

Create, Integrate, Manage and Deploy WordPress application using Docker-Compose in AWS

Different Methodology used for deploy Wordpress.

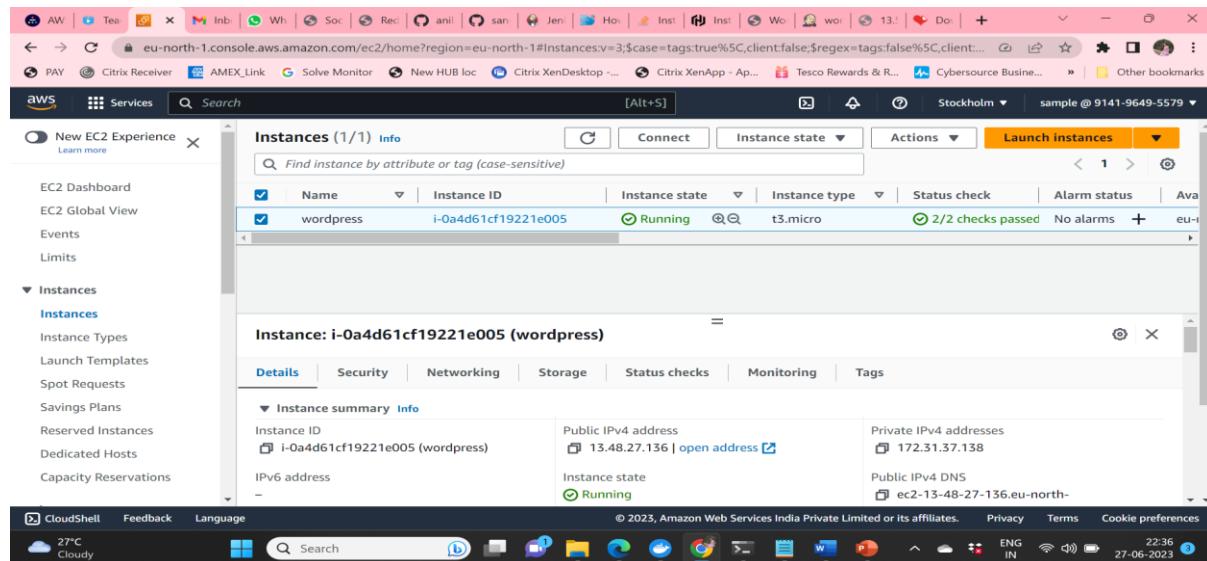
- Manually installing GIT, Docker and related repos.
- Automate using Jenkins.
- Creating EC2 Instance with user data
- Creating EC2 Instance with shell script

Manually installing GIT, Docker and Related Repos

Steps to creating the infrastructure in this pipeline/module

- Creating and launching an EC2 Instance with AMI – Amazon Linux 2
- Installing GIT, Docker and related repos
- Creating Docker images with help of YAML scripting

1) Creating and launching an EC2 Instance with AMI – Amazon Linux 2



The screenshot shows a web browser window with the URL eu-north-1.console.aws.amazon.com/ec2/home?region=eu-north-1#ConnectToInstance:instanceId=i-0a4d61cf19221e005. The browser's address bar and tabs are visible at the top. Below the address bar, there is a navigation bar with links like PAY, Citrix Receiver, AMEX_Link, Solve Monitor, New HUB loc, Citrix XenDesktop ..., Citrix XenApp - Ap..., Tesco Rewards & R..., Cybersource Busine..., and Other bookmarks. The main content area is titled "Connect to instance" with a "Info" link. It instructs the user to connect to instance i-0a4d61cf19221e005 (wordpress) using an SSH client. It provides four steps: 1. Open an SSH client, 2. Locate your private key file (june.pem), 3. Run the command chmod 400 june.pem, and 4. Connect to your instance using its Public DNS (ec2-13-48-27-136.eu-north-1.compute.amazonaws.com). An example command is shown: ssh -i "june.pem" ec2-user@ec2-13-48-27-136.eu-north-1.compute.amazonaws.com. A note at the bottom states: "Note: In most cases, the guessed user name is correct. However, read your AMI usage instructions to check if". The browser's status bar at the bottom shows CloudShell, Feedback, Language, Privacy, Terms, Cookie preferences, a weather icon (27°C Cloudy), a search bar, and system icons.

The screenshot shows a Windows desktop environment. At the top, there are three terminal windows: "Command Prompt", "Windows PowerShell", and another "Windows PowerShell". The Command Prompt window shows the following text:

```
Microsoft Windows [Version 10.0.22621.1848]
(c) Microsoft Corporation. All rights reserved.

C:\Users\sutir>cd Downloads

C:\Users\sutir\Downloads>ssh -i "june.pem" ec2-user@ec2-13-48-27-136.eu-north-1.compute.amazonaws.com
The authenticity of host 'ec2-13-48-27-136.eu-north-1.compute.amazonaws.com (13.48.27.136)' can't be established.
ED25519 key fingerprint is SHA256:lnwqpxLpX7Rh8eallZkptP2yiayY60ng46eE9s8ytCA.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-13-48-27-136.eu-north-1.compute.amazonaws.com' (ED25519) to the list of known hosts.

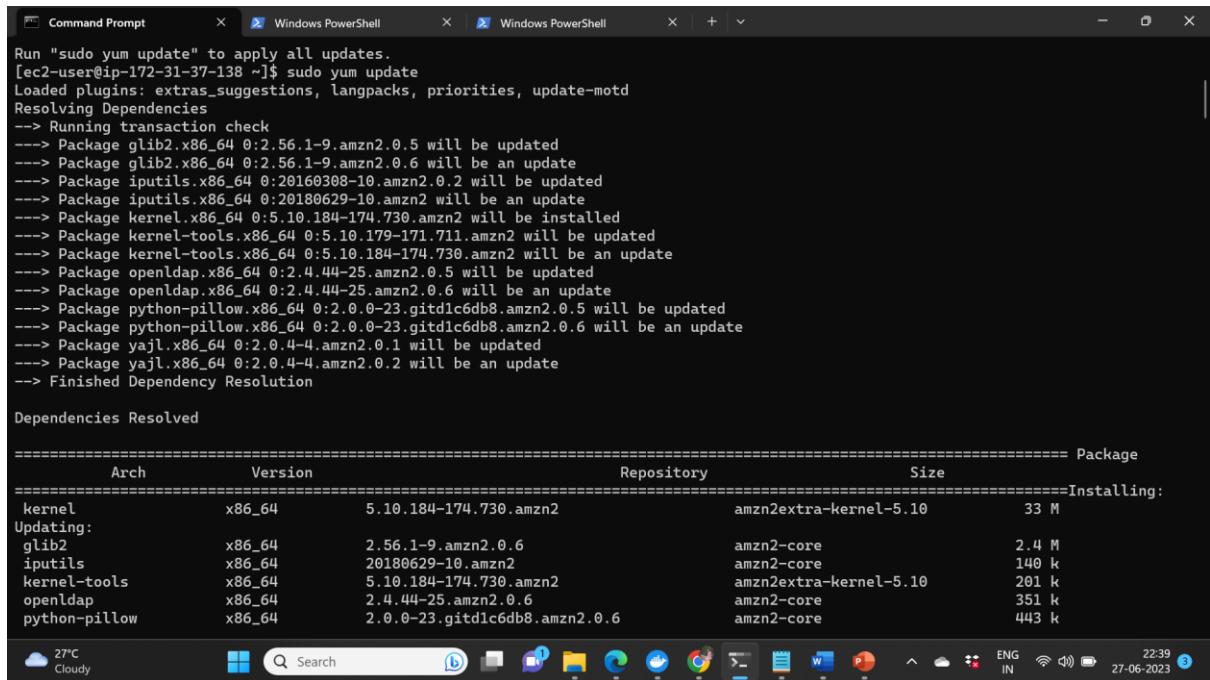
 _ _| _ _|_
 _| ( _ /   Amazon Linux 2 AMI
 ___| \_\_|__|
```

