

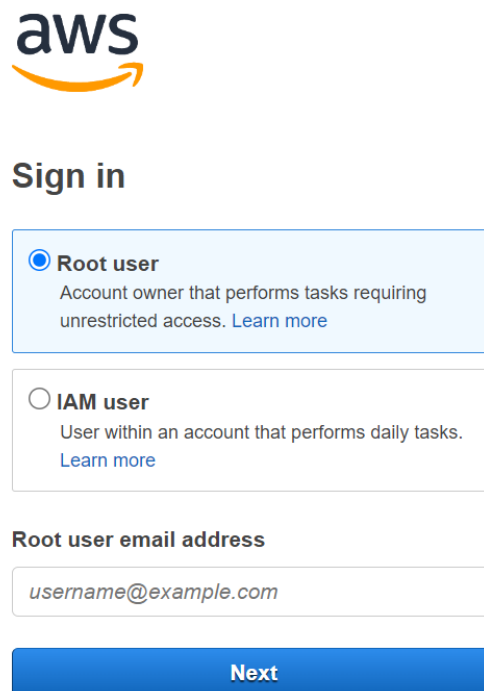


Jenkins Setup

By
Mr. Nandeesh

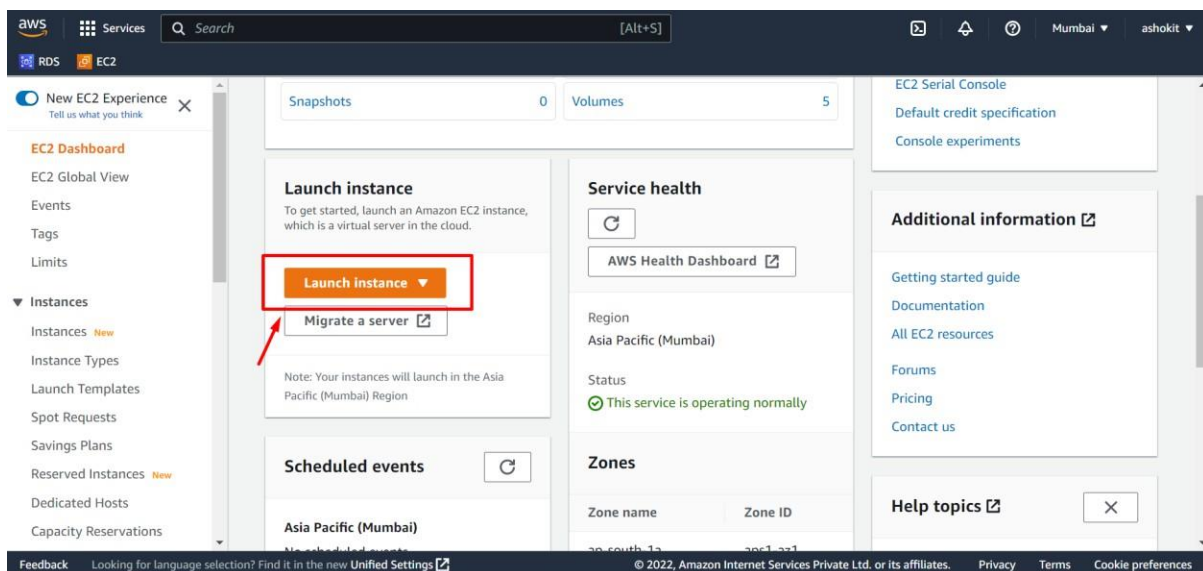
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Step - 1: Login into your AWS cloud account and navigate to EC2 service



The image shows the AWS Sign in page. At the top is the AWS logo. Below it is the text "Sign in". There are two radio button options: "Root user" (selected) and "IAM user". The "Root user" option has a description: "Account owner that performs tasks requiring unrestricted access. [Learn more](#)". The "IAM user" option has a description: "User within an account that performs daily tasks. [Learn more](#)". Below these options is a text input field labeled "Root user email address" containing the text "username@example.com". At the bottom is a blue button labeled "Next".

