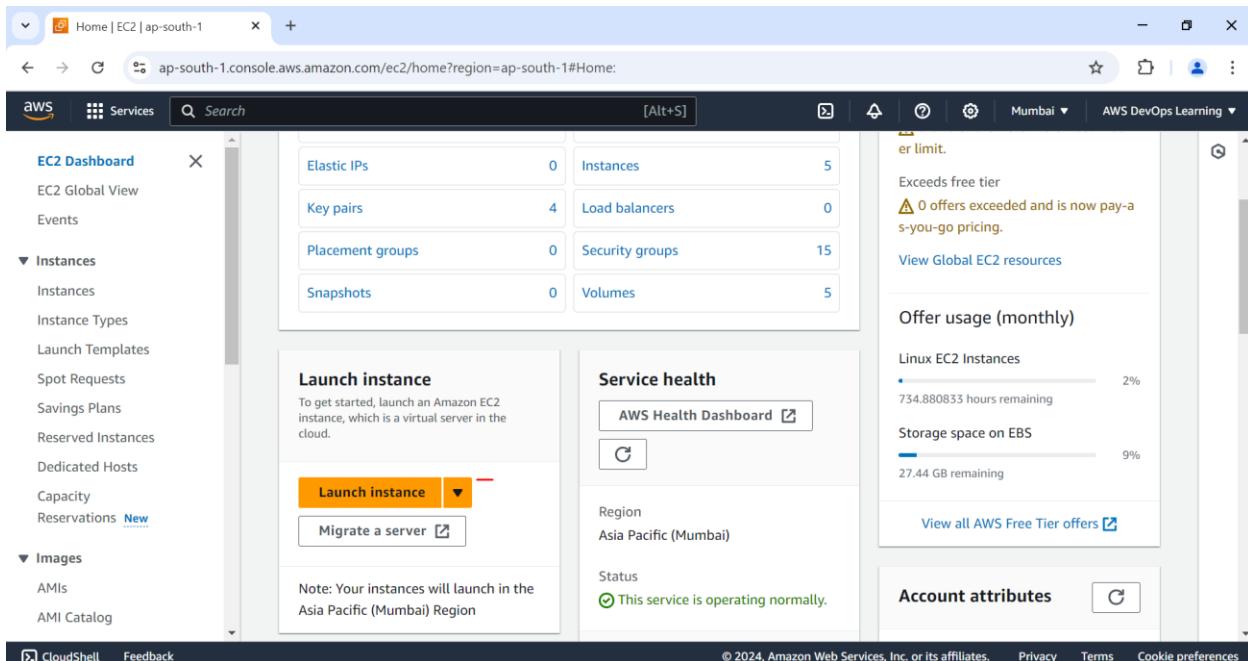


## Jenkins Setup

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

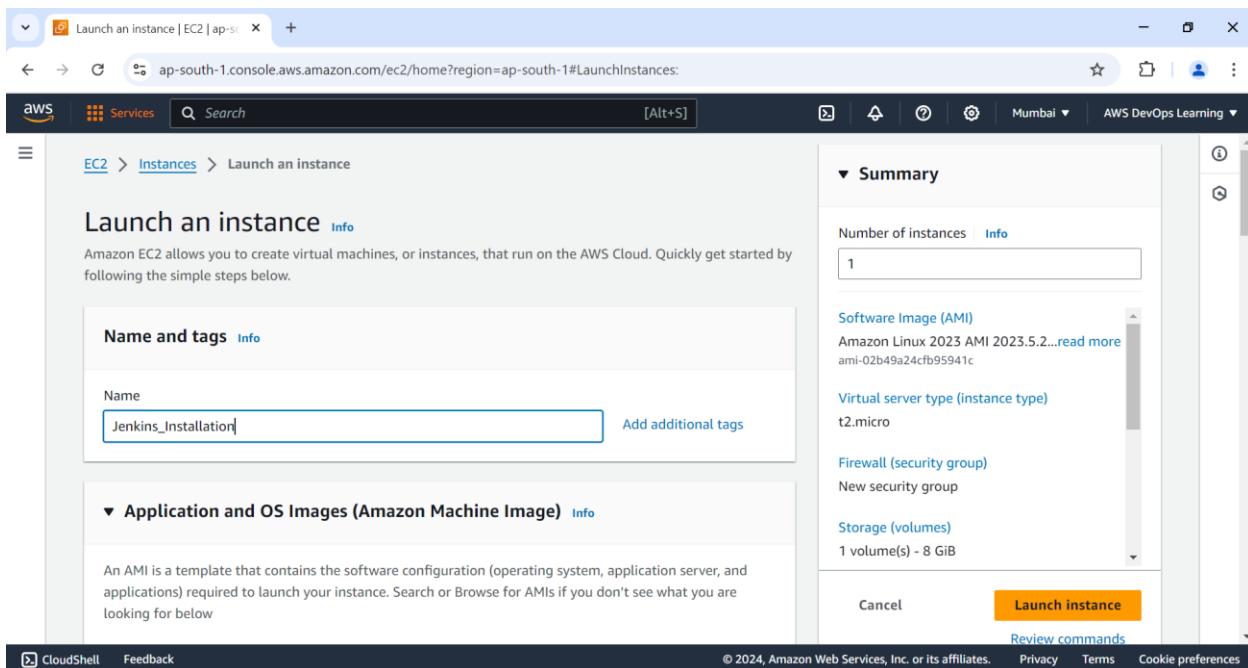
The image shows two screenshots of the AWS interface. The top screenshot is the 'Amazon Web Services Sign-In' page, where a user is logging in as 'surajk30june@gmail.com'. It features a 'Root user' selection option and a 'Next' button. A promotional banner for 'Amazon Aurora Optimized Reads' is visible on the right. The bottom screenshot is the 'Console Home' page, showing the 'Recently visited' section with links to EC2, Billing and Cost Management, S3, and CloudWatch, and the 'Applications' section which currently displays 'No applications'.