The Windows PowerShell windows show the following output:

```
https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 7 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-37-138 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
----> Package glibc2.x86_64 0:2.56.1-9.amzn2.0.5 will be updated
----> Package glibc2.x86_64 0:2.56.1-9.amzn2.0.6 will be an update
----> Package iputils.x86_64 0:20160308-10.amzn2.0.2 will be updated
----> Package iputils.x86_64 0:20180629-10.amzn2 will be an update
----> Package kernel.x86_64 0:5.10.184-174.730.amzn2 will be installed
----> Package kernel-tools.x86_64 0:5.10.179-171.711.amzn2 will be updated
----> Package kernel-tools.x86_64 0:5.10.184-174.730.amzn2 will be an update
----> Package openldap.x86_64 0:2.4.44-25.amzn2.0.5 will be updated
----> Package openldap.x86_64 0:2.4.44-25.amzn2.0.6 will be an update
```

The taskbar at the bottom shows various pinned icons and the system tray with a weather icon (27°C Cloudy), a search bar, and system icons.

2) Installing GIT, Docker and related repos

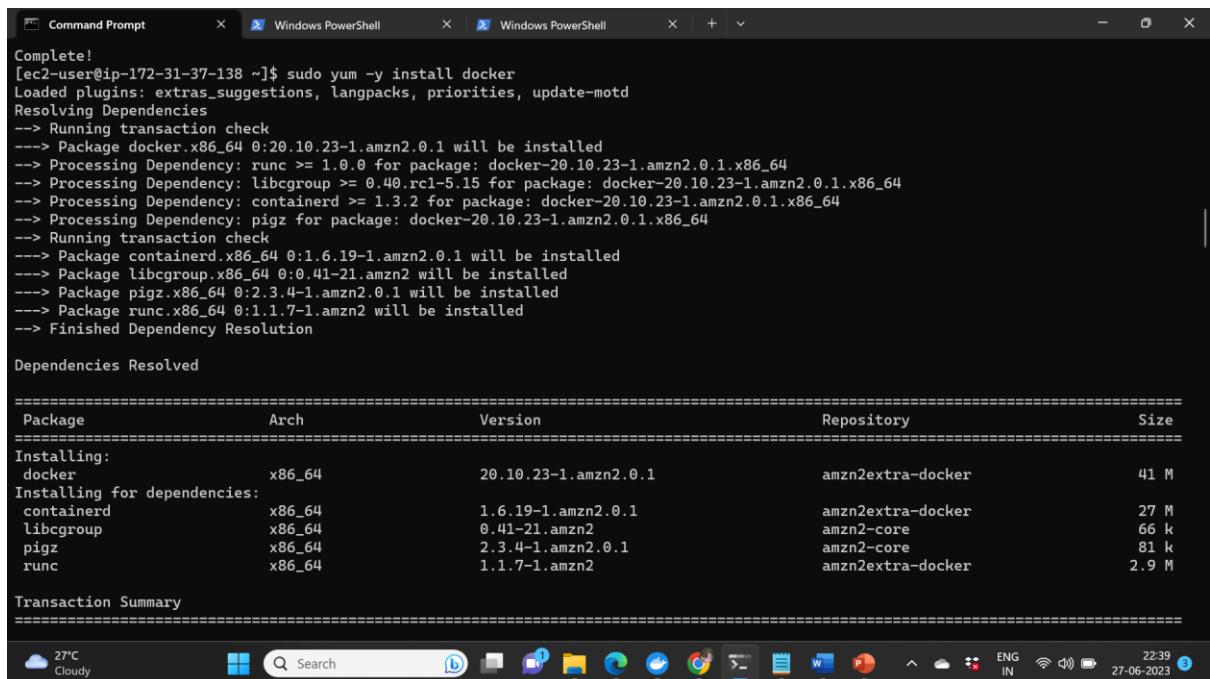


```
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-37-138 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
----> Package glib2.x86_64 0:2.56.1-9.amzn2.0.5 will be updated
----> Package glib2.x86_64 0:2.56.1-9.amzn2.0.6 will be an update
----> Package iputils.x86_64 0:20160308-10.amzn2.0.2 will be updated
----> Package iputils.x86_64 0:20180629-10.amzn2 will be an update
----> Package kernel.x86_64 0:5.10.184-174.730.amzn2 will be installed
----> Package kernel-tools.x86_64 0:5.10.179-171.711.amzn2 will be updated
----> Package kernel-tools.x86_64 0:5.10.184-174.730.amzn2 will be an update
----> Package openldap.x86_64 0:2.4.44-25.amzn2.0.5 will be updated
----> Package openldap.x86_64 0:2.4.44-25.amzn2.0.6 will be an update
----> Package python-pillow.x86_64 0:2.0.0-23.gitd1c6db8.amzn2.0.5 will be updated
----> Package python-pillow.x86_64 0:2.0.0-23.gitd1c6db8.amzn2.0.6 will be an update
---> Package yajl.x86_64 0:2.0.4-4.amzn2.0.1 will be updated
---> Package yajl.x86_64 0:2.0.4-4.amzn2.0.2 will be an update
--> Finished Dependency Resolution

Dependencies Resolved

=====
Arch          Version           Repository      Size
=====
kernel        x86_64          5.10.184-174.730.amzn2   amzn2extra-kernel-5.10    33 M
Updating:
glib2         x86_64          2.56.1-9.amzn2.0.6    amzn2-core                  2.4 M
iputils        x86_64          20180629-10.amzn2    amzn2-core                  140 k
kernel-tools  x86_64          5.10.184-174.730.amzn2  amzn2extra-kernel-5.10    201 k
openldap      x86_64          2.4.44-25.amzn2.0.6   amzn2-core                  351 k
python-pillow x86_64          2.0.0-23.gitd1c6db8.amzn2.0.6 amzn2-core                  443 k

Cloudy 27°C  Search (b)  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ENG IN 22:39 27-06-2023
```



```
Complete!
[ec2-user@ip-172-31-37-138 ~]$ sudo yum -y install docker
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
----> Package docker.x86_64 0:20.10.23-1.amzn2.0.1 will be installed
----> Processing Dependency: runc >= 1.0.0 for package: docker-20.10.23-1.amzn2.0.1.x86_64
