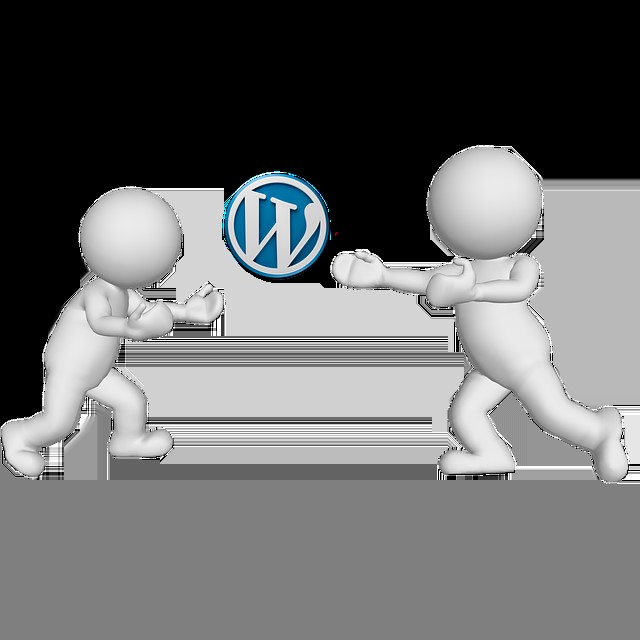
**Word Press**

**WordPress (also known as WP or WordPress.org) is a web content management system. It was originally created a tool to publish blogs but has evolved to support publishing other web content, including more traditional websites, mailing lists and Internet forum, media galleries, membership sites, learning management systems and online stores. Available as free and open-source software, WordPress is among the most popular content management systems – it was used by 43.1% of the top 10 million websites as of December 2023.**



**WordPress is written in PHP hypertext preprocessor language and paired with a MySQL or MariaDB database. Features include a plugin architecture and a template system, referred to within WordPress as "Themes".**

**WordPress has to be installed on a web server, either as part of an Internet hosting service or on a computer running the WordPress software package.**

**WordPress was released on May 27, 2003, by its founders, American developer Matt Mullenwegand English developer Mike Little. WordPress Foundation owns WordPress, WordPress projects, and other related trademarks.**

**What is Wordpress used for?**

**WordPress is a content management system (CMS) that allows you to host and build websites. WordPress contains plugin architecture and a template system, so you can customize any website to fit your business, blog, portfolio, or online store.**

**Features:**

* **Flexibility.**
* **User-friendliness.**
* **Media management.**
* **Quick installation and upgrade.**
* **WordPress language.**
* **User management.**
* **Simplicity of operations.**
* **Easy theme system.**

**How many types of wordpress are there?**

* **There are two types of WordPress websites:**

**1. There is WordPress.com, which is a web hosting company.**

**2. There is WordPress.org, also known as self-hosted WordPress.**

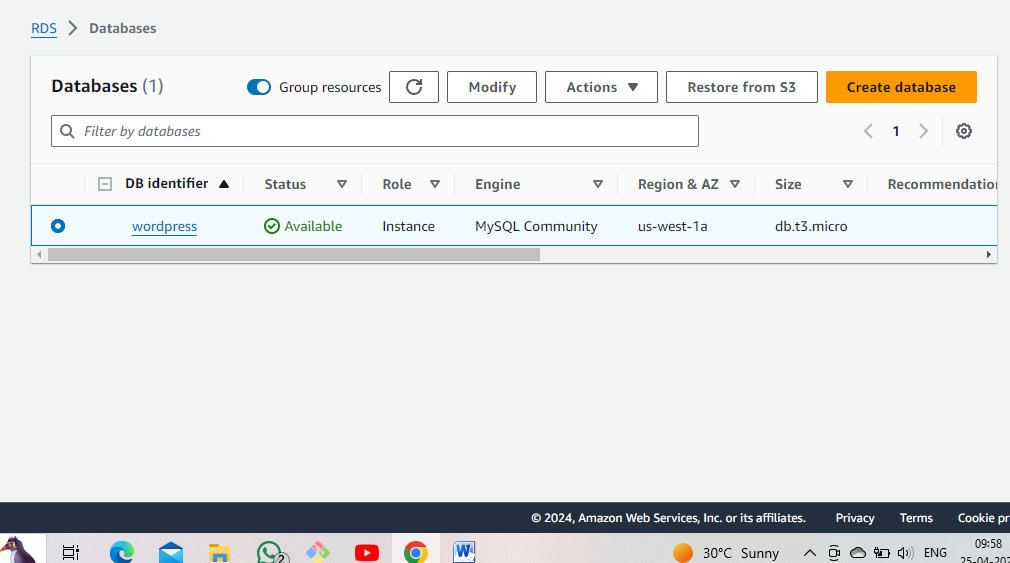
**What is the most popular website on Wordpress?**

* **Blog or Personal Website**
* **Business Website**
* **Ecommerce Website / Online Store**
* **Membership Website**
* **Online Courses Website**
* **Online Marketplace Website**
* **Pay-Per-View Website**
* **Podcast Website**

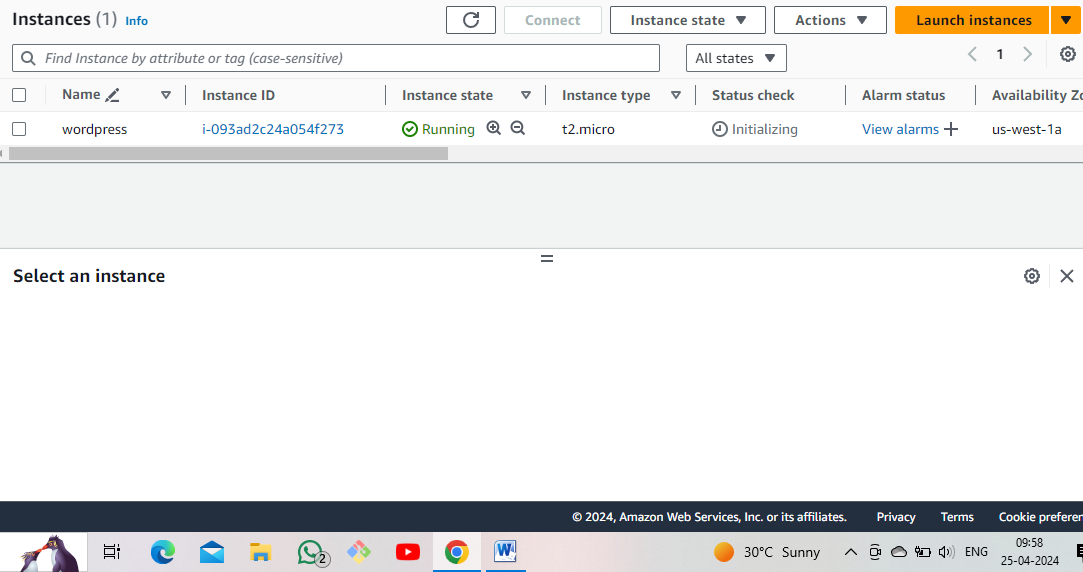
**1. Deploy WordPress web application by using AWS RDS (MYSQL) service**

**(manually) ?**

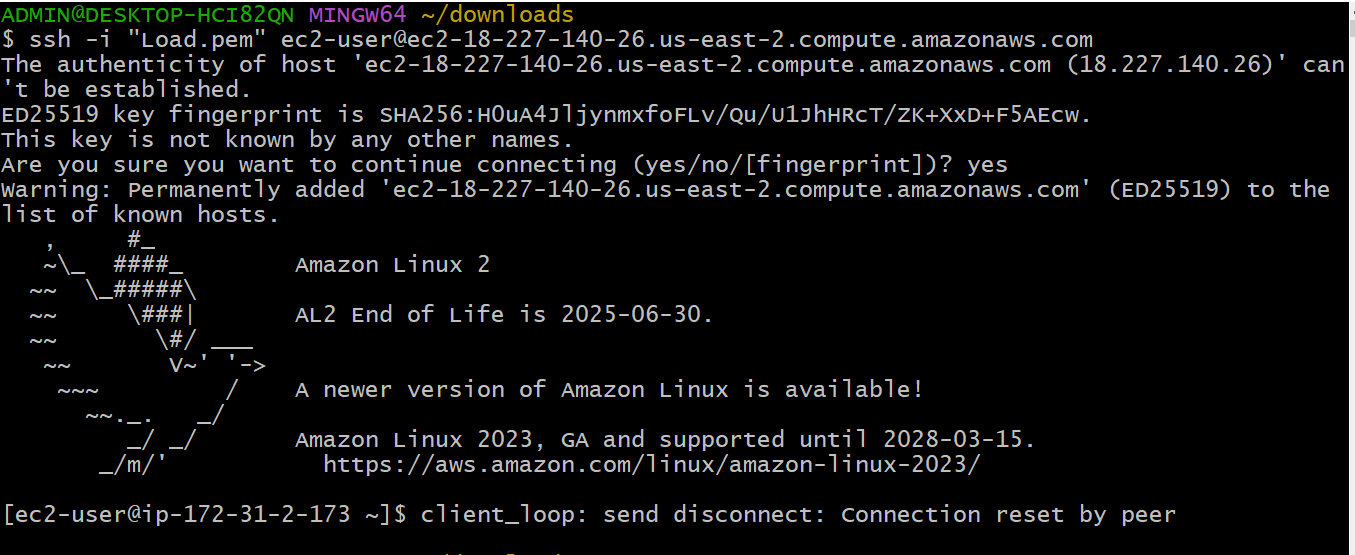
* **First go to aws account and login with credentials. After go to RDS service and open that service.**
* **Now create a mysql database by using RDS service for that go into the RDS services and click on create database.**
* **Now select the database creation method I selected here standard create method.**
* **Now select the database engine with version but I select the mysql database engine.**
* **Now select the template as free tier and by selecting this free tier.**
* **Now give the some name to your database and give username and passwords as credentials for your database access.**
* **Now select the storage type as General purpose SSD (gp2) and enter the storage value as (1000GB) minimum (20GB).**
* **Now select created VPC or select default VPC and it automatically select the database subnet group.**
* **Now give the name of the database which you give at the stage of DB instance identifier enter the same name here.**
* **Now click on create database button and it will create the mysql database.**



* **Now create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and giving security group with SSH (22) and HTTP (80).**

****

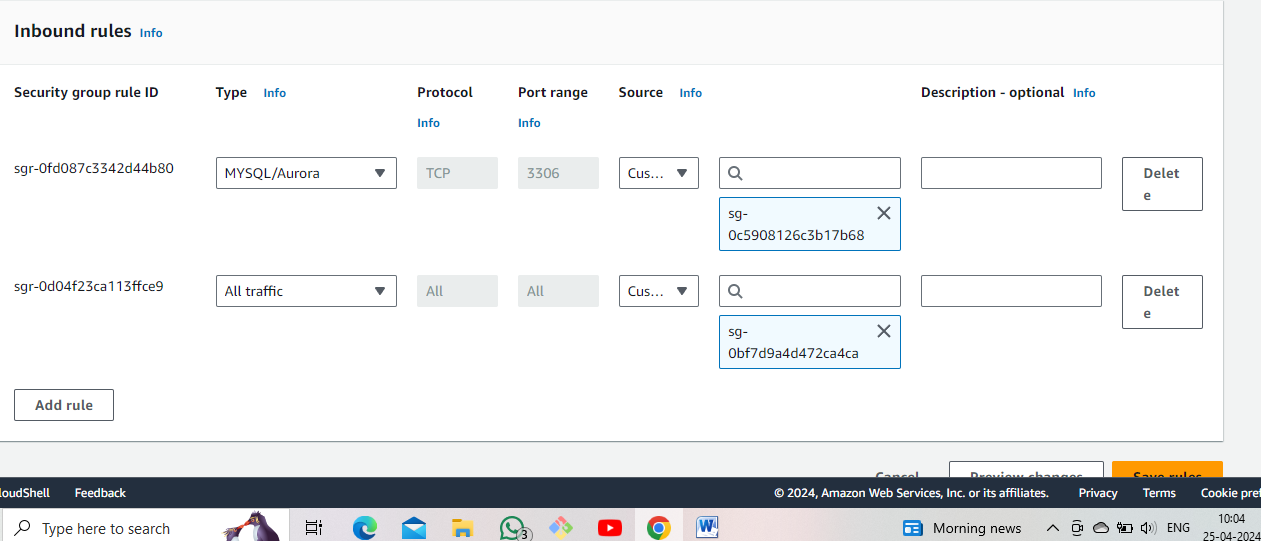
* **Now connect the virtual server through the GitBash.**



* **Now update the linux version by using command as**

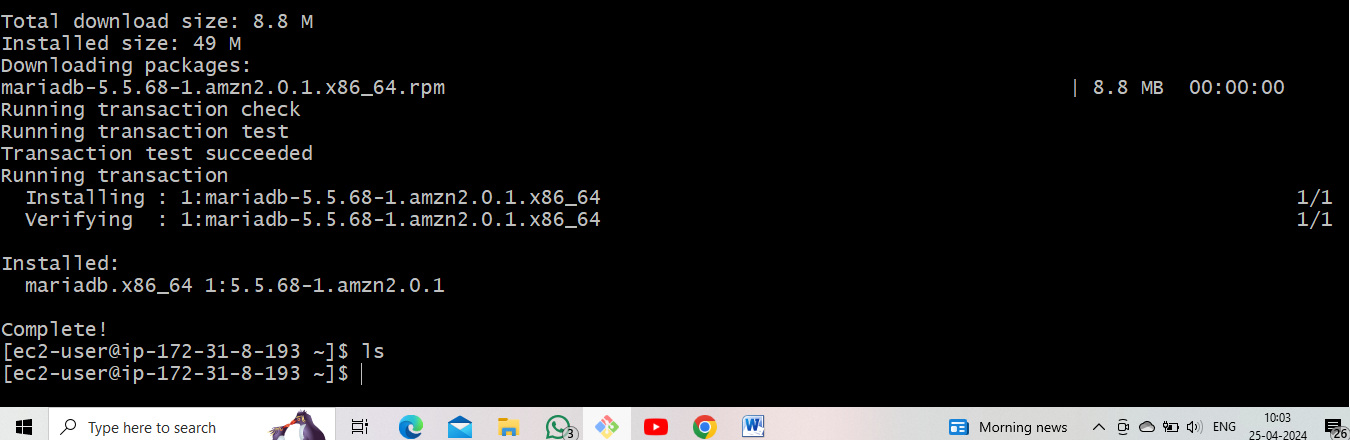
**< sudo yum –y update >**

* **Now go inside the created database and go to the security under this option there is a security group id click on that.**
* **Now go to inbound rules and click on the edit inbound rules and select the EC2 instance security group id and click save rules.**

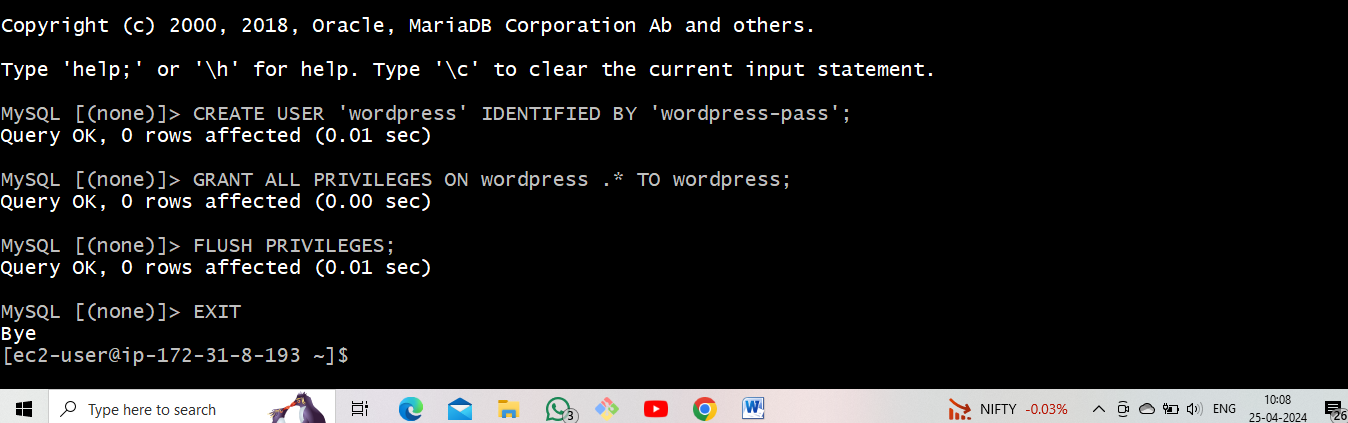


* **Now access the mysql database by using the command as**

**< sudo mysql –h ( database endpoint address) –u (database user) –p >**

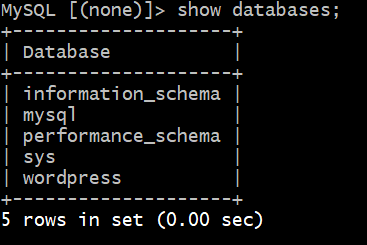


* **Now create a database user for wordpress application and give it permissions to access the “wordpress” database.**
* **CREATE USER ‘wordpress’ IDENTIFIED BY ‘wordpress-pass’;**
* **GRANT ALL PRIVILEGES ON wordpress .\* TO wordpress.**
* **FLUSH PRIVILEGES**
* **EXIT**



* Show the databases using the command as

< show databases; >



* **Now install httpd server using this command as**

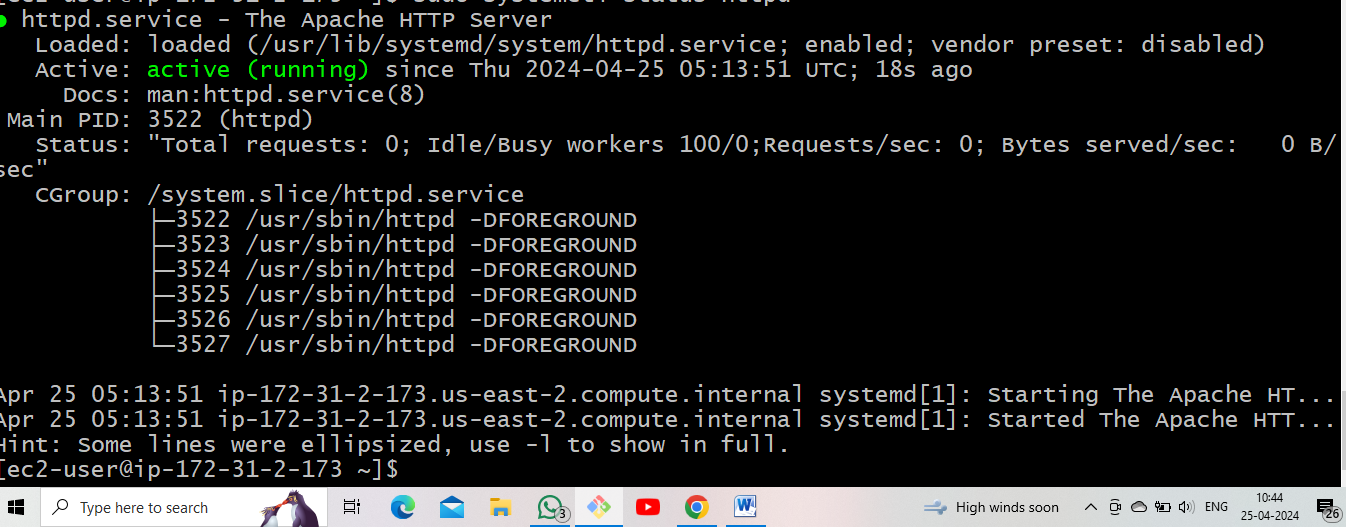
**< sudo yum –y install httpd >**

* **Now start,enable,status the HTTPD service by giving the commands as**

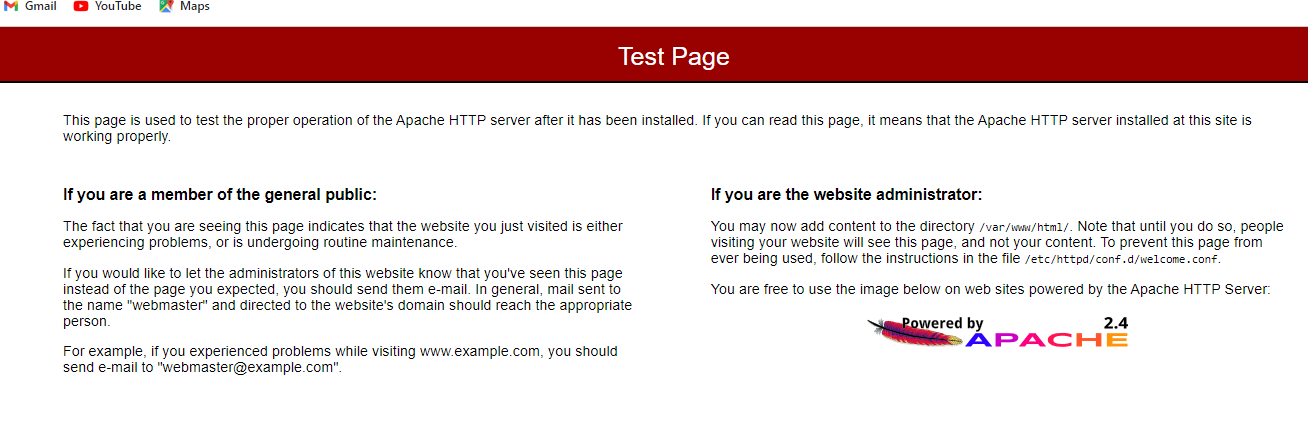
**< sudo systemctl start httpd >**

**< sudo systemctl enable httpd >**

**< sudo systemctl status httpd >**



* **Now go to EC2 instance and copy public ip and paste it on Google browse it and check the official page of HTTPD is displays or not.**