## Step 2: Click on Launch Instance.

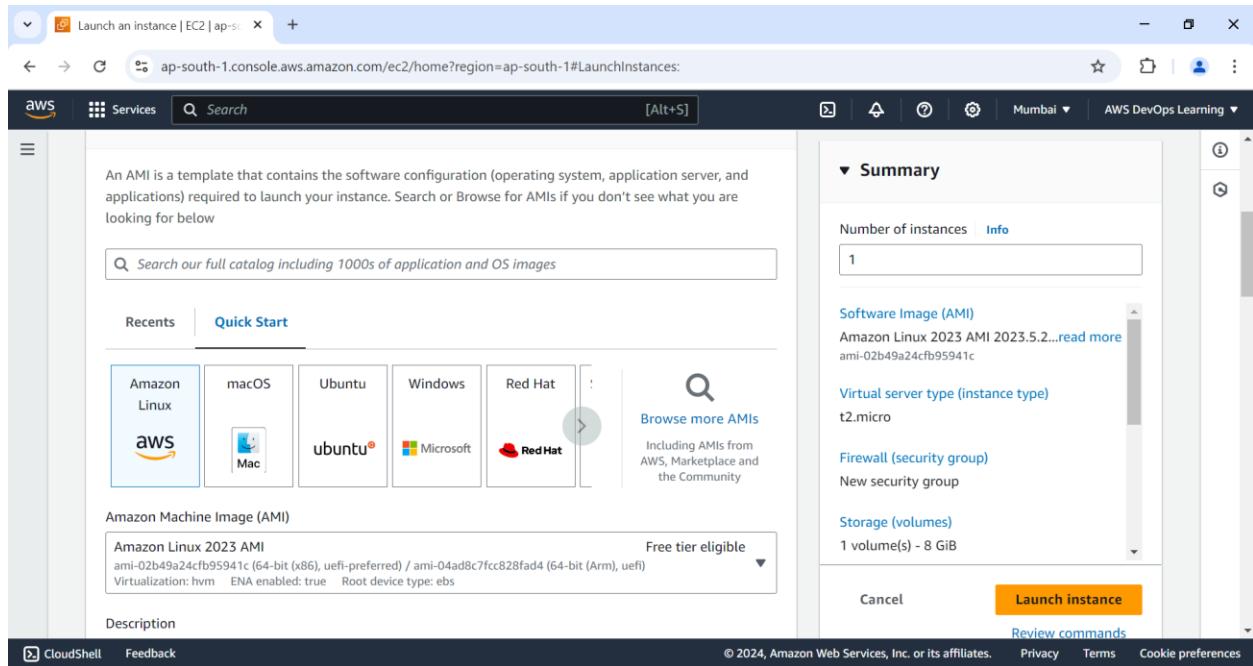


The screenshot shows the AWS EC2 Dashboard. On the left, there's a sidebar with various navigation options like EC2 Dashboard, Instances, Images, and Services. The main area has sections for Elastic IPs, Key pairs, Placement groups, Snapshots, Instances, Load balancers, Security groups, and Volumes. In the center, there's a 'Launch instance' section with a large orange 'Launch instance' button. To the right, there's a 'Service health' section showing the status of AWS Health Dashboard and a note that the service is operating normally. Below that is an 'Offer usage (monthly)' section for Linux EC2 Instances and Storage space on EBS. At the bottom, there are links for CloudShell, Feedback, and copyright information from 2024.

## Step-3: Give name for instance and select AMI



The screenshot shows the 'Launch an instance' wizard. It starts with a 'Summary' step where you can set the number of instances (1) and choose the software image (Amazon Linux 2023 AMI). Then it moves to the 'Name and tags' step, where you can enter a name for the instance (Jenkins\_Installation) and add tags. Finally, it reaches the 'Application and OS Images (Amazon Machine Image)' step, which provides a brief description of what an AMI is and allows you to search or browse for one. At the bottom, there are 'Cancel', 'Launch instance', and 'Review commands' buttons.

