Understand the basic linux commands with Java Installation

Generally, there are 2 users for one Linux server. 1.root/ admin and ec2-user(custom)

Install MobeXterm server to connect to Linux server.

You need to install java, maven etc to this instance.

For that you don’t have access to install using ec2-user, So use root user(default one to install softwares)

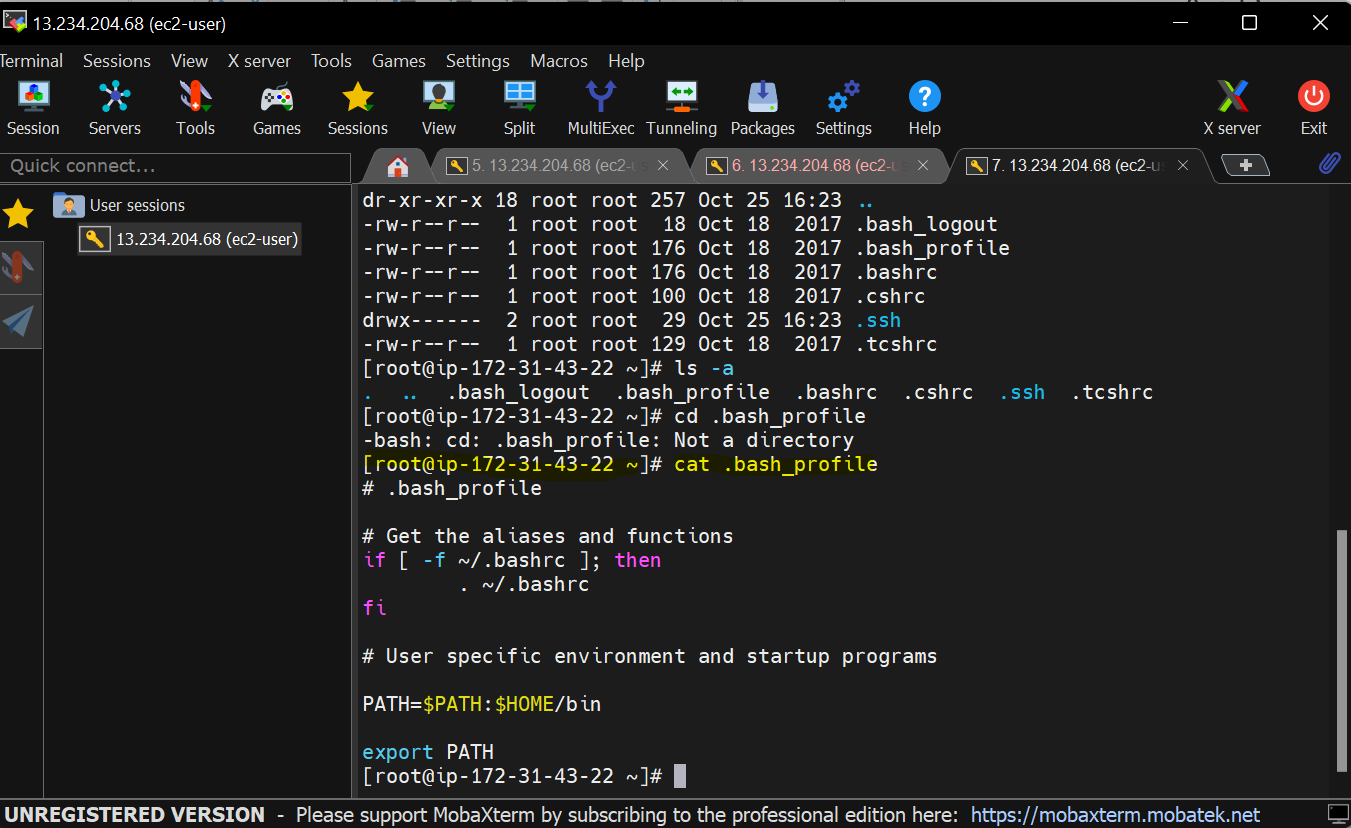
**Sudo su - --->** To go to the root user([root@ip-172-31-43-22 ~]#)

[OpenJDK: Download and install](https://openjdk.org/install/)

Choose fedora as linux is for aws, install java

Inorder to visible to all the softwares in the system, we need to set environmental variable path of java. To do so , we need to go to **.bash\_profile**

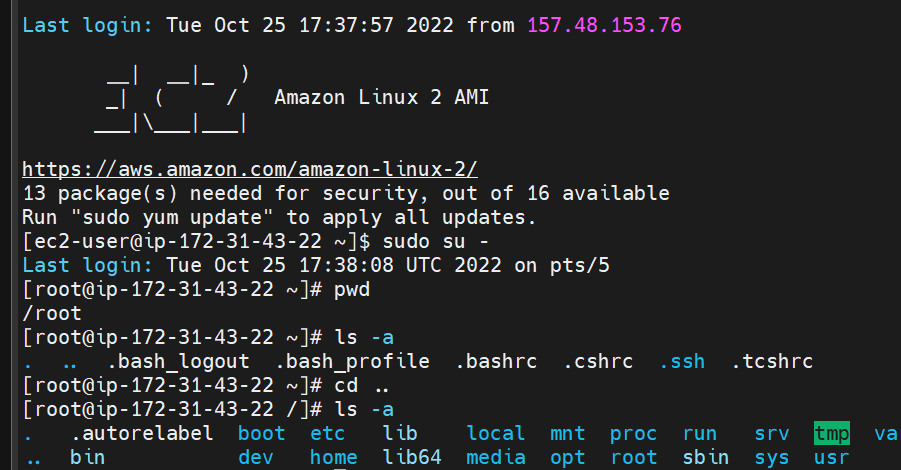
To open the content of the file , use **cat filename**



Setting Java and Maven path in Bash Profile in Linux

In this content provide java path

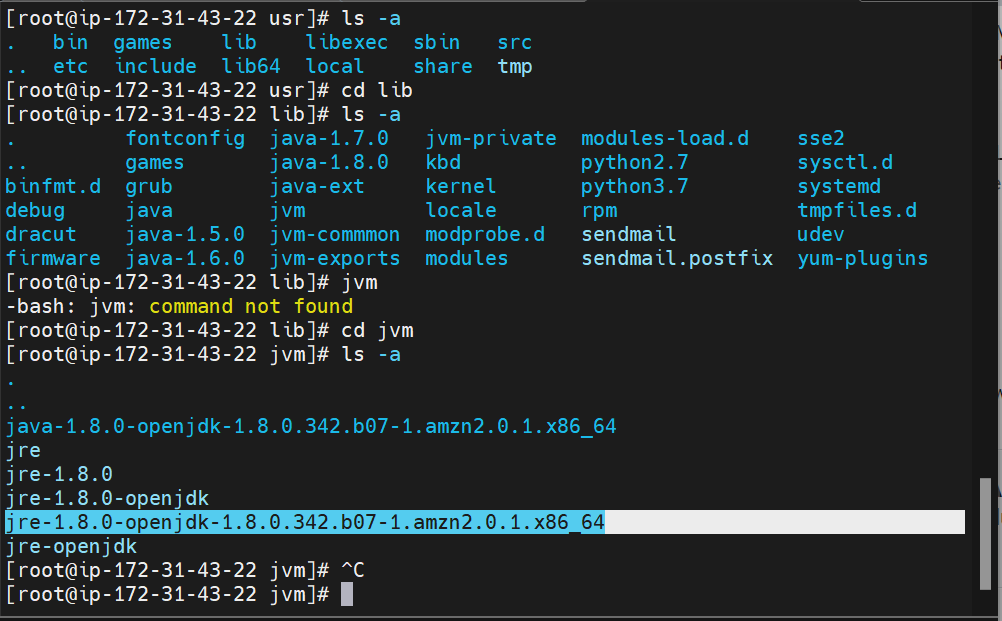
Generally java and other liberaries will be stored under **usr/lib** directory