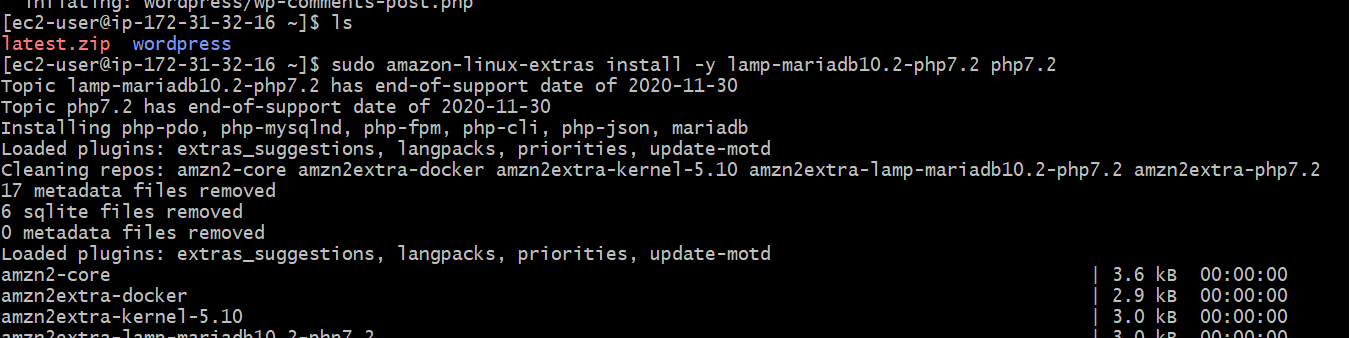


* **Now go to browser and search as download Wordpress.**

**< sudo wget (copy link address) >**

* **It gives the zip file to unzip that file by using a command as**

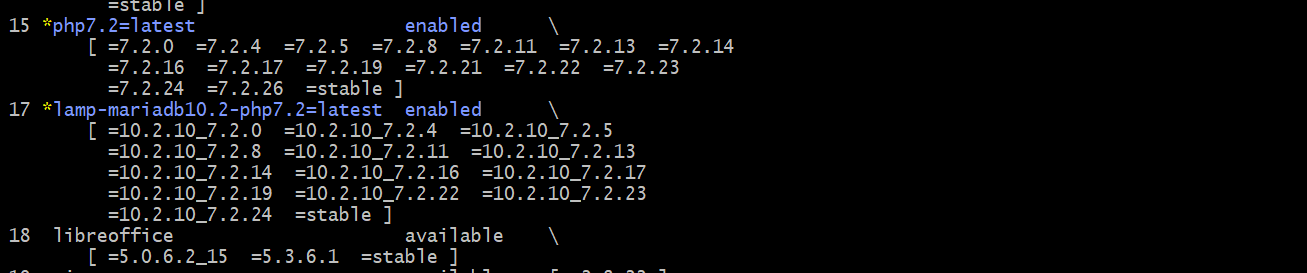
**< unzip (zip file) >**



* **Now download the following command as**

**< sudo amazon-linux-extras install –y lamp- mariadb10.2-php7.2 php7.2 >**



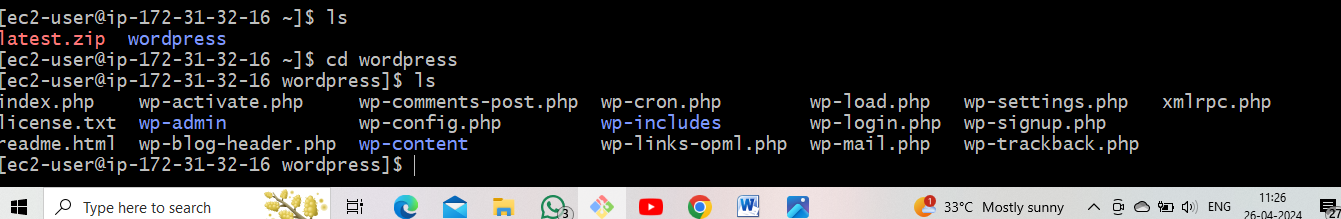


* **Now go inside the unzip directory by using command as**

**< cd (unzip directory) >**

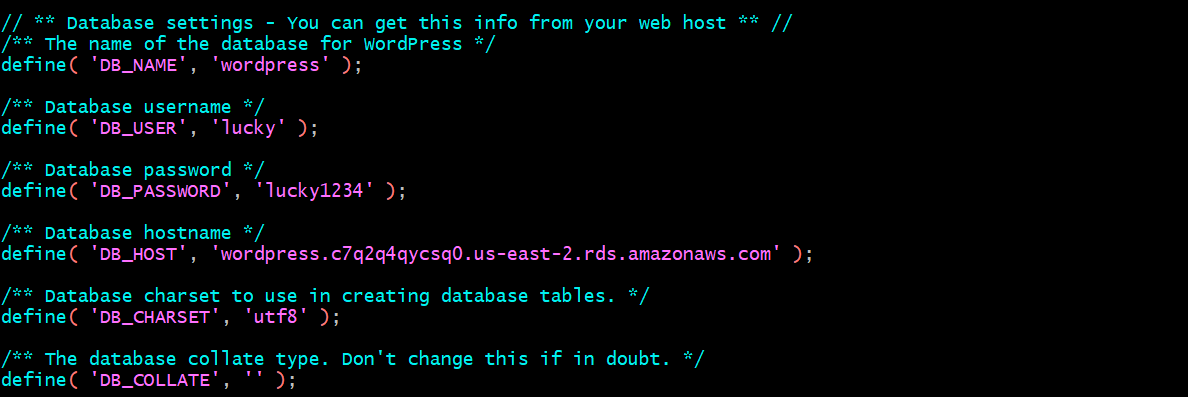
* **Now change the wordpress configuration file by giving command as**

**< sudo mv wp-config-sample.php wp-config.php>**

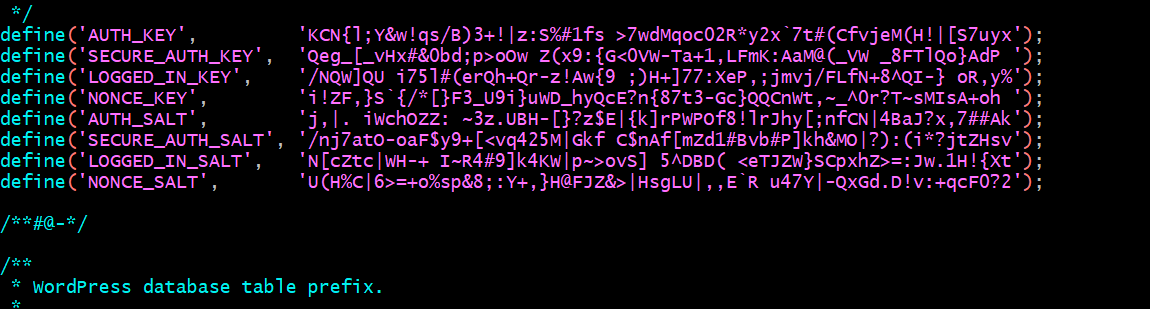


* **Now some configurations in wordpress configuration file as by giving database name, username, password and host name and wordpress keys.**

**< Sudo vi wp-config.php>**



* **Go to Google searching wordpress keys.**

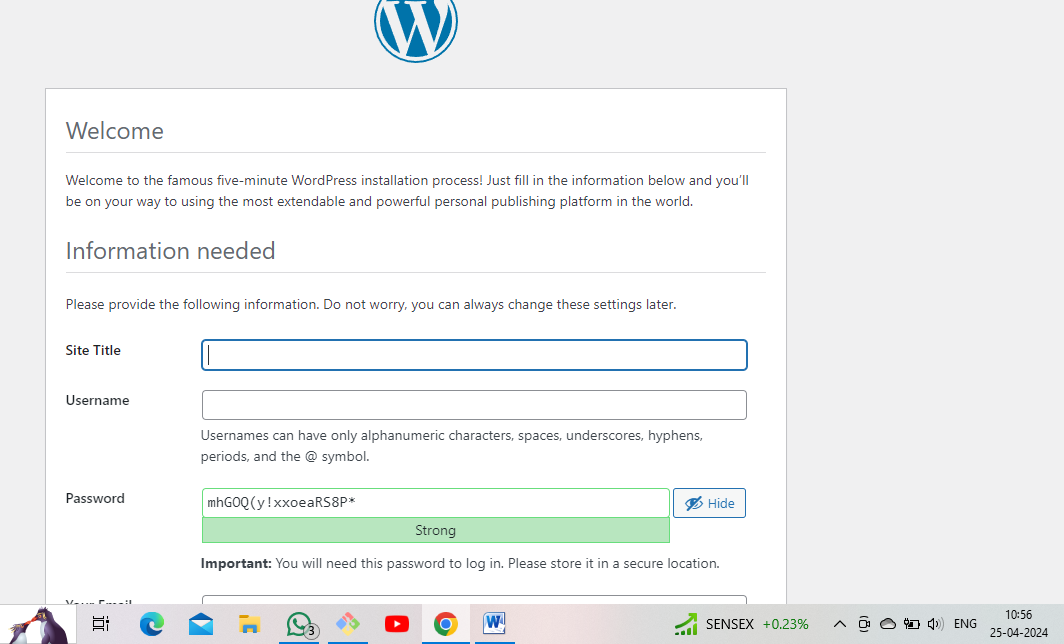
****

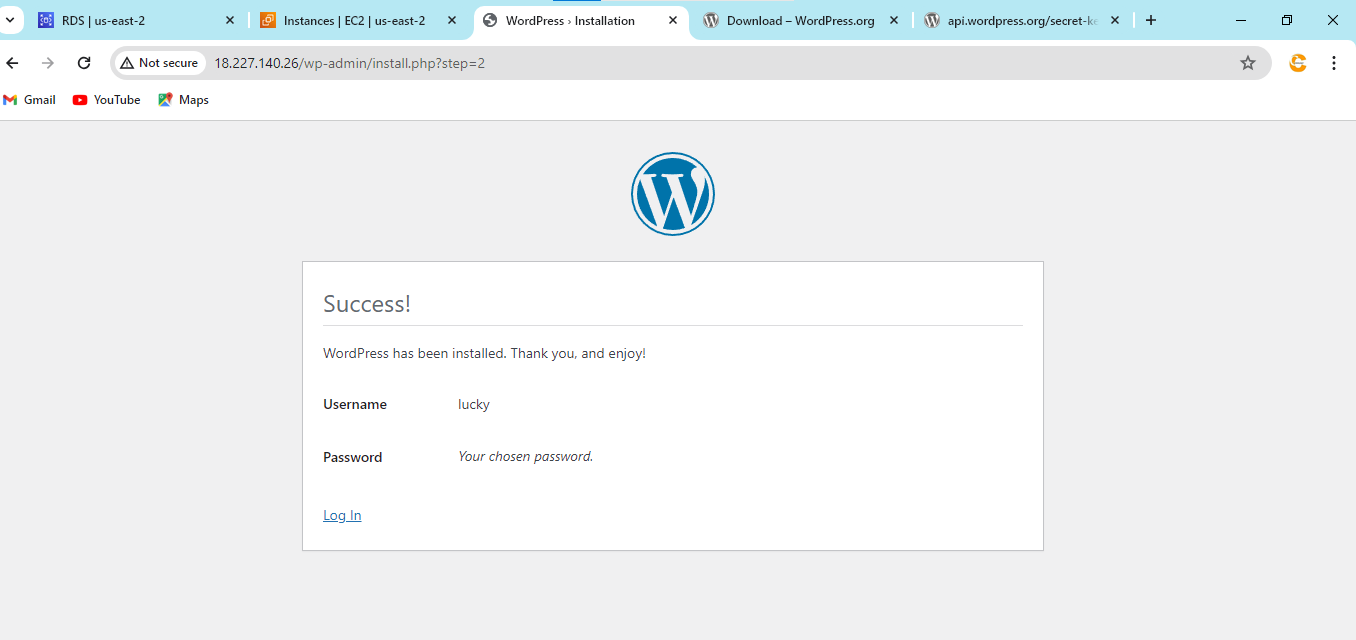
* **Now copy this wordpress directory to the document root directory to host web application of wordpress by giving a command as**

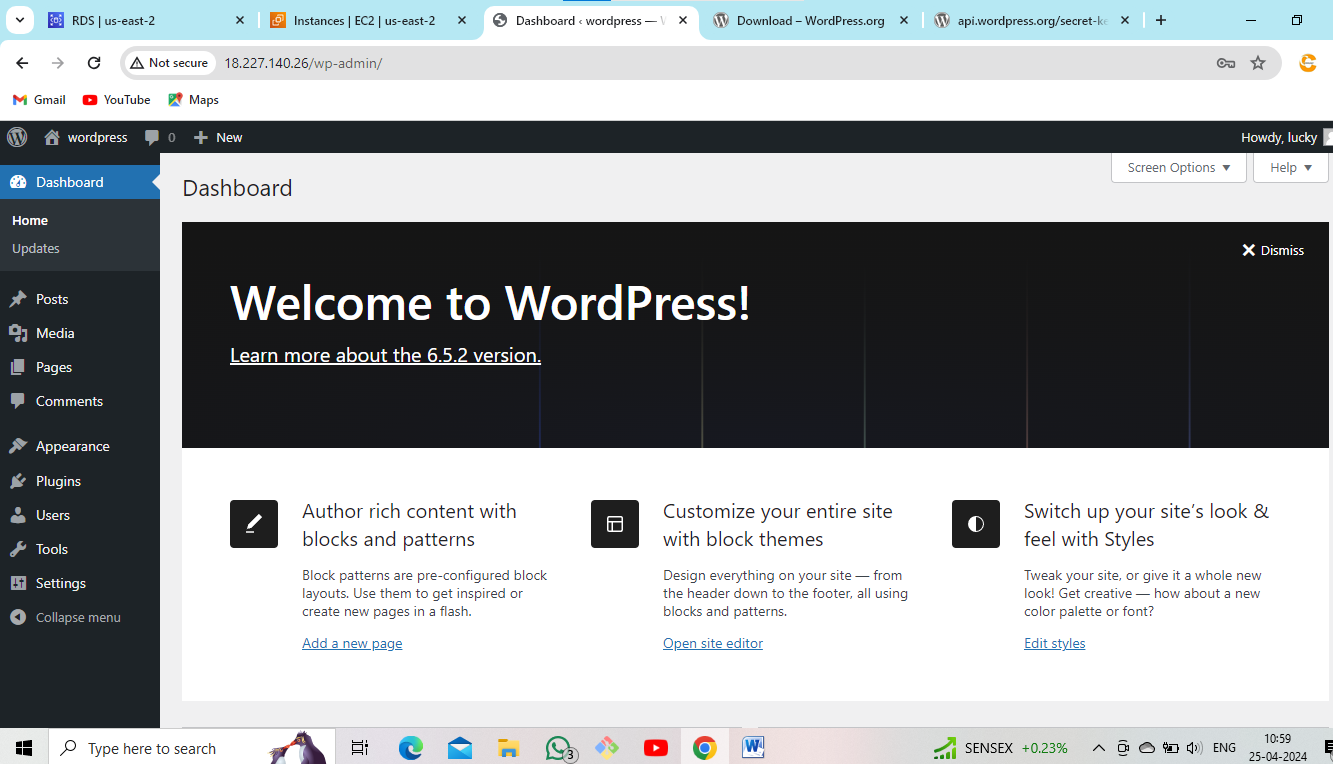
**< sudo cp –r (wordpress or unzip directory)/\* /var/www/html/ >**