Step - 2: Click on 'Launch Instance'



Step - 3 : Give name for instance and select AMI (I am selecting UBUNTU AMI)

Name

Jenkins-VM

Add additional tags

▼ Application and OS Images (Amazon Machine Image) Info

An AMI is a template that contains the software configuration (operating system, application server, and applications) required to launch your instance. Search or Browse for AMIs if you don't see what you are looking for below

Q Search our full catalog including 1000s of application and OS images

Recents

Quick Start

Amazon Linux

aws

macOS

Mac

Ubuntu

ubuntu

Windows

Microsoft

Red Hat

Red Hat

S

>

Q

Browse more AMIs

Including AMIs from AWS, Marketplace and the Community

Amazon Machine Image (AMI)

Ubuntu Server 22.04 LTS (HVM), SSD Volume Type

Free tier eligible

ami-062df10d14676e201 (64-bit (x86)) / ami-0c66c4f14d217d16f (64-bit (Arm))

Virtualization: hvm ENA enabled: true Root device type: ebs

Step - 4 : Keep instance type as t2.mico (it is free tier eligible) and select Key Pair.

Note: If key-pair not available, create new pair and select it.

(When we create new key pair it will down .pem file. Keep it safely. We need that .pem file to connect with the machine using SSH)

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▼ Instance type [Info](#)

Instance type

t2.micro

Free tier eligible

Family: t2 1 vCPU 1 GiB Memory
On-Demand Linux pricing: 0.0124 USD per Hour
On-Demand Windows pricing: 0.017 USD per Hour

[Compare instance types](#)

▼ Key pair (login) [Info](#)

You can use a key pair to securely connect to your instance. Ensure that you have access to the selected key pair before you launch the instance.

Key pair name - required

aws

▼

[Create new key pair](#)

▼ Network settings [Info](#)

Network [Info](#)

vpc-063de24cc63cda6c7 | default-vpc

Subnet [Info](#)

No preference (Default subnet in any availability zone)

[Edit](#)

Step - 5 : Select Security Group Settings to allow SSH traffic and click on 'Launch Instance' button

Firewall (security groups) [Info](#)

A security group is a set of firewall rules that control the traffic for your instance. Add rules to allow specific traffic to reach your instance.

☒ Create security group

☐ Select existing security group

We'll create a new security group called 'launch-wizard-3' with the following rules:

☒ Allow SSH traffic from
Helps you connect to your instance

Anywhere
0.0.0.0/0

▼

☐ Allow HTTPS traffic from the internet
To set up an endpoint, for example when creating a web server

☐ Allow HTTP traffic from the internet
To set up an endpoint, for example when creating a web server

⚠ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

×

Number of instances [Info](#)

1

▼

Software Image (AMI)

Amazon Linux 2 Kernel 5.10 AMI...[read more](#)
ami-074dc0a6f6c764218

Virtual server type (instance type)

t2.micro

Firewall (security group)

New security group

Storage (volumes)