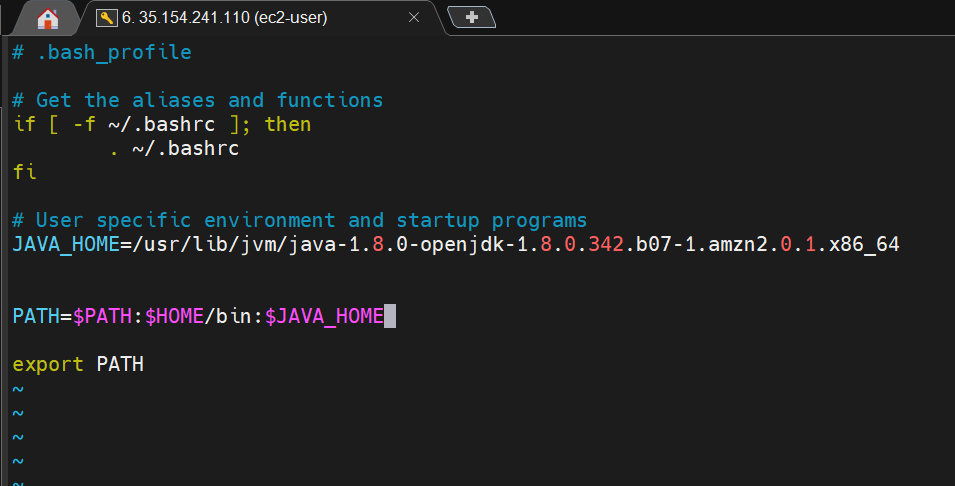
Go to /🡪usr🡪lib🡪jvm🡪select the java path

To find java path find /usr/lib/jvm/java-1.8\* | head -n 3

/usr/lib/jvm/java-1.8.0-openjdk-1.8.0.342.b07-1.amzn2.0.1.x86\_64



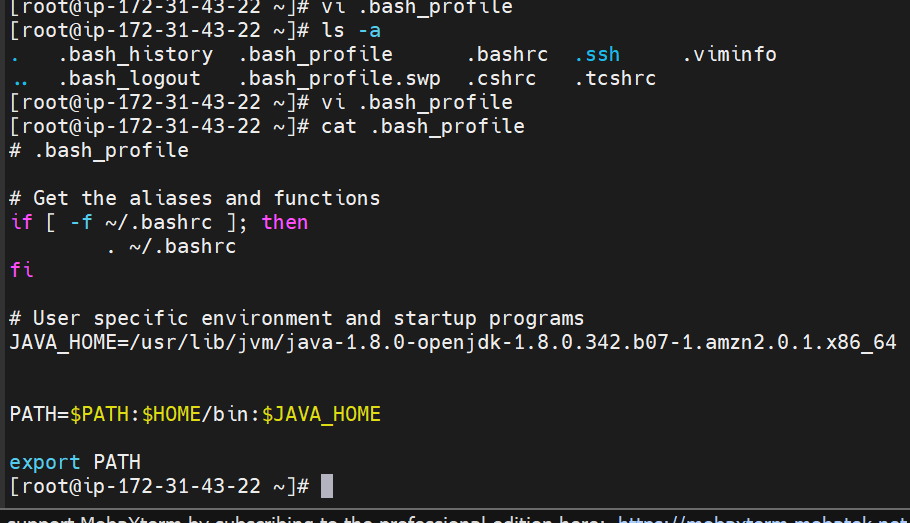
Setting java path



Store path of the java in one variable JAVA\_HOME

And add it to the path

To check if it is added as environmental var, use **cat** and to know the path, use which java



Installing Maven in Linux(root account)

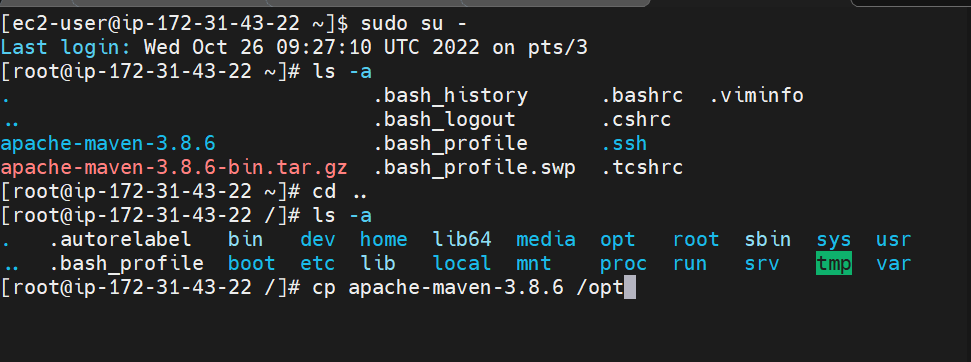
Use **wget** because you wont find maven in yum package.

wget <https://dlcdn.apache.org/maven/maven-3/3.8.6/binaries/apache-maven-3.8.6-bin.tar.gz>

Unzip it in linux using **tar xzvf apache-maven-3.8.6-bin.tar.gz**

Now copy the maven to opt folder using **cp apache-maven-3.8.6 /opt**

Give all the files in a directory to the req path by **cp -r apache-maven-3.8.6 /opt**

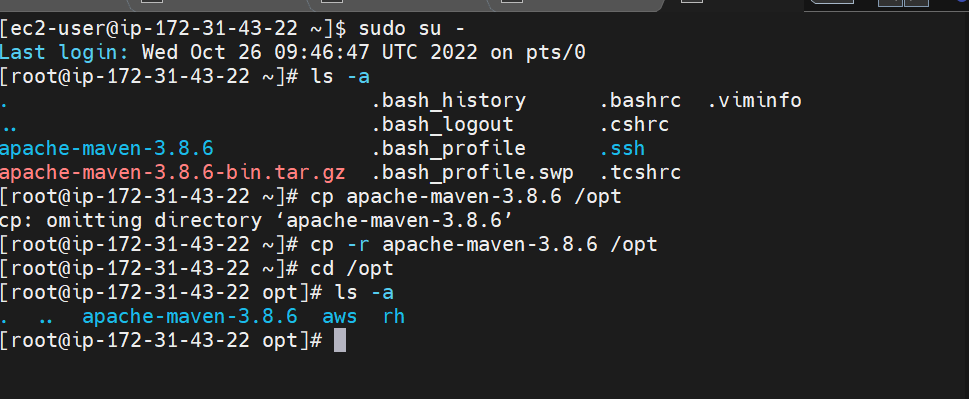


Now maven is copied to /opt folder

[root@ip-172-31-37-77 ~]# cp apache-maven-3.8.6 /opt

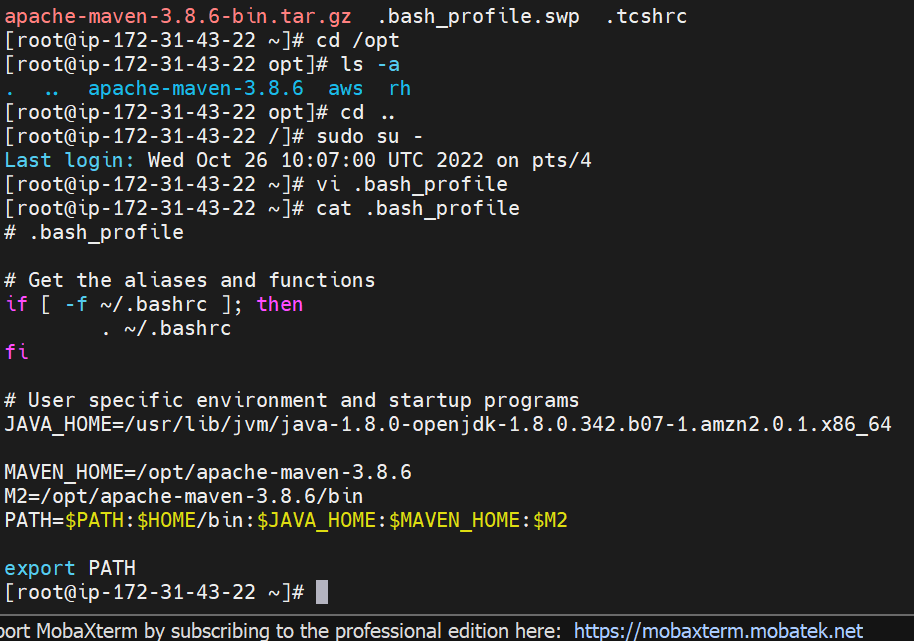
cp: omitting directory ‘apache-maven-3.8.6’

