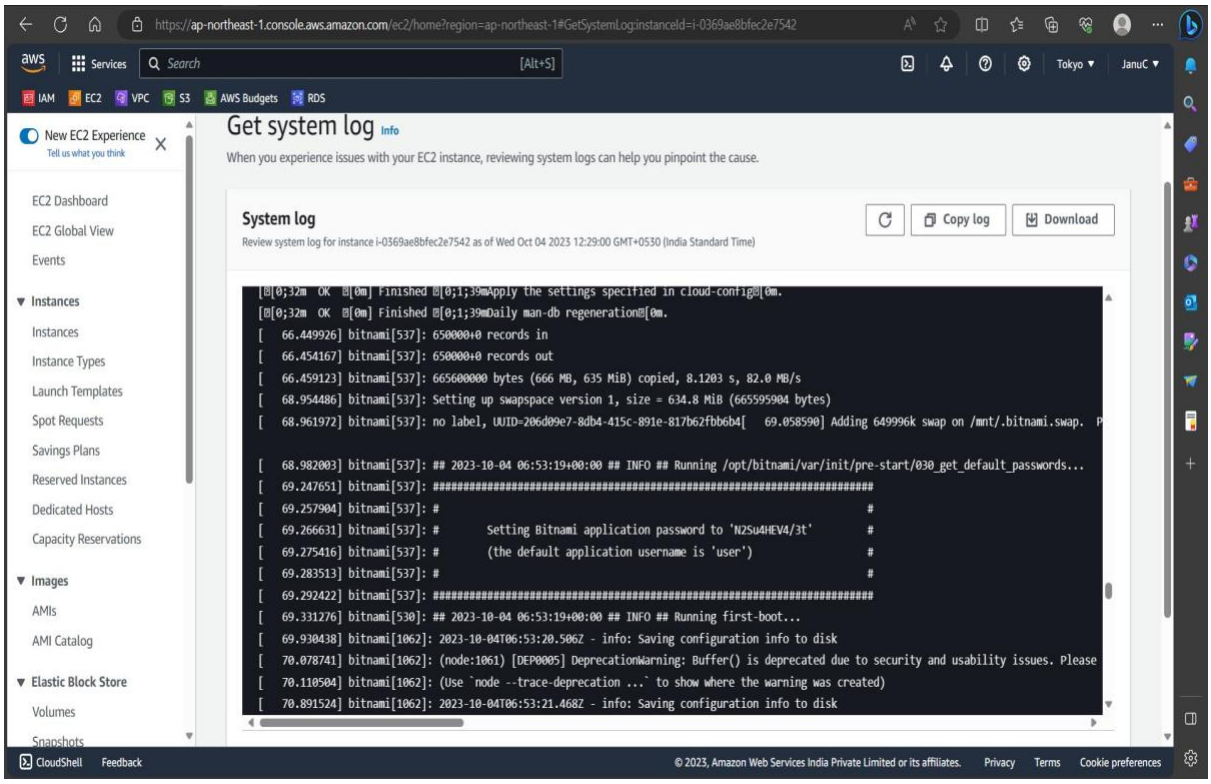




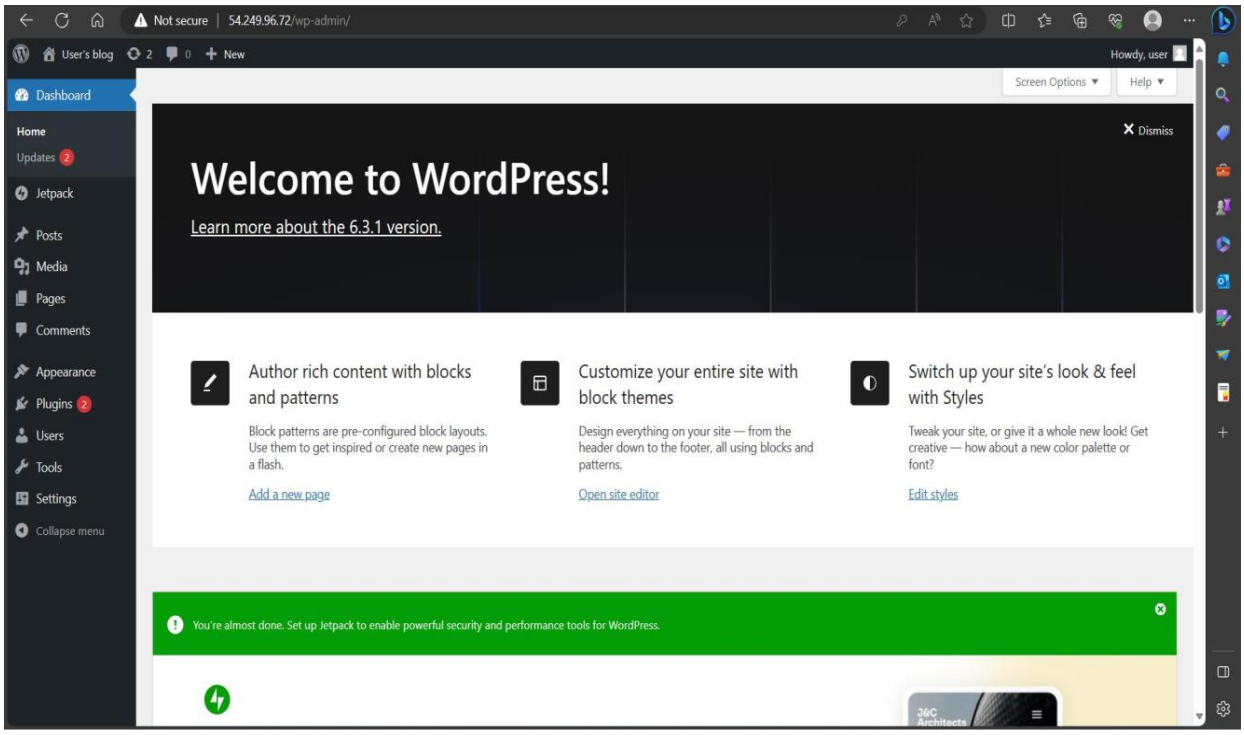
Get system log



Check the password for the WordPress login



Dashboard showing in WordPress

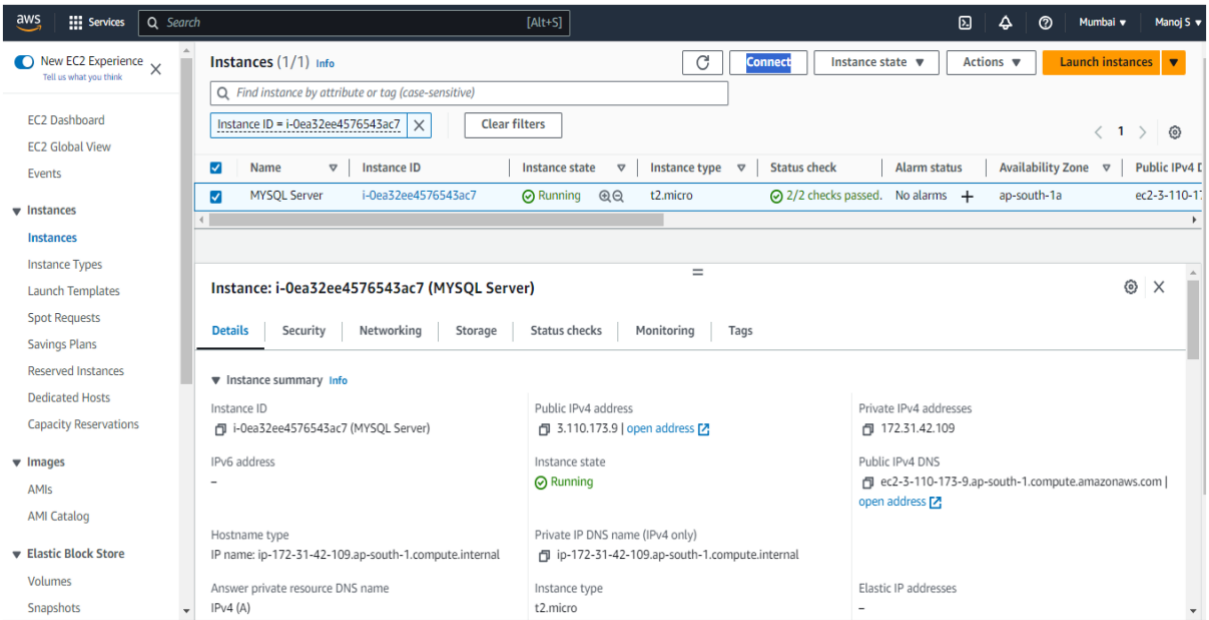


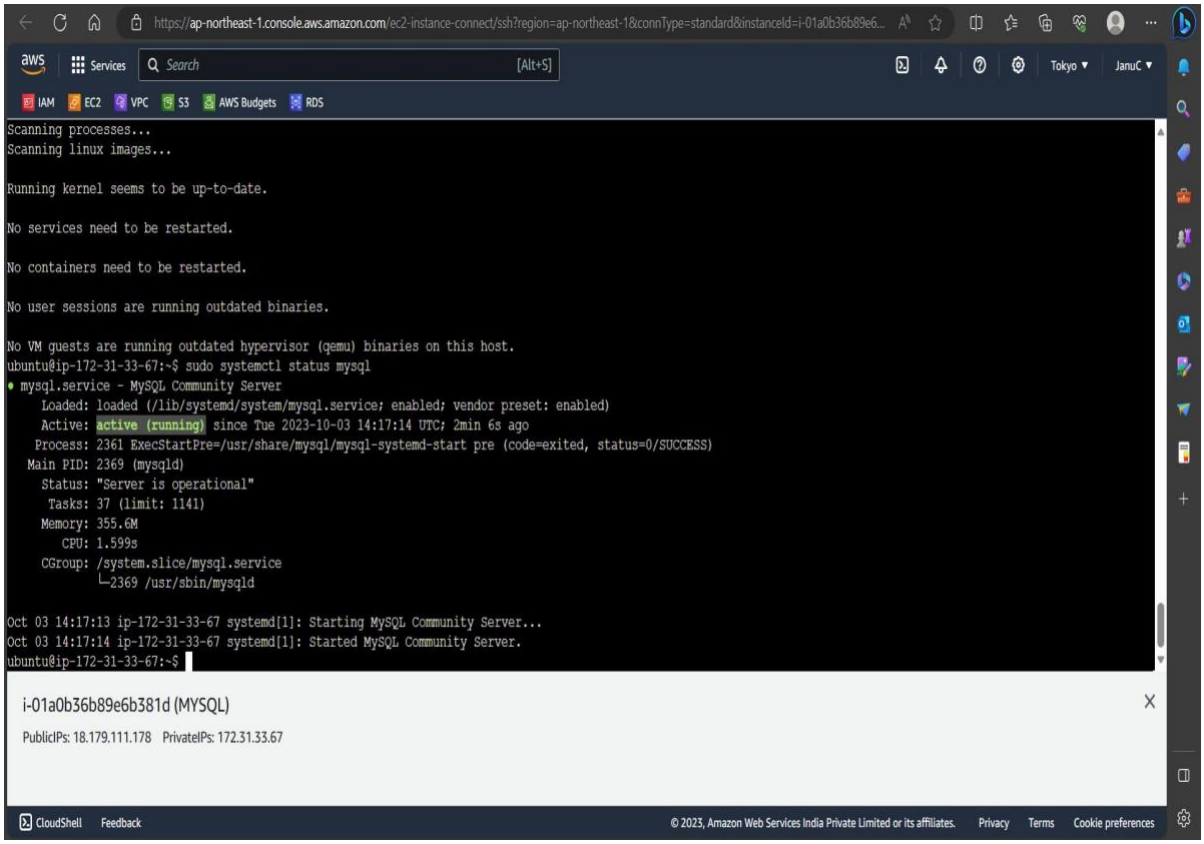
i) 1 EC2 instance for MYSQL

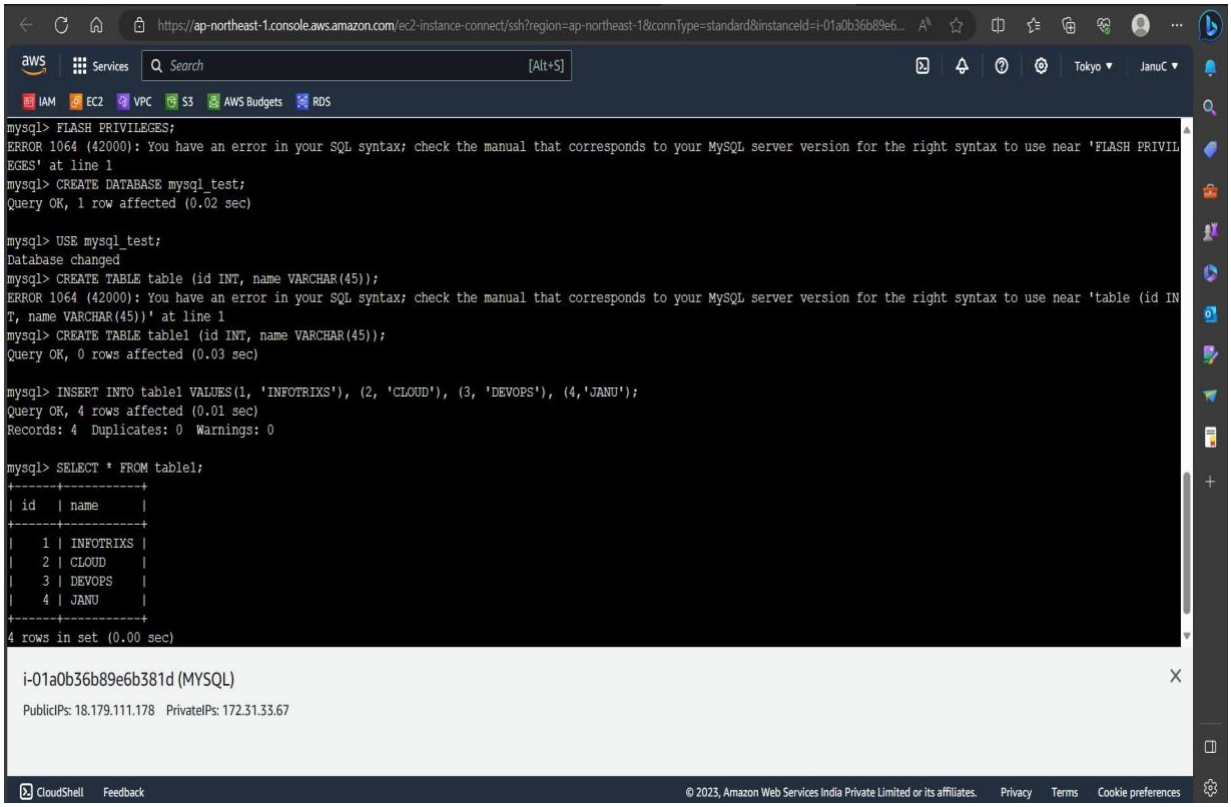
Create a MYSQL Server instance Launch

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 'Janu@24';

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, 'JANU');

SELECT * FROM table1;
```



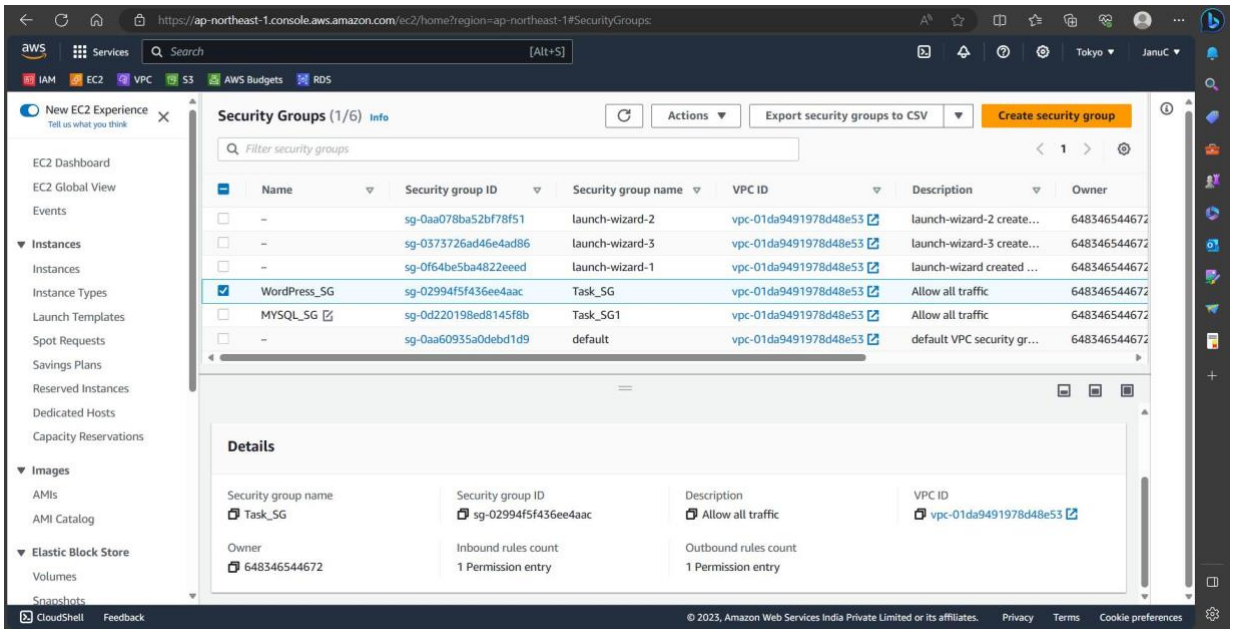