1 volume(s) - 8 GiB

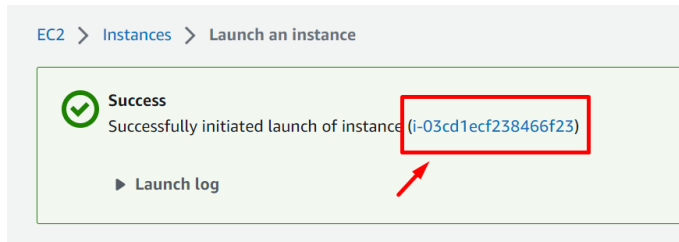
Cancel

Launch instance

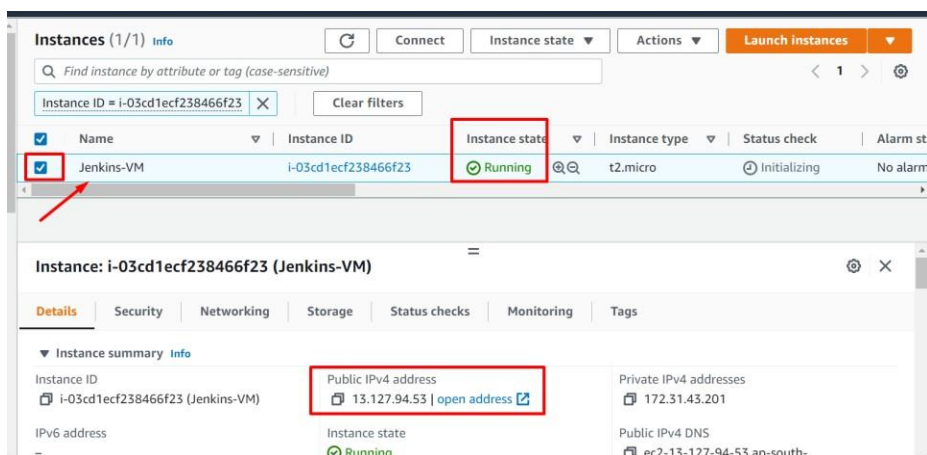
4

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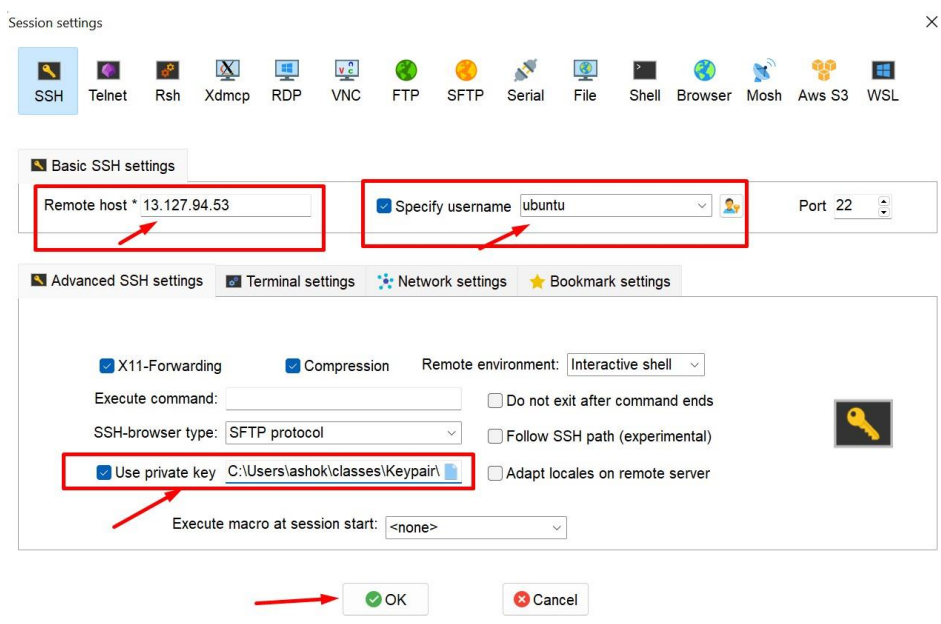
Step - 6 : Once instance got created then click on instance id which is showing like below.



Step - 7 : Select Instance name checkbox and see Public IP of the instance.

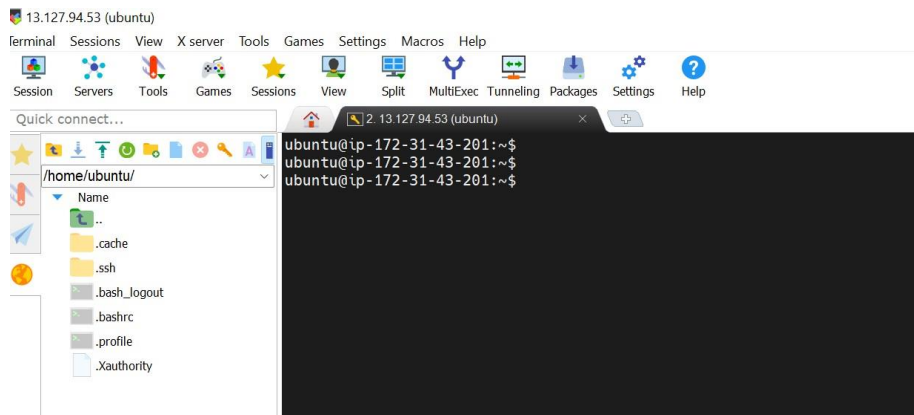


Step – 8: Open MobaXterm software and Connect to Jenkins VM



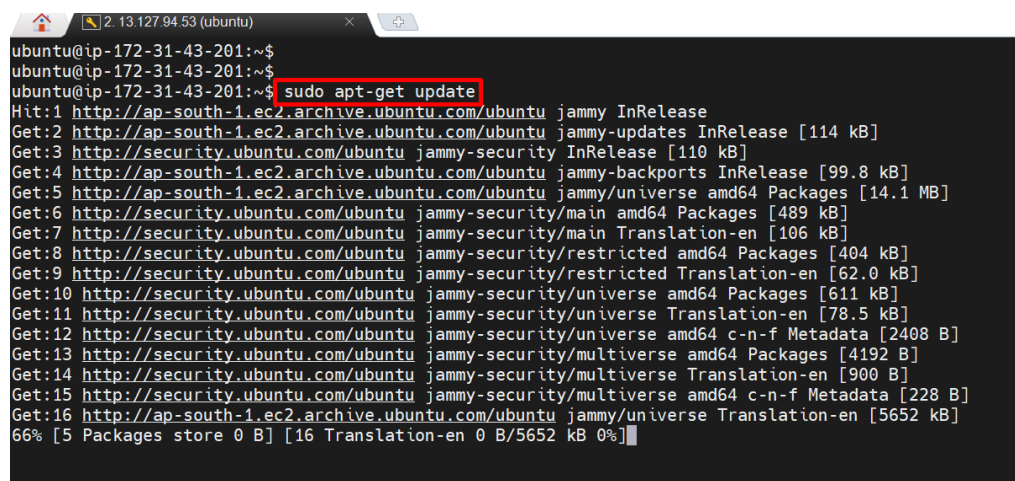
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Note: After successful connection with Virtual Machine, we can see below terminal