[root@ip-172-31-37-77 ~]#



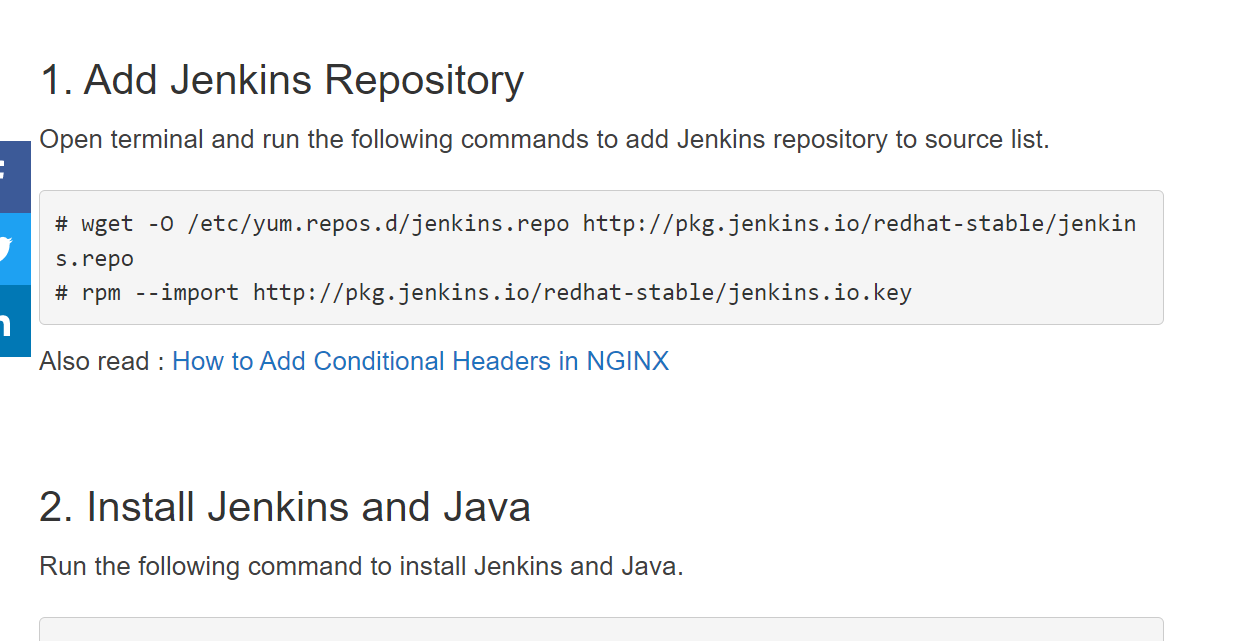
Now give 2 paths of maven into root directory.

Bin path and maven



Install Jenkins:

Java is required to install Jenkins, but we already have



Quick way:

Use Java latest version and install jenkins

Sudo su –

yum install wget -y

**yum install java-11\***

**set java path in .bashprofie**

**find /usr/lib/jvm/java-1.8\* | head -n 3**

**or $echo JAVA\_HOME**

**wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo**

**rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io.key**

yum install fontconfig java-11-openjdk -y

yum install jenkins -y

**systemctl enable jenkins**

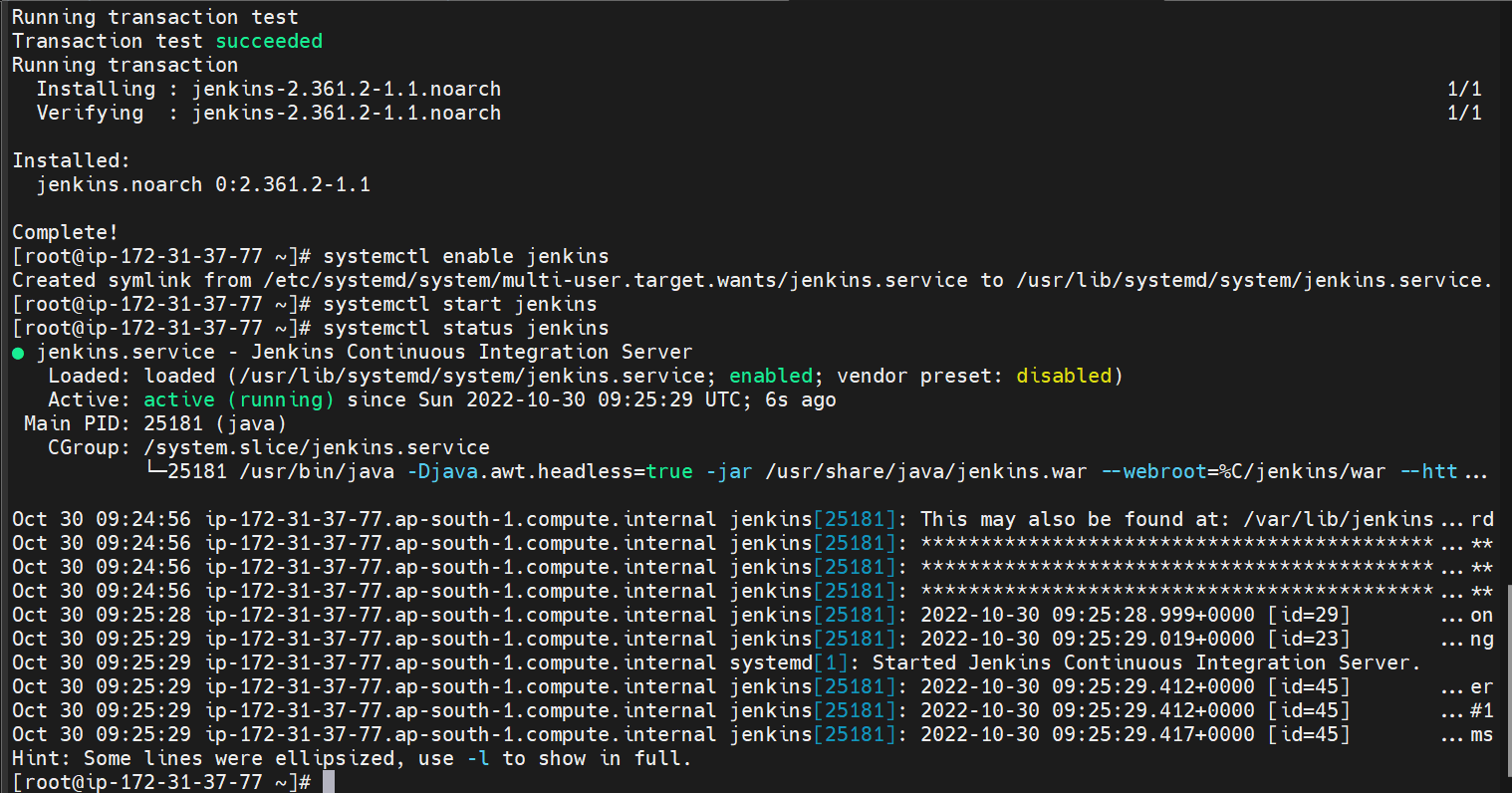
**systemctl start jenkins**

systemctl status Jenkins

[DevOps - Mithun Technologies +91-9980923226: Jenkins Installation in RedHat Linux Server - Mithun Technologies - 9980923226 (mithuntechnologies-devops.blogspot.com)](https://mithuntechnologies-devops.blogspot.com/2022/09/jenkins-installation-in-redhat-linux.html?zx=15b4ed21164456e2)

[Maven – Installing Apache Maven](https://maven.apache.org/install.html)