https://ap-northeast-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-northeast-1&connType=standard&instanceId=i-01a0b36b89e6...
Services
Search
[Alt+S]
Tokyo
JanuC
IAM
EC2
VPC
S3
AWS Budgets
RDS
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services 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-172-31-33-67:~$ sudo systemctl status mysql
● mysql.service - MySQL Community Server
Loaded: loaded (/lib/systemd/system/mysql.service; enabled; vendor preset: enabled)
Active: active (running) since Tue 2023-10-03 14:17:14 UTC; 2min 6s ago
Process: 2361 ExecStartPre=/usr/share/mysql/mysql-systemd-start pre (code=exited, status=0/SUCCESS)
Main PID: 2369 (mysqld)
Status: "Server is operational"
Tasks: 37 (limit: 1141)
Memory: 355.6M
CPU: 1.599s
CGroup: /system.slice/mysql.service
└2369 /usr/sbin/mysqld
Oct 03 14:17:13 ip-172-31-33-67 systemd[1]: Starting MySQL Community Server...
Oct 03 14:17:14 ip-172-31-33-67 systemd[1]: Started MySQL Community Server.
ubuntu@ip-172-31-33-67:~$
i-01a0b36b89e6b381d (MYSQL)
PublicIPs: 18.179.111.178 PrivateIPs: 172.31.33.67
CloudShell
Feedback
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

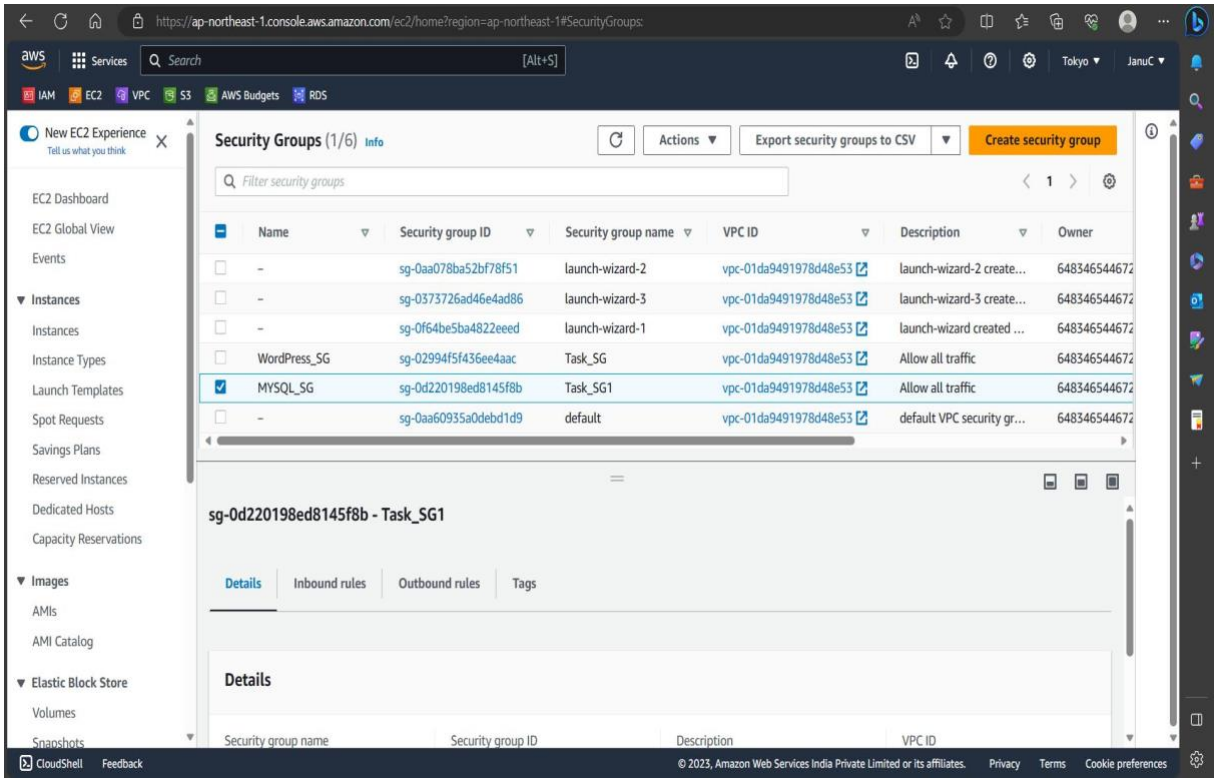

https://ap-northeast-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-northeast-1&connType=standard&instanceId=i-01a0b36b89e6...