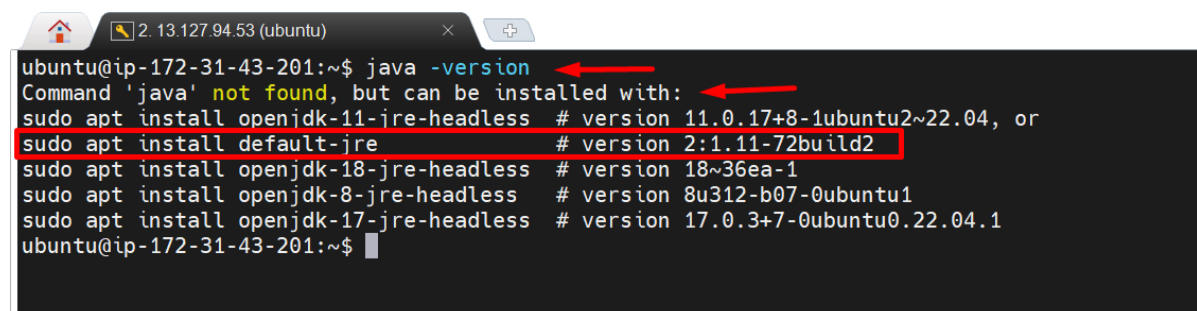


Step – 9 : Update packages using below command

```
$ sudo apt-get update
```



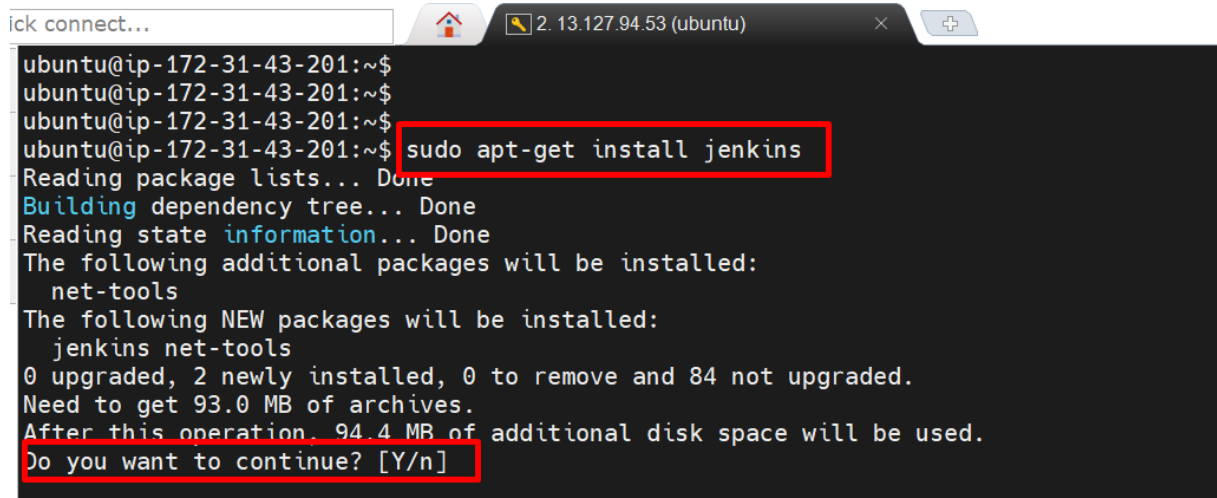
Step – 10 : Check Java version



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Step – 14 : Install Jenkins software using below command