Install maven also add path in .bash\_profile as mentioned above



**Getting Started with Jenkins:**

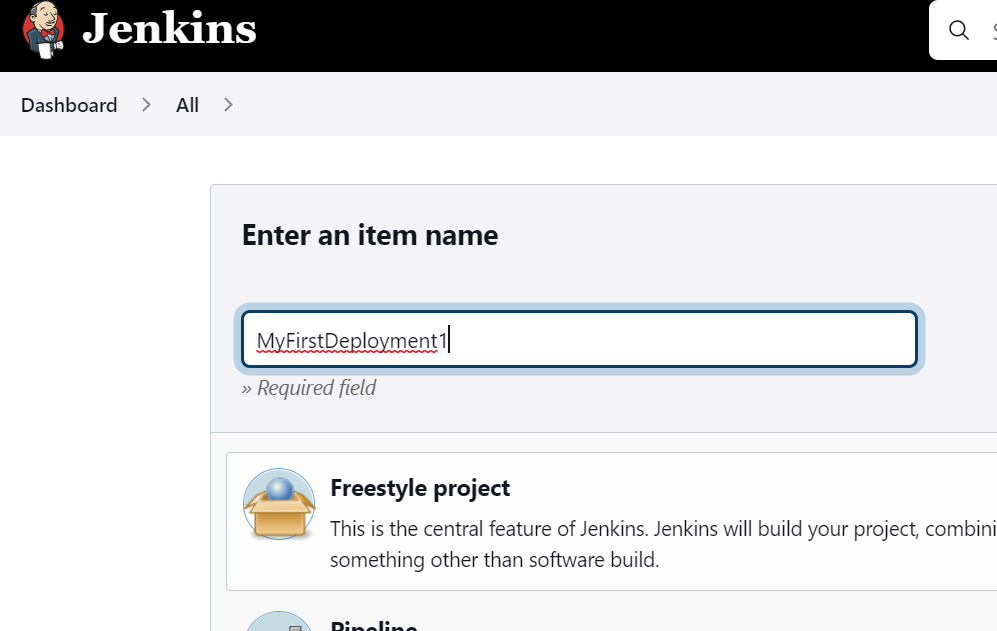
Jenkins should know where maven , git , java is installed.

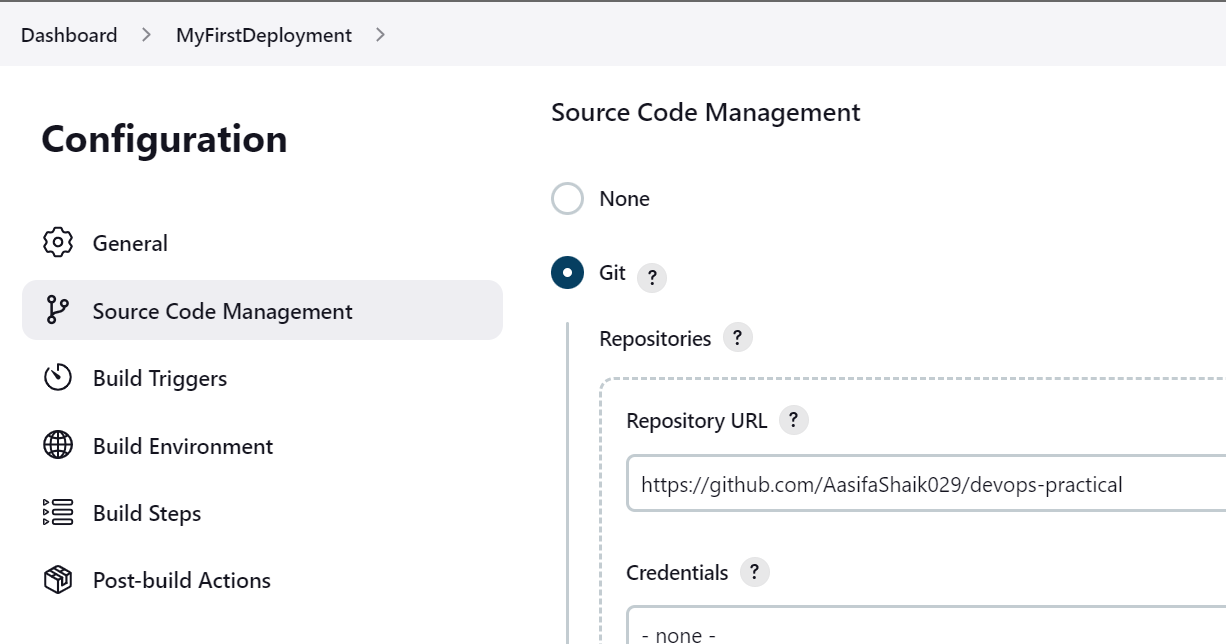
Manage Jenkins🡪Global tool configuration🡪Add JDK path, maven path, git path

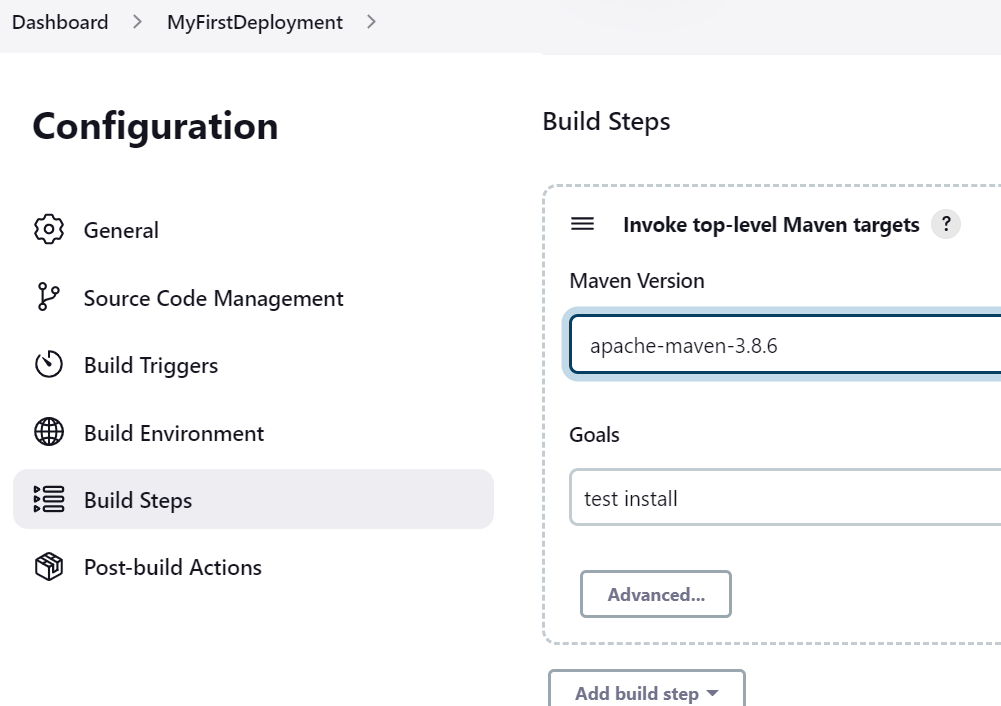
(to know the path in MobXterm , type $echo JAVA\_HOME/MAVEN\_HOME/which git)

Create a New deployment

( It tests the code, compiles and creates WAR file)