Services
Search
[Alt+S]
Tokyo
JanuC
IAM
EC2
VPC
S3
AWS Budgets
RDS
mysql> FLASH PRIVILEGES;
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'FLASH PRIVIL
EGES' at line 1
mysql> CREATE DATABASE mysql_test;
Query OK, 1 row affected (0.02 sec)
mysql> USE mysql_test;
Database changed
mysql> CREATE TABLE table (id INT, name VARCHAR(45));
ERROR 1064 (42000): You have an error in your SQL syntax; check the manual that corresponds to your MySQL server version for the right syntax to use near 'table (id IN
T, name VARCHAR(45))' at line 1
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,'JANU');
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	JANU
+------+-----------+
4 rows in set (0.00 sec)
i-01a0b36b89e6b381d (MYSQL)
PublicIPs: 18.179.111.178 PrivateIPs: 172.31.33.67
CloudShell
Feedback
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

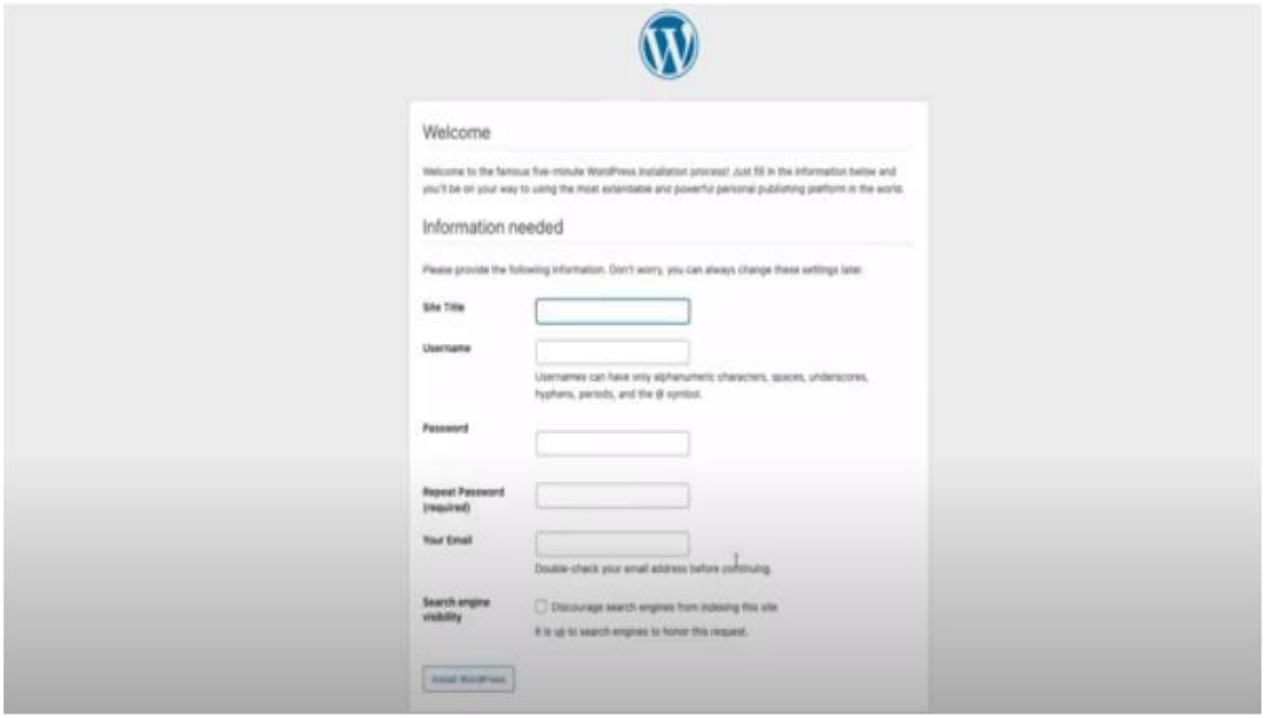
Task – 2

i) For Monolith: 1 EC2 instance, deploy WordPress and MYSQL on the same instances

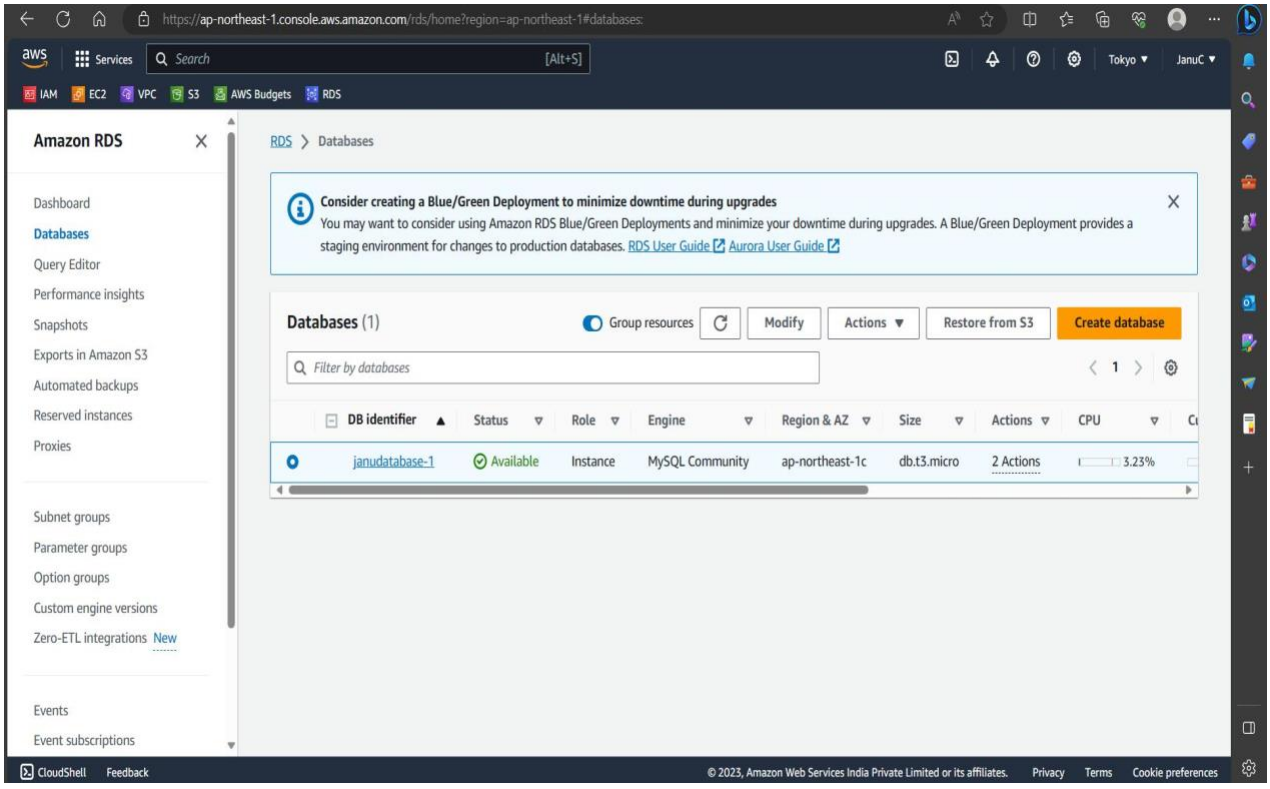
Create 2 Security Groups







Create Database

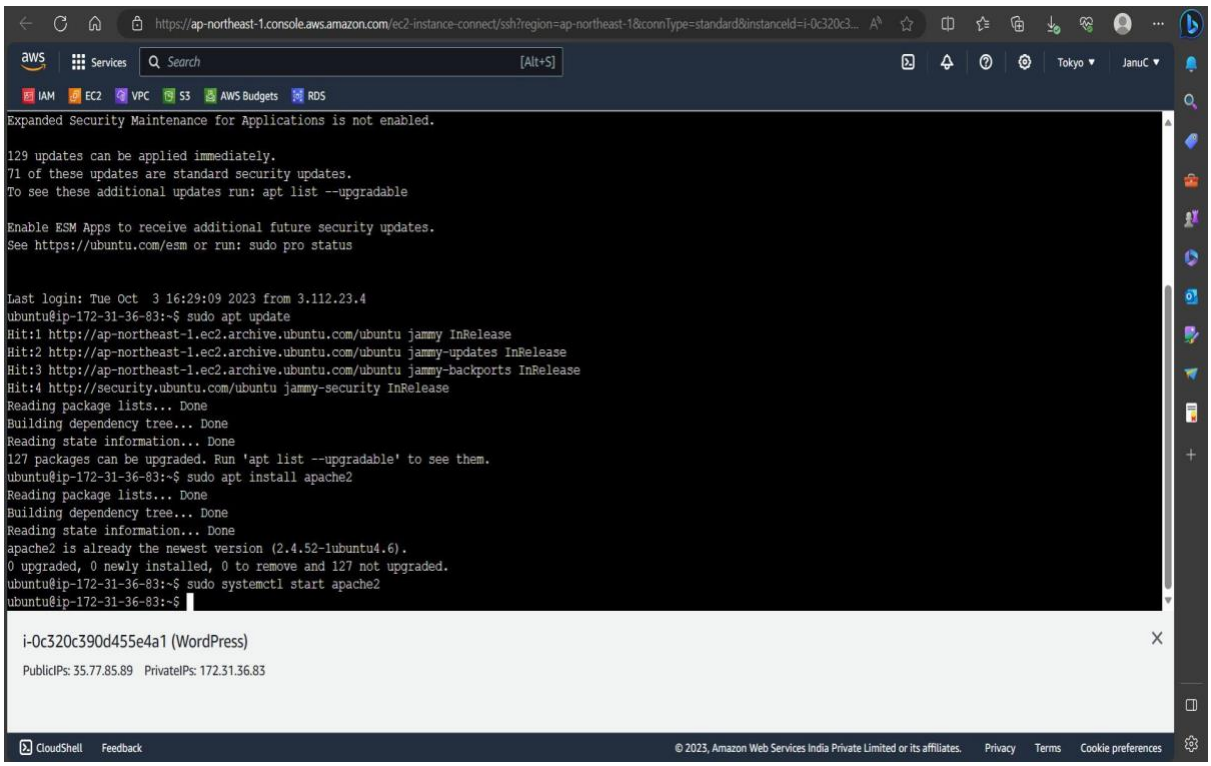


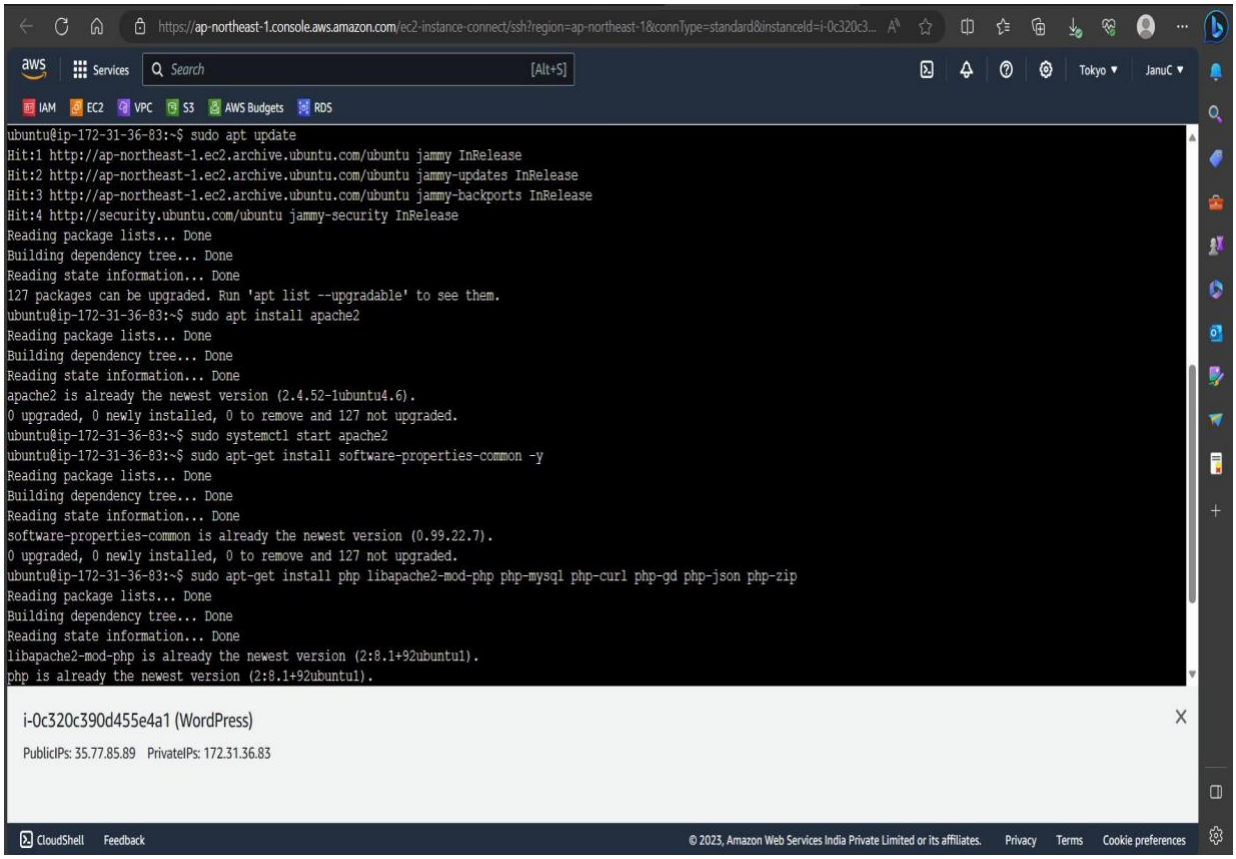
Commands:

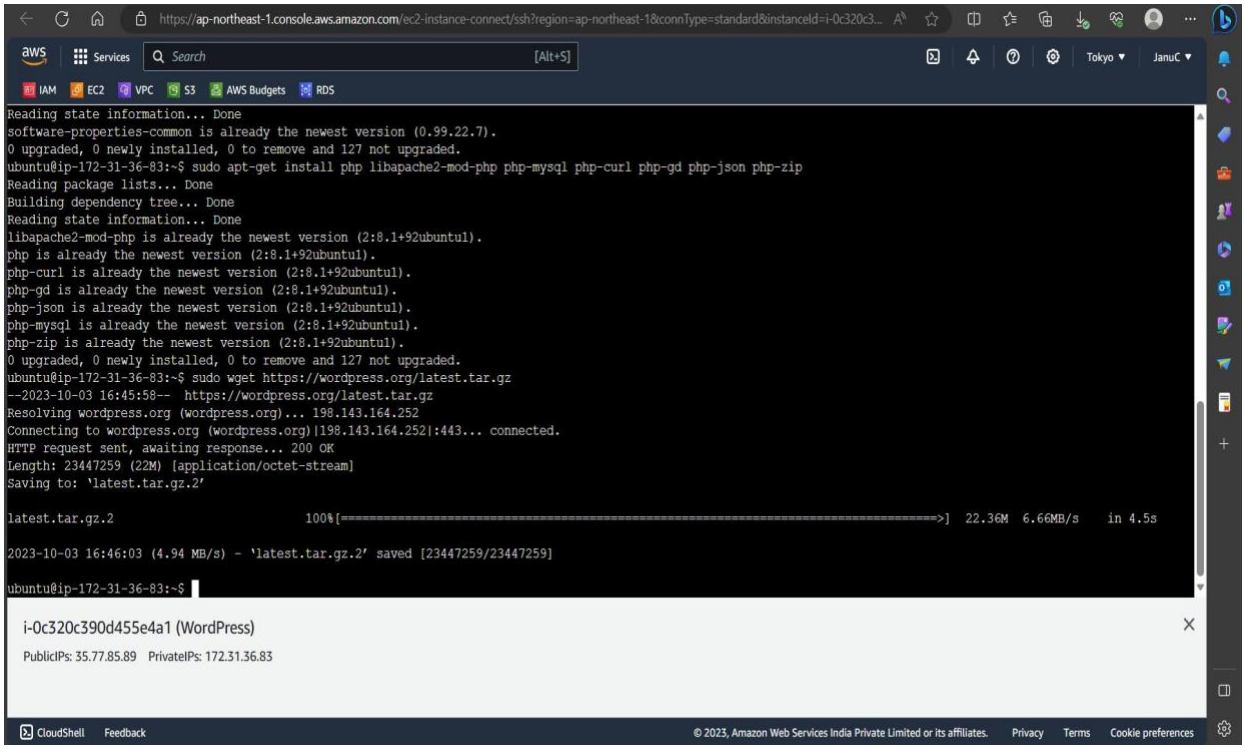
sudo apt update
sudo apt install apache2
sudo systemctl start apache2
sudo apt-get install software-properties-common -y
sudo apt-get install php libapache2-mod-php php-mysql php-curl php-gd php-json php-zip