----> Processing Dependency: libcgroup >= 0.40.rc1-5.15 for package: docker-20.10.23-1.amzn2.0.1.x86_64
----> Processing Dependency: containerd >= 1.3.2 for package: docker-20.10.23-1.amzn2.0.1.x86_64
----> Processing Dependency: pigz for package: docker-20.10.23-1.amzn2.0.1.x86_64
--> Running transaction check
----> Package containerd.x86_64 0:1.6.19-1.amzn2.0.1 will be installed
----> Package libcgroup.x86_64 0:0.41-21.amzn2 will be installed
----> Package pigz.x86_64 0:2.3.4-1.amzn2.0.1 will be installed
----> Package runc.x86_64 0:1.1.7-1.amzn2 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package          Arch          Version           Repository      Size
=====
docker          x86_64          20.10.23-1.amzn2.0.1   amzn2extra-docker       41 M
Installing:
docker          x86_64          20.10.23-1.amzn2.0.1   amzn2extra-docker       41 M
Installing for dependencies:
containerd     x86_64          1.6.19-1.amzn2.0.1    amzn2extra-docker       27 M
libcgroup       x86_64          0.41-21.amzn2          amzn2-core                66 k
pigz            x86_64          2.3.4-1.amzn2.0.1    amzn2-core                81 k
runc            x86_64          1.1.7-1.amzn2          amzn2extra-docker       2.9 M

Transaction Summary
=====

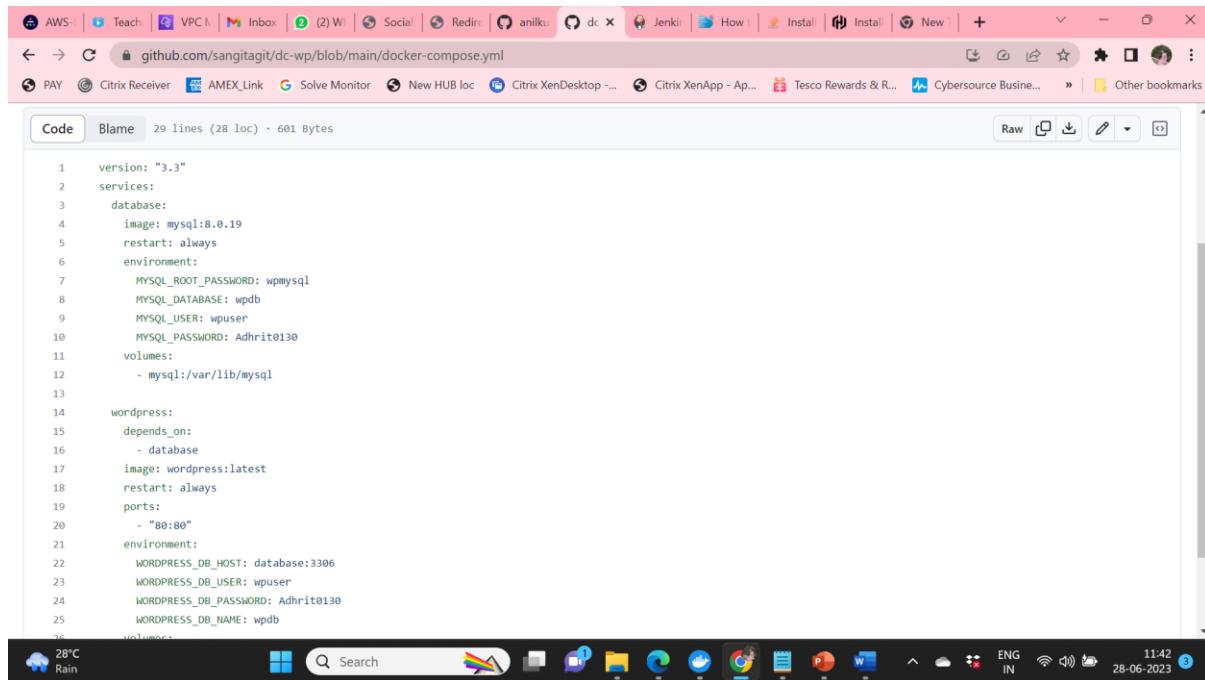
Cloudy 27°C  Search (b)  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ⌂  ENG IN 22:39 27-06-2023
```

```
[ec2-user@ip-172-31-37-138 ~]$ sudo service docker start
Redirecting to /bin/systemctl start docker.service
[ec2-user@ip-172-31-37-138 ~]$ sudo usermod -a -G docker ec2-user
[ec2-user@ip-172-31-37-138 ~]$ sudo chmod 666 /var/run/docker.sock
[ec2-user@ip-172-31-37-138 ~]$ sudo systemctl enable docker
Created symlink from /etc/systemd/system/multi-user.target.wants/docker.service to /usr/lib/systemd/system/docker.service.
[ec2-user@ip-172-31-37-138 ~]$ sudo chkconfig docker on
Note: Forwarding request to 'systemctl enable docker.service'.
[ec2-user@ip-172-31-37-138 ~]$ sudo yum install -y git
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
---> Package git.x86_64 0:2.40.1-1.amzn2.0.1 will be installed
---> Processing Dependency: perl-Git = 2.40.1-1.amzn2.0.1 for package: git-2.40.1-1.amzn2.0.1.x86_64
---> Processing Dependency: git-core-doc = 2.40.1-1.amzn2.0.1 for package: git-2.40.1-1.amzn2.0.1.x86_64
---> Processing Dependency: git = 2.40.1-1.amzn2.0.1 for package: git-2.40.1-1.amzn2.0.1.x86_64
---> Processing Dependency: perl(Term::ReadKey) for package: git-2.40.1-1.amzn2.0.1.x86_64
---> Processing Dependency: perl(Git) for package: git-2.40.1-1.amzn2.0.1.x86_64
---> Running transaction check
---> Package git-core.x86_64 0:2.40.1-1.amzn2.0.1 will be installed
---> Package git-core-doc.noarch 0:2.40.1-1.amzn2.0.1 will be installed
---> Package perl-Git.noarch 0:2.40.1-1.amzn2.0.1 will be installed
---> Processing Dependency: perl(Error) for package: perl-Git-2.40.1-1.amzn2.0.1.noarch
---> Package perl-TermReadKey.x86_64 0:2.30-20.amzn2.0.2 will be installed
---> Running transaction check
---> Package perl-Error.noarch 1:0.17020-2.amzn2 will be installed
---> Finished Dependency Resolution
| 3.7 kB  00:00:00

27°C Cloudy  Search  22:40  27-06-2023
```