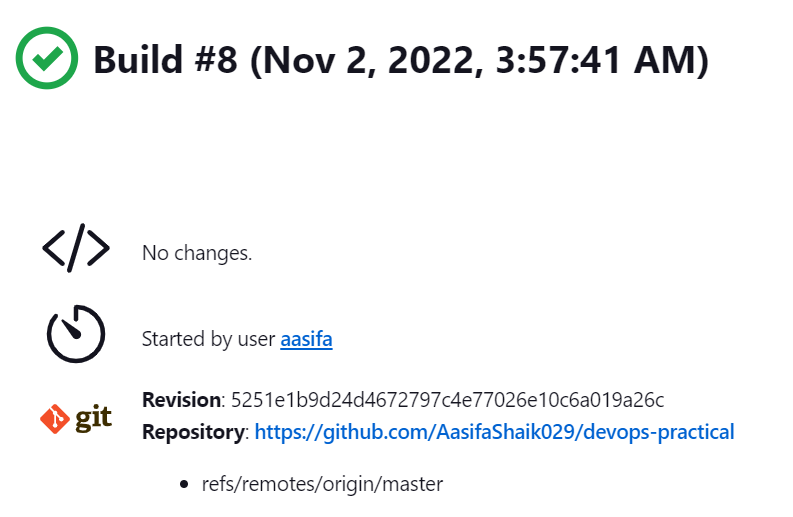


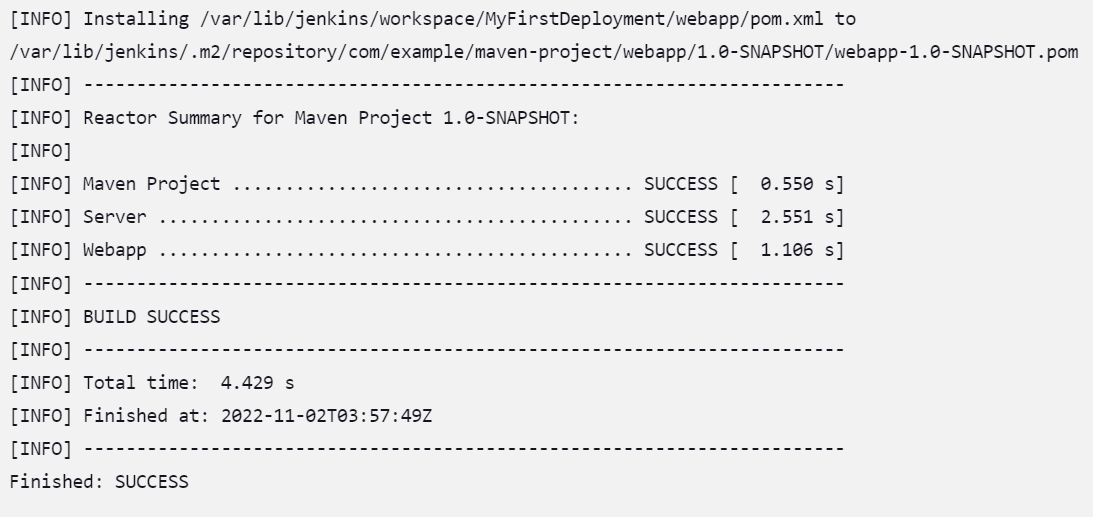


Add the repo, maven and correct java path and save

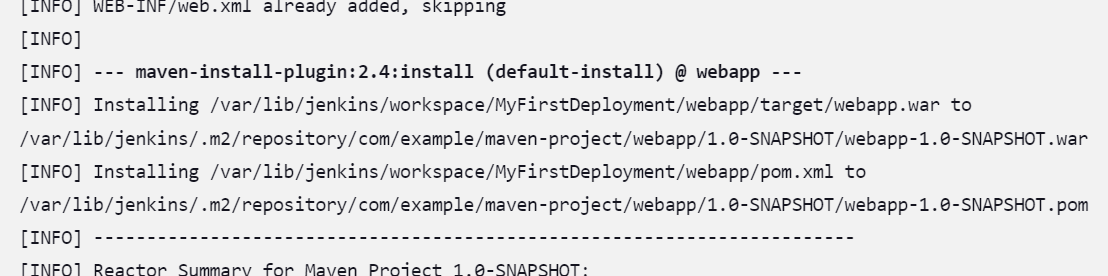
click on build now to build the job

check the console output



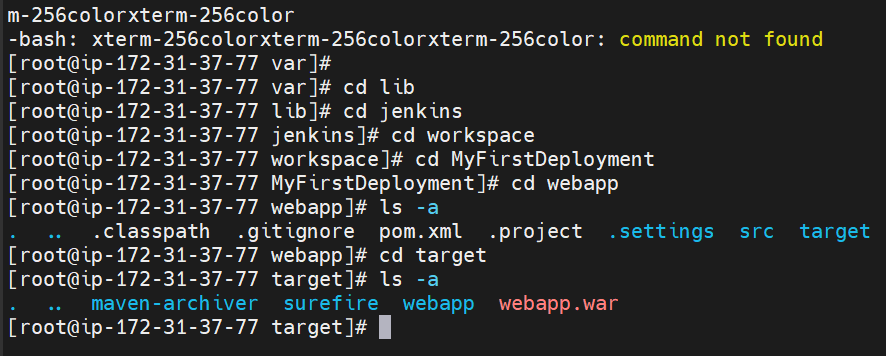


Used rahul shettys project



We need WAR file

It is there in Installing /var/lib/jenkins/workspace/MyFirstDeployment/webapp/target/webapp.war



You need to copy this war file into diff linux machine where your app server is present.

**Now deploy the WAR file (app)into another server with Jenkins and start the application on docker Container.**

Because you cant have application server in the same linux server. In real time these application servers will be hosted in separate servers and that machine wont have access to Jenkins and other configs

**Linux A>Jenkins>WAR file>Linux B**

**Linux B>WAR file>tomcat**

(once we have WAR file in second machine, we can deploy into tomcat)

Phase 1: (Hosting WAR File into another machine)

* Spin up New AWS Instance for deploying application  
  Create New User with Password

passwd ec2-user (Make sure you are in root)

* Enable Password Authentication in below File Path  
  vi /etc/ssh/sshd\_config
* Reload Service with service sshd reload
* Add the Server into Jenkins from Manage Jenkins
* Download Publish over SSH Plugin in Jenkins
* Add Docker Server SSH to Jenkins in the job
* Run the Deployment Job to deploy the artifacts into Application Server from Jenkins Server

Process:

Jenkins from Linux A should talk with user from Linux B machine.

(Don’t use root user of linux B)

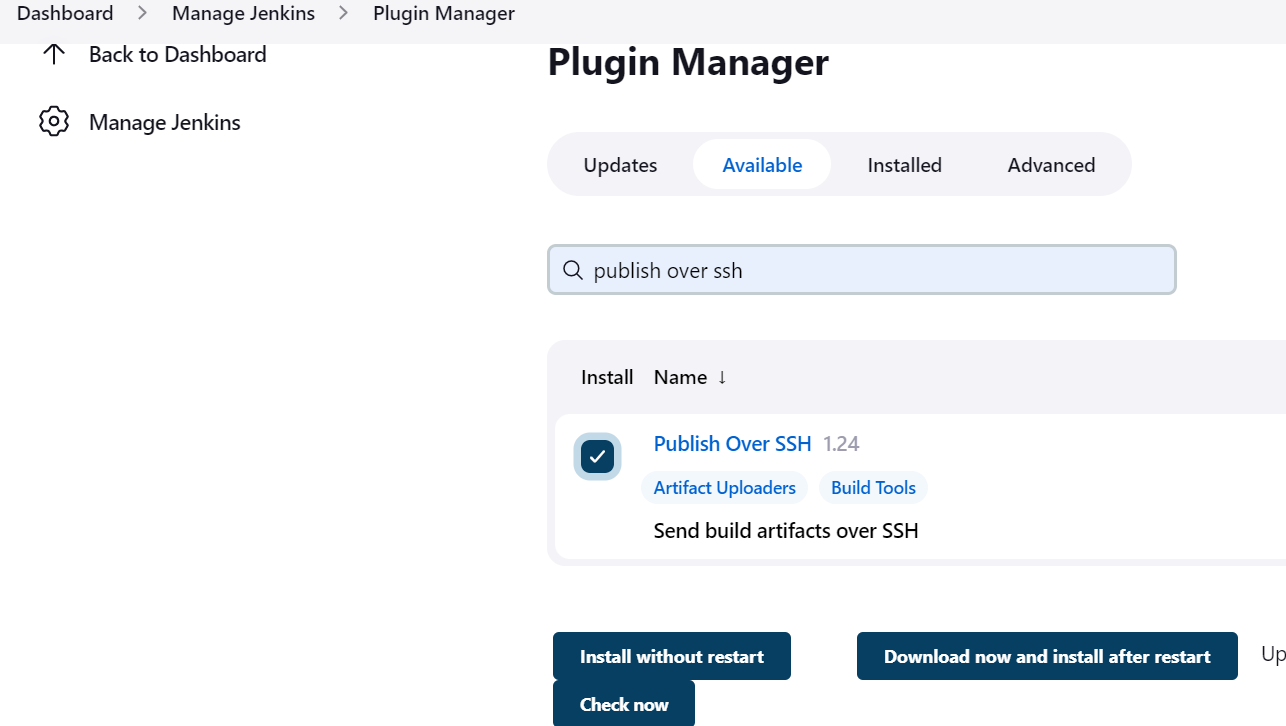
Jenkins Should push files to linux B

Linux B(aplication server)

