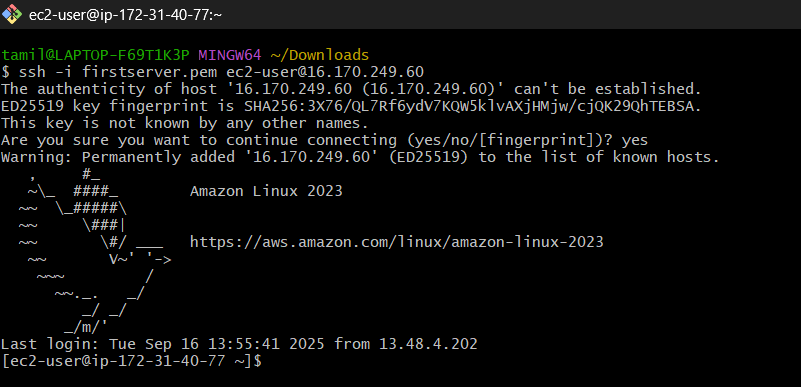
**AWS Challenge**

Launch one **EC2 instance** using **Amazon Linux 2**.

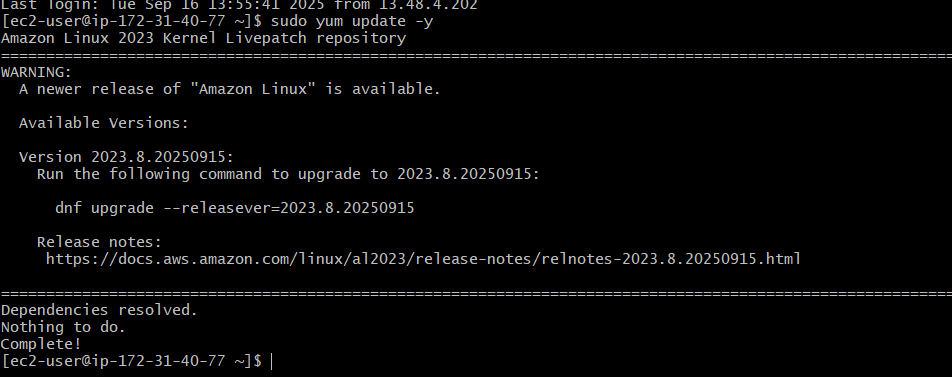
* Install **Docker**.
* Install **Jenkins**.
* Install **Apache**.
* Install **Nginx**.
* Install **Apache Tomcat**.

1. Launch one **EC2 instance** using **Amazon Linux 2**.



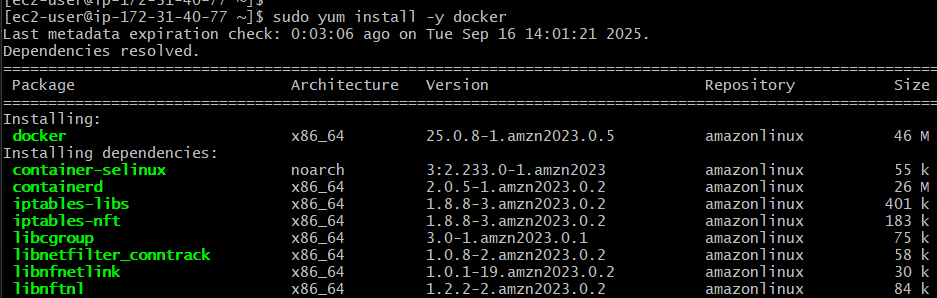
**Step 2: Update the System**

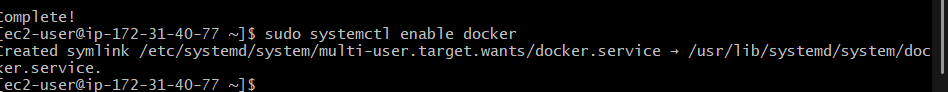
sudo yum update -y



**2: Install Docker**

1. **Enable & install:**
2. **sudo yum install -y docker**

****

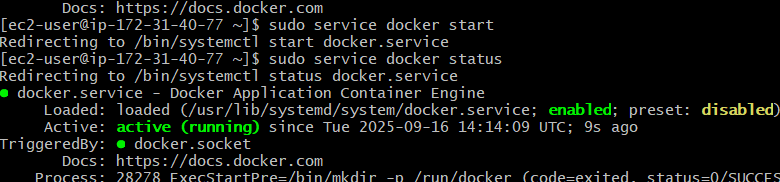
****

Note: You can also use the following system control command.

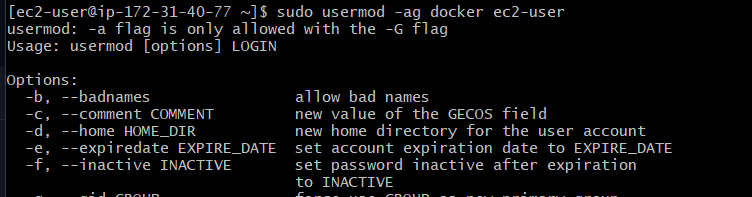
sudo systemctl start docker

6. Let’s check if the Docker is actaully up and running.

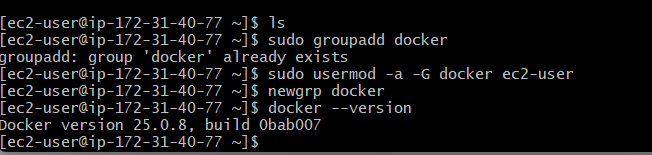
sudo service docker status

****

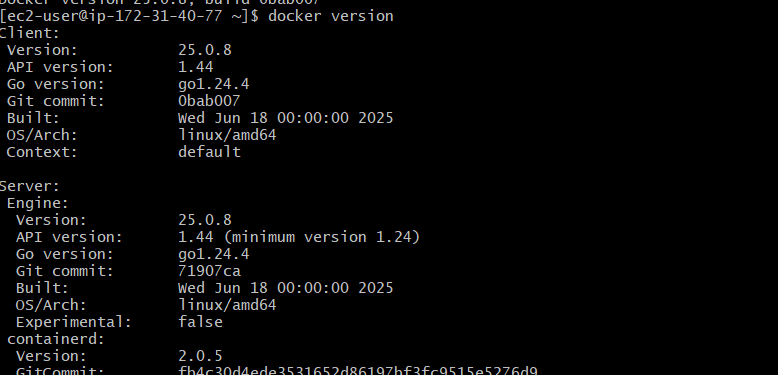
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /usr/lib/systemd/system/docker.service.