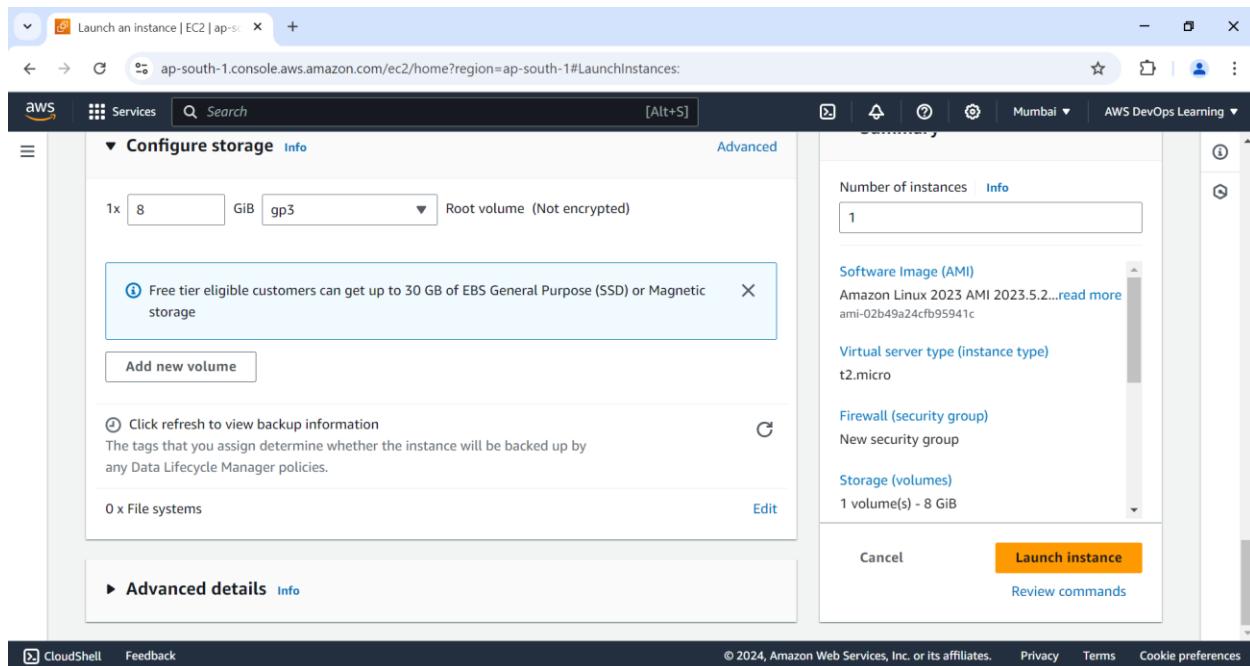
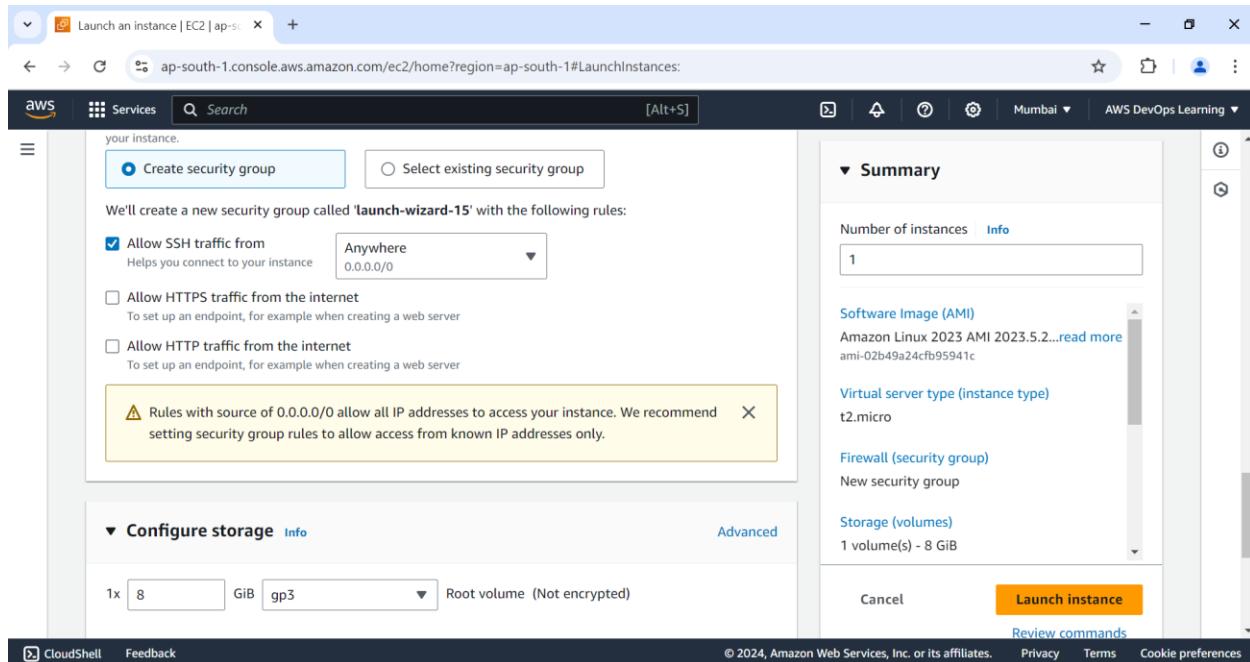


Step –4: Keep instance type as t2.mico and select Key Pair

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

(When we create a new key pair, it will download .pem file. Keep it safe. We need that .pem file to connect with the Machine using SSH)

Step –5: Select Security group Settings to allow SSH traffic and click on ‘Launch Instance’



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

The screenshot shows the AWS EC2 Instances launch success page. At the top, there's a green success message: "Successfully initiated launch of instance (i-02741f0b73bce234c)". Below it, a "Next Steps" section lists several options with small descriptions and buttons:

- Create billing and free tier usage alerts
- Connect to your instance
- Connect an RDS database
- Create EBS snapshot policy

Below these steps is a search bar and a navigation menu with pages 1 through 6.