* **Restart the httpd by giving a command as**

**< sudo systemctl restart httpd >**



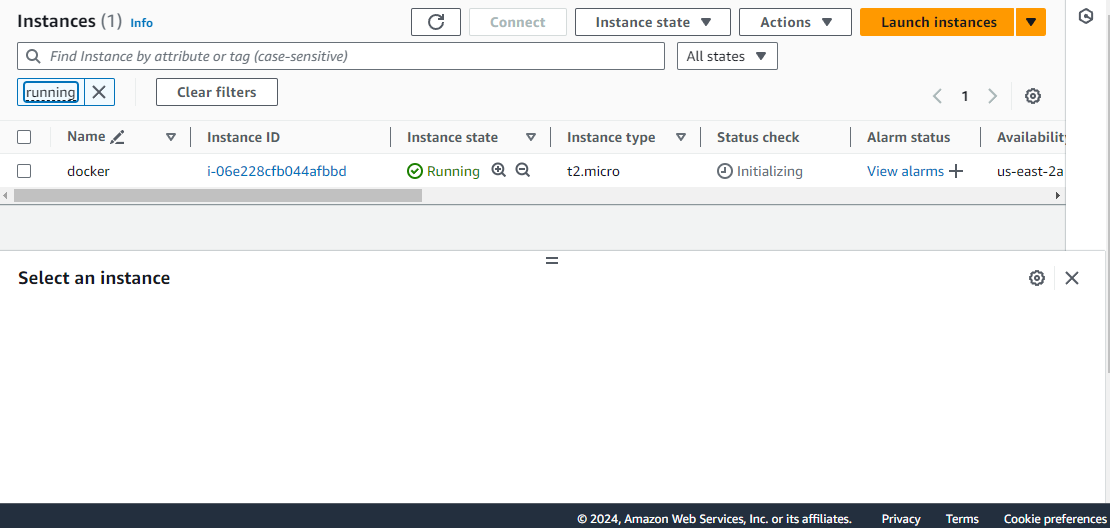




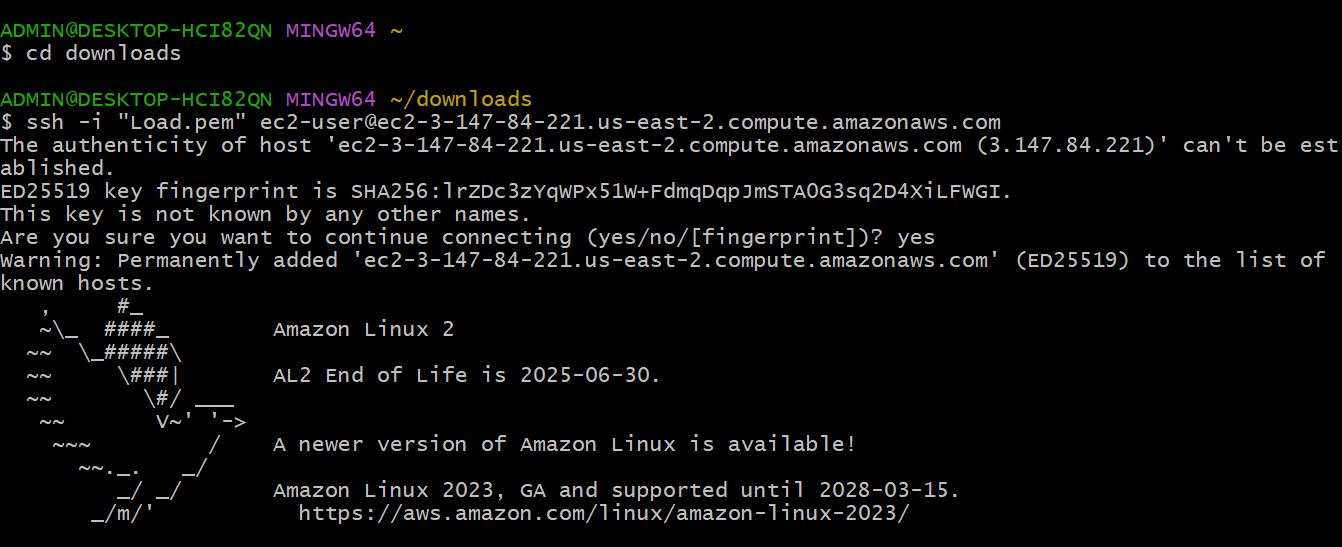
\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**2. Deploy WordPress web application by using docker compose file?**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t2.mediam and giving security group HTTP (80) and security group mysql aurora and port 8080.**



* **Now connect the virtual server through the GitBash as shown in below.**

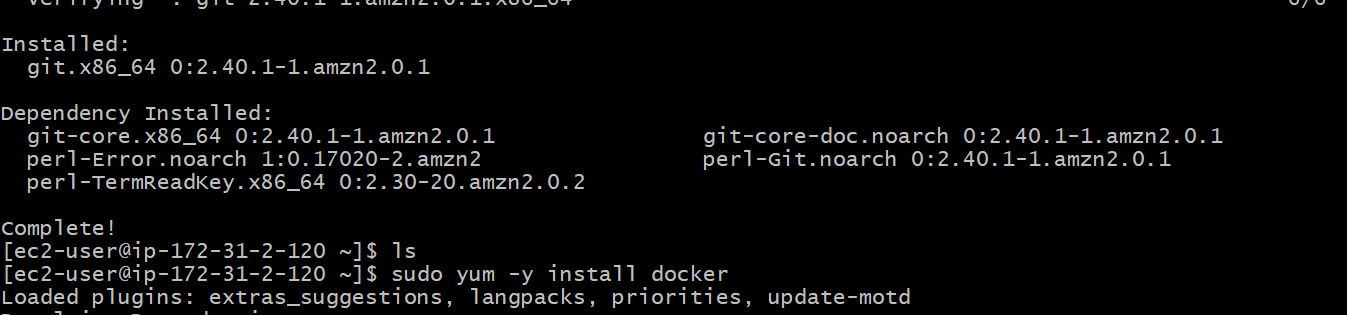


* **Run these following command.**

**< sudo yum –y update >**

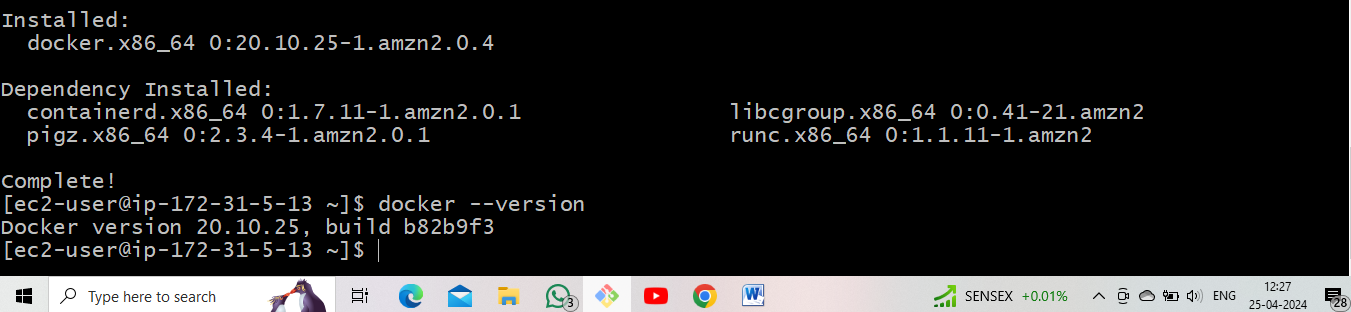
**Now installing git using following command as**

**< sudo yum –y install git >**



* **Now installing Docker using these following command.**

**< sudo yum –y install docker >**

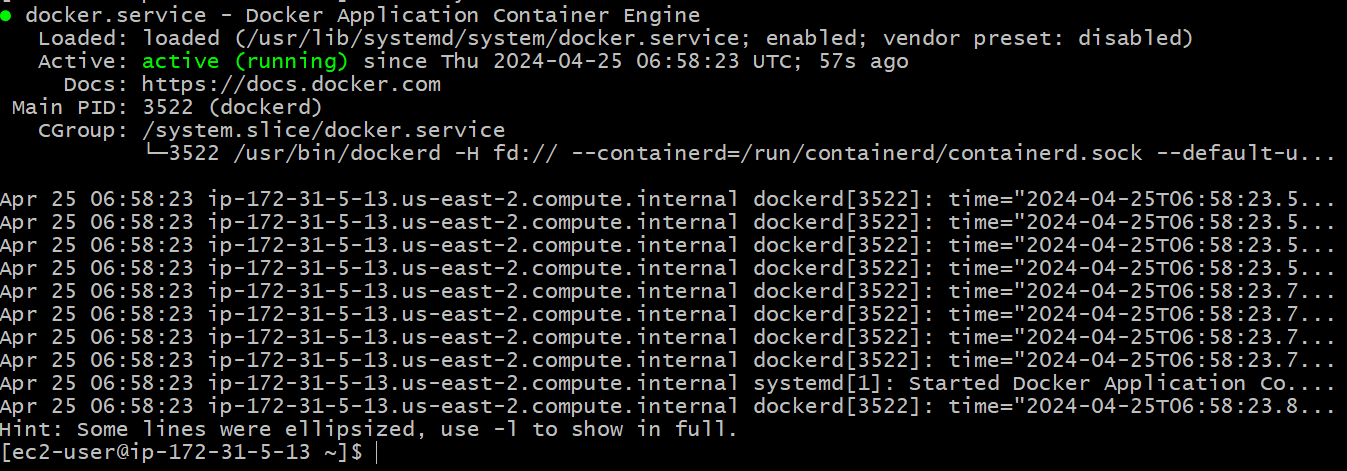


* **Run these following commands as Docker start,enable and status.**

**< sudo systemctl start docker >**

**< sudo systemctl enable docker >**

**< sudo systemctl status docker >**



* **Now give permissions to add a limited linux user account to docker group by using a command as**

< sudo chmod 666 /var/run/docker.sock >

* **Now install the docker-compose file by using these command as**

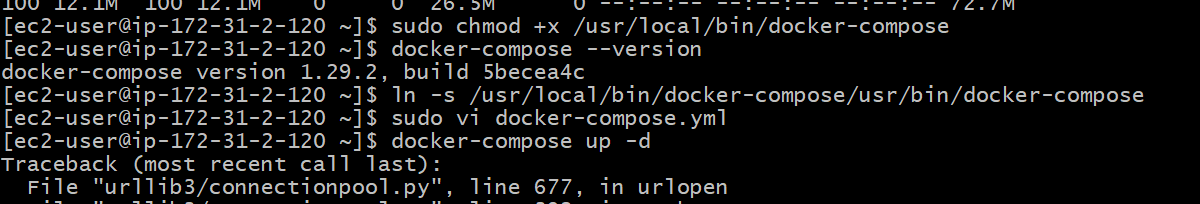
**< sudo curl -L "https://github.com/docker/compose/releases/download/1.29.2/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose >**

* **Set execution permissions using these command as**

**< sudo chmod +x /usr/local/bin/docker-compose >**

* **Verify Installation using these command as**

**< docker-compose –version** >

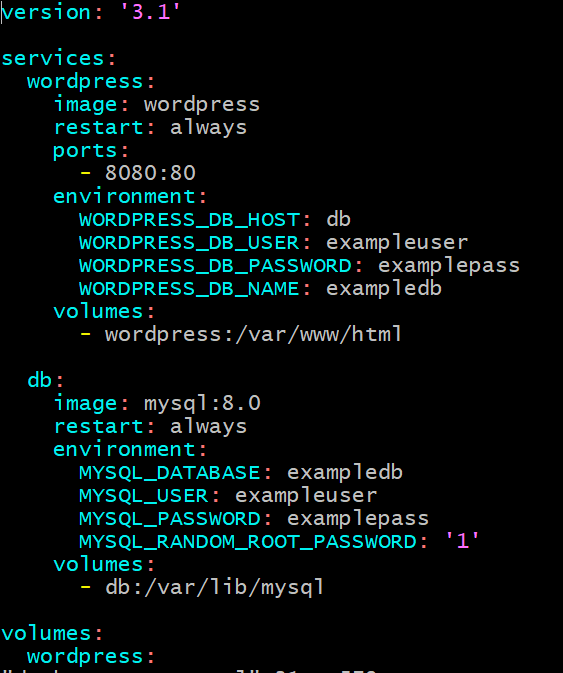


* **Now create the symbolic link by using command as**

**< ln-s /usr/local/bin/docker-compose/usr/bin/docker-compose >**

* **Now to create a docker-compose.yml file in vi mode as**

**< sudo vi docker-compose.yml >**



* **Now docker execute a command within a running docker container as**

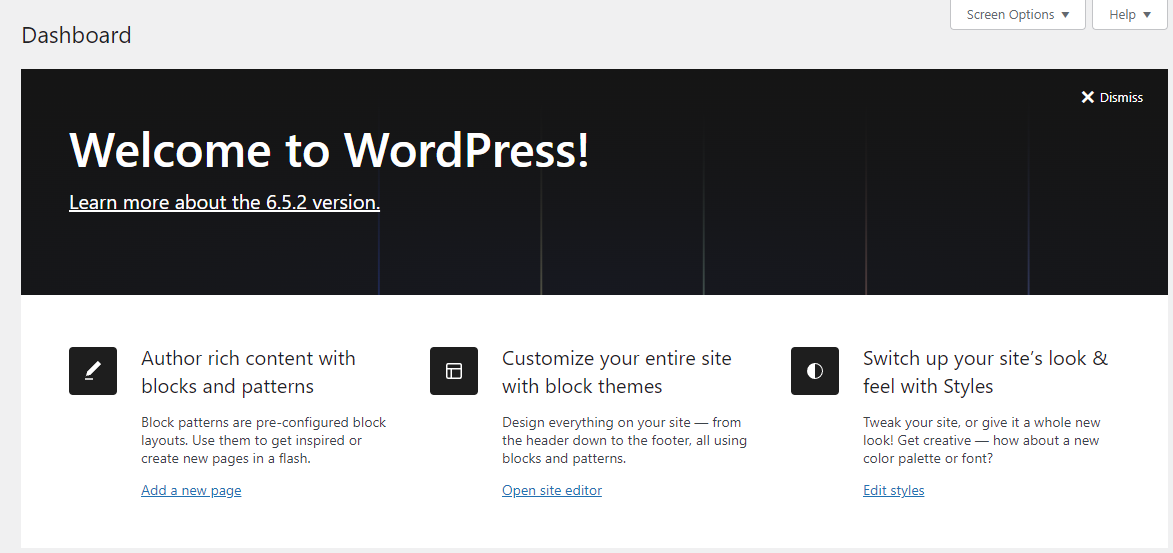
**< docker-compose up –d >**

* **Now once again the docker restart command as**

**< sudo service docker restart >**

* **Go to EC2 instance copy the public ip and paste with Google.**

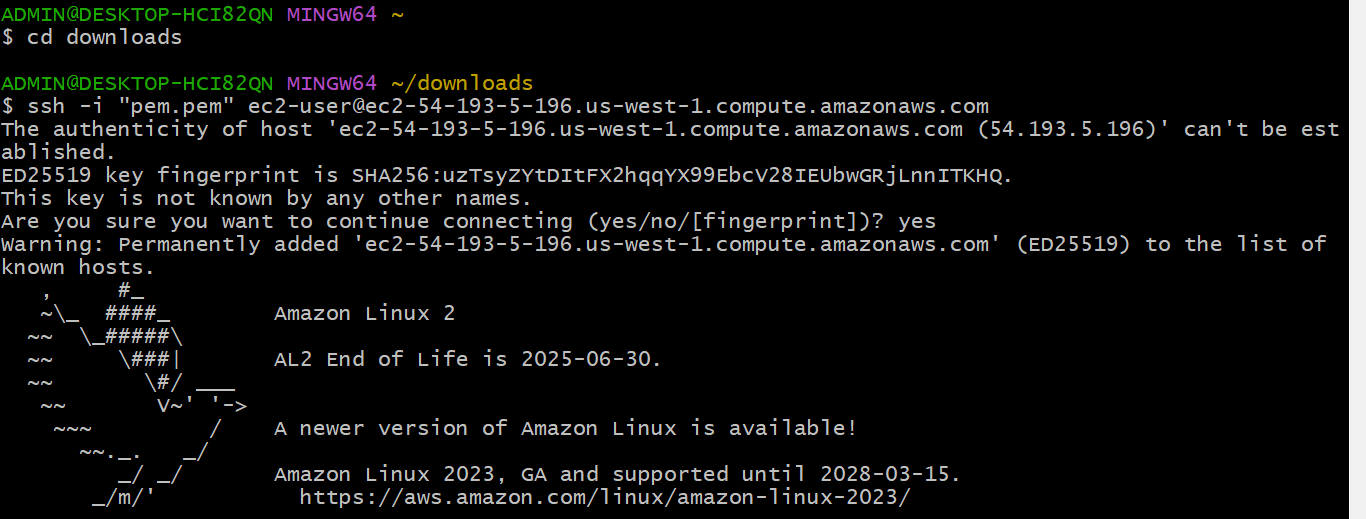
**< public ip:8080 (port) >**



\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

**3. Deploy WordPress web application by using git and jenkins?**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t2.mediam and giving security group HTTP (80) and security group mysql aurora and port 8080 and 8081.**
* **Now connect the virtual server through the GitBash as shown in below.**



* **Run these following command.**

**< sudo yum –y update >**

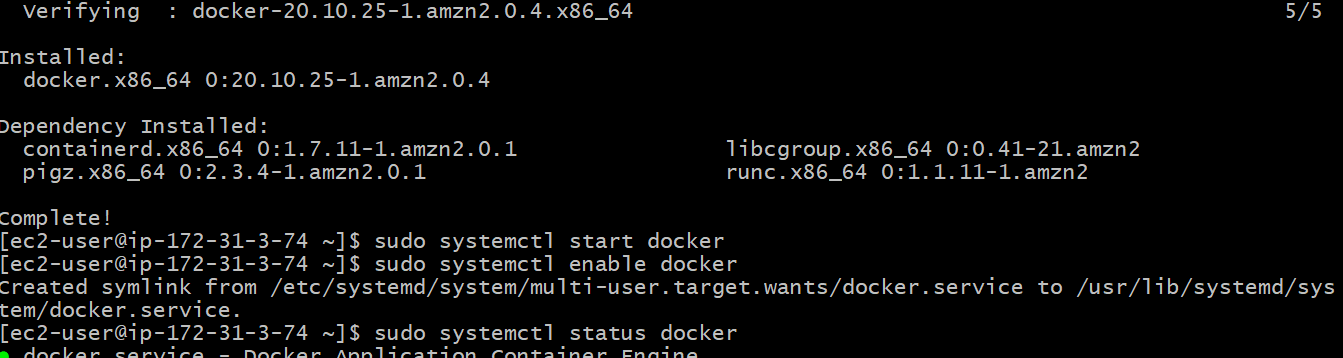
* **Now installing git using following command as**

**< sudo yum –y install git >**



* **Now install the docker.**

**< sudo yum -y install docker >**

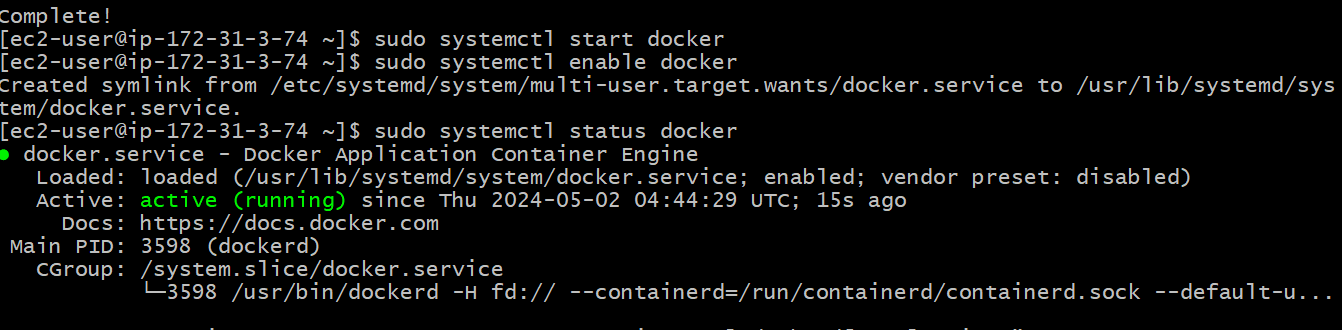


* **Run these following commands as Docker start,enable and status.**

**< sudo systemctl start docker >**

**< sudo systemctl enable docker >**

**< sudo systemctl status docker >**



* **Now install the docker-compose file by using these command as**

**< sudo curl -L "https://github.com/docker/compose/releases/download/1.29.2/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose>**

* **Set execution permissions using these command as**

**< sudo chmod +x /usr/local/bin/docker-compose>**

* **verify installation using these command as**

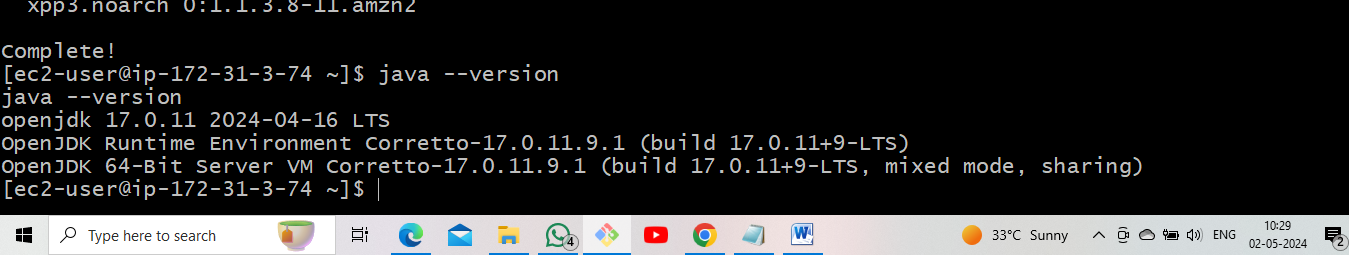
**< docker-compose –version >**

* **Now give permissions to add a limited linux user account to docker group by using a command as**