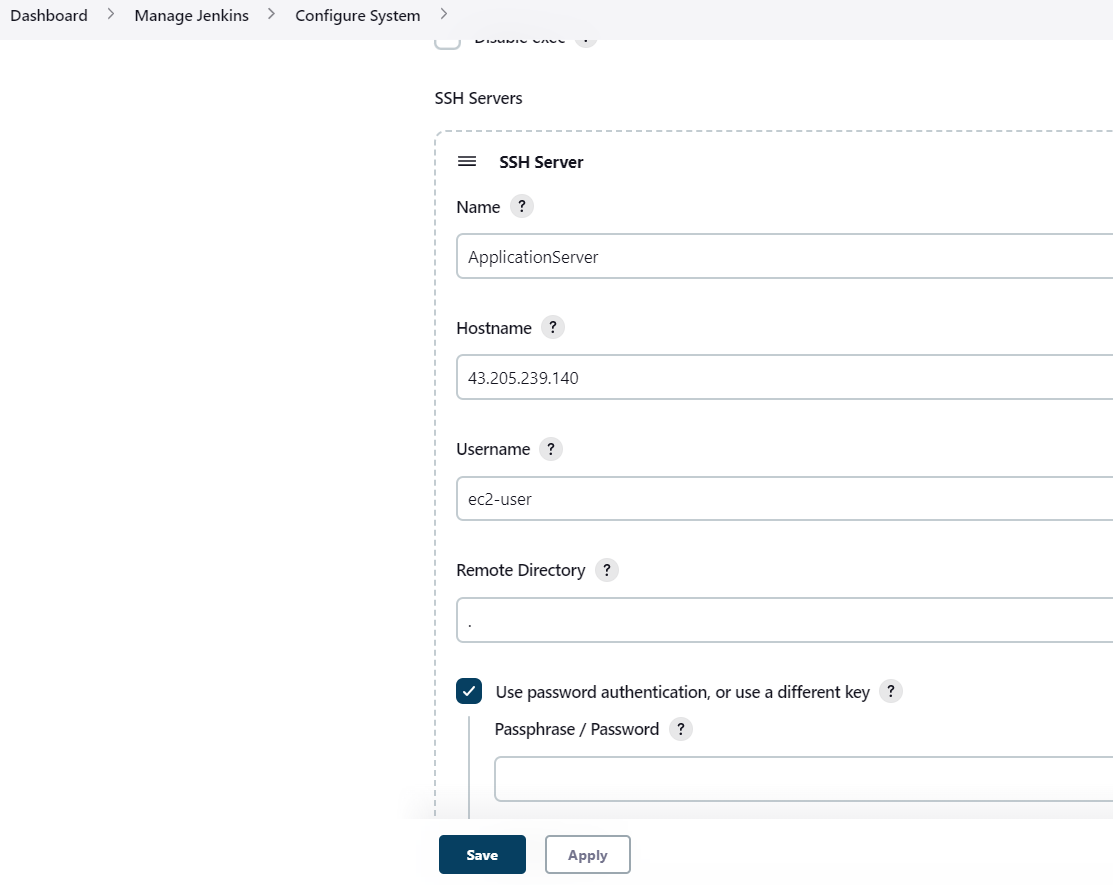
Linux A with Jenkins

Goto linux A Jenkins

Manage Jenkins🡪Manage plugin🡪publish over SSH(plugin name)

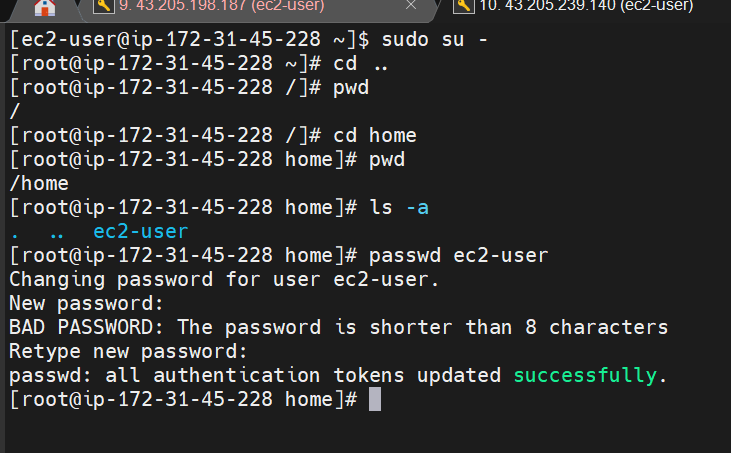


Goto dashboard🡪configure system🡪publish over ssh🡪add linux B user and password for the Jenkins to get authenticate



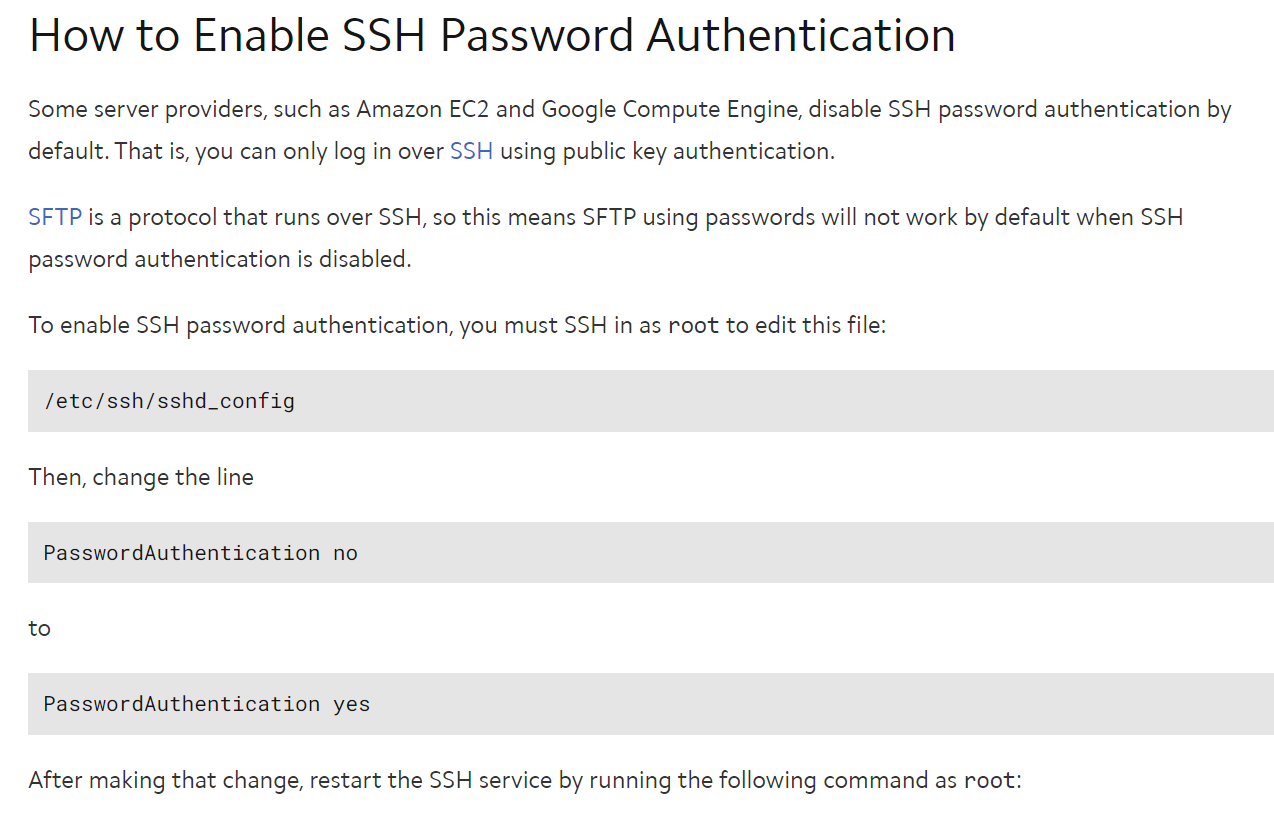
For setting up new password in linux B, go to / directory cd home