At the bottom, there are links for CloudShell, Feedback, and a copyright notice: © 2024, Amazon Web Services, Inc. or its affiliates.

## Step – 7: Select Instance name checkbox and see Public IP of instance

The screenshot shows the AWS EC2 Instances list page. On the left, a sidebar navigation includes EC2 Dashboard, EC2 Global View, Events, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations (New), and Images (AMIs, AMI Catalog). The main area displays a table of instances:

Name	Instance ID	Instance state	Instance type	Status check
Jenkins_Server	i-055cbd45165ff6e23	Running	t2.micro	2/2 checks pass

Below the table, the instance details for "i-055cbd45165ff6e23 (Jenkins\_Server)" are shown, including tabs for Details, Status and alarms, Monitoring, Security, Networking, Storage, and Tags. Under the Details tab, the Public IPv4 address is listed as "172.31.17.123".

## Step –8: Click on connect button and connect to Jenkins VM

Screenshot of the AWS EC2 Instances page showing a single instance named Jenkins-VM (Instance ID: i-0763d47a1766a33c3). The 'Connect' button is highlighted.

**Instances (1/1) info**

Name	Instance ID	Instance state	Instance type	Status check	Alarm status
Jenkins-VM	i-0763d47a1766a33c3	Running	t2.micro	2/2 checks passed	<a href="#">View alarms</a>

**i-0763d47a1766a33c3 (Jenkins-VM)**

**Details** | Status and alarms | Monitoring | Security | Networking | Storage | Tags

**Instance summary**

Instance ID i-0763d47a1766a33c3 (Jenkins-VM)	Public IPv4 address 15.206.122.249   <a href="#">open address</a>	Private IPv4 addresses 172.31.33.229
IPv6 address -	Instance state <span style="color: green;">Running</span>	Public IPv4 DNS -

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Screenshot of the 'Connect' dialog for the Jenkins-VM instance. The 'Connect using EC2 Instance Connect' option is selected.

**Connection Type**

- Connect using EC2 Instance Connect  
Connect using the EC2 Instance Connect browser-based client, with a public IPv4 address.
- Connect using EC2 Instance Connect Endpoint  
Connect using the EC2 Instance Connect browser-based client, with a private IPv4 address and a VPC endpoint.

**Public IP address**  
15.206.122.249

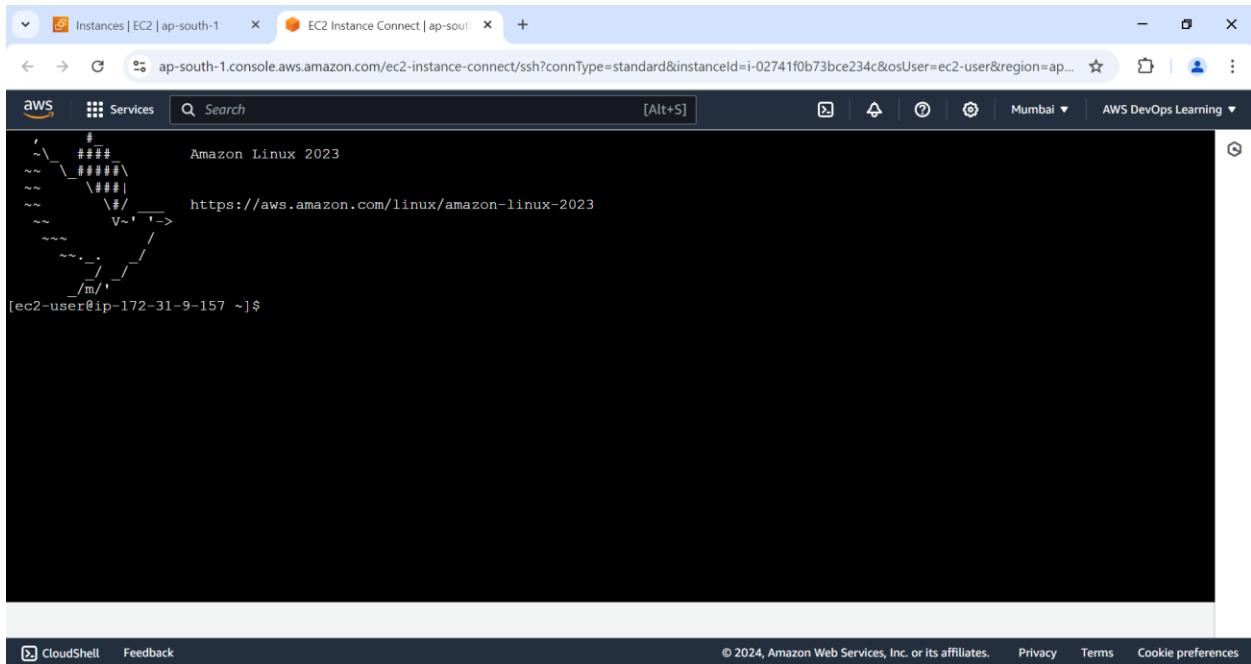
**Username**  
Enter the username defined in the AMI used to launch the instance. If you didn't define a custom username, use the default username, ec2-user.  
ec2-user

**Note:** In most cases, the default username, ec2-user, is correct. However, read your AMI usage instructions to check if the AMI owner has changed the default AMI username.