**< sudo chmod 666 /var/run/docker.sock >**

* **Now installing java using following command as**

**< sudo yum –y install java\* >**



* **Now installing Jenkins following commands as**

**< sudo wget -O /etc/yum.repos.d/jenkins.repo \**

**https://pkg.jenkins.io/redhat-stable/jenkins.repo >**

**< sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key >**

**< sudo yum upgrade >**

**< sudo yum install jenkins –y >**

**< sudo systemctl start Jenkins >**

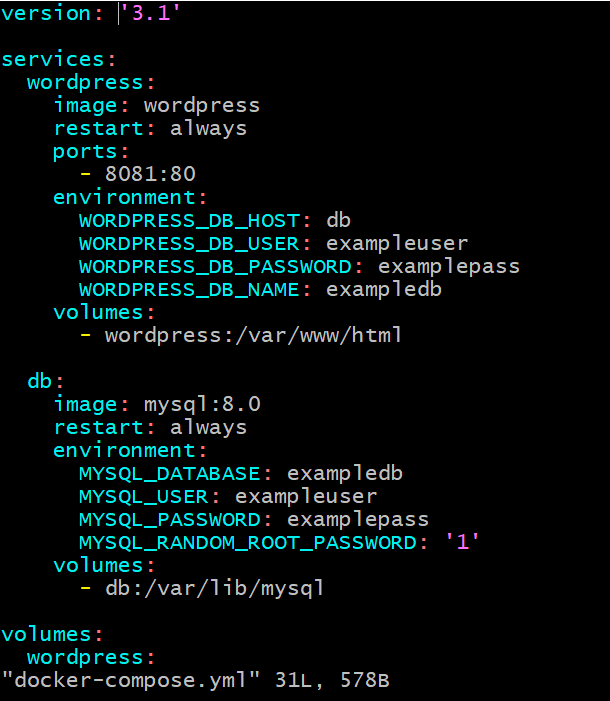
**< sudo systemctl enable Jenkins >**

**< sudo systemctl status Jenkins>**

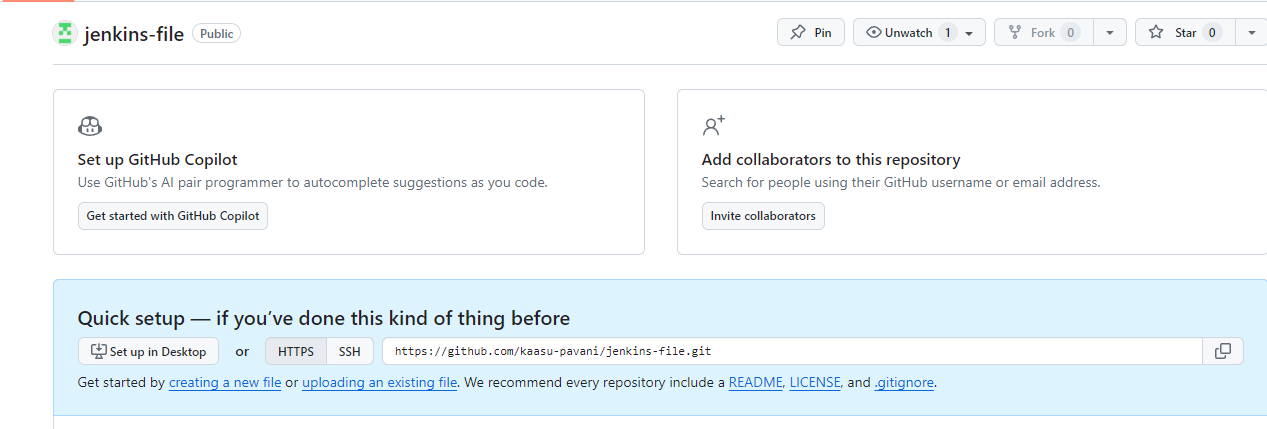


* **Now to create a docker-compose.yml file in vi mode as**

**< sudo vi docker-compose.yml >**



* **Now open the git hub.**
* **Create a new repository.**



* **Run these following commands as git Bash**

**< git init (git repository name) >**

**< sudo cp \* docker-compose.yml (git repository name) >**

**< cd (git repository name) >**

**< git status >**

**< git add . >**

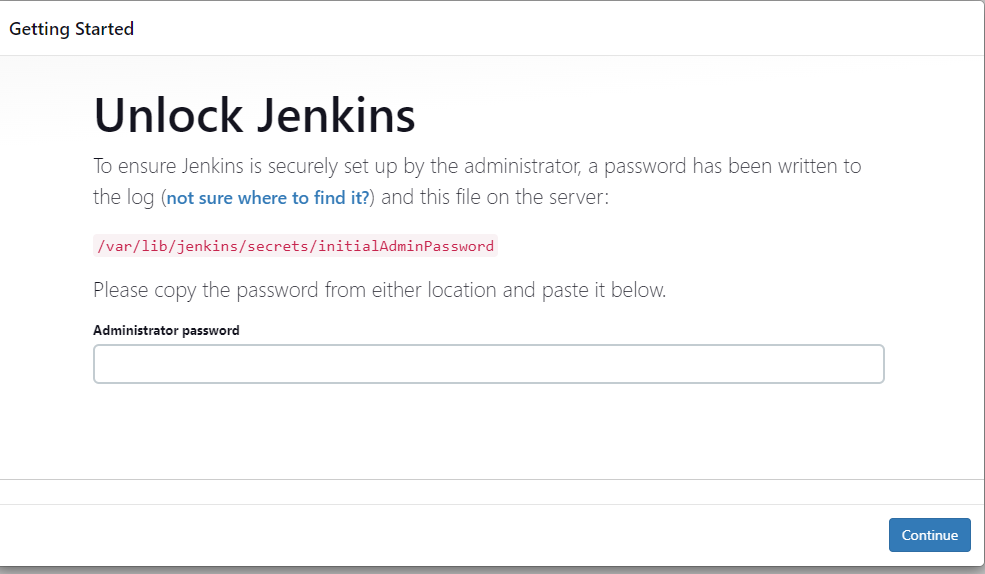
**< git commit –m “hello” docker-compose.yml >**

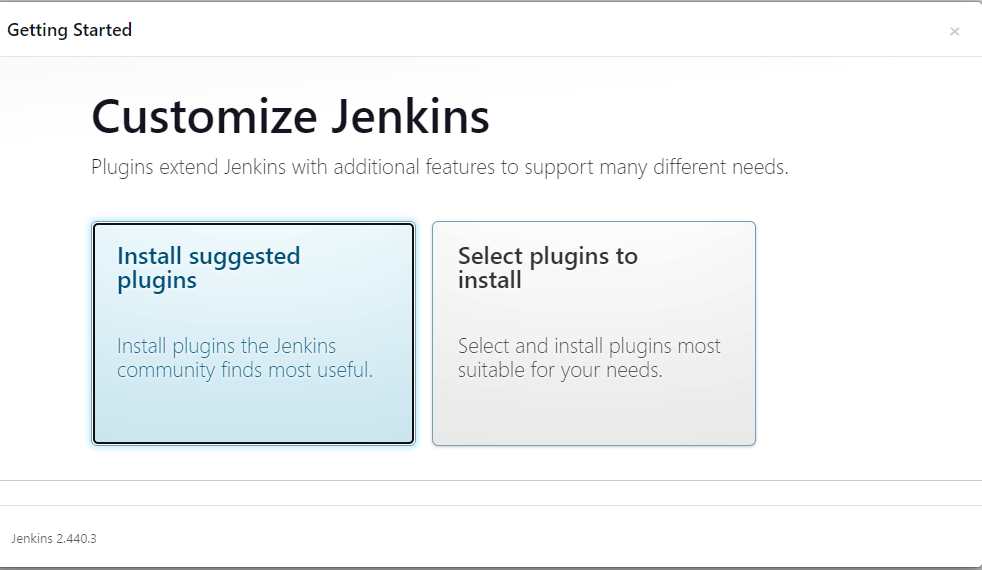
**< git remote add origin https://github.com/kaasu-pavani/jenkins-file.git >**

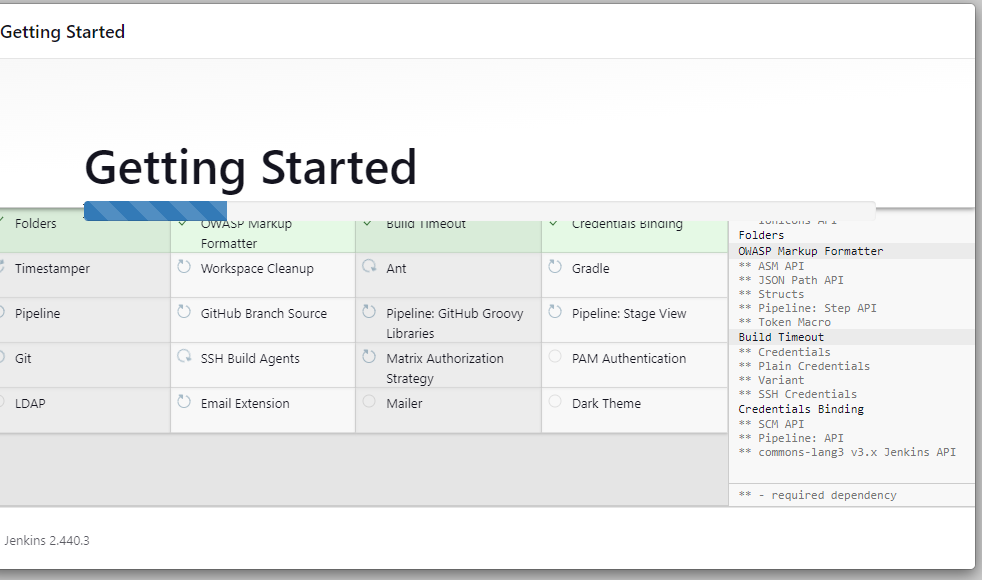
**< git push –all >**

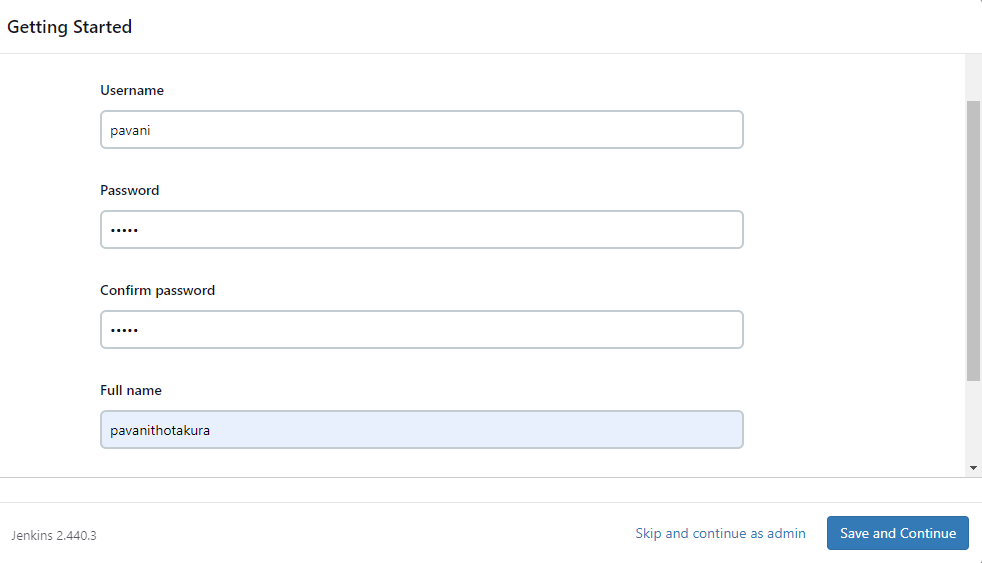
**< Username: kaasu-pavani**

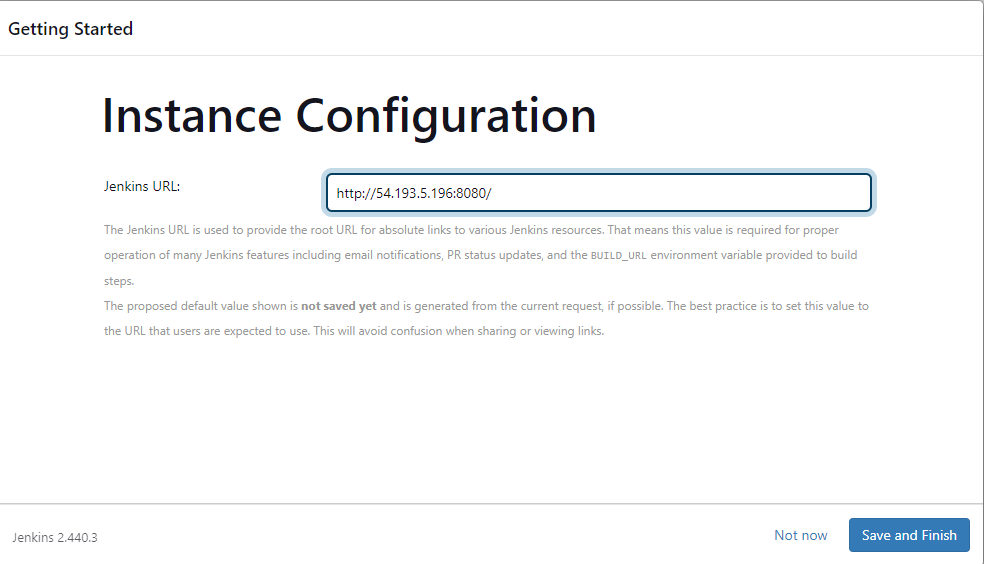
**Password: ghp\_GcLkpEstseF2sTxwLHFXtVgiDHeY1a2L4ULV (Personal access token) >**

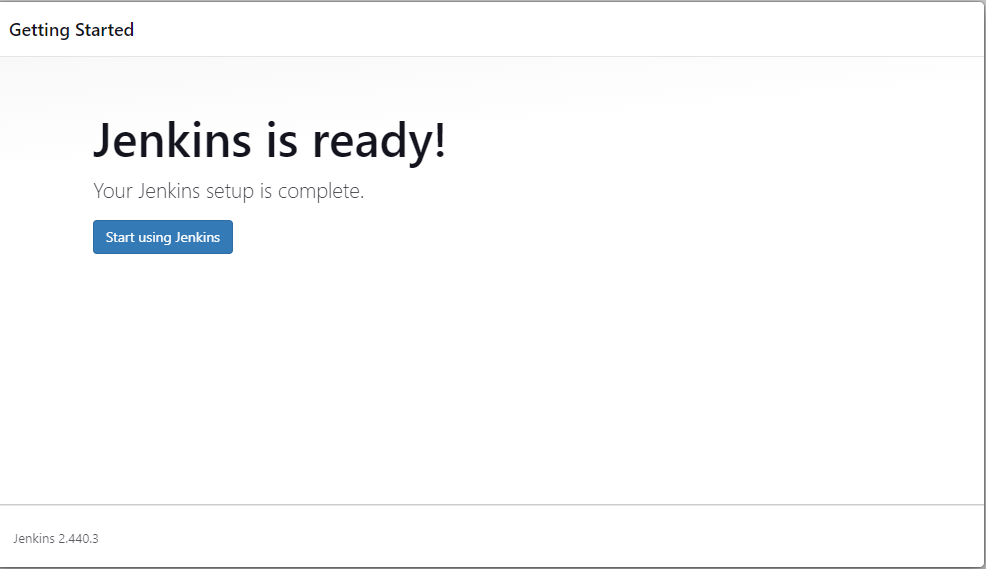


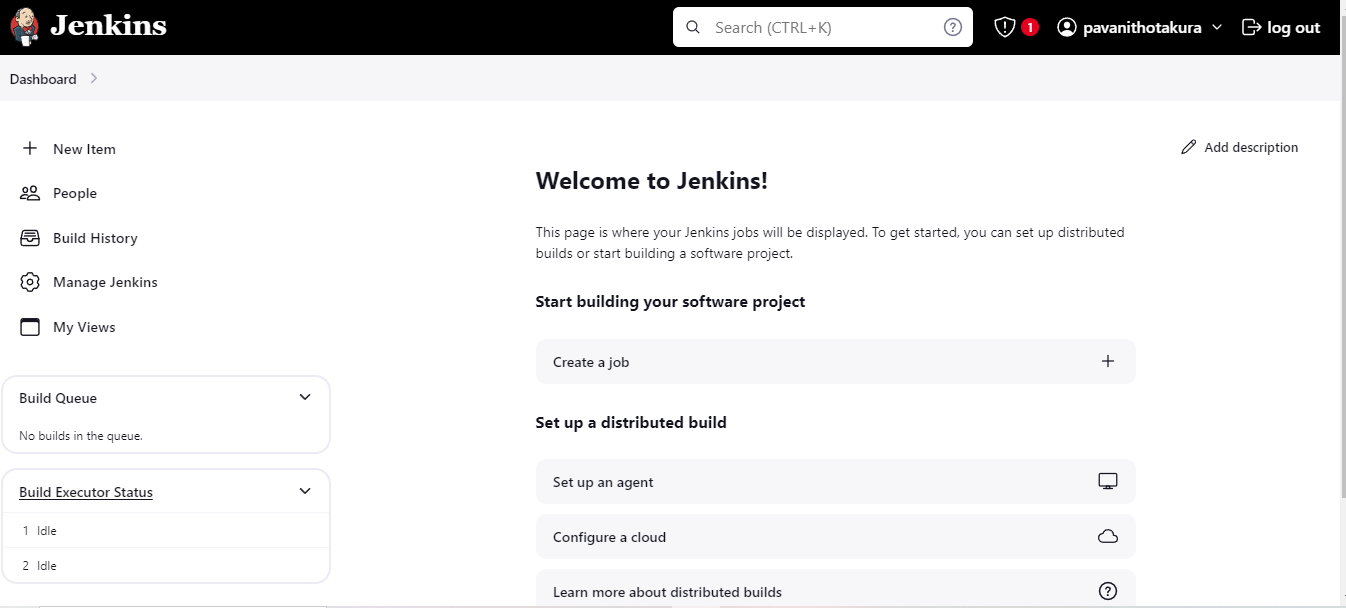


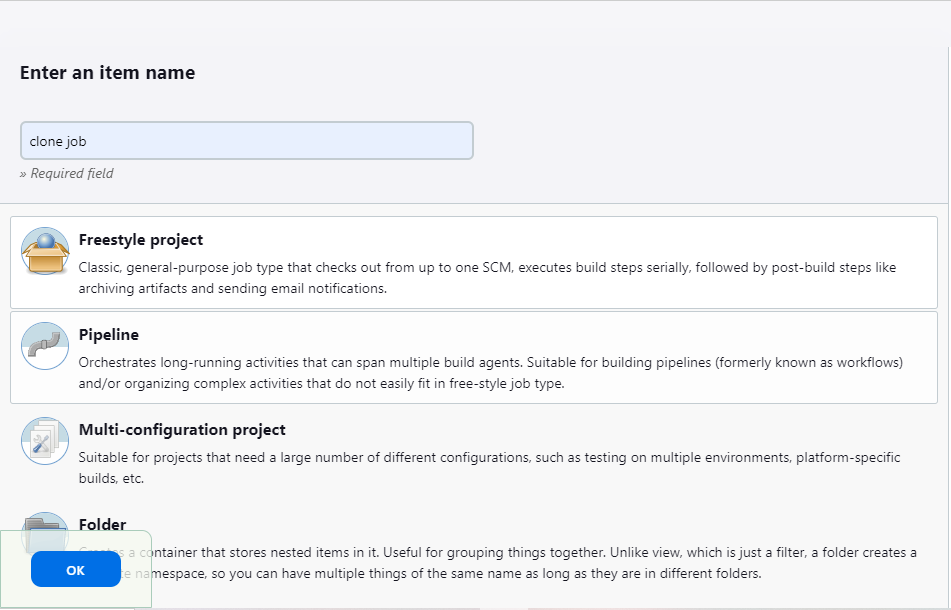




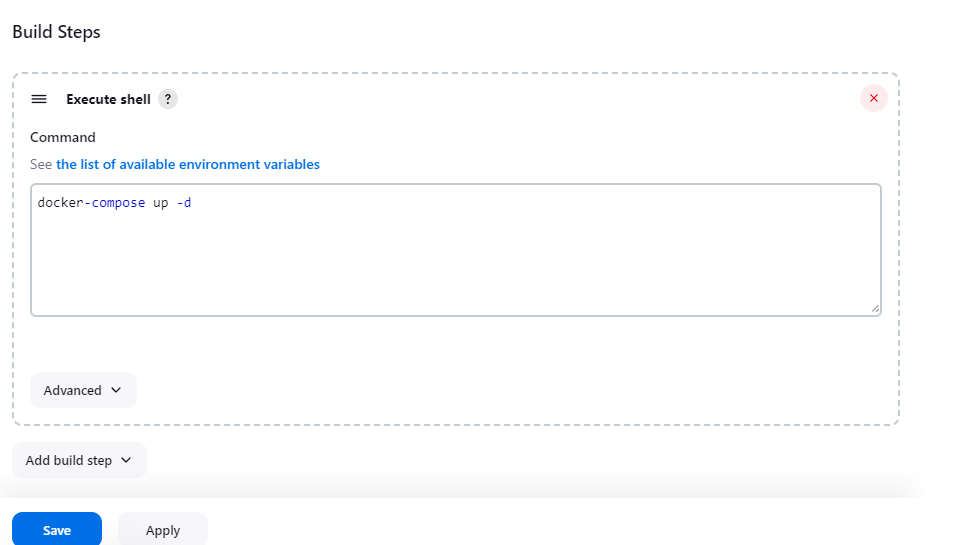












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**4. Deploy WordPress web application by using userdata of EC2 instance?**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t2.micro and giving security group HTTP (80) and HTTPs.**
* **Go to advanced details.**
* **Upload file in user data these following script.**