Then type **passwd ec2-user**

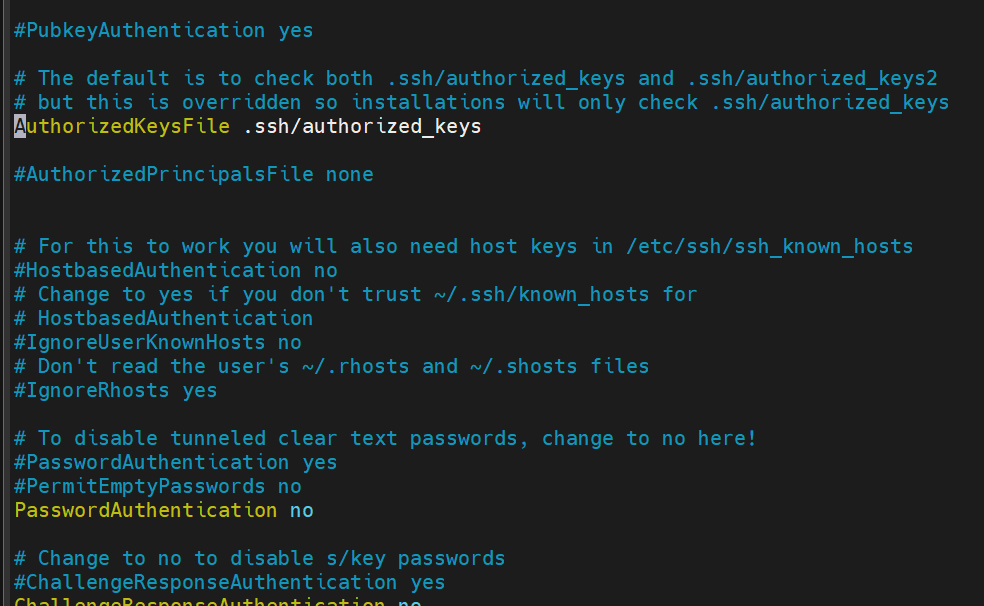
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You see a msg because by default aws set its linux server authentication process to NO. So we have to change it to yes.



You should be the root

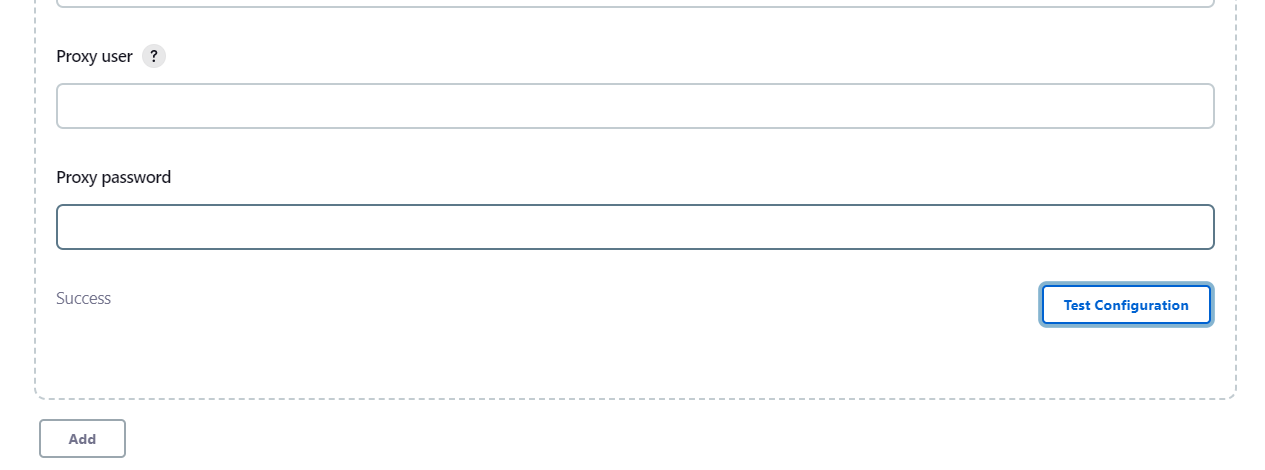


Here change to yes

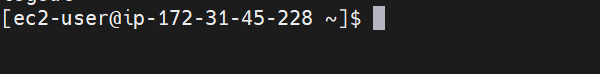
To apply changes to the server

* Reload Service with **service sshd reload**

Now you can see that authentication is successful

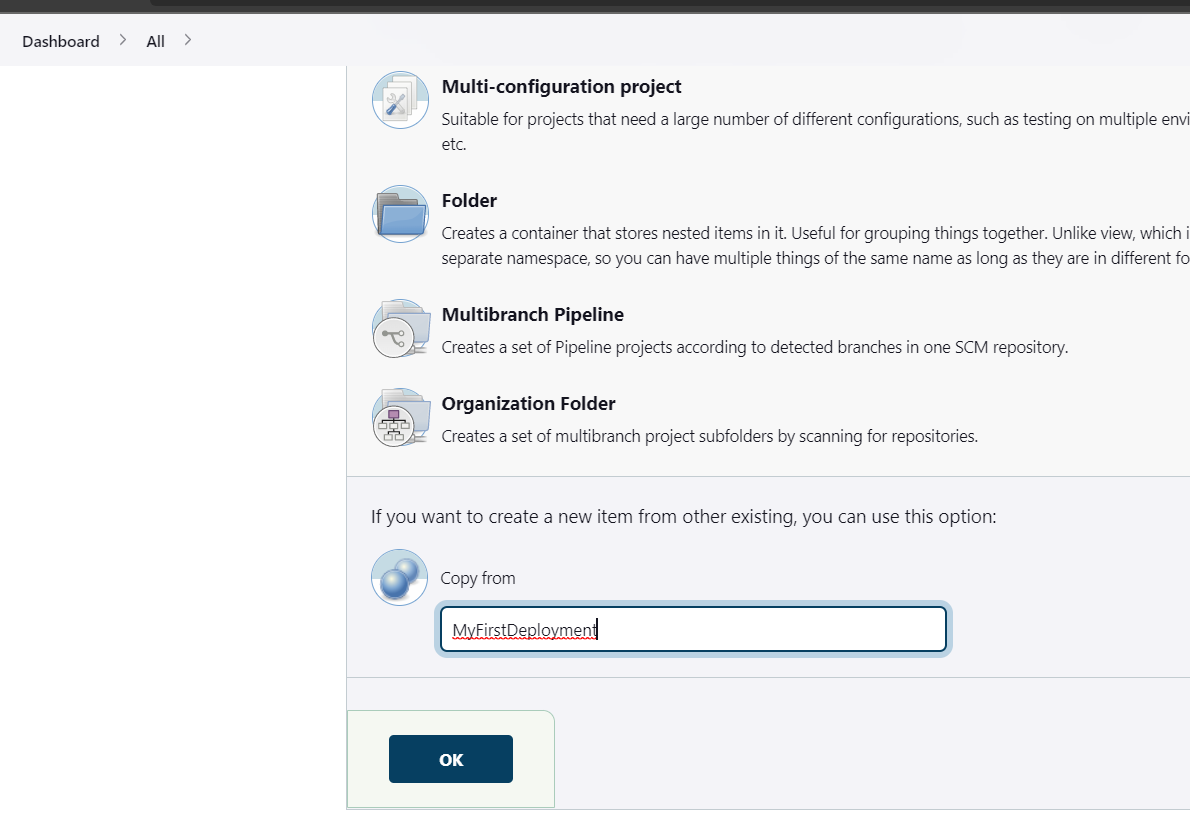
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Above you can see that as a remote dir we gave (.) it means whatever Jenkins installs in linux B it will be stored in ec2-user of home dir