**Cancel** **Connect**

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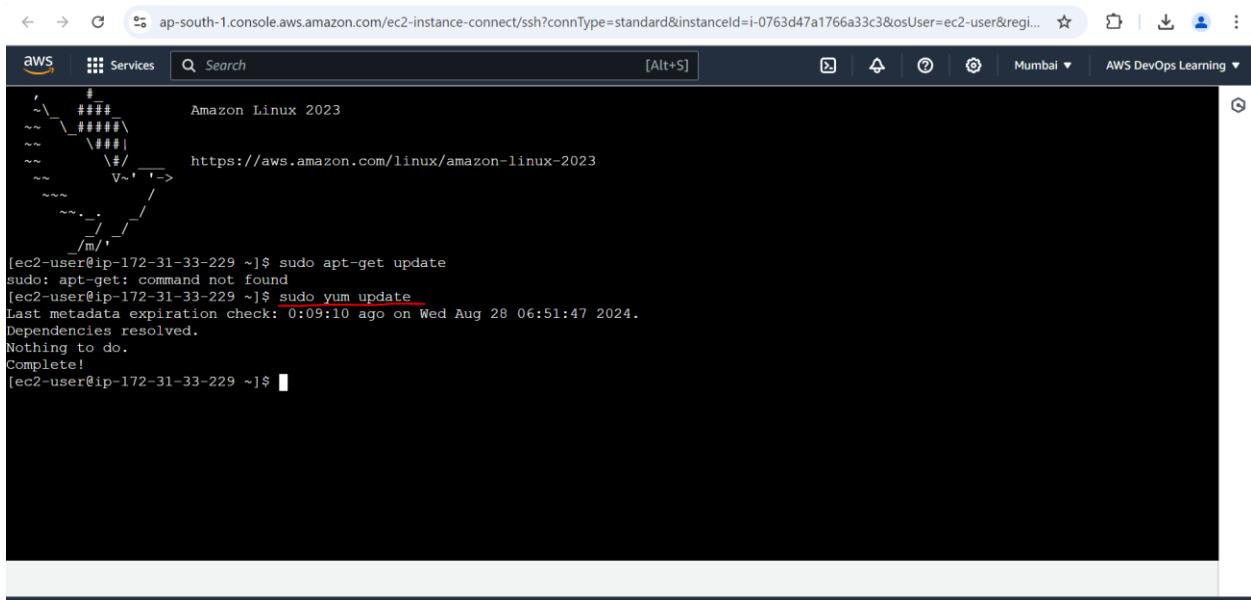
Note: After successful connection with Virtual Machin, we can see below terminal



```
[ec2-user@ip-172-31-9-157 ~]$
```

Step -9: Update Packages using the command below.

\$ sudo yum update



```
[ec2-user@ip-172-31-33-229 ~]$ sudo apt-get update
sudo: apt-get: command not found
[ec2-user@ip-172-31-33-229 ~]$ sudo yum update
Last metadata expiration check: 0:09:10 ago on Wed Aug 28 06:51:47 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-33-229 ~]$
```

Step- 10: Check Java Version

```

[ec2-user@ip-172-31-33-229 ~]$ sudo yum update
Last metadata expiration check: 0:09:10 ago on Wed Aug 28 06:51:47 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-33-229 ~]$ java -version
-bash: java: command not found
[ec2-user@ip-172-31-33-229 ~]$ java --version
-bash: java: command not found
[ec2-user@ip-172-31-33-229 ~]$ version java
-bash: version: command not found
[ec2-user@ip-172-31-33-229 ~]$ version --java
-bash: version: command not found
[ec2-user@ip-172-31-33-229 ~]$ java -v
-bash: java: command not found
[ec2-user@ip-172-31-33-229 ~]$ java -version
-bash: java: command not found
[ec2-user@ip-172-31-33-229 ~]$ yum update
Error: This command has to be run with superuser privileges (under the root user on most systems).
[ec2-user@ip-172-31-33-229 ~]$ sudo yum update
Last metadata expiration check: 0:15:42 ago on Wed Aug 28 06:51:47 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-33-229 ~]$ sudo yum install default-jar
Last metadata expiration check: 0:16:33 ago on Wed Aug 28 06:51:47 2024.
No match for argument: default-jar
Error: Unable to find a match: default-jar

```

Step –11: Install Java using Below command we required jdk version 17

`sudo dnf install java-17-amazon-corretto -y`

```

[ec2-user@ip-172-31-41-64 ~]$ sudo yum update -y
Last metadata expiration check: 0:00:25 ago on Wed Aug 28 08:43:15 2024.
No match for argument: -y
Error: No packages marked for upgrade.
[ec2-user@ip-172-31-41-64 ~]$ sudo dnf install java-17-amazon-corretto -y
Last metadata expiration check: 0:00:39 ago on Wed Aug 28 08:43:15 2024.
Dependencies resolved.