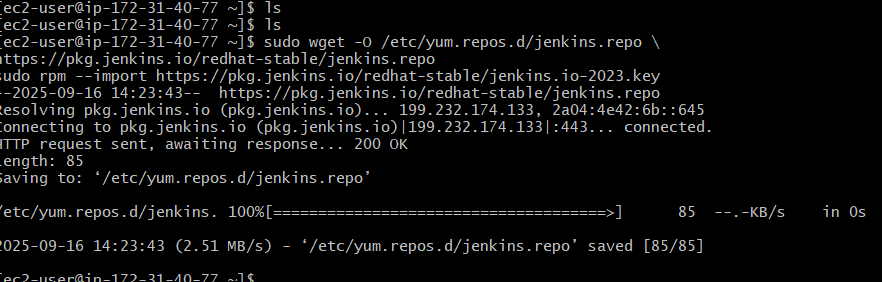
Use this command for checking the version: “ docker –version”



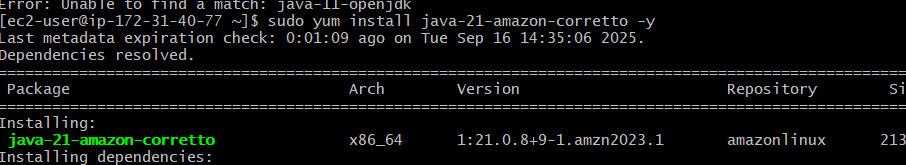
. If you want to see an extended version of the version details, such as the API version, Go version, and Engine Version, use the version command without dashes.



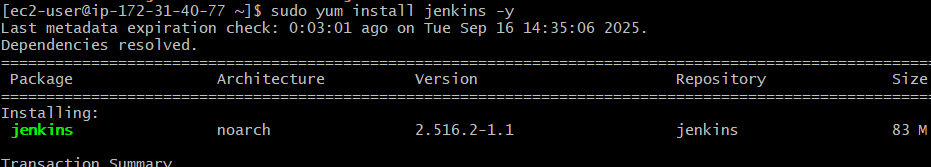
* 1. Install **Jenkins**.
* sudo yum update –y



sudo yum install java-21-amazon-corretto -y



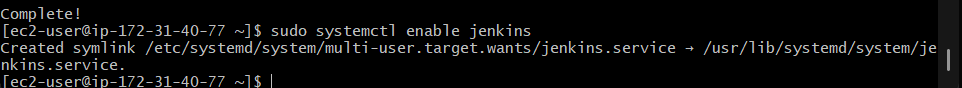
sudo yum install jenkins -y



sudo systemctl enable jenkins

Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.

Enable the Jenkins service to start at boot:

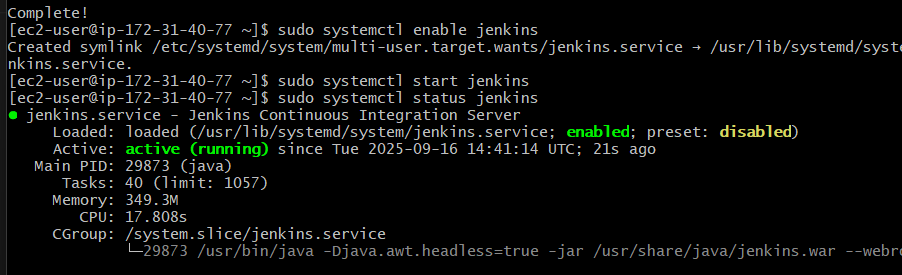


Start Jenkins as a service:

sudo systemctl start jenkins

You can check the status of the Jenkins service using the command:

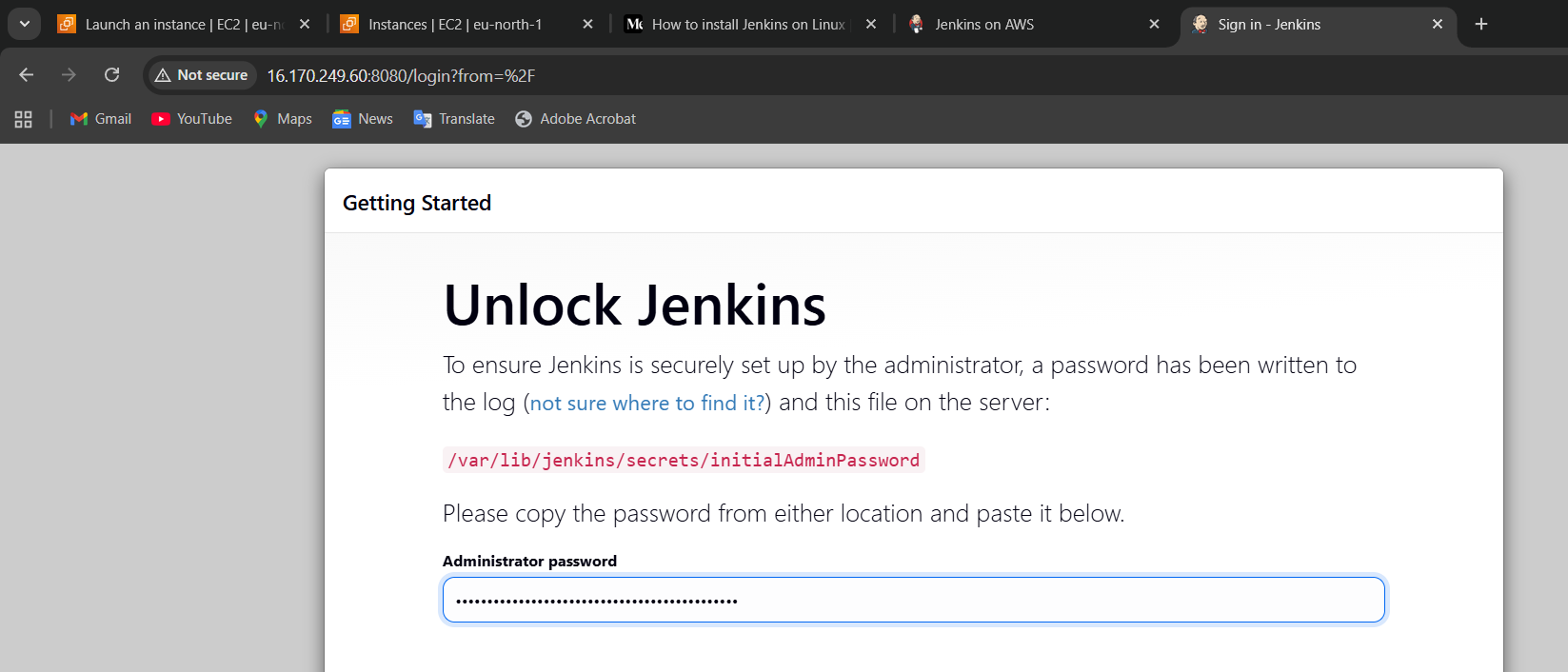
sudo systemctl status jenkins



**Configuring Jenkins**

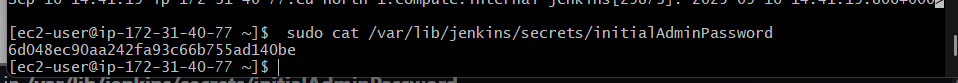
Jenkins is now installed and running on your EC2 instance. To configure Jenkins:

1. Connect to http://<your\_server\_public\_DNS>:8080 from your browser. You will be able to access Jenkins through its management interface:

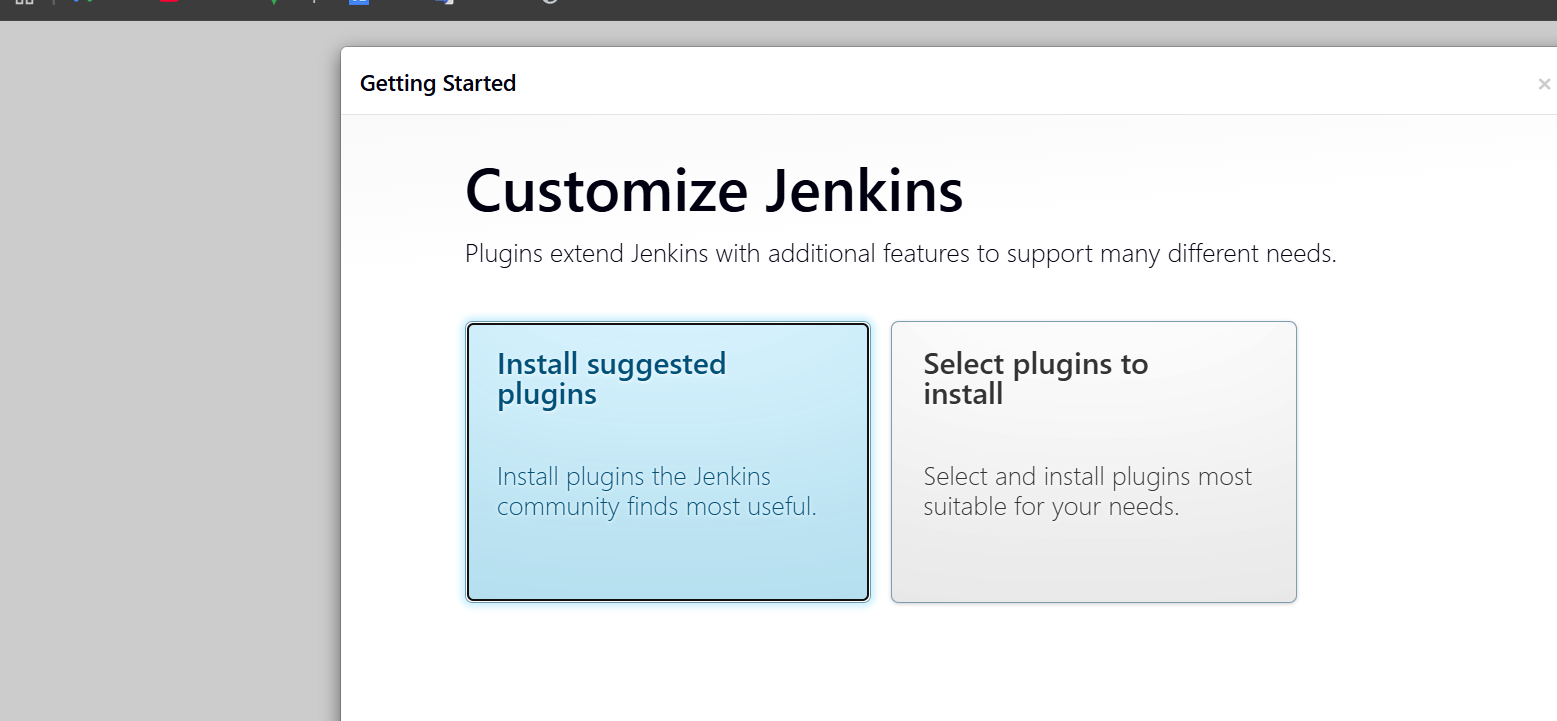


As prompted, enter the password found in **/var/lib/jenkins/secrets/initialAdminPassword**.