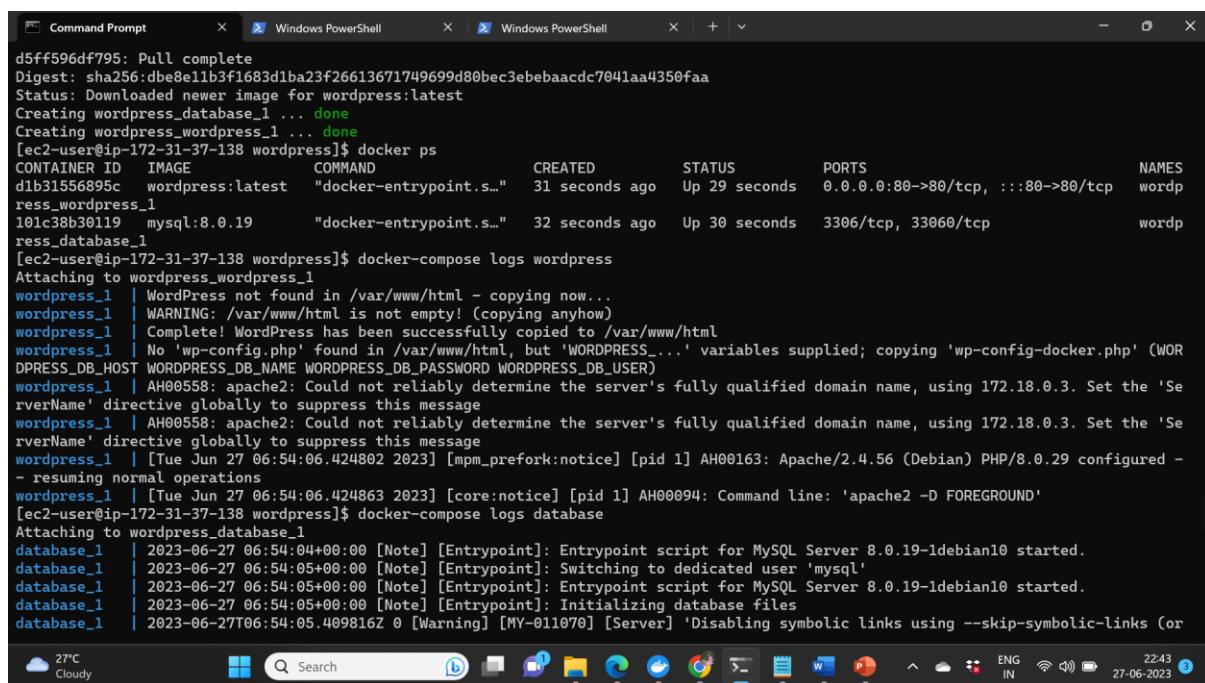
```
[ec2-user@ip-172-31-37-138 ~]$ Complete!
[ec2-user@ip-172-31-37-138 ~]$ sudo curl -L "https://github.com/docker/compose/releases/download/1.27.4/docker-compose-$(uname -s)-$(uname -m)" -o /usr/local/bin/docker-compose
% Total    % Received % Xferd  Average Speed   Time     Time      Current
          Dload  Upload Total Spent   Left Speed
 0       0       0       0       0      0 --:--:-- --:--:-- --:--:--   0
100 11.6M  100 11.6M  0      0 12.0M      0 --:--:-- --:--:-- --:--:-- 12.0M
[ec2-user@ip-172-31-37-138 ~]$ sudo chmod +x /usr/local/bin/docker-compose
[ec2-user@ip-172-31-37-138 ~]$ docker compose --version
Docker version 20.10.23, build 7155243
[ec2-user@ip-172-31-37-138 ~]$ sudo ln -s /usr/local/bin/docker-compose /usr/bin/docker-compose
[ec2-user@ip-172-31-37-138 ~]$ mkdir wordpress
[ec2-user@ip-172-31-37-138 ~]$ cd wordpress/
[ec2-user@ip-172-31-37-138 wordpress]$ vi docker-compose.yml
[ec2-user@ip-172-31-37-138 wordpress]$ docker-compose up -d
Creating network "wordpress_default" with the default driver
Creating volume "wordpress_mysql" with default driver
Pulling database (mysql:8.0.19)...
8.0.19: Pulling from library/mysql
54fec2fa59d0: Pull complete
bcc6c6145912: Pull complete
951c3d959c9d: Pull complete
05de4d0e206e: Pull complete
319f0394ef42: Pull complete
d9185034607b: Pull complete
013a9c64dad: Pull complete
96d4c3d31f9f: Pull complete
785bc90808da: Pull complete
1339cf094729: Pull complete
beb8f531cc37: Pull complete
2b40c9f6a918: Pull complete
| 22:40  27-06-2023
```