```

Package	Architecture	Version	Repository	Size
Installing:				
<code>java-17-amazon-corretto</code>	x86_64	1:17.0.12+7-1.amzn2023.1	amazonlinux	187 k
Installing dependencies:				
<code>alsa-lib</code>	x86_64	1.2.7.2-1.amzn2023.0.2	amazonlinux	504 k
<code>cairo</code>	x86_64	1.17.6-2.amzn2023.0.1	amazonlinux	684 k
<code>dejavu-sans-fonts</code>	noarch	2.37-16.amzn2023.0.2	amazonlinux	1.3 M
<code>dejavu-sans-mono-fonts</code>	noarch	2.37-16.amzn2023.0.2	amazonlinux	467 k
<code>dejavu-serif-fonts</code>	noarch	2.37-16.amzn2023.0.2	amazonlinux	1.0 M
<code>fontconfig</code>	x86_64	2.13.94-2.amzn2023.0.2	amazonlinux	273 k
<code>fonts-filesystem</code>	noarch	1:2.0.5-12.amzn2023.0.2	amazonlinux	9.5 k
<code>freetype</code>	x86_64	2.13.2-5.amzn2023.0.1	amazonlinux	423 k
<code>giflib</code>	x86_64	5.2.1-9.amzn2023.0.1	amazonlinux	49 k
<code>google-noto-fonts-common</code>	noarch	20201206-2.amzn2023.0.2	amazonlinux	15 k
<code>google-noto-sans-vf-fonts</code>	noarch	20201206-2.amzn2023.0.2	amazonlinux	492 k
<code>graphite2</code>	x86_64	1.3.14-7.amzn2023.0.2	amazonlinux	97 k
<code>harfbuzz</code>	x86_64	7.0.0-2.amzn2023.0.1	amazonlinux	868 k

Step –12: Verify Java Version

```

← → G ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0efeb49d1dc036d35&osUser...
Services Search [Alt+S] Mumbai AWS DevOps Learning
Verifying : xml-common-0.6.3-56.amzn2023.0.2.noarch
Installed:
alsa-lib-1.2.7.2-1.amzn2023.0.2.x86_64
dejavu-sans-fonts-2.37-16.amzn2023.0.2.noarch
dejavu-serif-fonts-2.37-16.amzn2023.0.2.noarch
fonts-filesystem-1:2.0.5-12.amzn2023.0.2.noarch
giflib-5.2.1-9.amzn2023.0.1.x86_64
google-noto-fonts-common-20201206-2.amzn2023.0.2.noarch
graphite2-1.3.14-7.amzn2023.0.2.x86_64
java-17-amazon-corretto-1:17.0.12+7-1.amzn2023.1.x86_64
javapackages-filesystem-6.0.0-7.amzn2023.0.6.noarch
libICE-1.0.10-6.amzn2023.0.2.x86_64
libX11-1.7.2-3.amzn2023.0.4.x86_64
libXau-1.0.9-6.amzn2023.0.2.x86_64
libXi-1.7.10-6.amzn2023.0.2.x86_64
libXrandr-1.5.2-6.amzn2023.0.2.x86_64
libXt-1.2.0-4.amzn2023.0.2.x86_64
libXtst-1.2.3-14.amzn2023.0.2.x86_64
libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64
libxcb-1.13.1-7.amzn2023.0.2.x86_64
xml-common-0.6.3-56.amzn2023.0.2.noarch

cairo-1.17.6-2.amzn2023.0.1.x86_64
dejavu-sans-mono-fonts-2.37-16.amzn2023.0.2.noarch
fontconfig-2.13.94-2.amzn2023.0.2.x86_64
freetype-2.13.2-5.amzn2023.0.1.x86_64
google-noto-fonts-common-20201206-2.amzn2023.0.2.noarch
graphite2-1.3.14-7.amzn2023.0.2.x86_64
java-17-amazon-corretto-1:17.0.12+7-1.amzn2023.1.x86_64
javapackages-filesystem-6.0.0-7.amzn2023.0.6.noarch
libICE-1.0.10-6.amzn2023.0.2.x86_64
libX11-1.7.2-3.amzn2023.0.4.x86_64
libXau-1.0.9-6.amzn2023.0.2.x86_64
libXi-1.7.10-6.amzn2023.0.2.x86_64
libXrandr-1.5.2-6.amzn2023.0.2.x86_64
libXt-1.2.0-4.amzn2023.0.2.x86_64
libbrotli-1.0.9-4.amzn2023.0.2.x86_64
libpng-2:1.6.37-10.amzn2023.0.6.x86_64
pixman-0.40.0-3.amzn2023.0.3.x86_64

Complete!
[ec2-user@ip-172-31-41-64 ~]$ java --version
openjdk 17.0.12 2024-07-16 LTS
OpenJDK Runtime Environment Corretto-17.0.12.7.1 (build 17.0.12+7-LTS)
OpenJDK 64-Bit Server VM Corretto-17.0.12.7.1 (build 17.0.12+7-LTS, mixed mode, sharing)
[ec2-user@ip-172-31-41-64 ~]$ 
```

Step- 13: Add Jenkins key to repository by executing below commands.

```

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