**#!/bin/bash**

**sudo yum -y install git docker**

**sudo systemctl start docker**

**sudo systemctl enable docker**

**sudo chmod 666 /var/run/docker.sock**

**sudo usermod -a -G docker ec2-user**

**sudo curl -L "https://github.com/docker/compose/releases/latest/download/docker-compose-$ (uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose**

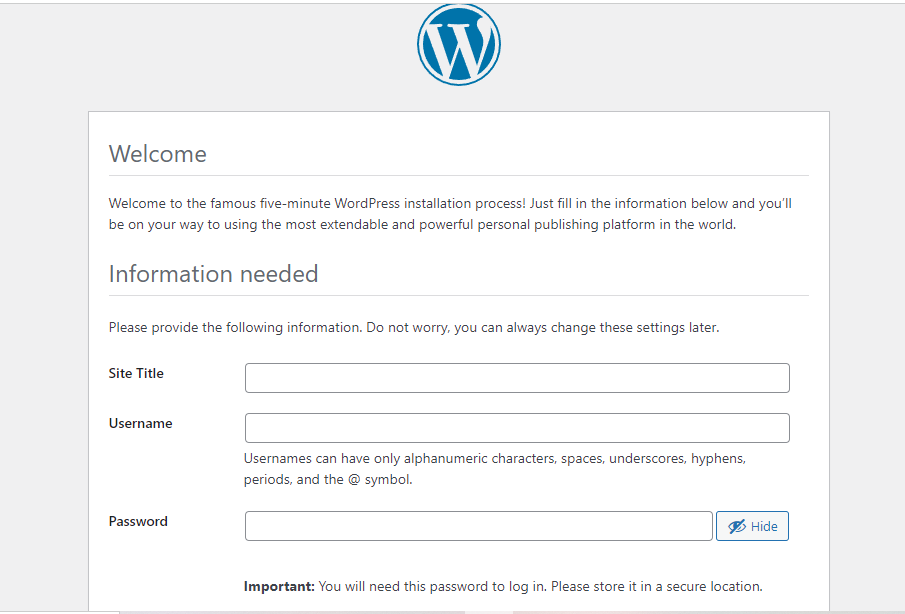
**sudo chmod +x /usr/local/bin/docker-compose**

**git clone https://github.com/Hemayuva/wordpress.git**

**cd wordpress**

**docker-compose up -d**

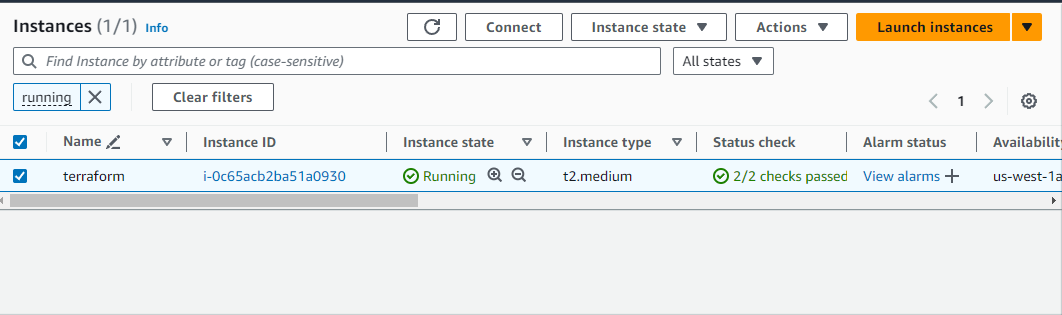
* **Copy public ip and paste to Google.**
* **Now open wordpress application.**



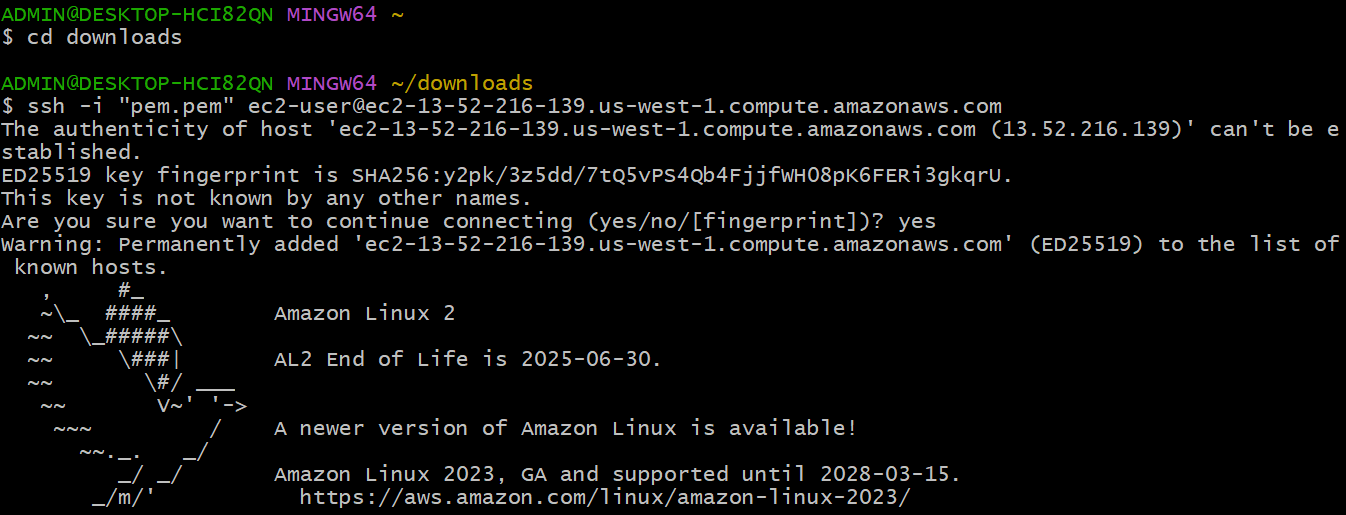
**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**5. Deploy WordPress web application by using git and jenkins execute shell (bash script)?**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t2.mediam and giving security group HTTP (80) and security group mysql aurora and port 8080 and 8081.**

****

* **Now connect the virtual server through the GitBash as shown in below.**

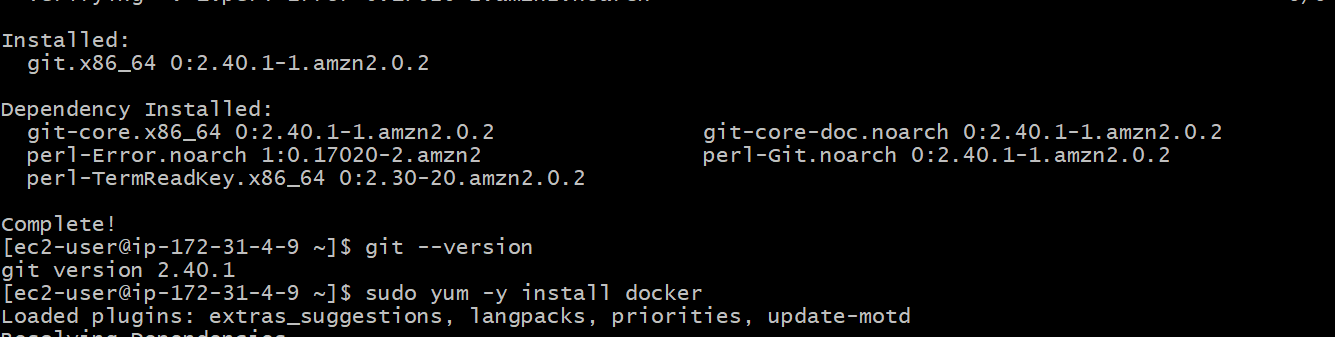


* **Run these following command as**

**< sudo yum –y update >**

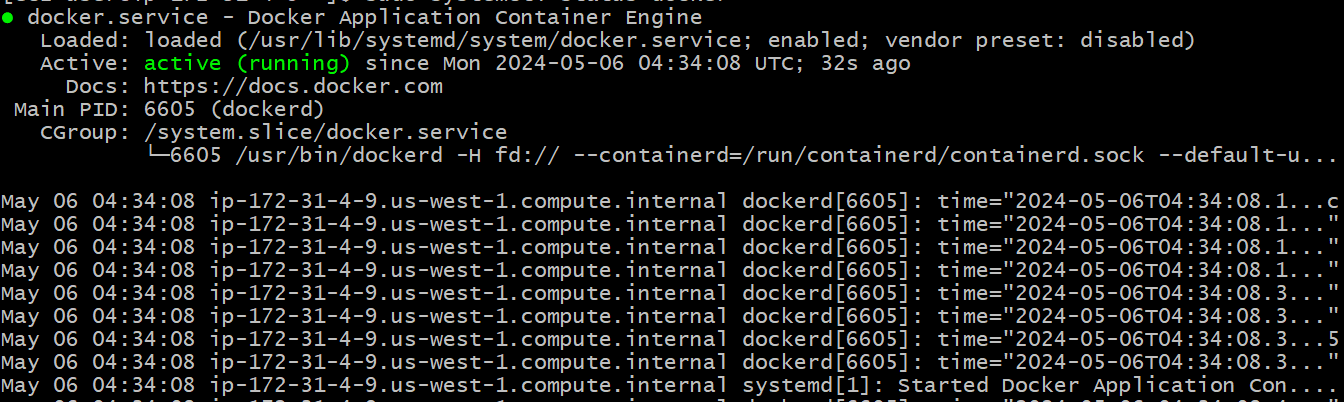
* **Now installing git using following command as**

**< sudo yum –y install git >**



* **Now install the docker.**

**< sudo yum -y install docker >**



* **Now install the docker-compose file by using these command as**

**< sudo curl -L "https://github.com/docker/compose/releases/download/1.29.2/docker-compose-$ (uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose >**

* **Set execution permissions using these command as**

**< sudo chmod +x /usr/local/bin/docker-compose>**

* **Verify Installation using these command as**

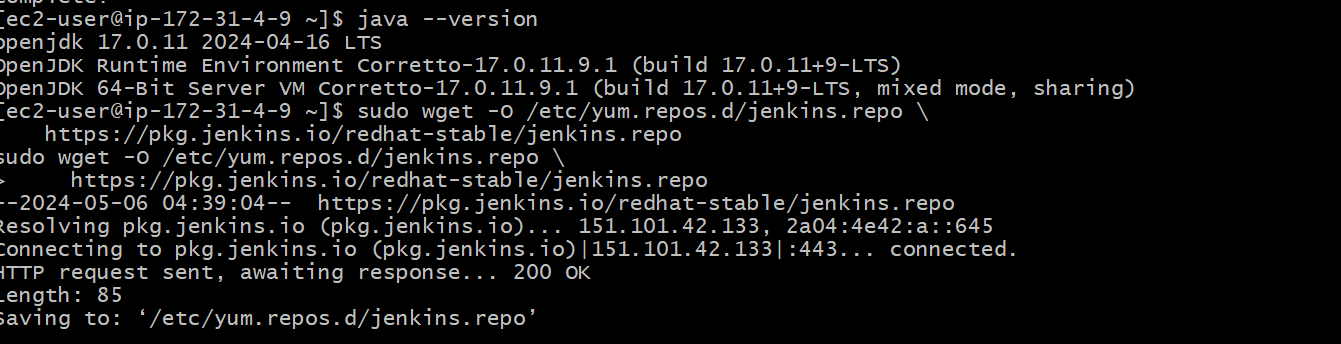
**< docker-compose –version >**

* **Now give permissions to add a limited linux user account to docker group by using a command as**

**< sudo chmod 666 /var/run/docker.sock >**

* **Now installing java using following command as**

**< sudo yum –y install java\* >**



* **Now installing Jenkins following commands as**

**< sudo wget -O /etc/yum.repos.d/jenkins.repo \**

**https://pkg.jenkins.io/redhat-stable/jenkins.repo >**

**< sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key >**

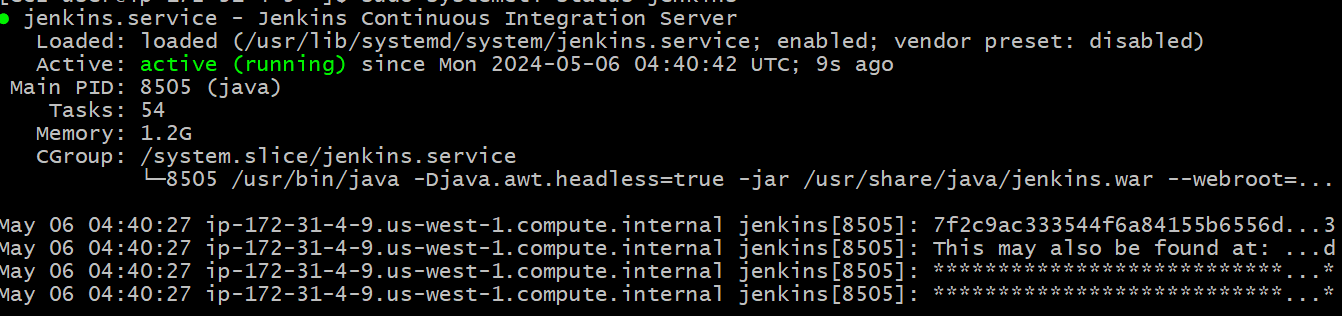
**< sudo yum upgrade >**

**< sudo yum install jenkins -y >**

**< sudo systemctl start Jenkins >**

**< sudo systemctl enable Jenkins >**

**< sudo systemctl status Jenkins >**



* **Now open the github repository.**
* **Create one repo and upload these following code.**

**version: '3.1'**

**services:**

**wordpress:**

**image: wordpress**

**restart: always**

**ports:**

**- 80:80**

**environment:**

**WORDPRESS\_DB\_HOST: db**

**WORDPRESS\_DB\_USER: exampleuser**

**WORDPRESS\_DB\_PASSWORD: examplepass**

**WORDPRESS\_DB\_NAME: exampledb**

**volumes:**

**- wordpress:/var/www/html**

**db:**

**image: mysql:8.0**

**restart: always**

**environment:**

**MYSQL\_DATABASE: exampledb**

**MYSQL\_USER: exampleuser**

**MYSQL\_PASSWORD: examplepass**

**MYSQL\_RANDOM\_ROOT\_PASSWORD: 1 # removed quotes here**

**volumes:**

**- db:/var/lib/mysql**

**expose:**

**- 3306**

**- 33060**

**volumes:**

**wordpress:**

**db:**

* **Go to GitBash , run these following commands**

**<sudo git init docker-compose>**

**<cd docker-compose>**

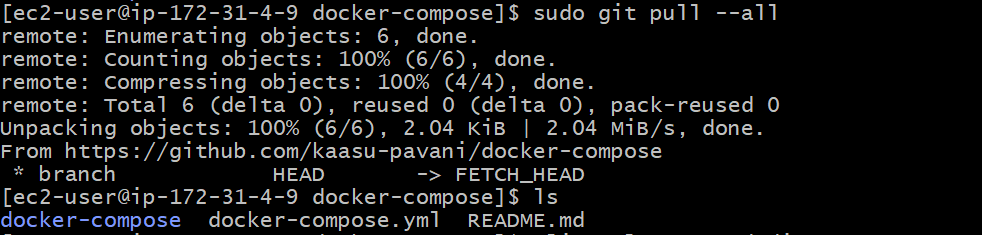
**<** **git add .>**

**< git remote add origin https://github.com/kaasu-pavani/docker-compose.git>**

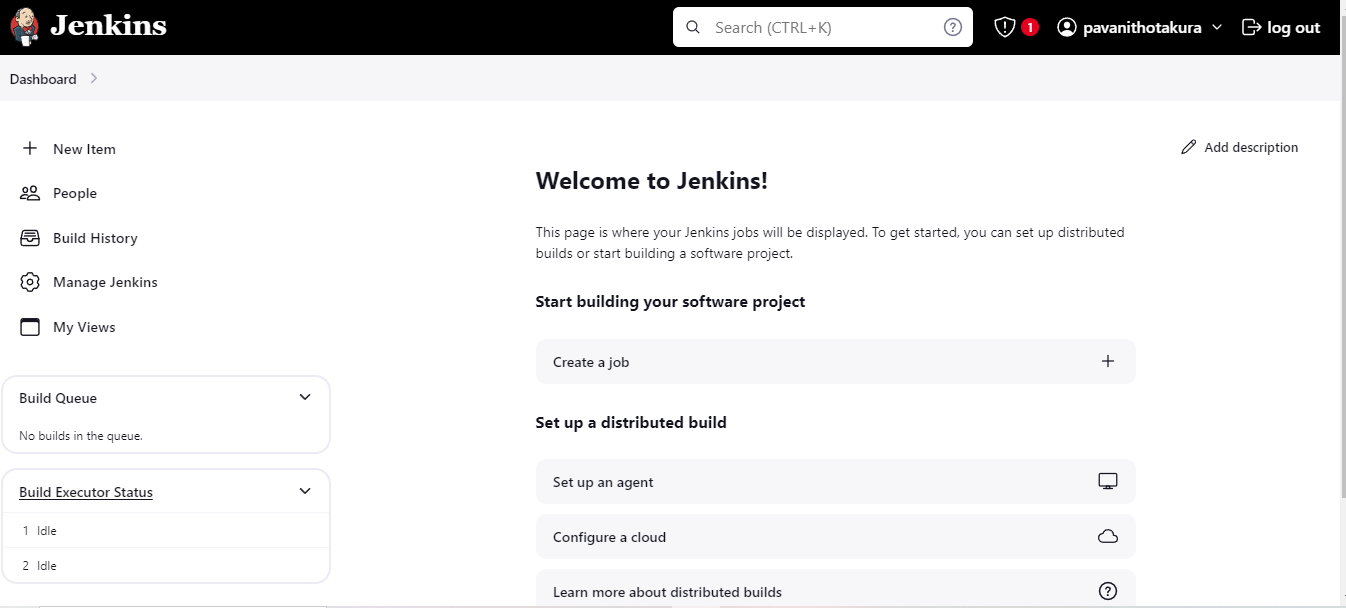
**< git clone https://github.com/kaasu-pavani/docker-compose.git >**