3) Creating Docker images with help of YAML scripting



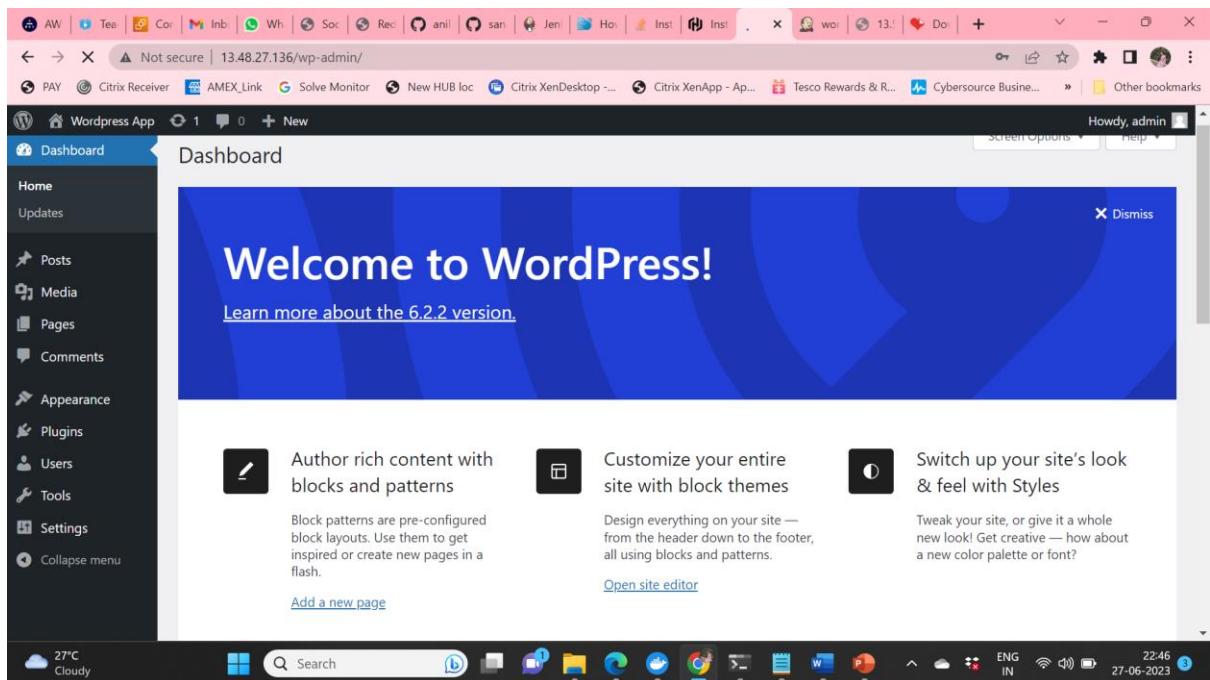
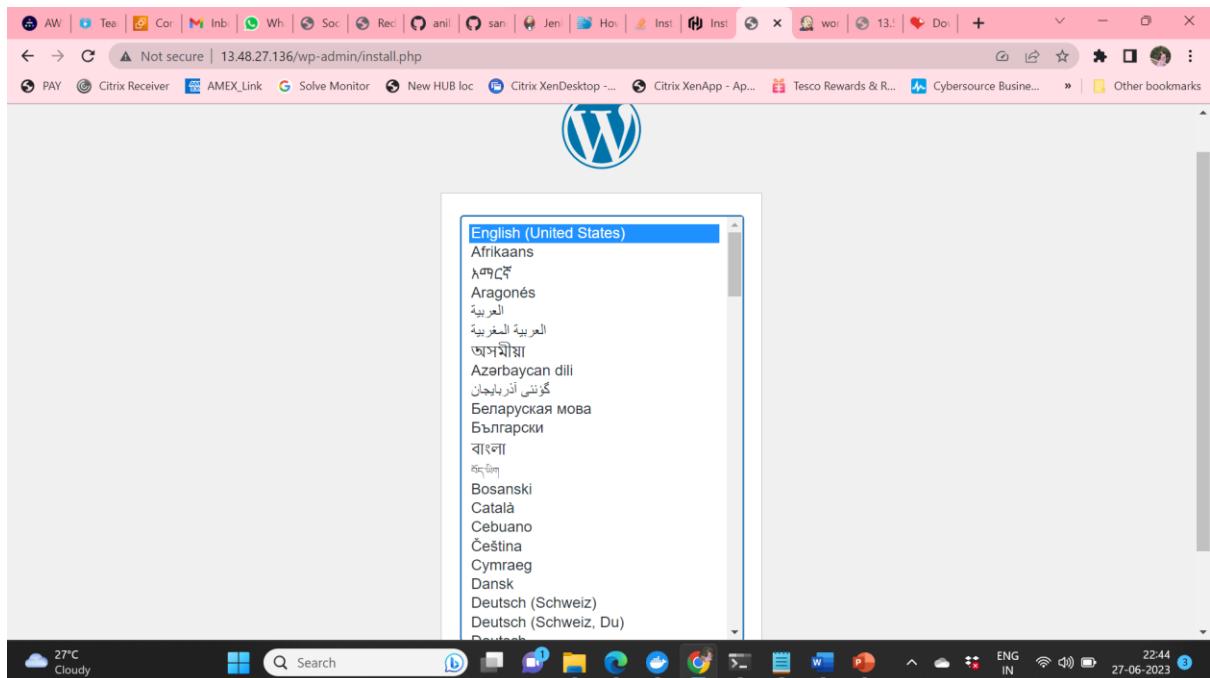
A screenshot of a web browser displaying a GitHub code editor. The URL is github.com/sangitagit/dc-wp/blob/main/docker-compose.yml. The code editor shows a Docker Compose file with 29 lines and 601 bytes. The file defines two services: 'database' and 'wordpress'. The 'database' service uses a MySQL image (version 8.0.19) and has environment variables for root password, database name, user, and port. It also specifies a volume for the MySQL data directory. The 'wordpress' service depends on the 'database' service, uses a WordPress image (latest), and has environment variables for database host, user, password, and name. It also specifies a port mapping from 80 to 80. The browser interface includes a toolbar at the top with various icons and a status bar at the bottom showing the date and time.

```
version: "3.3"
services:
  database:
    image: mysql:8.0.19
    restart: always
    environment:
      MYSQL_ROOT_PASSWORD: wpmysql
      MYSQL_DATABASE: wpdb
      MYSQL_USER: wpuser
      MYSQL_PASSWORD: Adhr10130
    volumes:
      - mysql:/var/lib/mysql
  wordpress:
    depends_on:
      - database
    image: wordpress:latest
    restart: always
    ports:
      - "80:80"
    environment:
      WORDPRESS_DB_HOST: database:3306
      WORDPRESS_DB_USER: wpuser
      WORDPRESS_DB_PASSWORD: Adhr10130
      WORDPRESS_DB_NAME: wpdb
volumes:
  mysql:
```