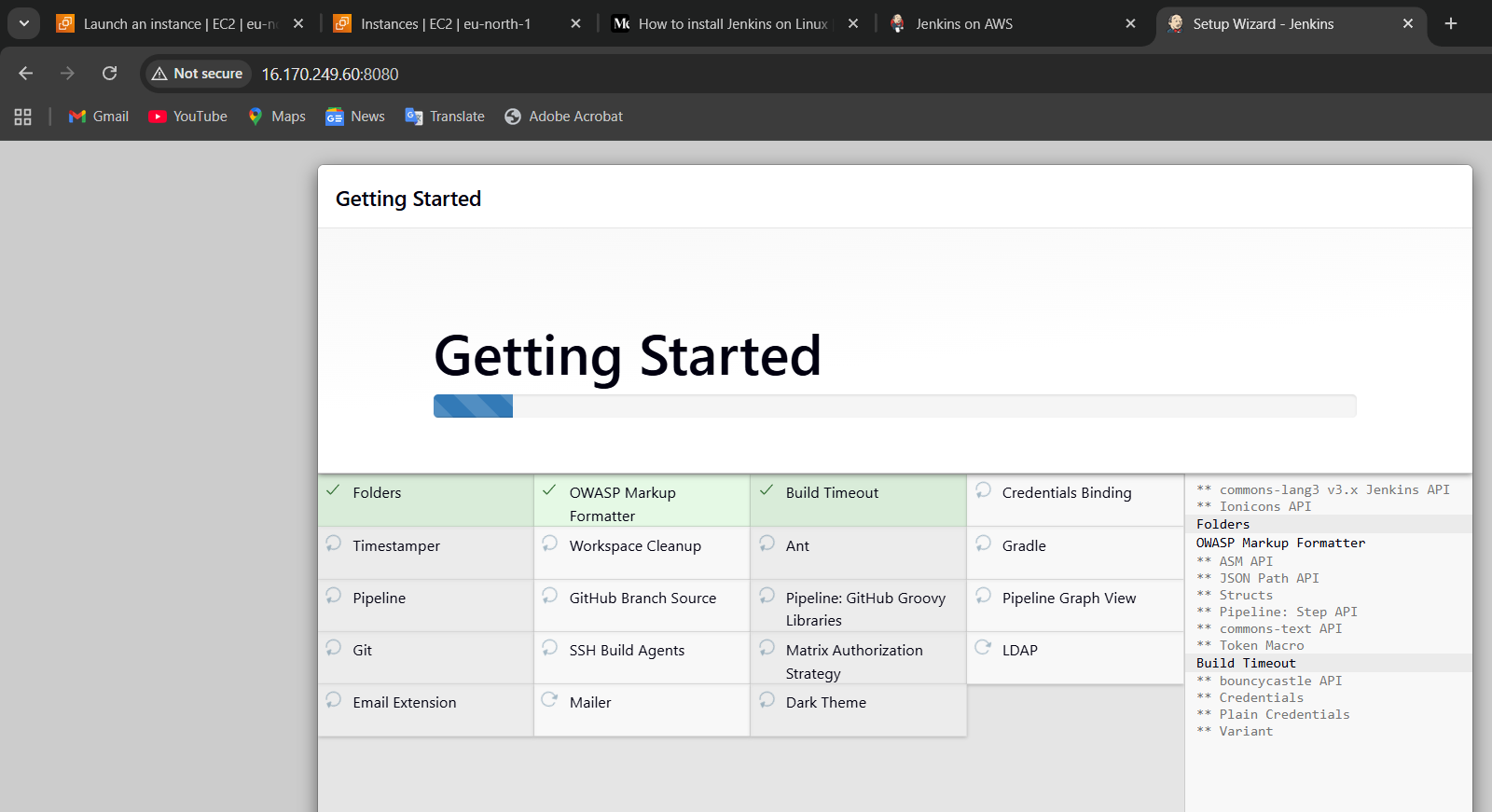
1. Use the following command to display this password:
2. Jenkins runs on port 8080 by default. Access Jenkins through your web browser by entering http://your\_server\_ip:8080. You should see a screen asking for an initial administrator password.