```

```

← → G ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0efeb49d1dc036d35&osUser...
Services Search [Alt+S] Mumbai AWS DevOps Learning
OpenJDK Runtime Environment Corretto-17.0.12.7.1 (build 17.0.12+7-LTS)
OpenJDK 64-Bit Server VM Corretto-17.0.12.7.1 (build 17.0.12+7-LTS, mixed mode, sharing)
[ec2-user@ip-172-31-41-64 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
  https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-08-28 08:46:24-- http://%20/
Resolving ( )... failed: Name or service not known.
wget: unable to resolve host address ''
-bash: https://pkg.jenkins.io/redhat-stable/jenkins.repo: No such file or directory
[ec2-user@ip-172-31-41-64 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
  https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-08-28 08:47:05-- http://%20/
Resolving ( )... failed: Name or service not known.
wget: unable to resolve host address ''
-bash: https://pkg.jenkins.io/redhat-stable/jenkins.repo: No such file or directory
[ec2-user@ip-172-31-41-64 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
  https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-08-28 08:47:21-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:4e42:24::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

/etc/yum.repos.d/jenkins.repo    100%[=====]----- 85 --.-KB/s   in 0s

2024-08-28 08:47:21 (3.39 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]
[ec2-user@ip-172-31-41-64 ~]$ 
```

Import a key file from Jenkins-CI to enable installation from the package

```

$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key

```

```
aws Services Search [Alt+S] Mumbai AWS DevOps Learning

Resolving ( )... failed: Name or service not known.
wget: unable to resolve host address ''
-bash: https://pkg.jenkins.io/redhat-stable/jenkins.repo: No such file or directory
[ec2-user@ip-172-31-41-64 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-08-28 08:47:05-- http://$20/
Resolving ( )... failed: Name or service not known.
wget: unable to resolve host address ''
-bash: https://pkg.jenkins.io/redhat-stable/jenkins.repo: No such file or directory
[ec2-user@ip-172-31-41-64 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-08-28 08:47:21-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:4e42:24::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

/etc/yum.repos.d/jenkins.repo    100%[=====]     85  --.-KB/s   in 0s

2024-08-28 08:47:21 (3.39 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[ec2-user@ip-172-31-41-64 ~]$ $ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
-bash: $: command not found
[ec2-user@ip-172-31-41-64 ~]$ $ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
-bash: $: command not found
[ec2-user@ip-172-31-41-64 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-41-64 ~]$
```

```
$ sudo yum upgrade
```

```
← → ⚙ ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0feb49d1dc036d35&osUser... ☆ 📁 🌐 🌐 🌐 Mumbai AWS DevOps Learning

aws Services Search [Alt+S] Mumbai AWS DevOps Learning

--2024-08-28 08:47:05-- http://%20/
Resolving ( )... failed: Name or service not known.
wget: unable to resolve host address `'
-bash: https://pkg.jenkins.io/redhat-stable/jenkins.repo: No such file or directory
[ec2-user@ip-172-31-41-64 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo \
    https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2024-08-28 08:47:21-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:4e42:24::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 85
Saving to: '/etc/yum.repos.d/jenkins.repo'

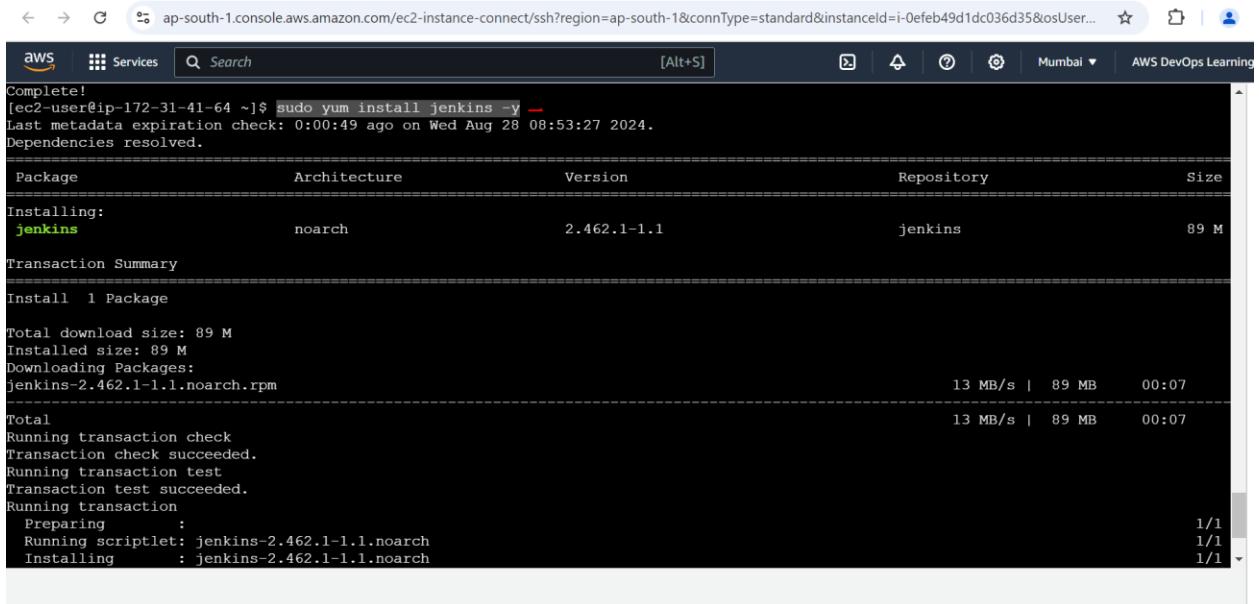
/etc/yum.repos.d/jenkins.repo    100%[=====]     85  --.-KB/s   in 0s

2024-08-28 08:47:21 (3.39 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]

[ec2-user@ip-172-31-41-64 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
-bash: $: command not found
[ec2-user@ip-172-31-41-64 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
-bash: $: command not found
[ec2-user@ip-172-31-41-64 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-41-64 ~]$ sudo yum upgrade -
Jenkins-stable                                         266 kB/s | 29 kB   00:00
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-41-64 ~]$
```