A screenshot of a terminal window showing the output of several Docker commands. It starts with pulling the 'wordpress' image, followed by creating database and WordPress containers, and then listing running containers. Finally, it runs 'docker-compose logs' for the 'wordpress' service, showing Apache and PHP logs. The terminal window is part of a Windows environment, with other PowerShell windows visible in the background. The status bar at the bottom shows the date and time.

```
d5ff596df795: Pull complete
Digest: sha256:dbe8e11b3f1683d1ba23f26613671749699d80bec3ebebaacd7041aa4350faa
Status: Downloaded newer image for wordpress:latest
Creating wordpress_database_1 ... done
Creating wordpress_wordpress_1 ... done
[ec2-user@ip-172-31-37-138 wordpress]$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
d1b31556895c wordpress:latest "docker-entrypoint.s..." 31 seconds ago Up 29 seconds 0.0.0.0:80->80/tcp, :::80->80/tcp wordp
ress_wordpress_1
101c38b30119 mysql:8.0.19 "docker-entrypoint.s..." 32 seconds ago Up 30 seconds 3306/tcp, 33060/tcp wordp
ress_database_1
[ec2-user@ip-172-31-37-138 wordpress]$ docker-compose logs wordpress
Attaching to wordpress_wordpress_1
wordpress_1 | WordPress not found in /var/www/html - copying now...
wordpress_1 | WARNING: /var/www/html is not empty! (copying anyhow)
wordpress_1 | Complete! WordPress has been successfully copied to /var/www/html
wordpress_1 | No 'wp-config.php' found in /var/www/html, but 'WORDPRESS_...' variables supplied; copying 'wp-config-docker.php' (WORDPRESS_DB_HOST WORDPRESS_DB_NAME WORDPRESS_DB_PASSWORD WORDPRESS_DB_USER)
wordpress_1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.18.0.3. Set the 'ServerName' directive globally to suppress this message
wordpress_1 | AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.18.0.3. Set the 'ServerName' directive globally to suppress this message
wordpress_1 | [Tue Jun 27 06:54:06.424802 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56 (Debian) PHP/8.0.29 configured -- resuming normal operations
wordpress_1 | [Tue Jun 27 06:54:06.424863 2023] [core:notice] [pid 1] AH00094: Command line: 'apache2 -D FOREGROUND'
[ec2-user@ip-172-31-37-138 wordpress]$ docker-compose logs database
Attaching to wordpress_database_1
database_1 | 2023-06-27 06:54:04+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.19-1debian10 started.
database_1 | 2023-06-27 06:54:05+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
database_1 | 2023-06-27 06:54:05+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.19-1debian10 started.
database_1 | 2023-06-27 06:54:05+00:00 [Note] [Entrypoint]: Initializing database files
database_1 | 2023-06-27T06:54:05.409816Z 0 [Warning] [MY-011070] [Server] 'Disabling symbolic links using --skip-symbolic-links (or
```



Automate using Jenkins

The screenshot shows the AWS CloudWatch Metrics Insights interface. A query has been run to search for metrics related to EC2 instances. The results table displays several rows of data, each representing an EC2 instance with columns for Name, Instance ID, Instance state, Instance type, Status check, Alarm status, and Availability zone. One row is highlighted with a blue background, corresponding to the instance shown in the detailed view below.

Instances (1/3) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability zone
wordpress	i-0a4d61cf19221e005	Running	t3.micro	2/2 checks passed	No alarms	+ eu-north-1a
wd-auto-t3	i-0eab5a7c254f0ca80	Running	t3.medium	2/2 checks passed	No alarms	+ eu-north-1a
wordpress-aut...	i-06996b28e73151616	Running	t3.micro	2/2 checks passed	No alarms	+ eu-north-1a

Instance: i-0eab5a7c254f0ca80 (wd-auto-t3)

Details	Security	Networking	Storage	Status checks	Monitoring	Tags
Instance summary						
Instance ID i-0eab5a7c254f0ca80 (wd-auto-t3)	Public IPv4 address copied 13.51.207.39 open address	Private IPv4 addresses 172.31.40.20				
IPv6 address	Instance state Running	Public IPv4 DNS ec2-13-51-207-39.eu-north-				