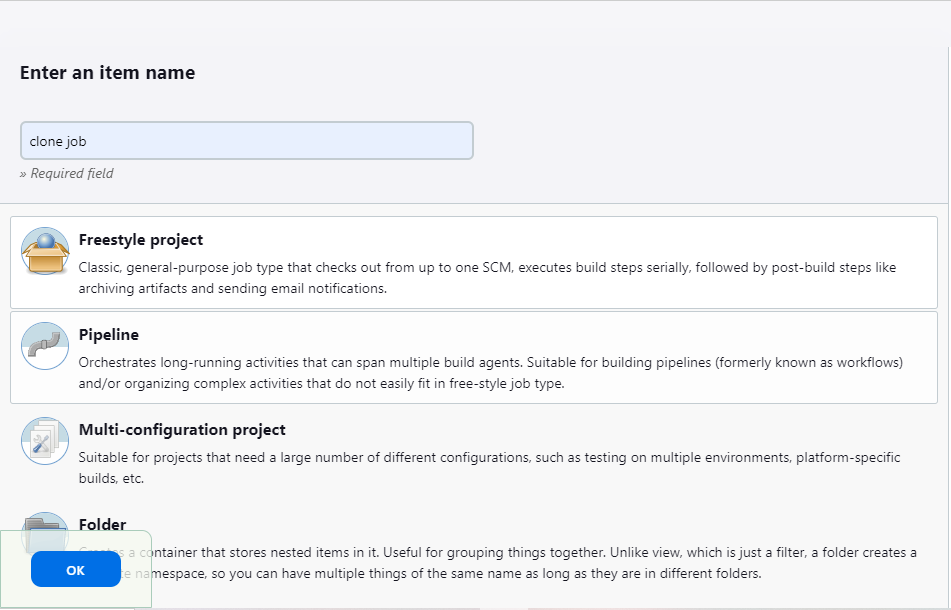
**< Sudo Git pull –all >**

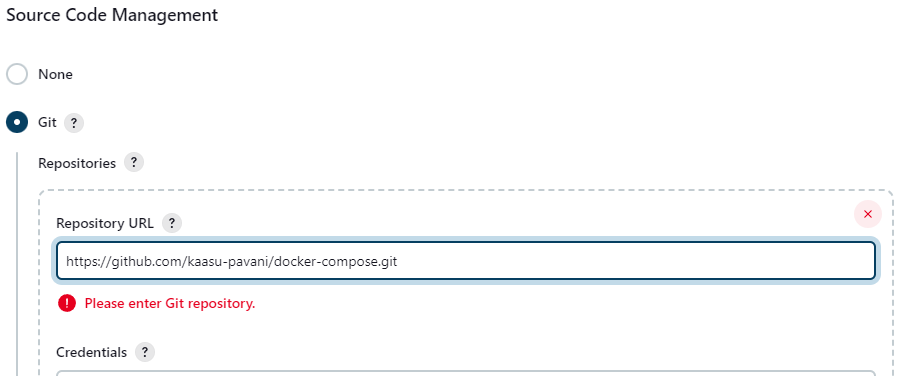
**< ls >**

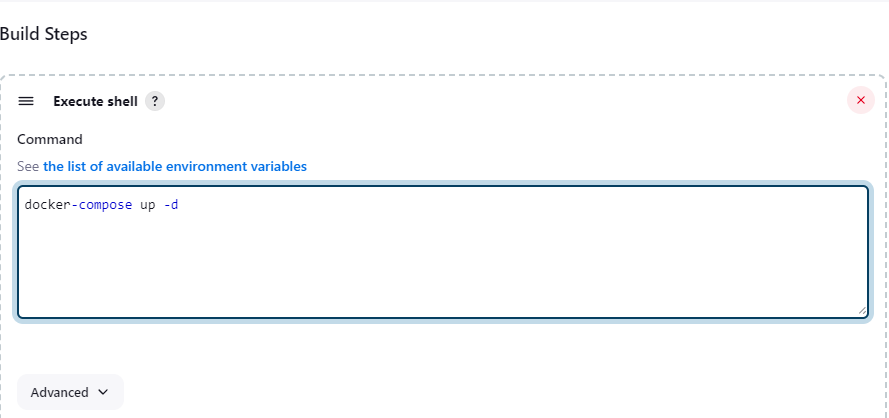
****

* **Now sign in Jenkins**

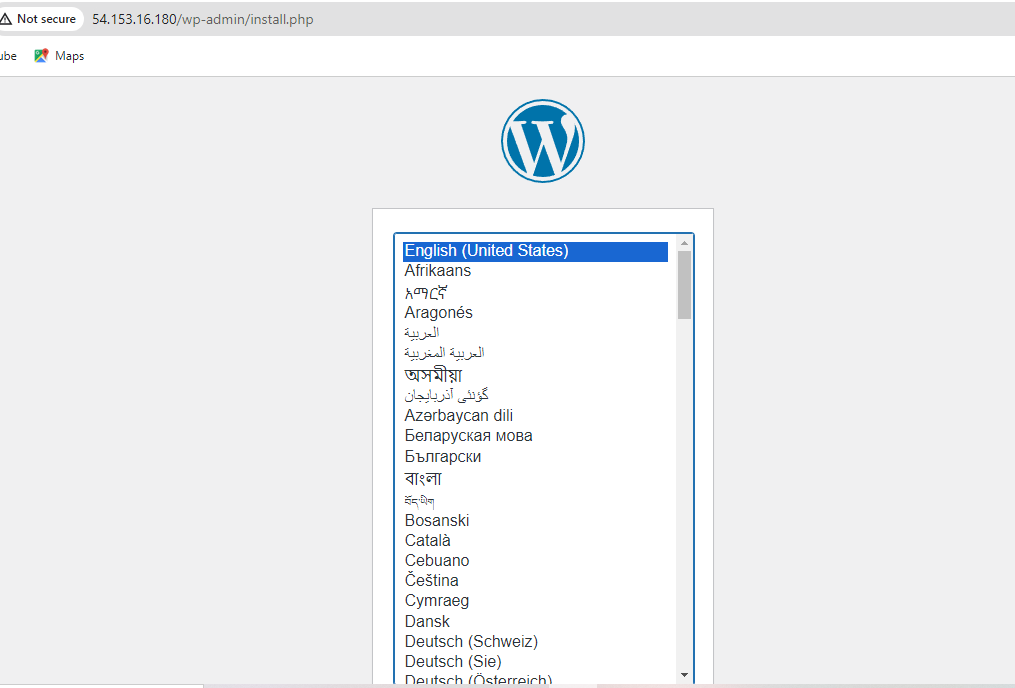








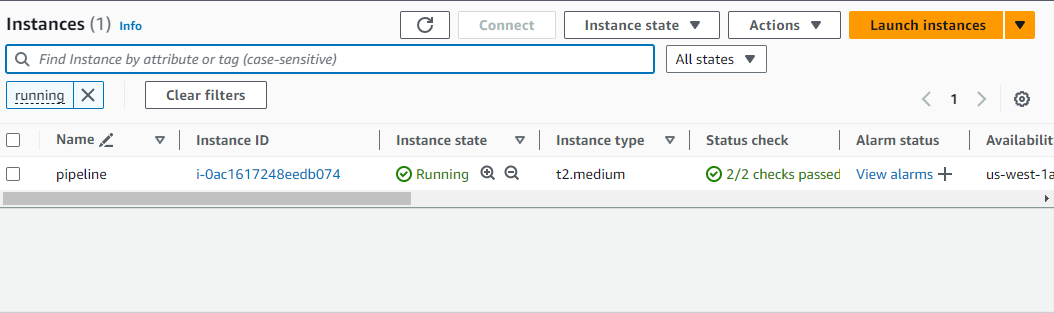
****

****

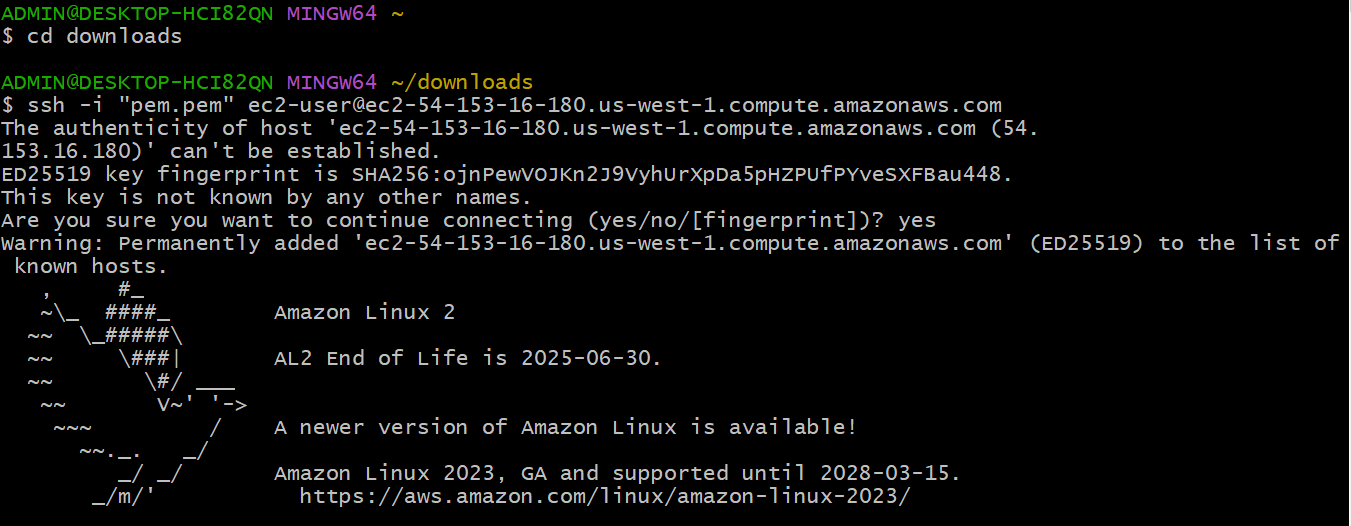
**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**6. Deploy WordPress web application by using git and jenkins execute shell (bash script) create jenkins pipeline add build periodically and poll scm to initial job of pipeline and check the changes happened or not which are made in github repo?**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t2.mediam and giving security group HTTP (80) and HTTPS and security group and port 8080.**

****

* **Go to Git Bash terminal.**



* **Now run these following command as install java software**

**< sudo yum –y install java\* >**



* **Now installing the Jenkins following below commands**

**< sudo wget -O /etc/yum.repos.d/jenkins.repo \**

**https://pkg.jenkins.io/redhat-stable/jenkins.repo >**

**< sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key >**

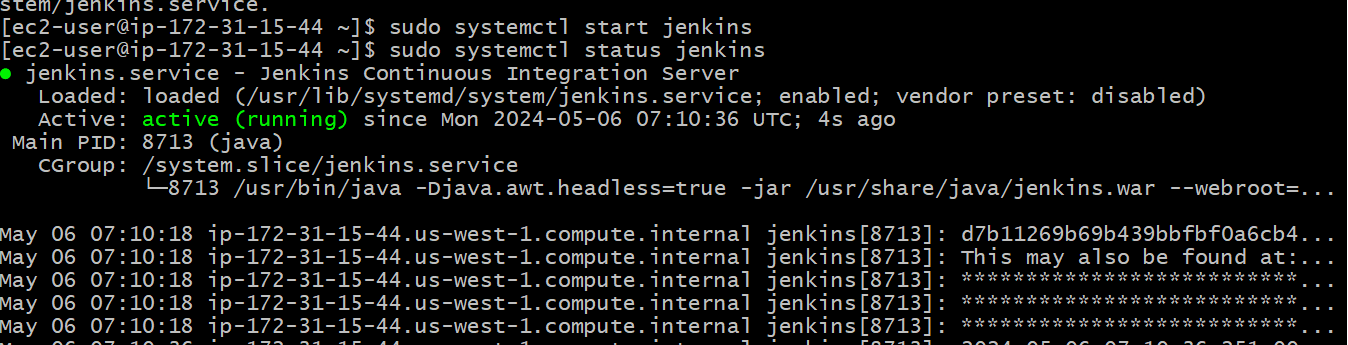
**< sudo yum upgrade >**

**< sudo yum install jenkins -y >**

**< sudo systemctl start Jenkins >**

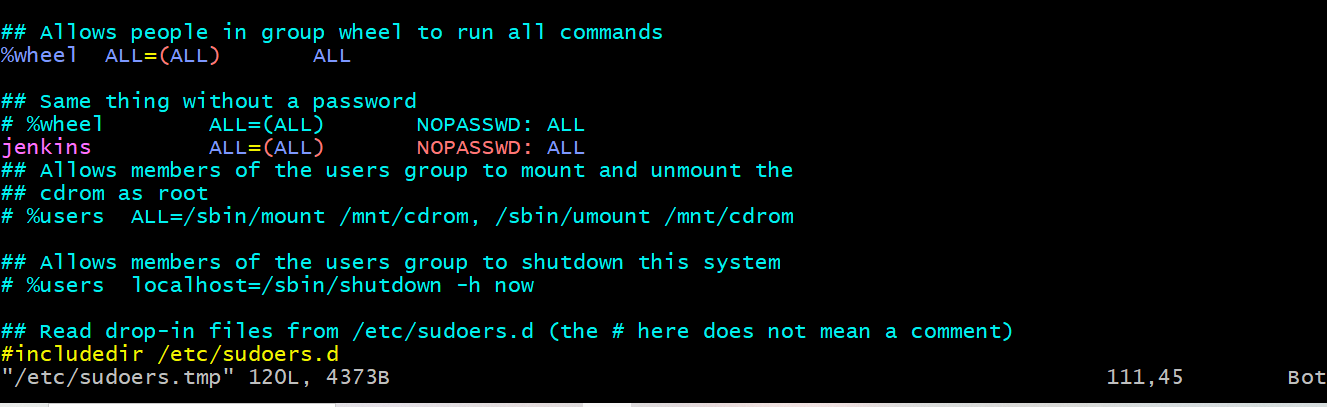
**< sudo systemctl enable Jenkins >**

**< sudo systemctl status Jenkins >**

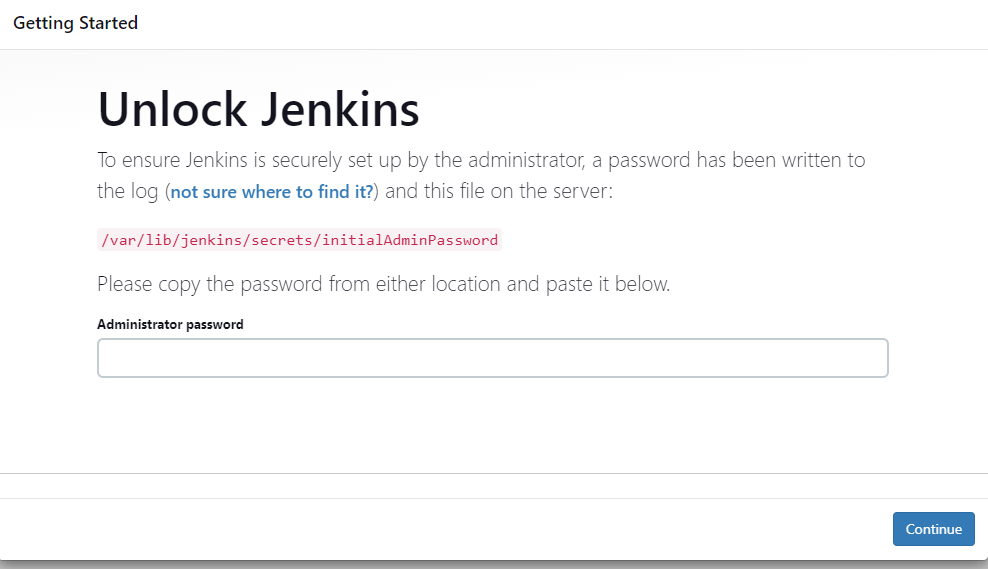
****

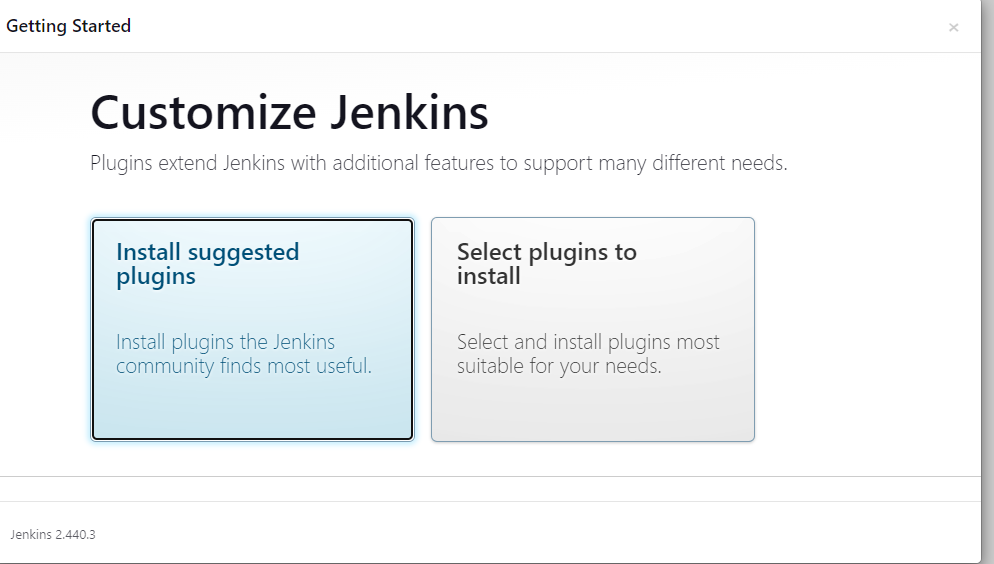
* **Now give the permissions as**

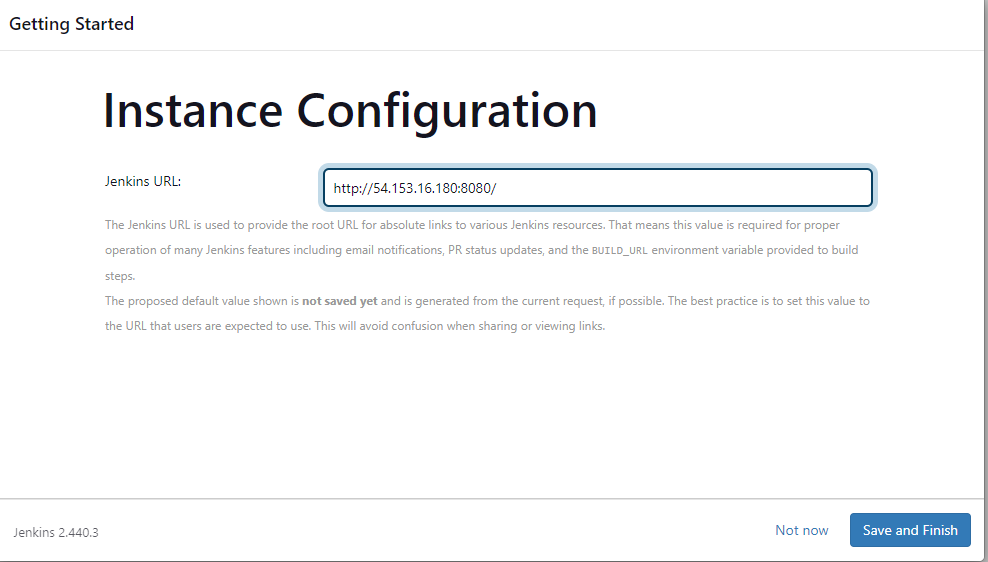
**< sudo visudo >**

****

* **Now go to EC2 instance, copy the public ip and host to Google.**
* **Now open the Jenkins windows.**