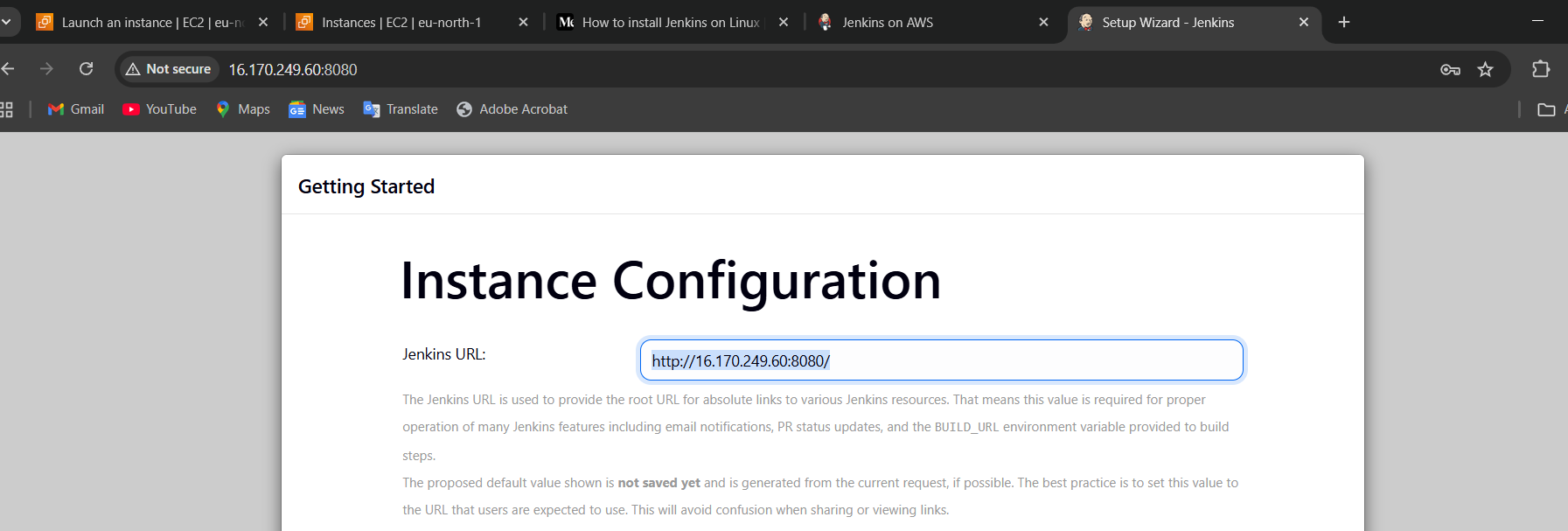


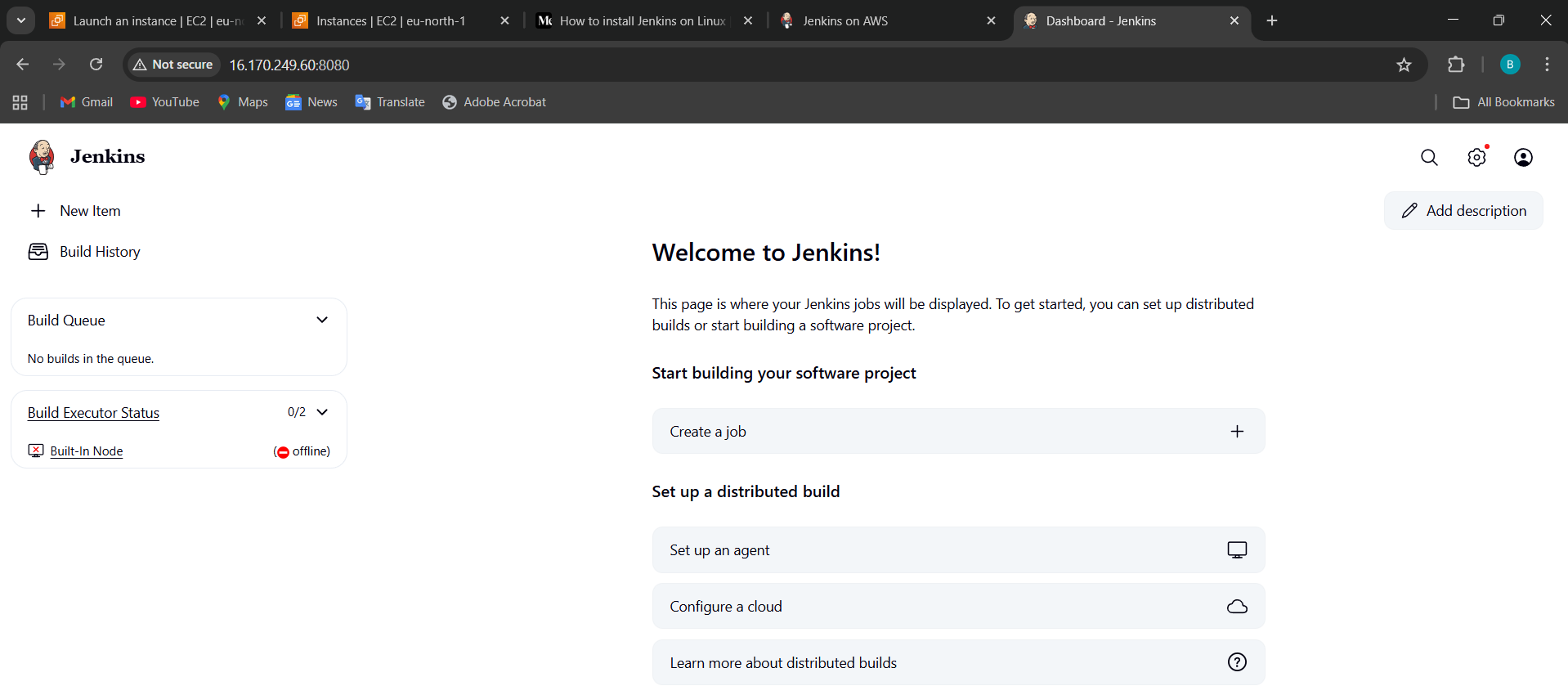
Enter the password to access



<http://16.170.249.60:8080/user/admin/=>> used to access my Jenkins



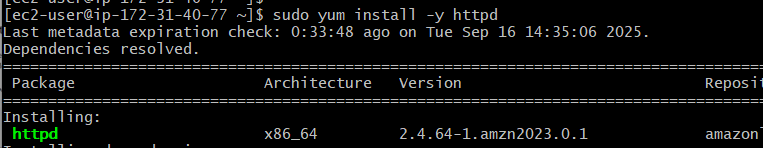




1. Install **Apache**.

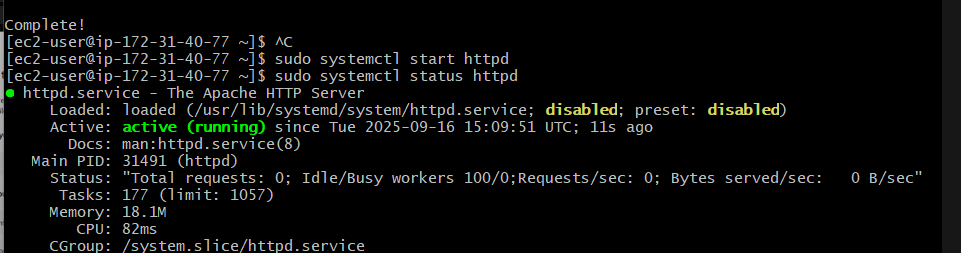
Install Apache (httpd) (on port **80**)

sudo yum install -y httpd

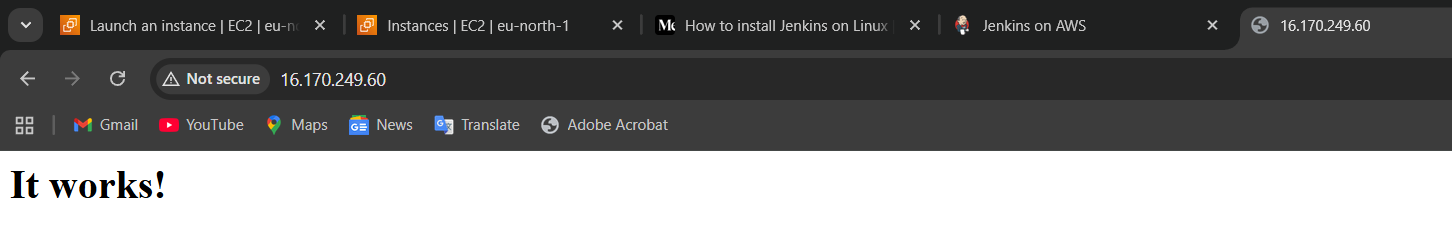


sudo systemctl start httpd

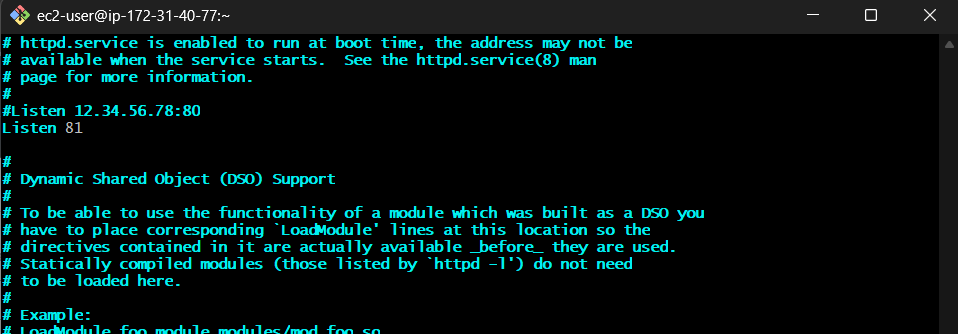
sudo systemctl status httpd



Copy ip address past (ip:80)

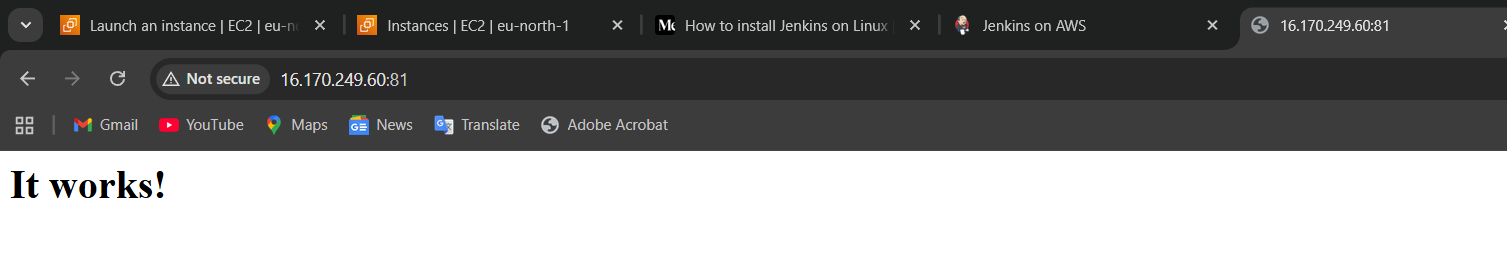


sudo vi /etc/httpd/conf/httpd.conf => oopen this file edit change 80 to 81 save and exit