The screenshot shows a Windows terminal window with three tabs: Command Prompt, Windows PowerShell, and another Windows PowerShell tab. The user is executing an AWS CLI command to connect to an EC2 instance using SSH. The command involves generating a key pair and then using it to connect. The terminal also shows the user navigating to a download folder and updating the Amazon Linux 2 AMI.

```
PS C:\Users\sutir> cd .\Downloads
PS C:\Users\sutir\Downloads> ssh -i "june.pem" ec2-user@ec2-13-51-207-39.eu-north-1.compute.amazonaws.com
The authenticity of host 'ec2-13-51-207-39.eu-north-1.compute.amazonaws.com (13.51.207.39)' can't be established.
ED25519 key fingerprint is SHA256:3W8NdCM1DScDl5NRmsGE9DnLczzhfodvsm0FL7jo8tU.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-13-51-207-39.eu-north-1.compute.amazonaws.com' (ED25519) to the list of known hosts.

--| _--_ )
-| ( _ /   Amazon Linux 2 AMI
---| \_--_ |

https://aws.amazon.com/amazon-linux-2/
4 package(s) needed for security, out of 7 available
Run "sudo yum update" to apply all updates.
[ec2-user@ip-172-31-40-20 ~]$ sudo yum update
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
amzn2-core
Resolving Dependencies
--> Running transaction check
--> Package glibc2.x86_64 0:2.56.1-9.amzn2.0.5 will be updated
--> Package glibc2.x86_64 0:2.56.1-9.amzn2.0.6 will be an update
--> Package util-linux.x86_64 0:20160308-10.amzn2.0.2 will be updated
--> Package util-linux.x86_64 0:20180629-10.amzn2 will be an update
--> Package kernel.x86_64 0:5.10.184-174.730.amzn2 will be installed
--> Package kernel-tools.x86_64 0:5.10.179-171.711.amzn2 will be updated
--> Package kernel-tools.x86_64 0:5.10.184-174.730.amzn2 will be an update
```

```
Complete!
[ec2-user@ip-172-31-40-20 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
o/redhat-stable/> https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2023-06-27 07:41:15-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.86.133, 2a04:4e42:14::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.86.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

100%[=====] 85 --.-K/s in 0s

2023-06-27 07:41:15 (5.78 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[ec2-user@ip-172-31-40-20 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-40-20 ~]$ sudo yum -y install java-11*
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
jenkins
jenkins/primary_db
Resolving Dependencies
--> Running transaction check
--> Package java-11-amazon-corretto.x86_64 1:11.0.19+7-1.amzn2 will be installed
--> Processing Dependency: dejavu-sans-mono-fonts for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: dejavu-serif-fonts for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: dejavu-sans-fonts for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: giflib for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: alsalib for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: libXtst for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: libXrandr for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: libXrender for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: libXi for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
--> Processing Dependency: libXinerama for package: 1:java-11-amazon-corretto-11.0.19+7-1.amzn2.x86_64
27°C Cloudy Search 22:57 ENG IN 27-06-2023
```

```
Complete!
[ec2-user@ip-172-31-40-20 ~]$ sudo yum -y install jenkins
Loaded plugins: extras_suggestions, langpacks, priorities, update-motd
Resolving Dependencies
--> Running transaction check
-->> Package jenkins.noarch 0:2.401.1-1.1 will be installed
--> Finished Dependency Resolution

Dependencies Resolved

=====
Package           Arch      Version            Repository      Size
=====
Installing:
jenkins          noarch   2.401.1-1.1       jenkins        94 M

Transaction Summary
=====
Install 1 Package

Total download size: 94 M
Installed size: 94 M
Downloading packages:
jenkins-2.401.1-1.1.noarch.rpm
Running transaction check
Running transaction test
Transaction test succeeded
Running transaction
  Installing : jenkins-2.401.1-1.1.noarch
  Verifying  : jenkins-2.401.1-1.1.noarch
1/1
1/1

Installed:
27°C Cloudy Search 22:57 ENG IN 27-06-2023
```

```

[ec2-user@ip-172-31-40-20 ~]$ sudo systemctl enable jenkins
Created symlink from /etc/systemd/system/multi-user.target.wants/jenkins.service to /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-40-20 ~]$ sudo systemctl start jenkins
[ec2-user@ip-172-31-40-20 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
30b778786691458ea80cf8a10179514b
[ec2-user@ip-172-31-40-20 ~]$ cd /etc
[ec2-user@ip-172-31-40-20 etc]$ ls
acpi      dhcp      hostname    modules-load.d   rc0.d      ssh
adjtime   DIR_COLORS hosts       motd          rc1.d      ssl
aliases   DIR_COLORS.256color hosts.allow  mtab          rc2.d      statetab
aliases.db DIR_COLORS.lightbgcolor hosts.deny   my.cnf        rc3.d      statetab.d
alternatives dracut.conf  idmapd.conf  my.cnf.d      rc4.d      subgid
amazon     dracut.conf.d image-id     netconfig     rc5.d      subuid
anacrontab e2fsck.conf init.d      NetworkManager rc_local   sudo.conf
asound.conf environment  inputrc     networks      rc.local   sudoers
at.deny    ethertypes  iproute2    nfc.conf      request-key.conf sudo-ldap.conf
audisp     exports    issue.net   nfsmount.conf request-key.d  sysconfig
audit      exports.d  issue.net   nsswitch.conf resolv.conf  sysctl.conf
bash_completion.d filesystems krb5.conf   libaudit.conf pam.d      request-key.d
bashrc     fonts      krb5.conf.d libnfsidmap   openldap   rpm
binfmt.d   fstab     krb5.conf.d ld.so.cache  opt        rsyncd.conf system-release
chkconfig.d gcrypt     ld.so.cache  ld.so.conf   os-release  rsyslog.conf system-release-cpe
chrony.conf GeoIP.conf  ld.so.conf.d ld.so.conf.pam  pam.d      rsyslog.d terminfo
chrony.d   GeoIP.conf.default libaudit.conf libnfsidmap  passwd    rvtab
chrony.keys gnupg     libnfsidmap  libuser.conf pkcs11    sasl2
cifs-utils GREP_COLORS group      locale.conf  login.defs  screenrc
cloud      groff     libnfsidmap  libuser.conf pki       scl
cron.d     group     libnfsidmap  locale.conf  logrotate.conf pm       security
cron.daily group-    libnfsidmap  libuser.conf login.defs  postfix
cron.deny   grub2.cfg libnfsidmap  logrotate.conf logrotate.d  postfix
cron.hourly grub2-efi.cfg libnfsidmap  logrotate.conf logrotate.d  postfix
cron.monthly grub.d    libnfsidmap  logrotate.conf logrotate.d  postfix

```

Jenkins

Dashboard >

S	W	Name ↓	Last Success	Last Failure	Last Duration
		wordpress-automation	1 hr 36 min #5	1 hr 39 min #4	38 sec

Build Queue

The screenshot shows a web-based configuration interface for a CI/CD pipeline. The URL is <https://13.51.207.39:8080/job/wordpress-automation/configure>. The page title is "Configuration". On the left, there is a sidebar with the following sections:

- General
- Source Code Management
- Build Triggers
- Build Environment
- Build Steps** (highlighted)
- Post-build Actions

The main content area is titled "Command" and contains the following Docker Compose command:

```
sudo yum -y install docker
sudo service docker start
sudo usermod -a -G docker ec2-user
sudo chmod 666 /var/run/docker.sock
sudo systemctl enable docker
sudo chkconfig docker on
sudo yum install -y git
sudo curl -L "https://github.com/docker/compose/releases/download/1.27.4/docker-compose-$(uname -s)-$(uname -m)" | sudo chmod +x /usr/local/bin/docker-compose
sudo ln -s /usr/local/bin/docker-compose /usr/bin/docker-compose
mkdir wordpress
cd wordpress
sudo git clone https://github.com/sangitagit/dc-wp.git
cd dc-wp
docker-compose up -d
docker-compose logs wordpress
docker-compose logs database
```