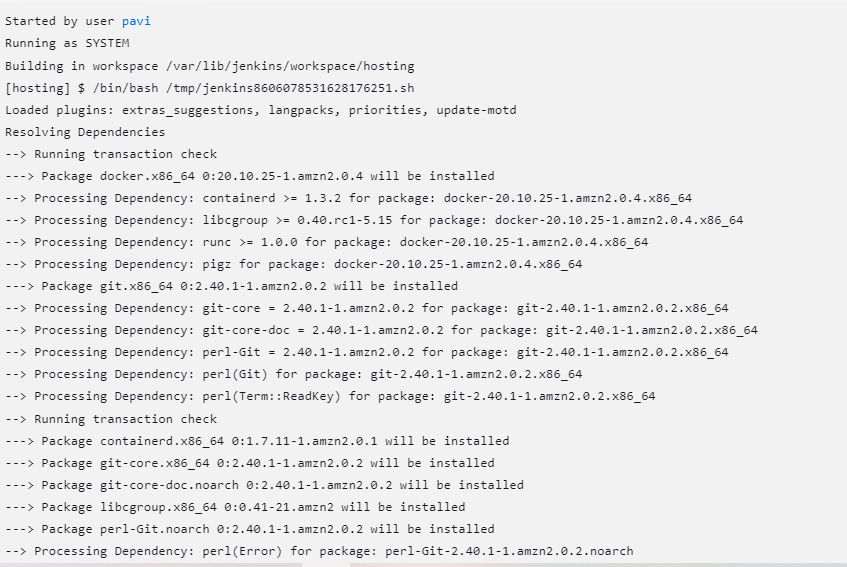
****

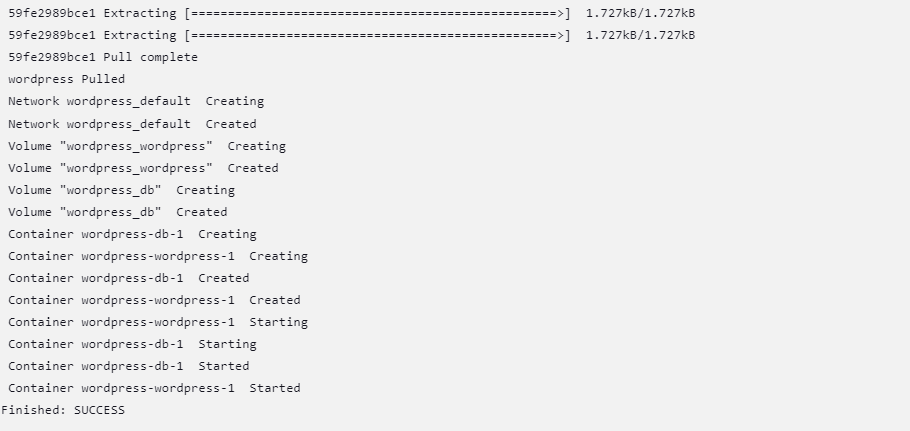
****

****

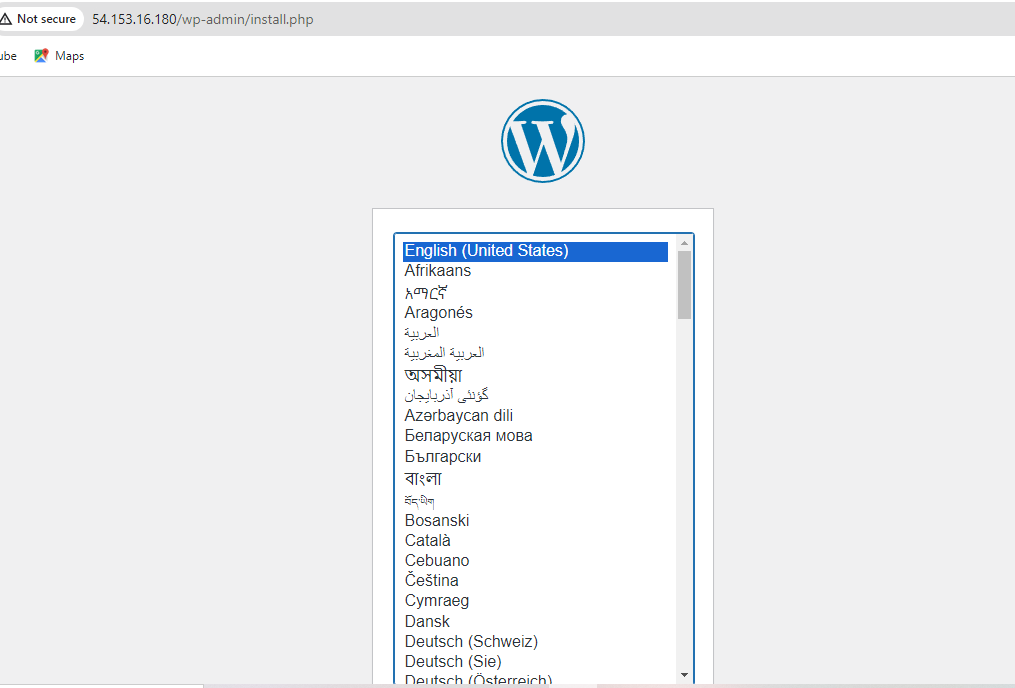
****



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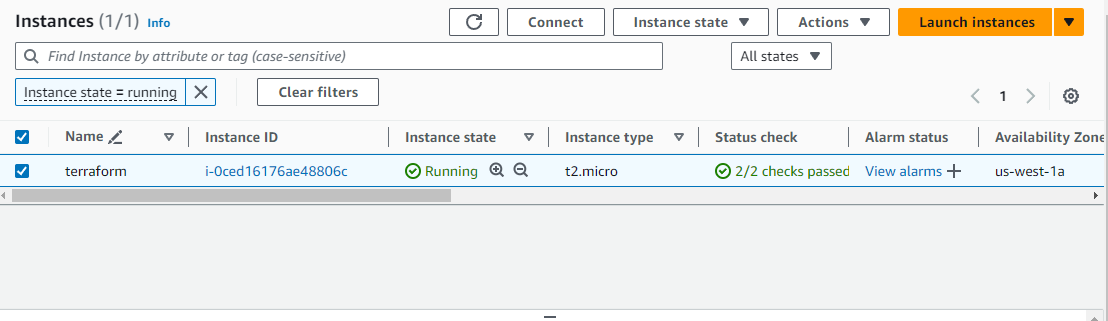
* **Now go to EC2 instance, copy the public ip and host to Google.**
* **Now open the wordpress window.**

****

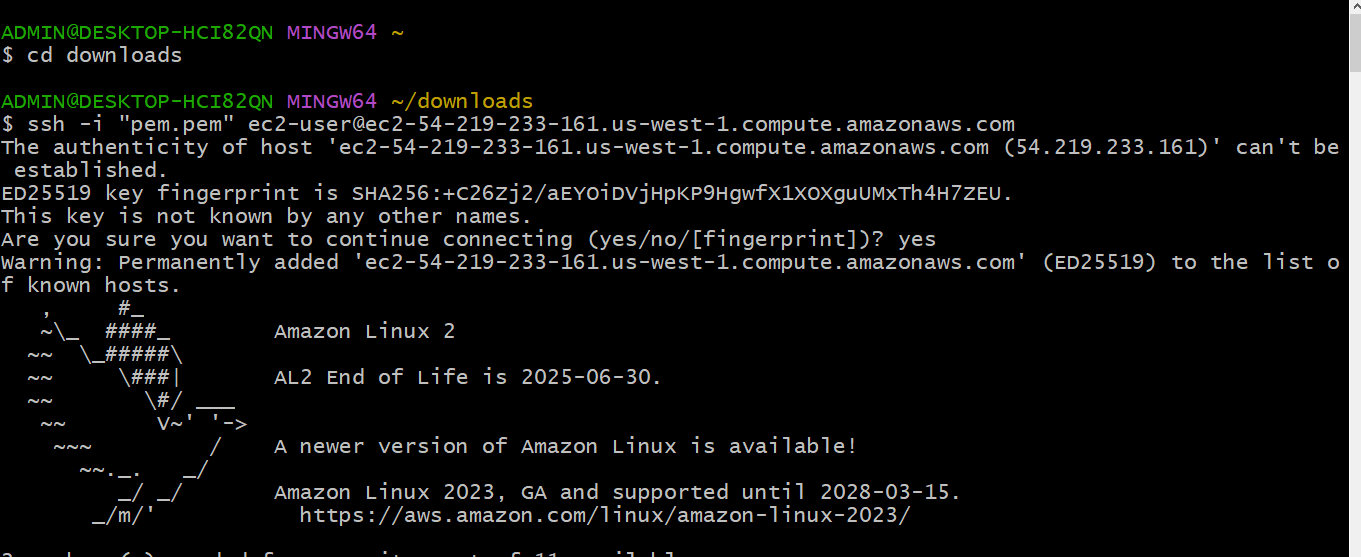
**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**7. Deploy WordPress web application by using terraform (create Ec2 instance along with userdata .sh file)?**

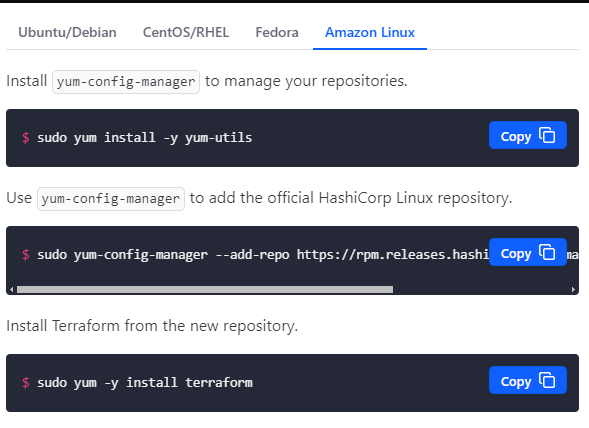
* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t2.micro and giving security group HTTP (80) and HTTPS and security group and port 8080.**



* **Go to Git Bash terminal.**



* **Now install the terraform.**
* **Go to Google, copy Teraform commands and paste to Git Bash terminal.**



* **Now create the file following these command as**

**< vi main.tf >**

* **Now create the another file following these command as**

**< vi user.sh >**

* **Now run the terraform execution following these commands as**

**\* Terraform init**

**\* Terraform fmt**

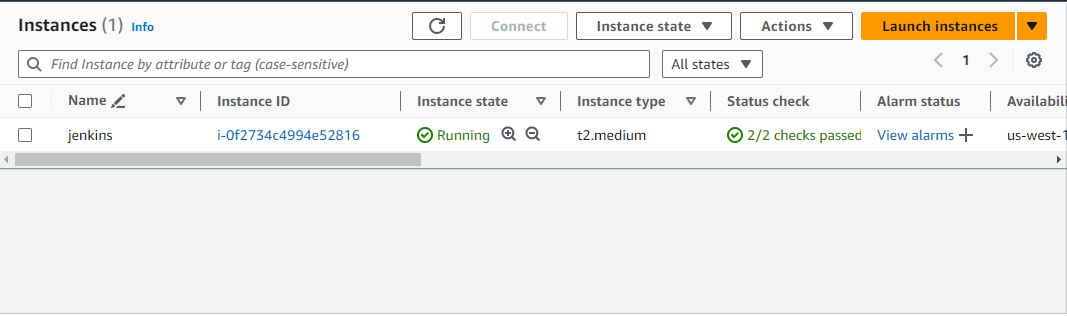
**\* Terraform validate**

**\* Terraform plan**

**\* Terraform apply**

**8. Deploy WordPress web application by using git (clone terraform script which helps to deploy WordPress web application), jenkins (in execute shell install terraform, init, fmt, validate and apply with automatic command as terraform apply --auto-approve) and terraform.**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t3.mediam and giving security group HTTP (80) and HTTPS and security group and port 8080.**



* **Go to Gitbash.**
* **Now install Git using these command as**

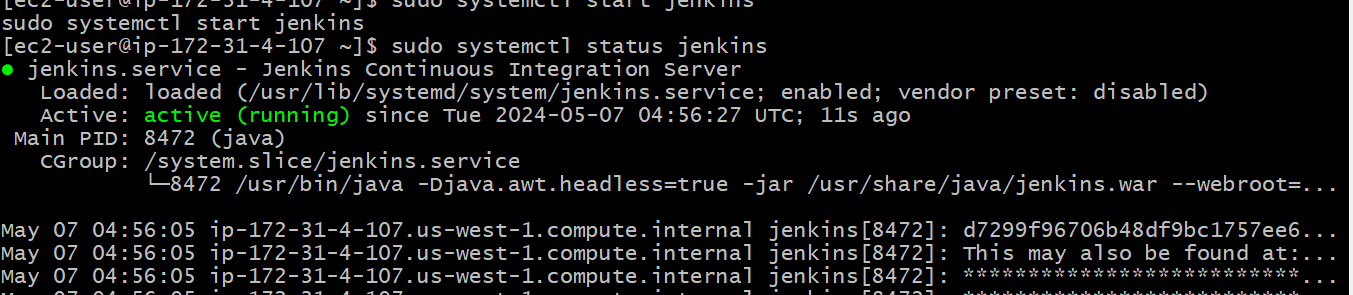
**< sudo yum –y install git >**



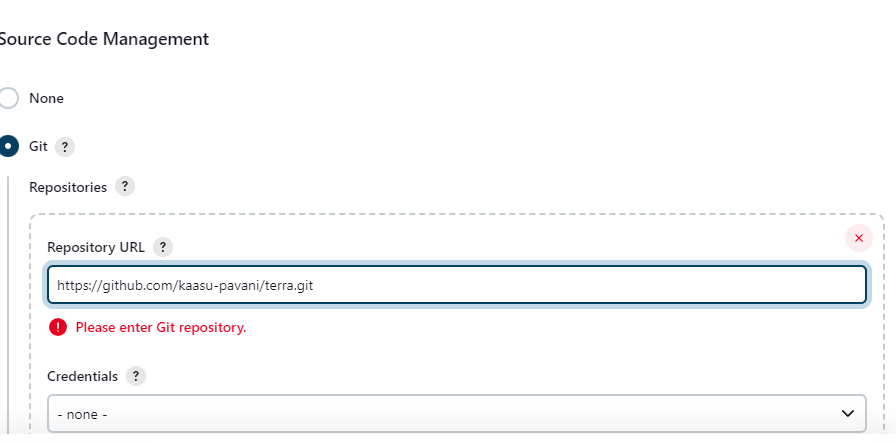
* **Now install the java using these following command as**

**< sudo yum –y install java\* >**

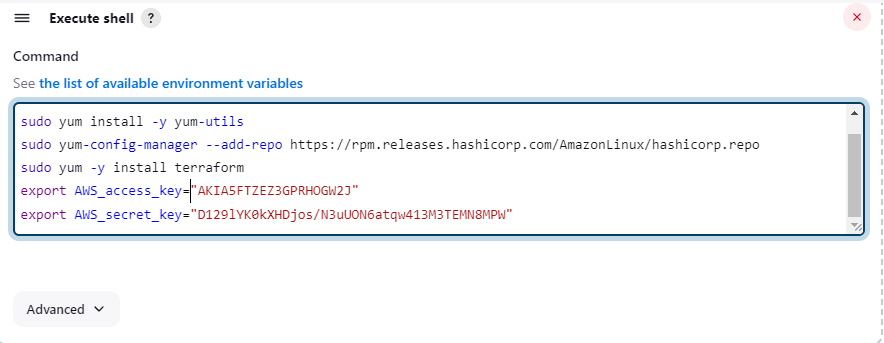
* **Now install the Jenkins (follow the above steps Jenkins installation).**



* **Go to Jenkins window.**
* **Username, password, full name and Email entered after that start using Jenkins.**
* **Create job.**
* **Go to source code management, select Git.**
* **Go to Git repo URL (copy Git URL from Git hub). [Git hub repo (main.tf and user.sh) these data].**

****

* **Go to Execute shell enter the Terraform installation commands and IAM user (access and secret key).**

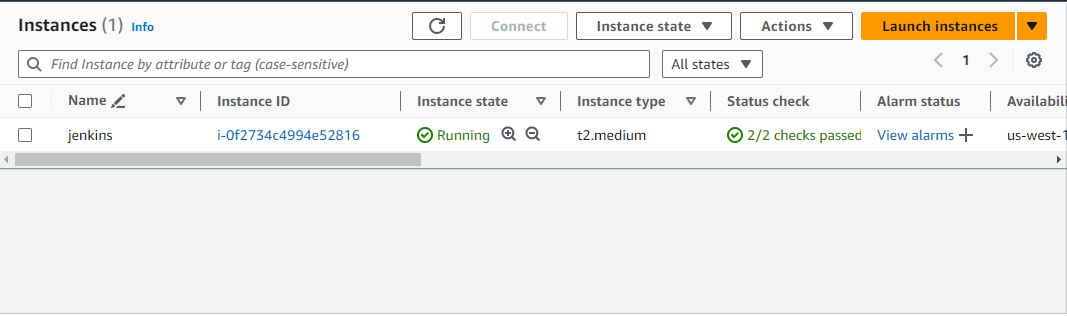
****

* **After that click apply & save and Build now.**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**9. Deploy WordPress web application by using git (clone terraform script which helps to deploy WordPress web application), jenkins (in execute shell install terraform, init, fmt, validate and apply with automatic command as terraform apply --auto-approve) and terraform and create jenkins pipeline and add build periodically and poll scm to initial job of pipeline and check the changes happened or not which are made in github repo.**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t3.mediam and giving security group HTTP (80) and HTTPS and security group and port 8080.**