sudo wget h ttps://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

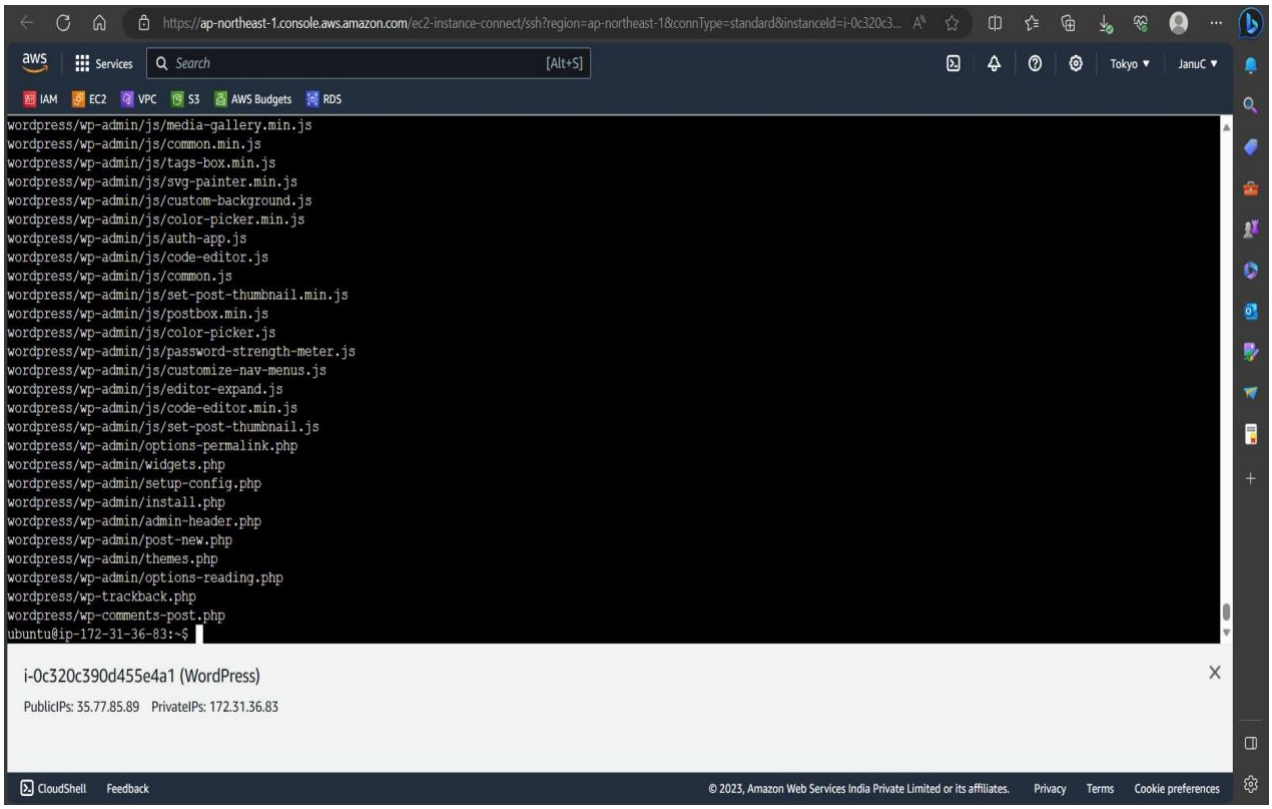
sudo a2ensite wordpress.conf
sudo a2enmod rewrite
sudo apache2ctl configtest
sudo service apache2 restart

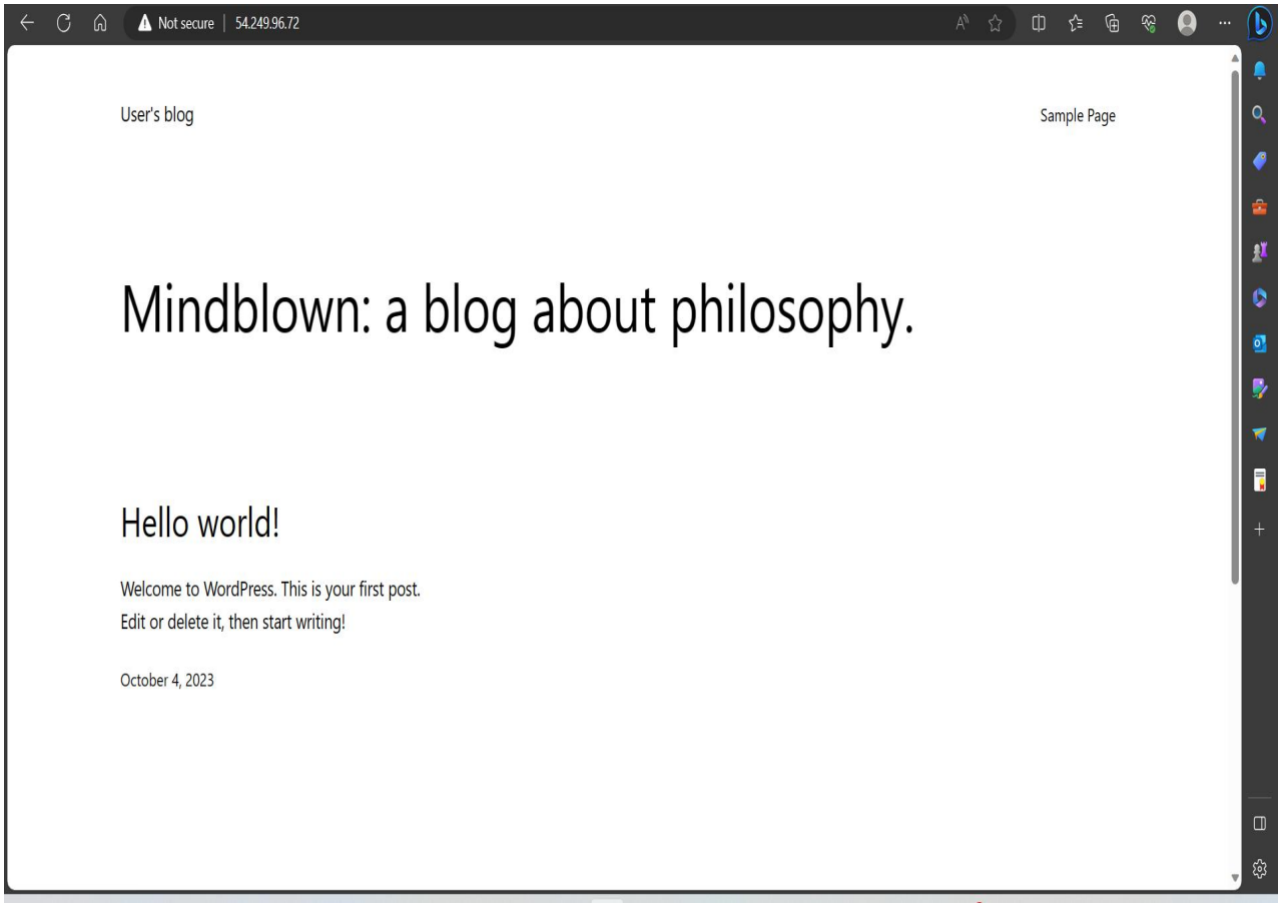


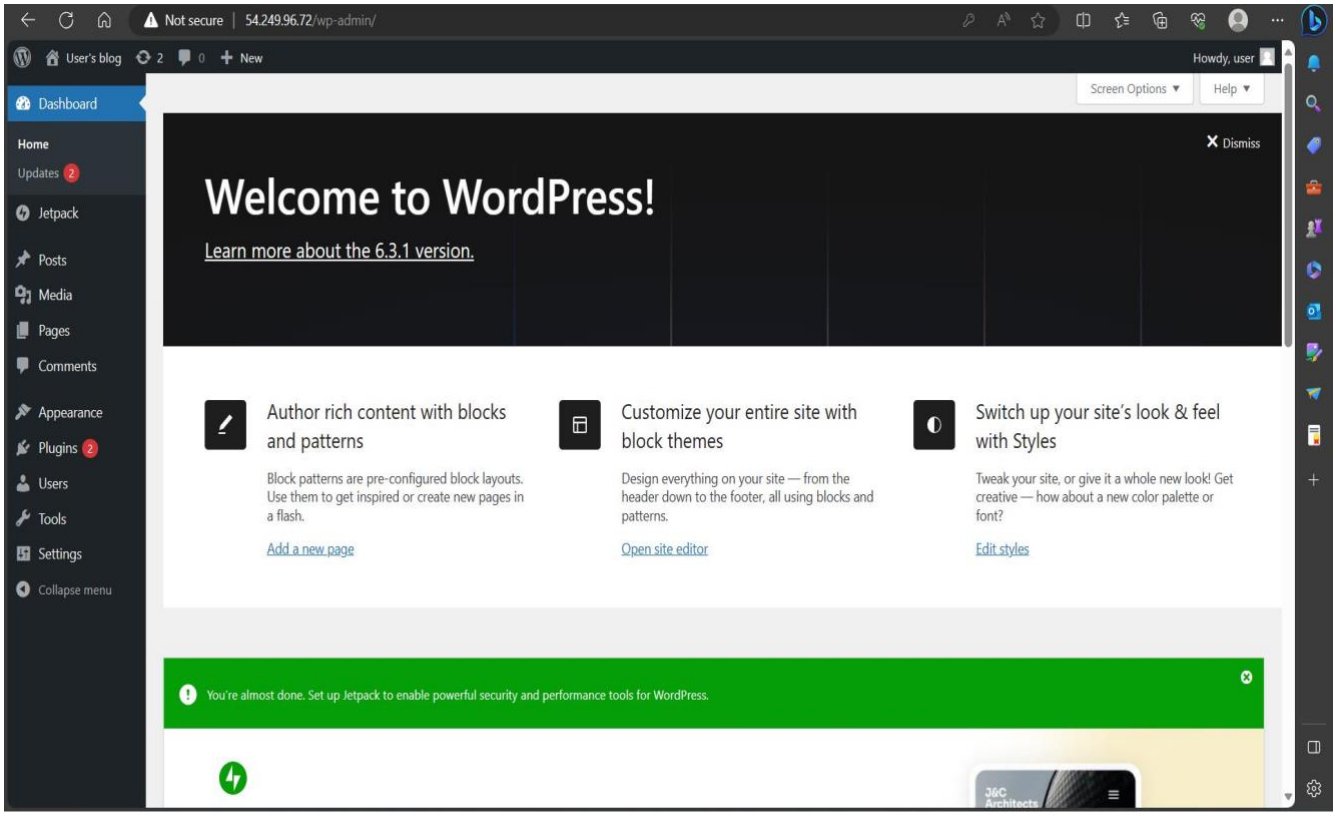

https://ap-northeast-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-northeast-1&connType=standard&instanceId=i-0c320c3...
aws
Services
Search
[Alt+S]
Tokyo
JanuC
IAM
EC2
VPC
S3
AWS Budgets
RDS
ubuntu@ip-172-31-36-83:~$ sudo apt update
Hit:1 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://ap-northeast-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
127 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-36-83:~$ sudo apt install apache2
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
apache2 is already the newest version (2.4.52-1ubuntu4.6).
0 upgraded, 0 newly installed, 0 to remove and 127 not upgraded.
ubuntu@ip-172-31-36-83:~$ sudo systemctl start apache2
ubuntu@ip-172-31-36-83:~$ sudo apt-get install software-properties-common -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.22.7).
0 upgraded, 0 newly installed, 0 to remove and 127 not upgraded.
ubuntu@ip-172-31-36-83:~$ sudo apt-get install php libapache2-mod-php php-mysql php-curl php-gd php-json php-zip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libapache2-mod-php is already the newest version (2:8.1+92ubuntu1).
php is already the newest version (2:8.1+92ubuntu1).