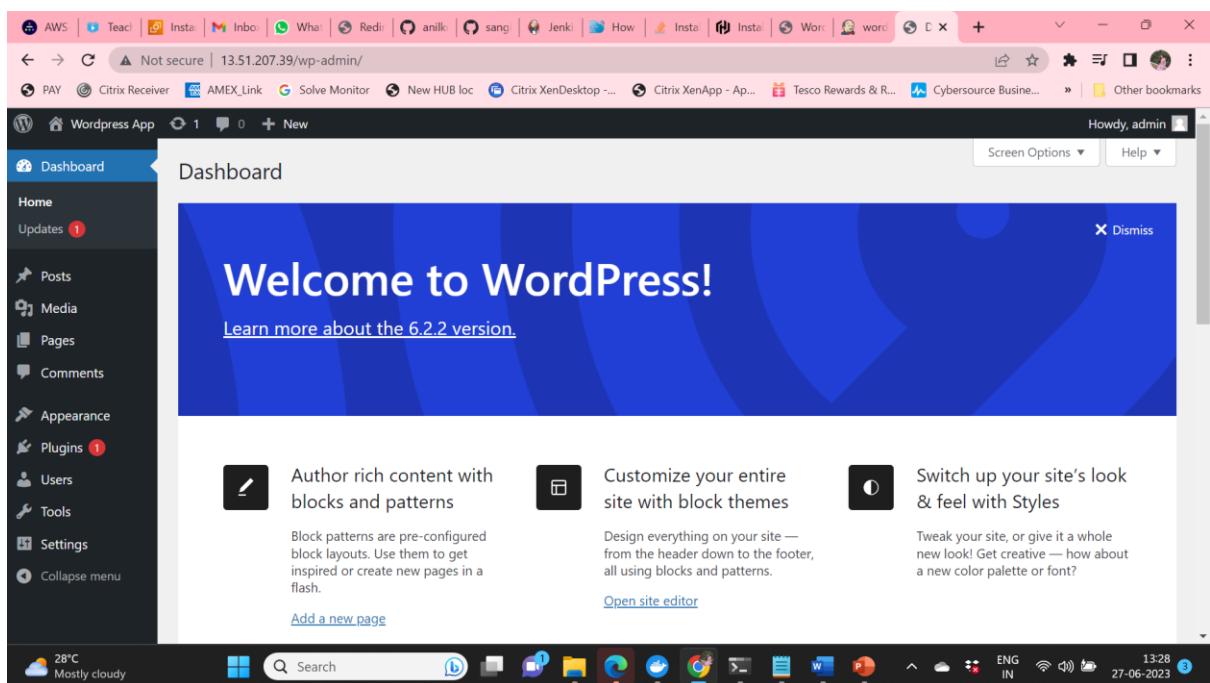
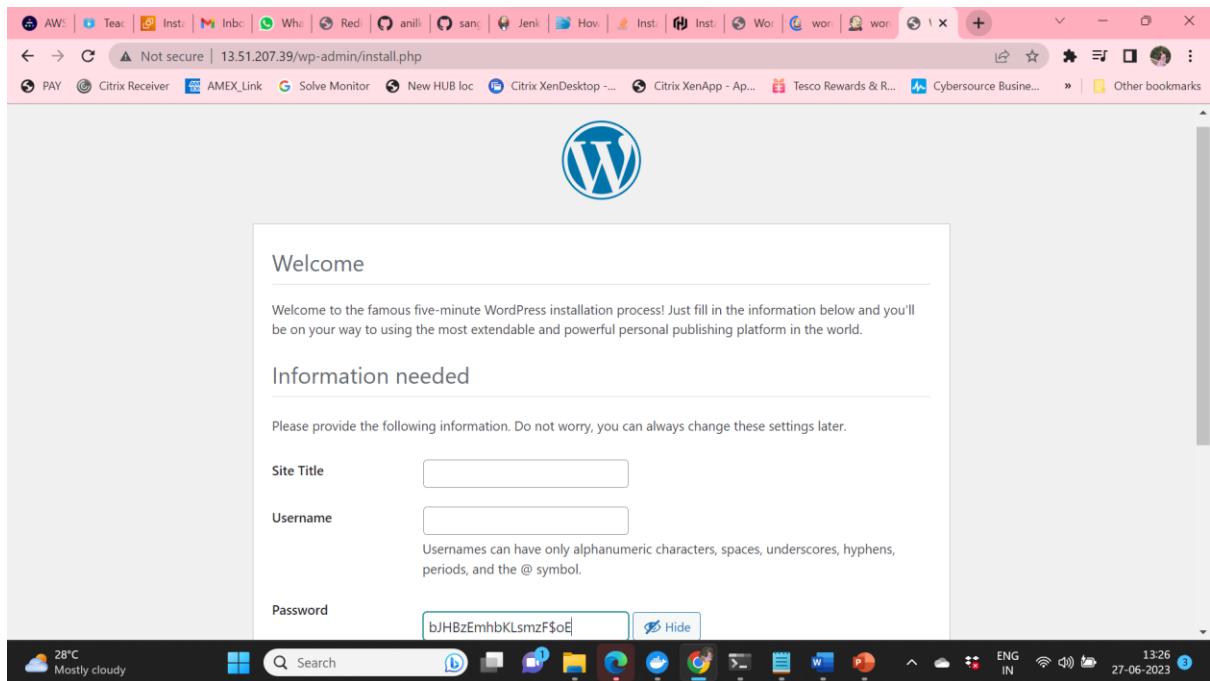
At the bottom of the command editor are two buttons: "Save" and "Apply".

The system tray at the bottom shows the date and time as 27-06-2023 13:22.

The screenshot shows a web-based console output interface for a CI/CD pipeline. The URL is <https://13.51.207.39:8080/job/wordpress-automation/1/console>. The page title is "Console Output". The main content area displays the following log output:

```
[@36mwordpress_1 |@0m AH00558: apache2: Could not reliably determine the server's fully qualified domain name, using 172.18.0.3. Set the 'ServerName' directive globally to suppress this message
[@36mwordpress_1 |@0m [Tue Jun 27 07:54:42.346572 2023] [mpm_prefork:notice] [pid 1] AH00163: Apache/2.4.56
(Debian) PHP/8.0.29 configured -- resuming normal operations
[@36mwordpress_1 |@0m [Tue Jun 27 07:54:42.346827 2023] [core:notice] [pid 1] AH00094: Command line: 'apache2 -
D FOREGROUND'
+ docker-compose logs database
Attaching to dc-wp_database_1
[@36mdatabase_1 |@0m 2023-06-27 07:54:41+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.19-
1debian10 started.
[@36mdatabase_1 |@0m 2023-06-27 07:54:41+00:00 [Note] [Entrypoint]: Switching to dedicated user 'mysql'
[@36mdatabase_1 |@0m 2023-06-27 07:54:41+00:00 [Note] [Entrypoint]: Entrypoint script for MySQL Server 8.0.19-
1debian10 started.
[@36mdatabase_1 |@0m 2023-06-27 07:54:41+00:00 [Note] [Entrypoint]: Initializing database files
[@36mdatabase_1 |@0m 2023-06-27 07:54:41.751584Z @ [Warning] [MY-011070] [Server] 'Disabling symbolic links
using --skip-symbolic-links (or equivalent) is the default. Consider not using this option as it' is deprecated
and will be removed in a future release.
[@36mdatabase_1 |@0m 2023-06-27 07:54:41.751676Z @ [System] [MY-013169] [Server] /usr/sbin/mysqld (mysqld
8.0.19) initializing of server in progress as process 43
Finished: SUCCESS
```

The system tray at the bottom shows the date and time as 27-06-2023 13:24.



Creating EC2 Instance with user data