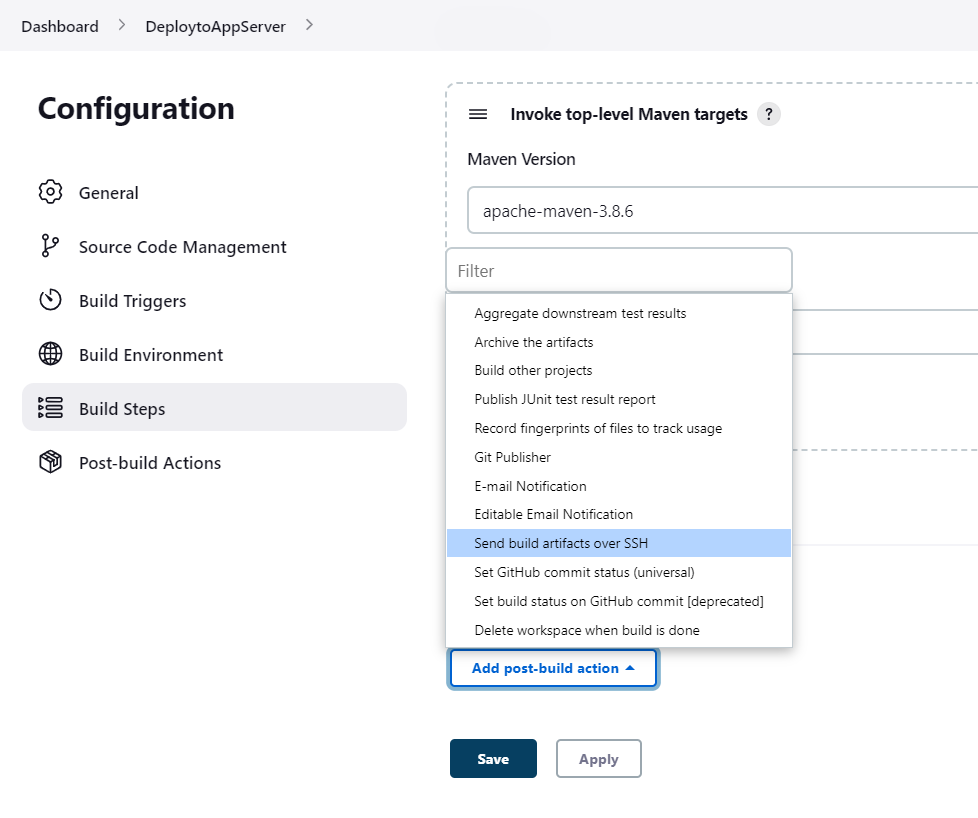


Apply and Save the public over ssh changes.

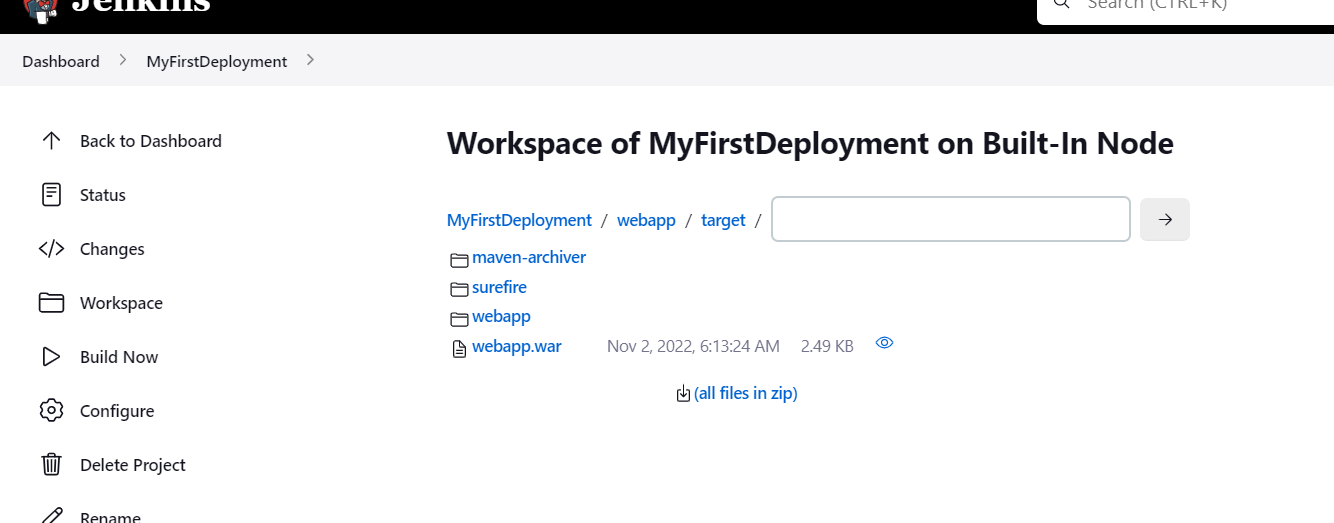
Now create a new job by inheriting all the conf from previous job.

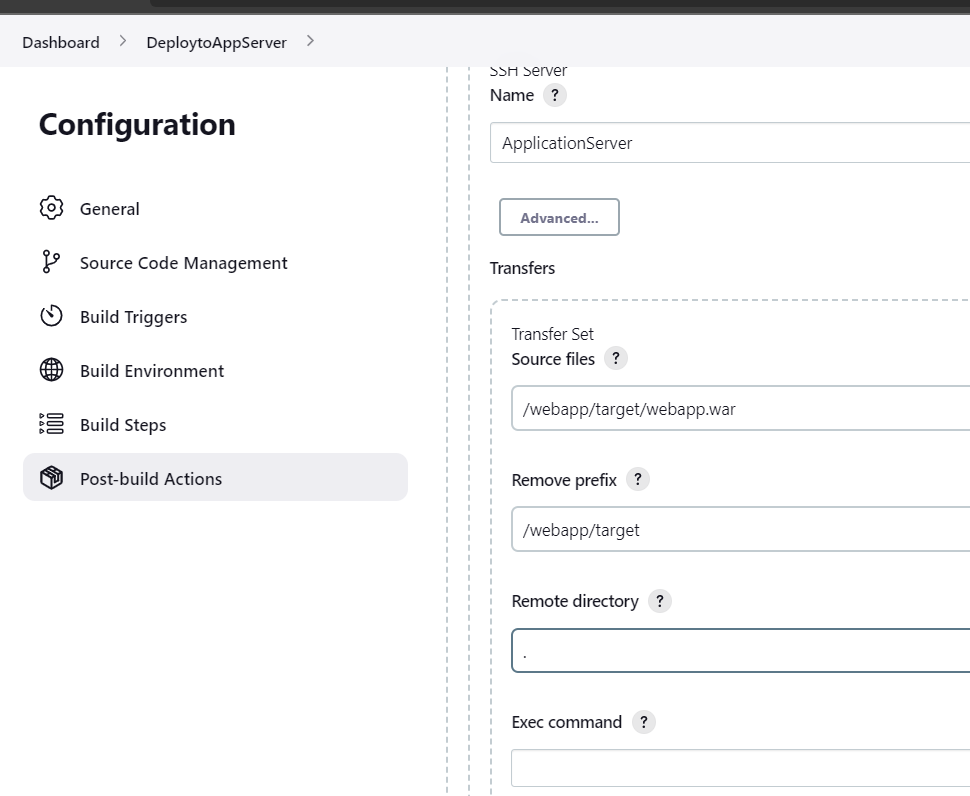


Open new job and we need to set up ssh for the war file



Give the below path for sourcefile





Build now and run liunx B/applicationserver