sudo systemctl restart httpd

sudo systemctl status httpd

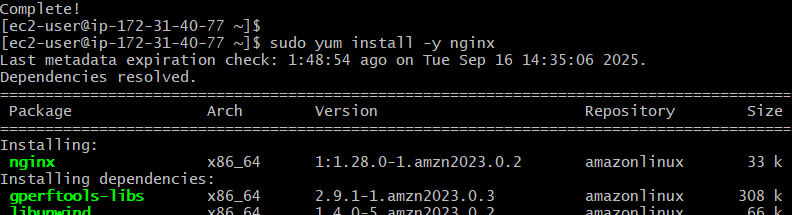


4 ) Install **NGINX**.

**Step 1: Update System**

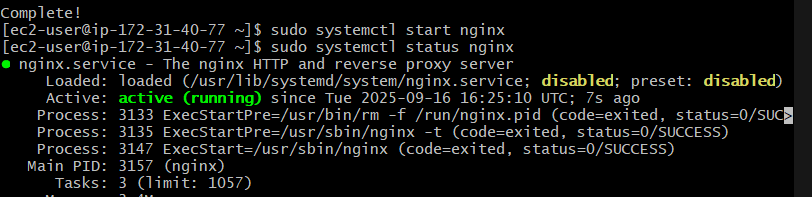
sudo yum update -y

sudo yum install -y nginx



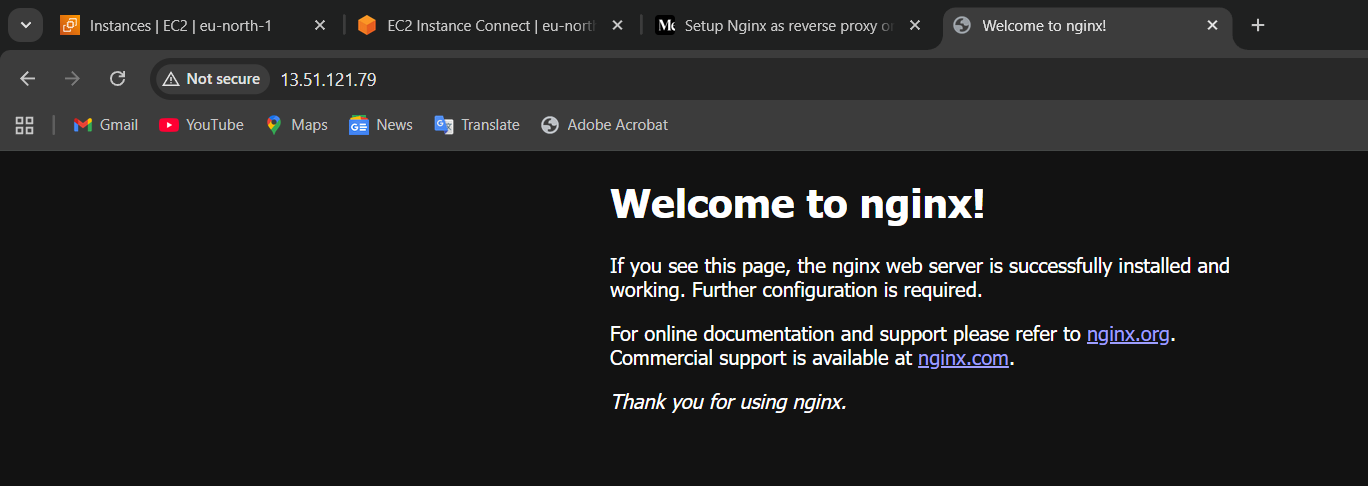
sudo systemctl start nginx

sudo systemctl status nginx to check the status of whether is active on or of



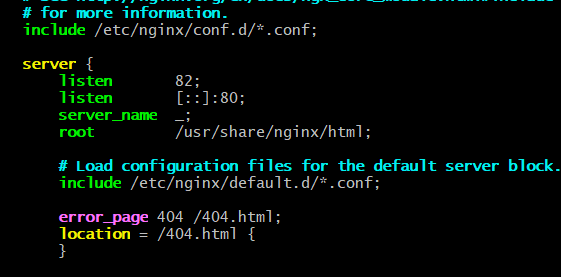
systemctl status nginx

Paste (IP:80)address in the website, IT WILL SHOW

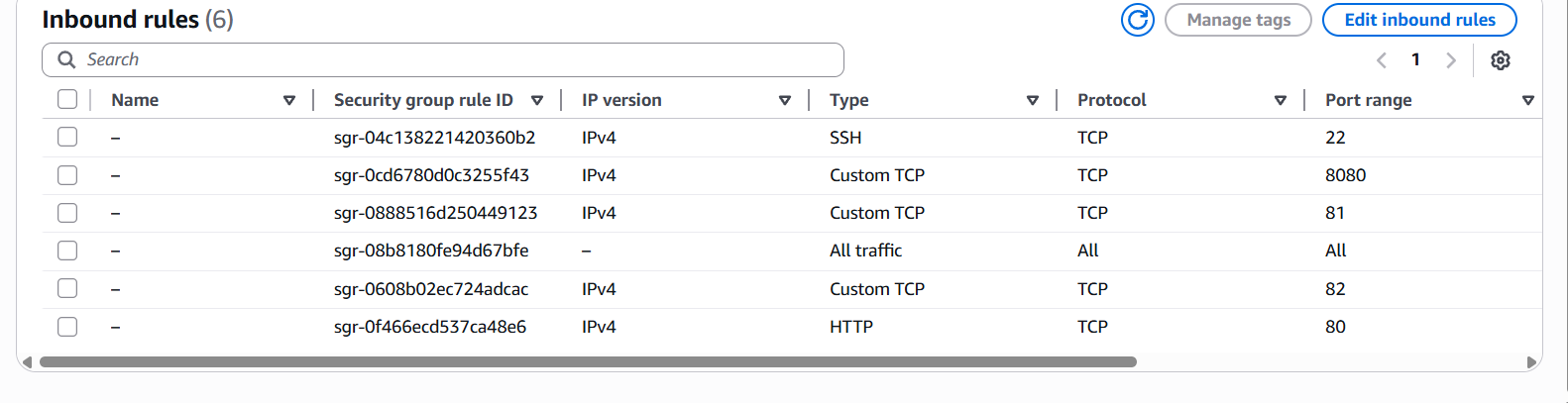


Change Nginx Port Number

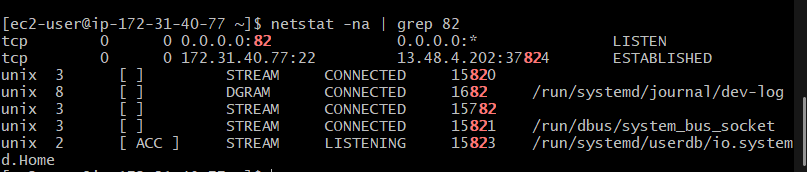
sudo vi /etc/nginx/nginx.conf