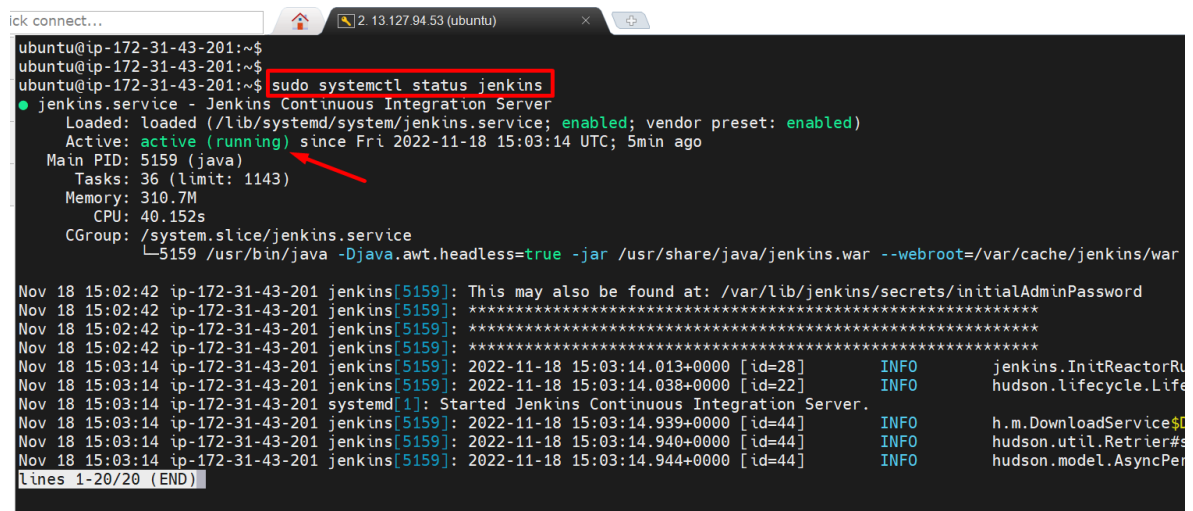
```
$ sudo apt-get install jenkins
```



```
ick connect... 2. 13.127.94.53 (ubuntu)
ubuntu@ip-172-31-43-201:~$
ubuntu@ip-172-31-43-201:~$
ubuntu@ip-172-31-43-201:~$ sudo apt-get install jenkins
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  net-tools
The following NEW packages will be installed:
  jenkins net-tools
0 upgraded, 2 newly installed, 0 to remove and 84 not upgraded.
Need to get 93.0 MB of archives.
After this operation, 94.4 MB of additional disk space will be used.
Do you want to continue? [Y/n]
```

Step – 15 : Check status of Jenkins Server using below command

```
$ sudo systemctl status jenkins
```



```
ick connect... 2. 13.127.94.53 (ubuntu)
ubuntu@ip-172-31-43-201:~$
ubuntu@ip-172-31-43-201:~$
ubuntu@ip-172-31-43-201:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
   Active: active (running) since Fri 2022-11-18 15:03:14 UTC; 5min ago
     Main PID: 5159 (java)
       Tasks: 36 (limit: 1143)
      Memory: 310.7M
         CPU: 40.152s
    CGroup: /system.slice/jenkins.service
            └─5159 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war

Nov 18 15:02:42 ip-172-31-43-201 jenkins[5159]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Nov 18 15:02:42 ip-172-31-43-201 jenkins[5159]: *****
Nov 18 15:02:42 ip-172-31-43-201 jenkins[5159]: *****
Nov 18 15:02:42 ip-172-31-43-201 jenkins[5159]: *****
Nov 18 15:03:14 ip-172-31-43-201 jenkins[5159]: 2022-11-18 15:03:14.013+0000 [id=28] INFO jenkins.InitReactorRu
Nov 18 15:03:14 ip-172-31-43-201 jenkins[5159]: 2022-11-18 15:03:14.038+0000 [id=22] INFO hudson.lifecycle.Life
Nov 18 15:03:14 ip-172-31-43-201 systemd[1]: Started Jenkins Continuous Integration Server.
Nov 18 15:03:14 ip-172-31-43-201 jenkins[5159]: 2022-11-18 15:03:14.939+0000 [id=44] INFO h.m.DownloadService$
Nov 18 15:03:14 ip-172-31-43-201 jenkins[5159]: 2022-11-18 15:03:14.940+0000 [id=44] INFO hudson.util.Retrier#s
Nov 18 15:03:14 ip-172-31-43-201 jenkins[5159]: 2022-11-18 15:03:14.944+0000 [id=44] INFO hudson.model.AsyncPer
lines 1-20/20 (END)
```


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Step – 16 : Open Security Group of our JENKINS VM

The screenshot shows the AWS Management Console interface for the 'Instances' page. The 'Jenkins-VM' instance is listed with ID 'i-03cd1ecf238466f23', state 'Running', and type 't2.micro'. Below the instance list, the 'Security groups' section is highlighted with a red box, showing 'sg-0f12a5294dffed5c3 (launch-wizard-2)'. The 'Inbound rules' section is also visible, with a search bar for filtering rules.