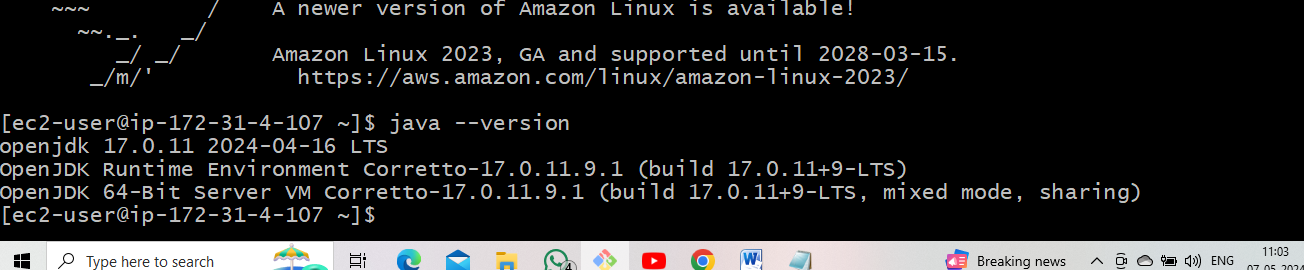


* **Go to Git Bash terminal.**
* **Now install the Git command as below**

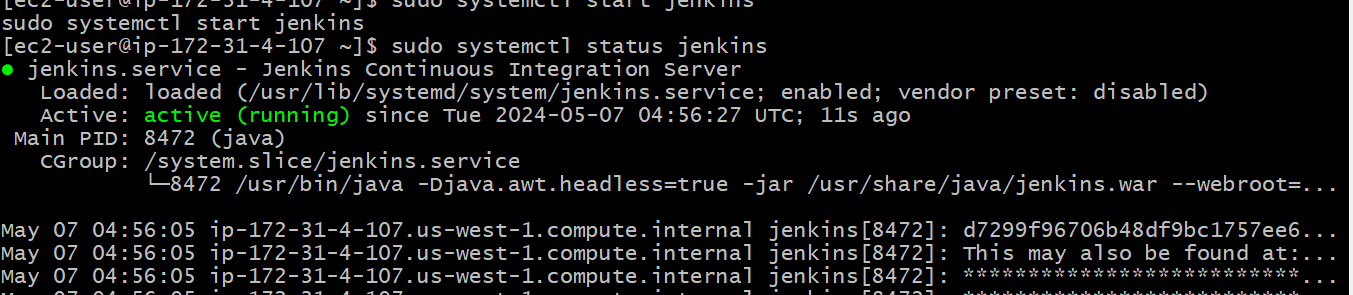
**< sudo yum –y install git >**

* **Now install the java command as**

**< sudo yum –y install java\* >**



* **Now install the Jenkins follow the above commands.**



* **Now create the job.**
* **After that select SCM (Git).**
* **Copy Git URL from Git hub repo and paste to Git URL.**
* **Go to execute shell enter the (Terraform installation commands).**
* **Click the apply & save and Build now.**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***

**10. Deploy WordPress web application by using k8’s (Declarative manifest method) with the help of docker hub images?**

* **Create the EC2 instance by selecting EC2 services and launch the instance by selecting Amazon Linux-2 version and t3.mediam and giving security group HTTP (80) and security group and port 8080.**
* **Go to Git Bash terminal.**
* **Now install the docker command as**

**< sudo yum –y install docker >**

* **Now docker (start, enable, status) commands as**

**< sudo systemctl start docker >**

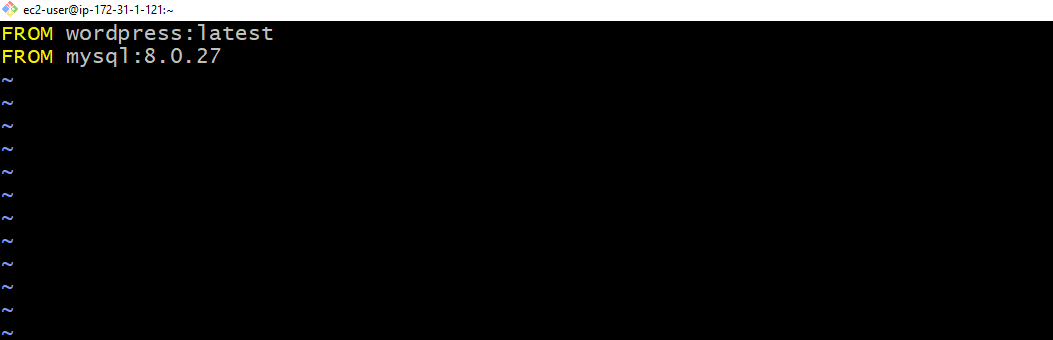
**< sudo systemctl enable docker >**

**< sudo systemctl start docker >**

* **Now install the docker-compose file ( command as Google).**

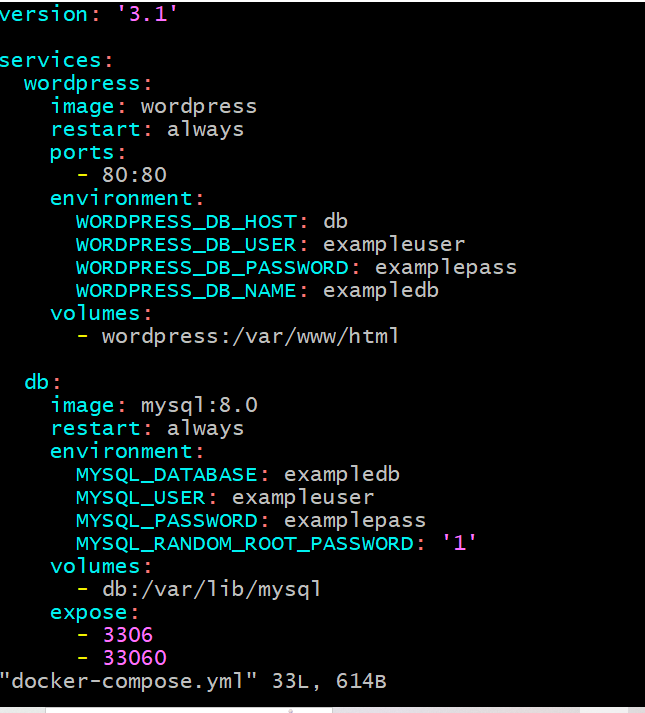


* **Now create file docker file.**



* **Now create the docker-compose file.**

**< sudo vi docker-compose.yml >**

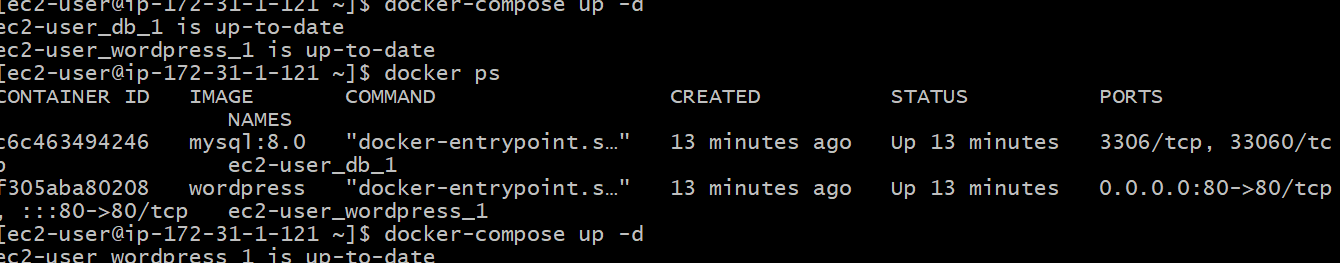
****

* **Now execute the docker-compose file command as**

**< docker-compose up –d >**

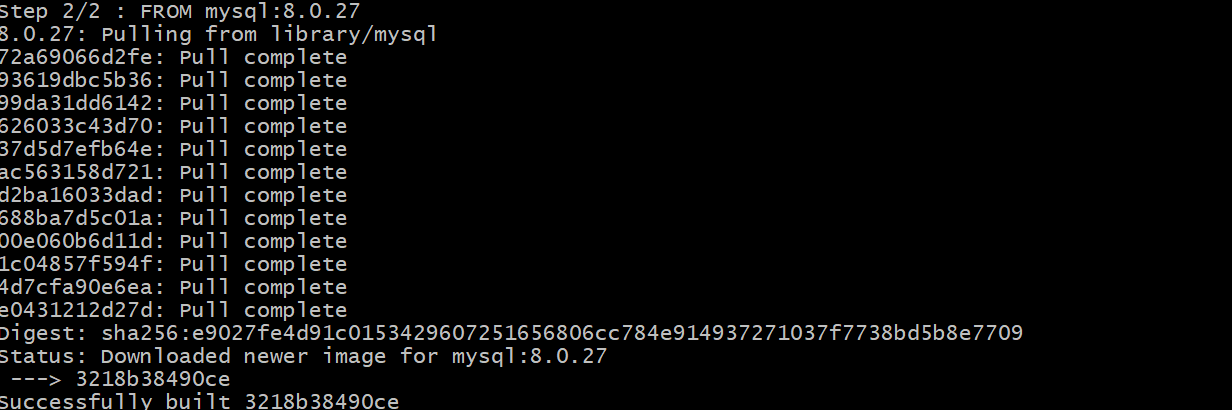
* **Now docker ps command as**

**< docker ps >**

****

* **Create new file using these command as**

**< docker build –t new . >**



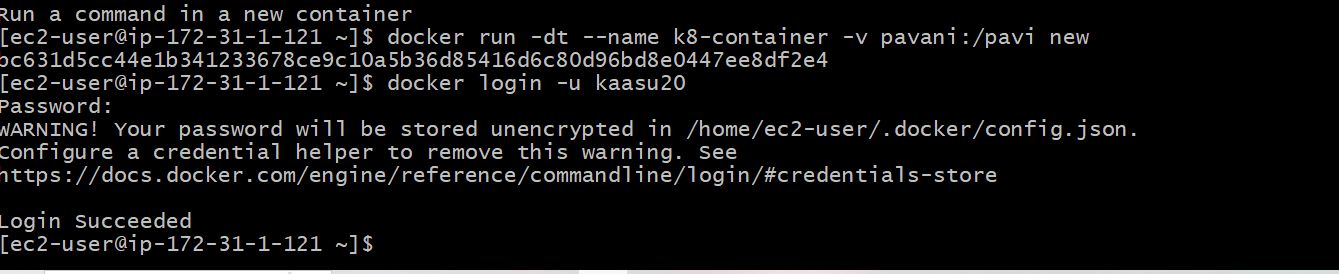
* **Now newly created images follow the command as**

**< docker run –dt –name k8-container –v pavani:/pavi new >**

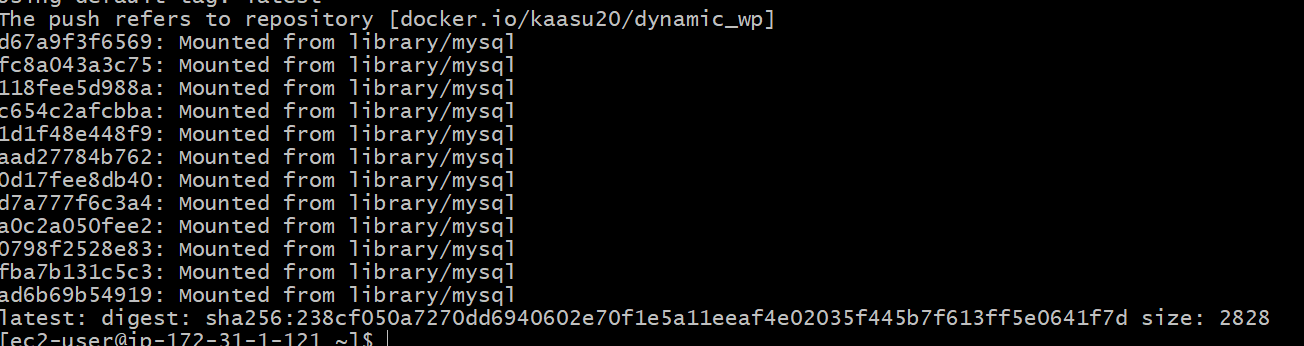
* **Now login the docker account using these command as**

**< docker login –u kaasu20 >**

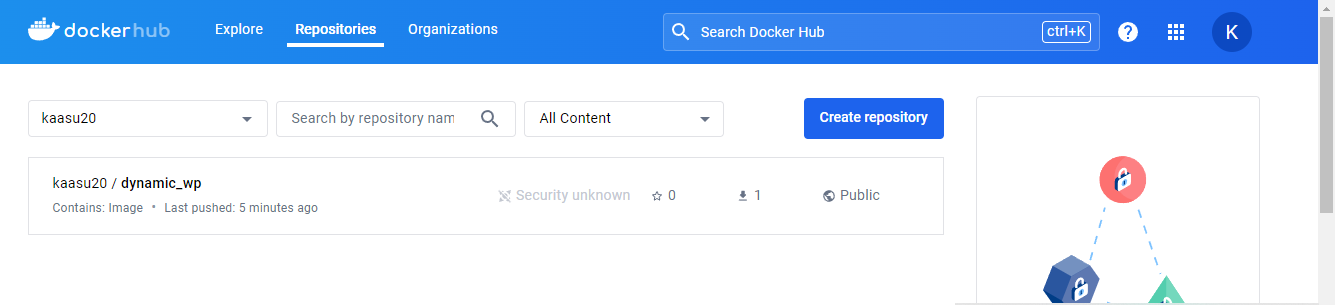
* **After that entered password.**



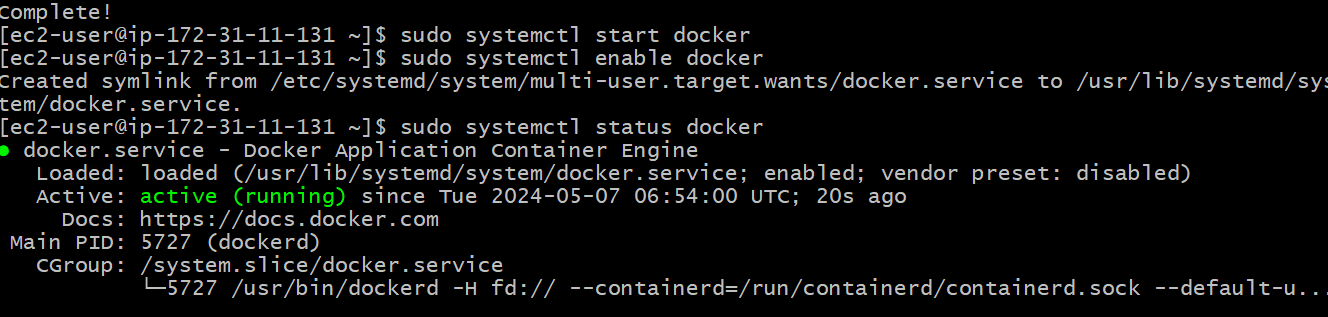
* **Now push the images to docker hub.**



* **Now see the docker hub.**



* **Now create the new instance.**
* **Install the docker.**



* **Now give the permissions docker.**

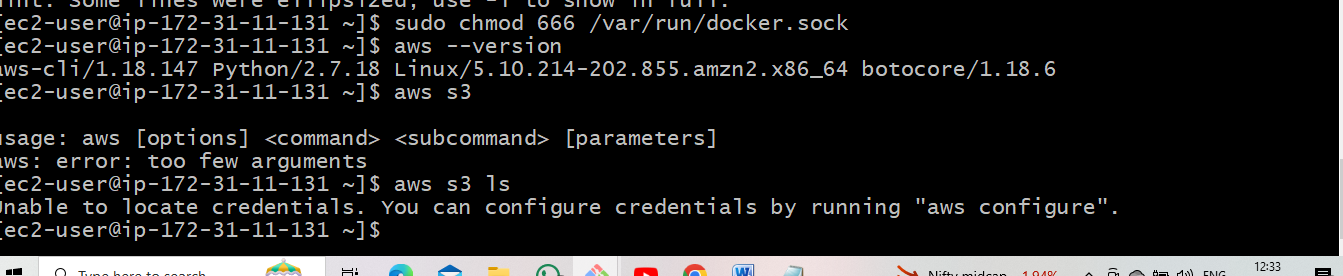
**< sudo chmod 666 /var/run/docker.sock >**

* **Now check the AWS version**

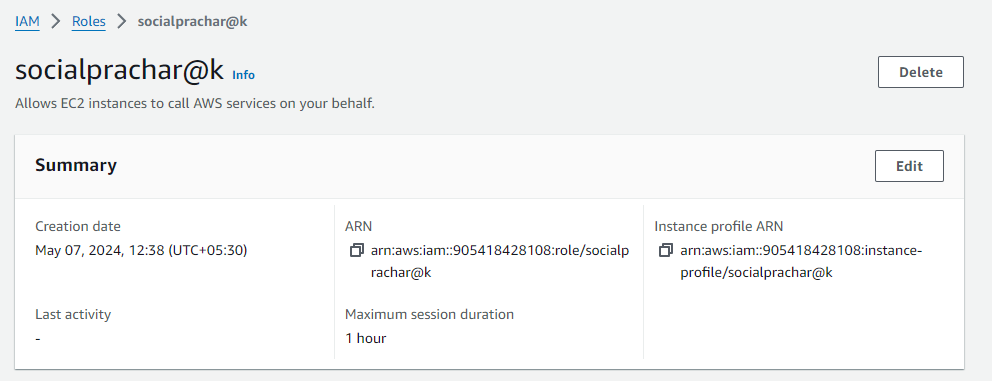
**< aws –version >**

* **Now check for s3 bucket.**

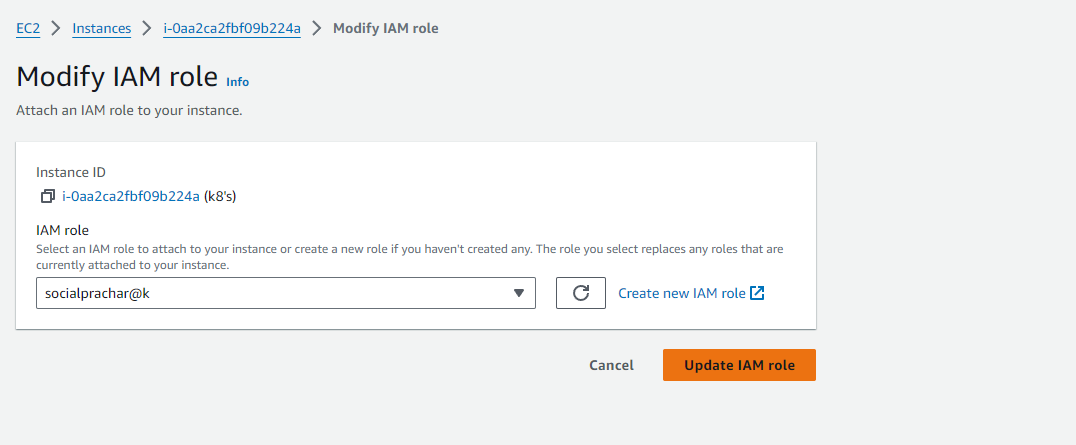
**< aws s3 ls >**



* **Now create the IAM role.**

****

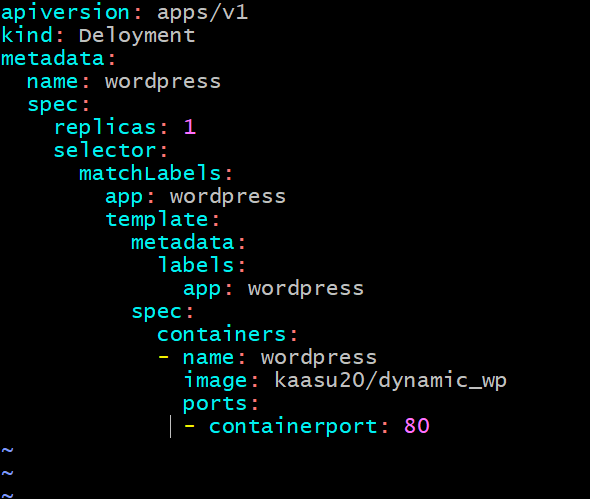
* **After that attach the EC2 instance.**



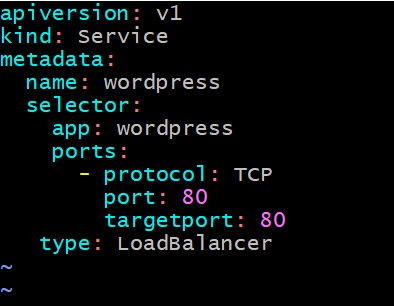
* **After that create S3 bucket.**
* **After that check the following command as**

**< aws s3 ls >**

* **After that install kops and kubectl (Google).**
* **Create one file deployment.yml.**



* **Create another file service.yml.**

****

* **Now enter the command as kops create cluster**
* **After that enter the command as Kops validate cluster**
* **Now enter the Kubectl apply –f deployment.yml**
* **And Kubectl apply –f service.yml**
* **After that Kubectl get svc wordpress**

**\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\***