i-0c320c390d455e4a1 (WordPress)
PublicIPs: 35.77.85.89 PrivateIPs: 172.31.36.83
CloudShell
Feedback
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

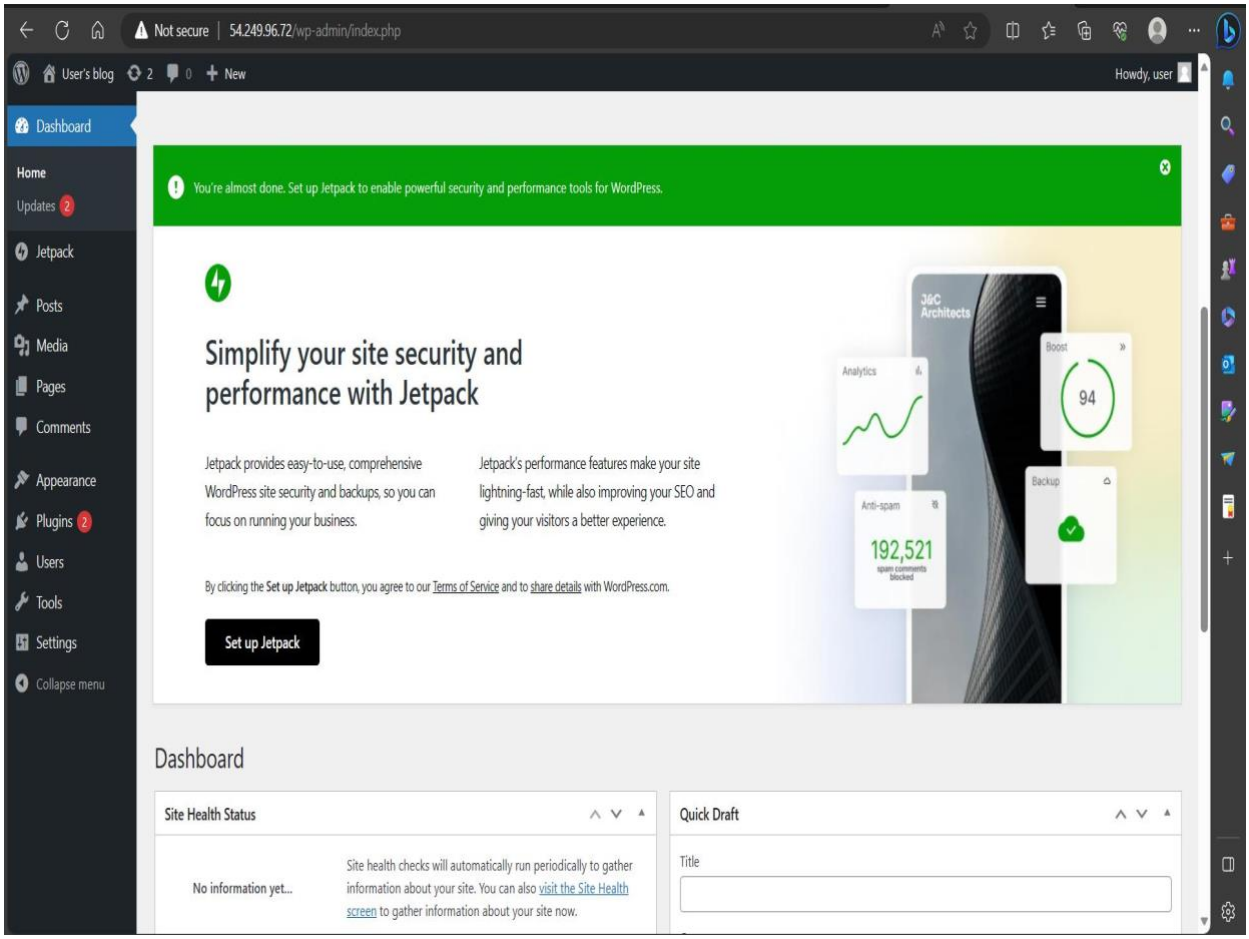

https://ap-northeast-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-northeast-1&connType=standard&instanceId=i-0c320c3...
aws
Services
Search
[Alt+S]
Tokyo
JanuC
IAM
EC2
VPC
S3
AWS Budgets
RDS
Reading state information... Done
software-properties-common is already the newest version (0.99.22.7).
0 upgraded, 0 newly installed, 0 to remove and 127 not upgraded.
ubuntu@ip-172-31-36-83:~$ sudo apt-get install php libapache2-mod-php php-mysql php-curl php-gd php-json php-zip
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
libapache2-mod-php is already the newest version (2:8.1+92ubuntu1).
php is already the newest version (2:8.1+92ubuntu1).
php-curl is already the newest version (2:8.1+92ubuntu1).
php-gd is already the newest version (2:8.1+92ubuntu1).
php-json is already the newest version (2:8.1+92ubuntu1).
php-mysql is already the newest version (2:8.1+92ubuntu1).
php-zip is already the newest version (2:8.1+92ubuntu1).
0 upgraded, 0 newly installed, 0 to remove and 127 not upgraded.
ubuntu@ip-172-31-36-83:~$ sudo wget https://wordpress.org/latest.tar.gz
--2023-10-03 16:45:58-- https://wordpress.org/latest.tar.gz
Resolving wordpress.org (wordpress.org)... 198.143.164.252
Connecting to wordpress.org (wordpress.org)|198.143.164.252|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 23447259 (22M) [application/octet-stream]
Saving to: 'latest.tar.gz.2'
latest.tar.gz.2 100%[==========>] 22.36M 6.66MB/s in 4.5s
2023-10-03 16:46:03 (4.94 MB/s) - 'latest.tar.gz.2' saved [23447259/23447259]
ubuntu@ip-172-31-36-83:~$
i-0c320c390d455e4a1 (WordPress)
PublicIPs: 35.77.85.89 PrivateIPs: 172.31.36.83
CloudShell
Feedback
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences

Not secure | 35.77.85.89
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
|-- sites-enabled
| `-- *.conf
apache2.conf is the main configuration file. It puts the pieces together by including all remaining


https://ap-northeast-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-northeast-1&connType=standard&instanceId=i-0c320c3...
aws
Services
Search
[Alt+S]
Tokyo
JanuC
IAM
EC2
VPC
S3
AWS Budgets
RDS
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-172-31-36-83:~$
i-0c320c390d455e4a1 (WordPress)
PublicIPs: 35.77.85.89 PrivateIPs: 172.31.36.83
CloudShell
Feedback
© 2023, Amazon Web Services India Private Limited or its affiliates.
Privacy
Terms
Cookie preferences


Not secure | 54.249.96.72
User's blog
Sample Page
Mindblown: a blog about philosophy.
Hello world!
Welcome to WordPress. This is your first post.
Edit or delete it, then start writing!
October 4, 2023


Not secure | 54.249.96.72/wp-admin/
User's blog
2
0
New
Howdy, user
Dashboard
Home
Updates 2
Jetpack
Posts
Media
Pages
Comments
Appearance
Plugins 2
Users
Tools
Settings
Collapse menu
Screen Options
Help
Dismiss
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
Customize your entire site with block themes
Design everything on your site — from the header down to the footer, all using blocks and patterns.
Open site editor
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?
Edit styles
You're almost done. Set up Jetpack to enable powerful security and performance tools for WordPress.


Not secure | 54.249.96.72/wp-admin/index.php
User's blog 2 0 New
Howdy, user
Dashboard
Home
Updates 2
Jetpack
Posts
Media
Pages
Comments
Appearance
Plugins 2
Users
Tools
Settings
Collapse menu
You're almost done. Set up Jetpack to enable powerful security and performance tools for WordPress.
Simplify your site security and performance with Jetpack
Jetpack provides easy-to-use, comprehensive WordPress site security and backups, so you can focus on running your business.
Jetpack's performance features make your site lightning-fast, while also improving your SEO and giving your visitors a better experience.
By clicking the Set up Jetpack button, you agree to our Terms of Service and to share details with WordPress.com.
Set up Jetpack
J&C Architects
Analytics
Boost
94
Backup
Anti-spam
192,521
spam comments blocked
Dashboard
Site Health Status
No information yet...
Site health checks will automatically run periodically to gather information about your site. You can also visit the Site Health screen to gather information about your site now.
Quick Draft
Title

THANK YOU! 😊