Instances (1/1) Info

Find instance by attribute or tag (case-sensitive)

Instance state = running X Clear filters

Name	Instance ID	Instance state	Instance type	Status check
Jenkins-VM	i-03cd1ecf238466f23	Running	t2.micro	2/2 checks passed

Instance: i-03cd1ecf238466f23 (Jenkins-VM)

Security groups

sg-0f12a5294dffed5c3 (launch-wizard-2)

Inbound rules

Filter rules

Step – 17: Add below Inbound rule to allow 8080 protocol

The screenshot shows the 'Edit inbound rules' page for the security group 'sg-0f12a5294dffed5c3 - launch-wizard-2'. The page displays a table of inbound rules. A new rule is being added, highlighted with a red box, with the following details: Type 'Custom TCP', Protocol 'TCP', Port range '8080', Source 'Anywhere on the Internet' (0.0.0.0/0), and Description 'Optional description'. The 'Add rule' button is visible at the bottom left.

EC2 > Security Groups > sg-0f12a5294dffed5c3 - launch-wizard-2 > Edit inbound rules

Edit inbound rules Info

Inbound rules control the incoming traffic that's allowed to reach the instance.

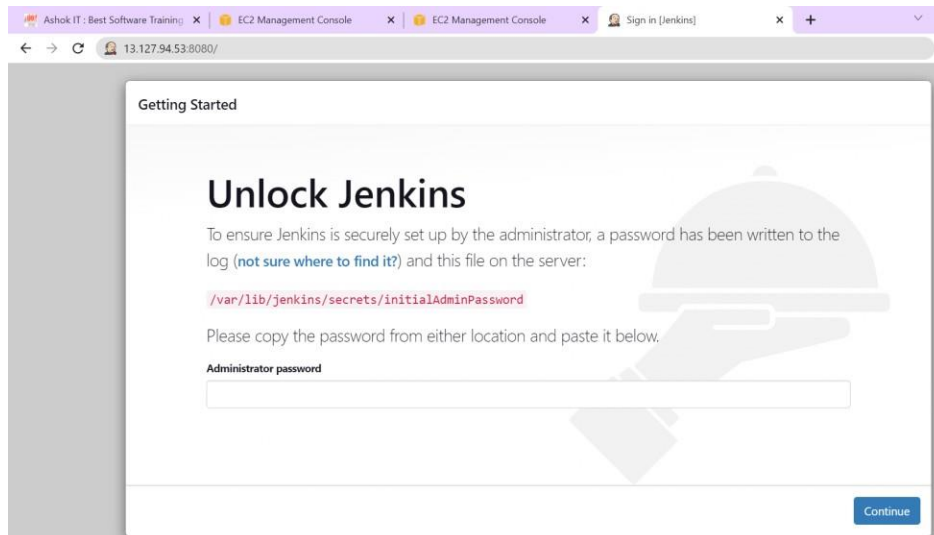
Inbound rules Info

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-05940697ace99f2f5	SSH	TCP	22	Custom	
-	Custom TCP	TCP	8080	Anywhere on the Internet	Optional description

Add rule

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Step – 18 : Access Jenkins Server in browser using public IP like below