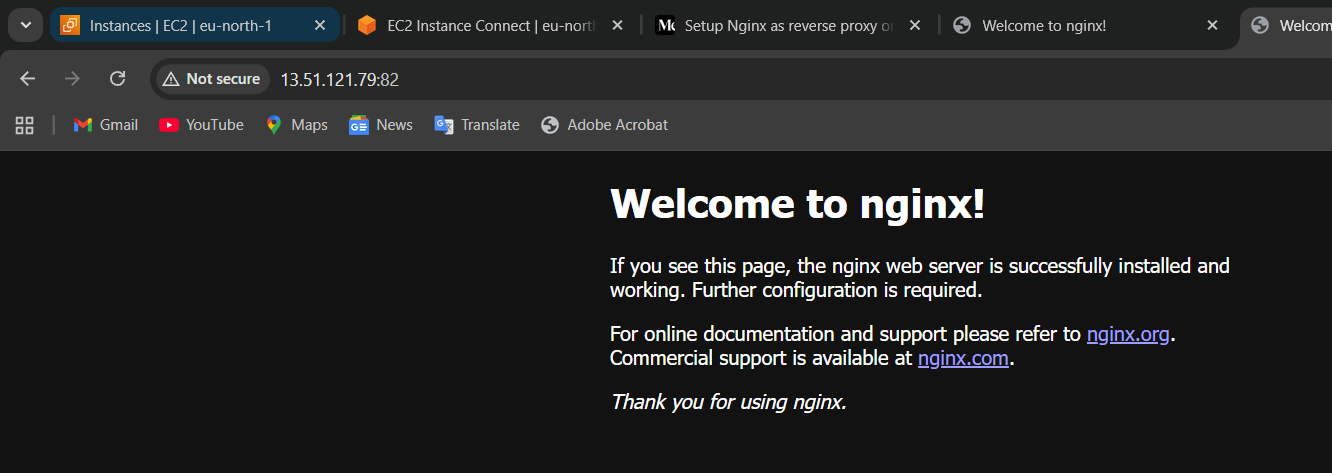
Change and save &exit



Netstat -na | grep (82) to check whether your port is running or not



<http://13.51.121.79:82/> (ip:82) paste it webser

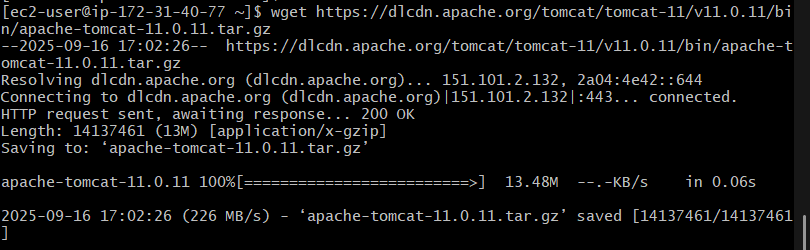


**5 ) Install Apache Tomcat.**

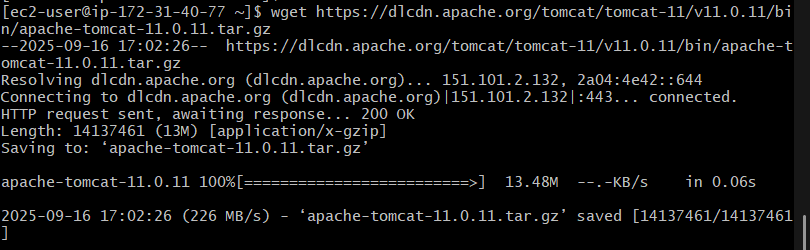
sudo yum update -y

Update System

Wget (link)

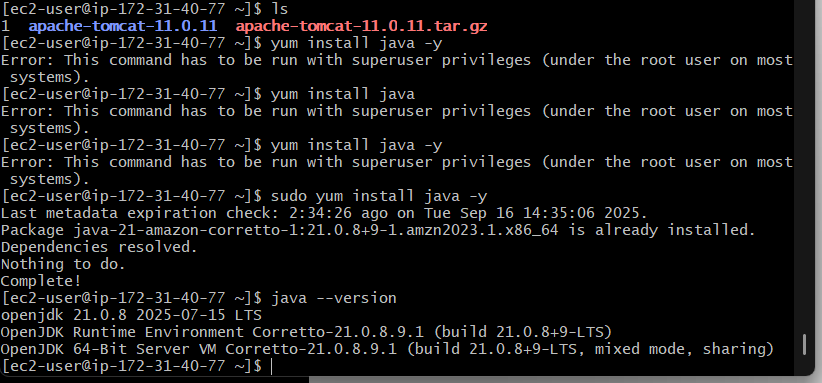


To extract and install downloaded Apache tomcat: Type **‘tar -zvxf’** and paste the blue highlighted command (Highlighted command should be on the screen of our device)



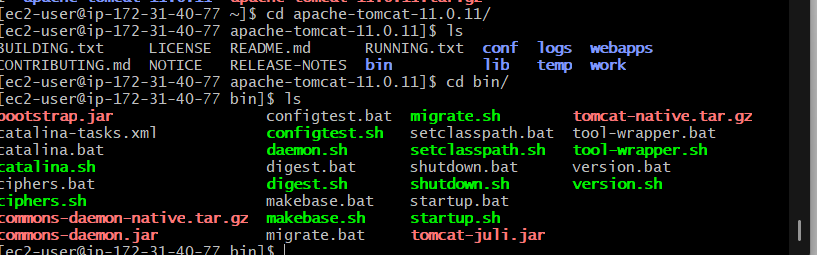
 Install java (Type:**yum install java -y**)

Install Java (Tomcat needs Java)