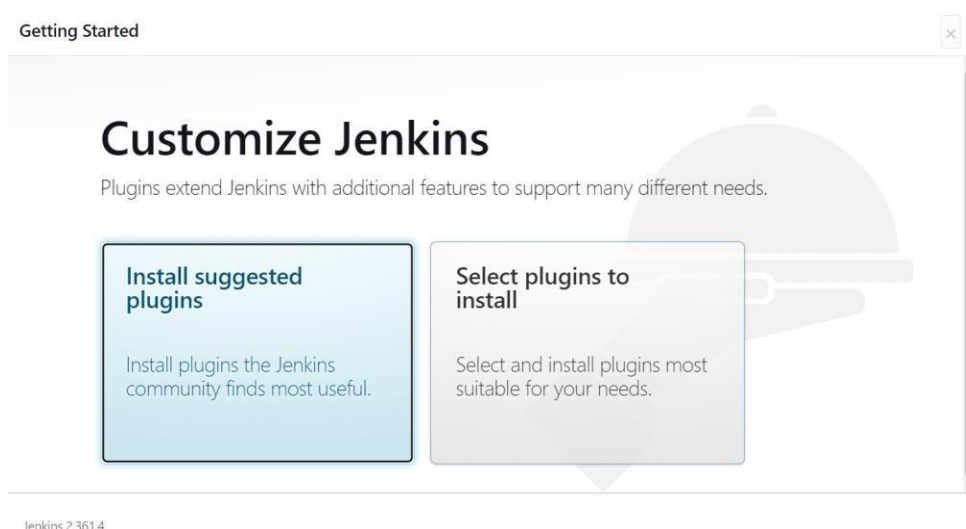


Step – 19 : To unlock Jenkins we need admin password; we can copy that using below command

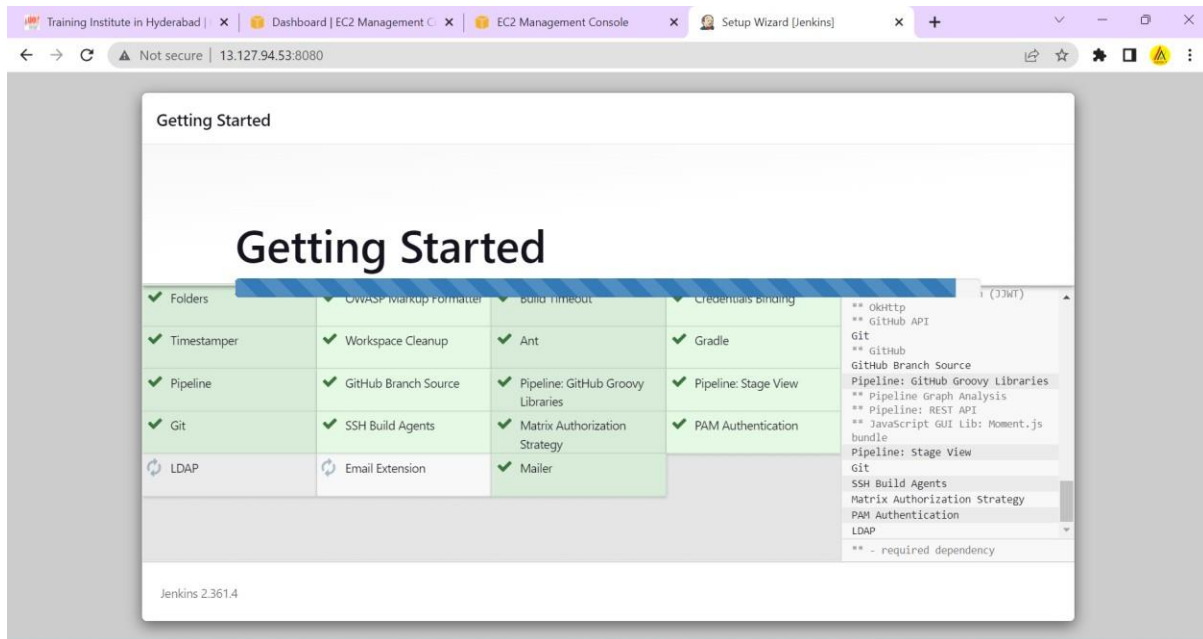
```
$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
```

```
ubuntu@ip-172-31-43-201:~$  
ubuntu@ip-172-31-43-201:~$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword  
ed634d751a774f959c5631fa85b8d20b  
ubuntu@ip-172-31-43-201:~$
```