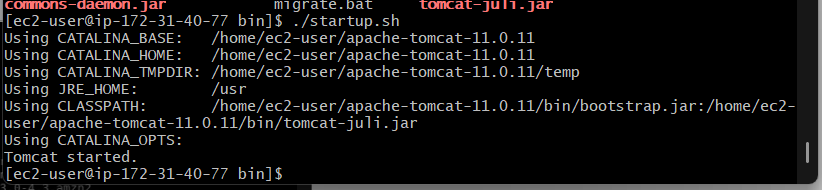
 we can find startup.sh (in green font) through **‘ls’** command

Go to the bin folder, which is in the Apache folder (Type: **cd bin**)

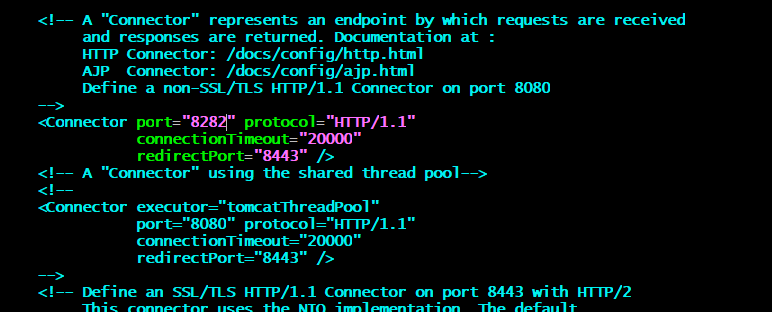


 Now type **‘./startup.sh’**to start tomcat

We can see the tomcat has been started



sudo vi /tomcat9/conf/server.xml



Come to the AWS console & Copy the public IP of the server and paste to browser

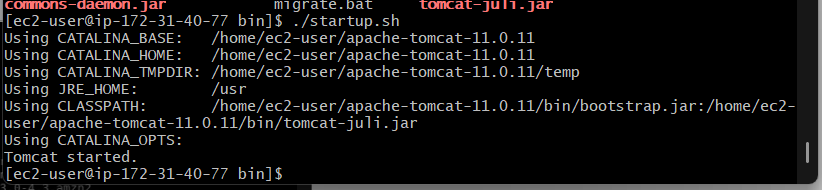
**Open Port in AWS Security Group**

Go to **EC2 → Security Groups → Inbound rules**

* Add rule:
  + **Type:** Custom TCP
  + **Port:** 8080 (or 9090 if changed)
  + **Source:** 0.0.0.0/0 (or just your IP for security)

sudo vi /opt/tomcat9/conf/server.xml

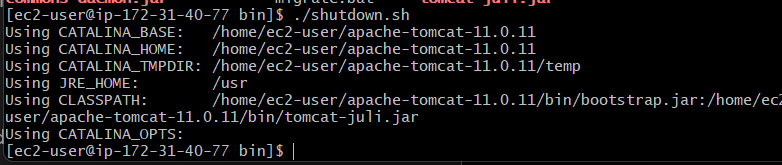
apache-tomcat-11.0.11=>conf>server.xml change, edit and save



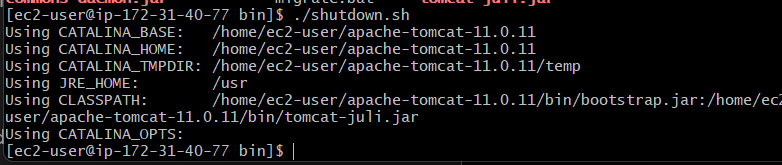
cd /opt/tomcat9/bin

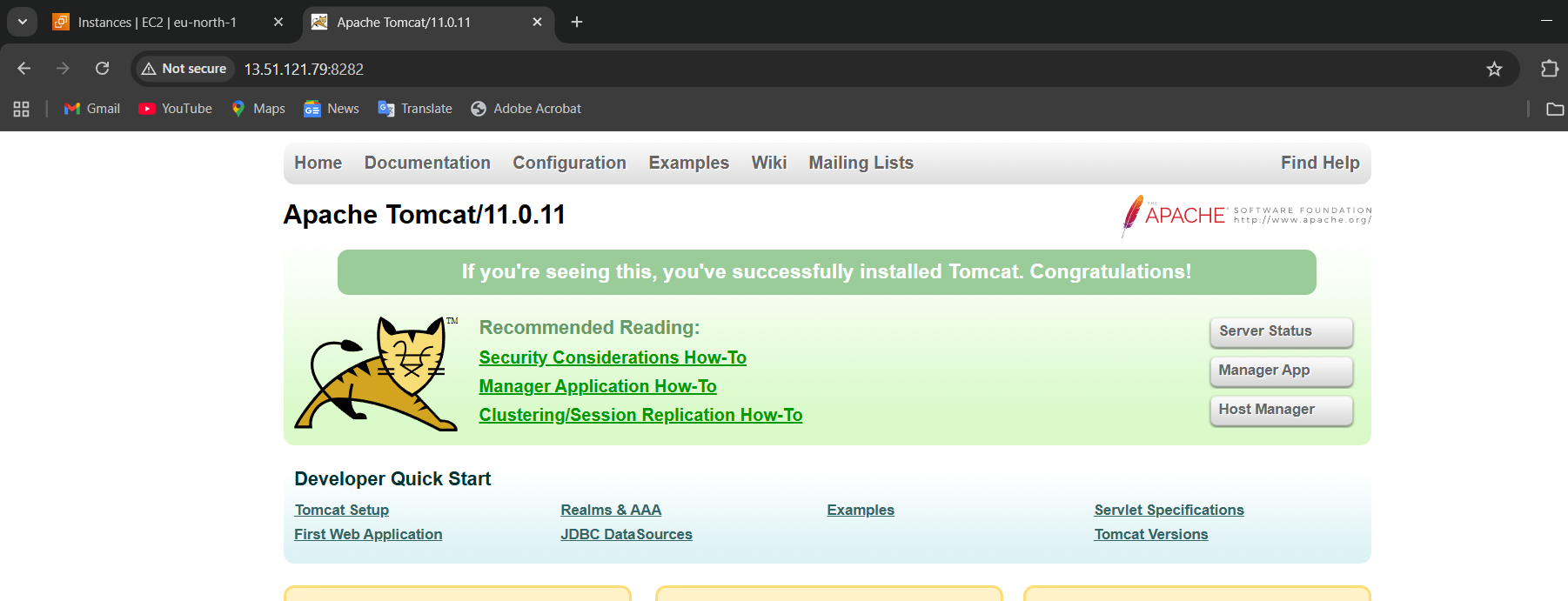
sudo ./shutdown.sh

sudo ./startup.sh



sudo ./startup.sh





✅ Now Tomcat is installed, running, and serving requests.