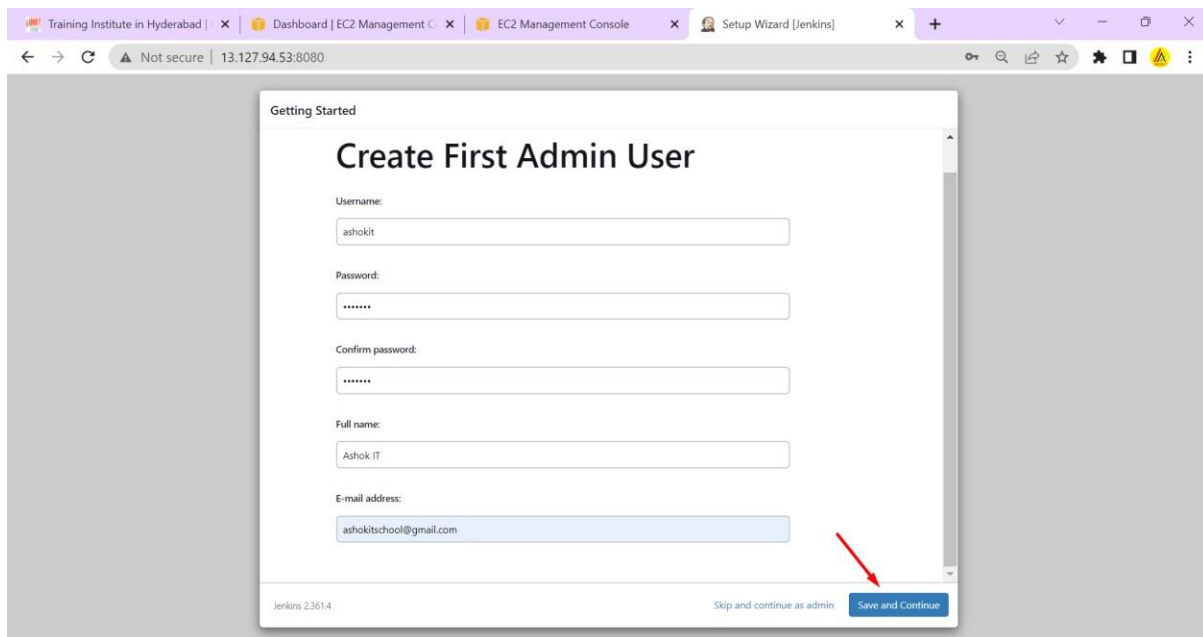
Step – 20 : Click on Install Suggested Plugins



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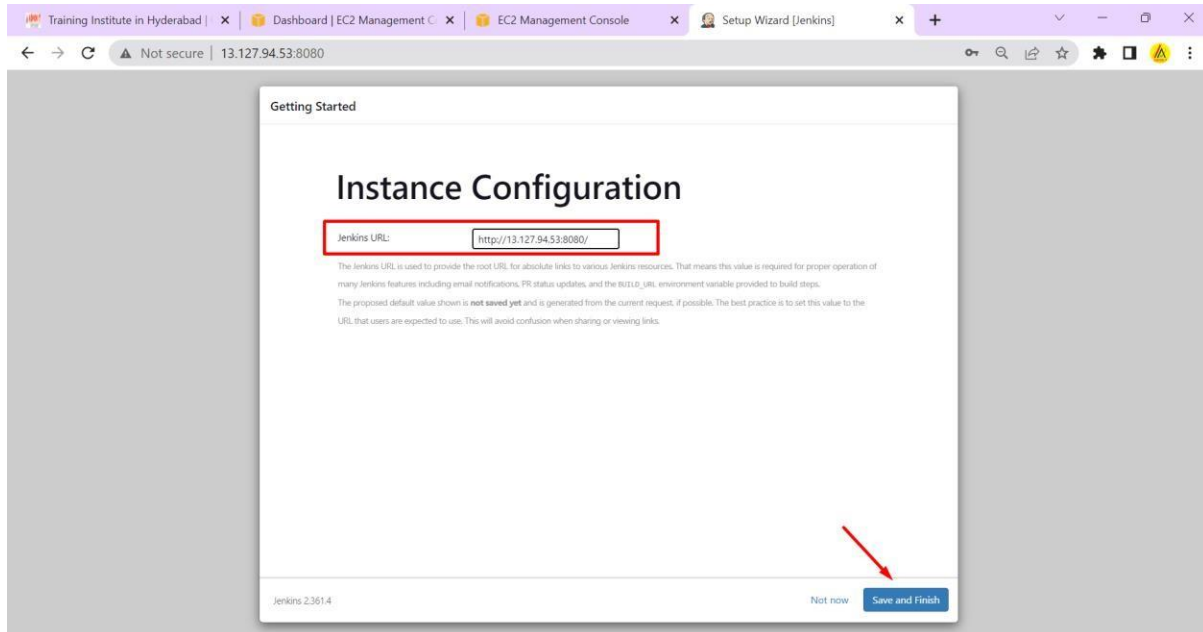


Step – 21 : Create Admin User account



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Step – 22 : Just Save and Finish in below screen



Note: Once setup is completed, we can see Jenkins dashboard like below.