**Step – 14: Install Jenkins software using below command**

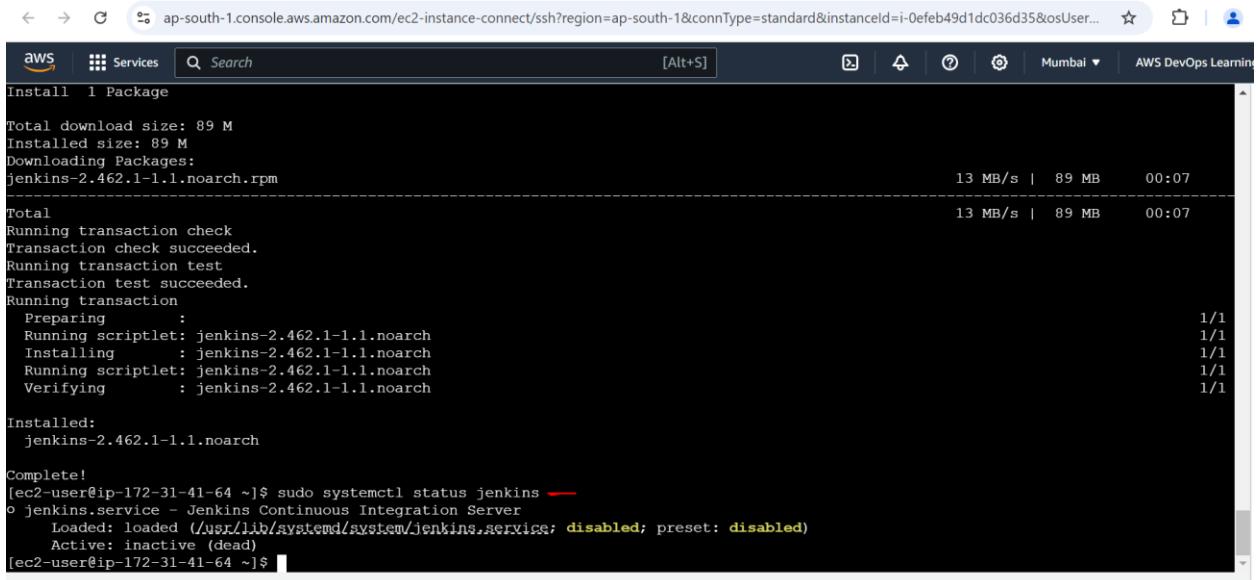
```
$ sudo yum install jenkins -y
```



```
Complete!
[ec2-user@ip-172-31-41-64 ~]$ sudo yum install jenkins -y
Last metadata expiration check: 0:00:49 ago on Wed Aug 28 08:53:27 2024.
Dependencies resolved.
=====
| Package           | Architecture | Version   | Repository | Size |
|=====             |=====         |=====      |=====       |===== |
| Installing:      |              |           |            |        |
| jenkins          | noarch      | 2.462.1-1.1 | jenkins    | 89 M  |
|=====             |              |           |            |        |
| Transaction Summary |          |           |            |        |
|=====             |              |           |            |        |
| Install 1 Package |          |           |            |        |
|=====             |              |           |            |        |
| Total download size: 89 M |          |           |            |        |
| Installed size: 89 M |          |           |            |        |
| Downloading Packages: |          |           |            |        |
| jenkins-2.462.1-1.1.noarch.rpm |          |           |            |        |
|=====             |              |           |            |        |
| Total           |          |           |            |        |
| Running transaction check |          |           |            |        |
| Transaction check succeeded. |          |           |            |        |
| Running transaction test |          |           |            |        |
| Transaction test succeeded. |          |           |            |        |
| Running transaction |          |           |            |        |
| Preparing : |          |           |            |        |
|   Running scriptlet: jenkins-2.462.1-1.1.noarch |          |           |        |
|   Installing : jenkins-2.462.1-1.1.noarch |          |           |        |
|=====             |              |           |            |        |
| 1/1             |          |           |            |        |
| 1/1             |          |           |            |        |
| 1/1             |          |           |            |        |
```

Step- 15: Check the status of Jenkins server using below command

```
sudo systemctl status jenkins
```



```
Install 1 Package
=====
| Package           | Architecture | Version   | Repository | Size |
|=====             |=====         |=====      |=====       |===== |
| Total download size: 89 M |          |           |            |        |
| Installed size: 89 M |          |           |            |        |
| Downloading Packages: |          |           |            |        |
| jenkins-2.462.1-1.1.noarch.rpm |          |           |            |        |
|=====             |              |           |            |        |
| Total           |          |           |            |        |
| Running transaction check |          |           |            |        |
| Transaction check succeeded. |          |           |            |        |
| Running transaction test |          |           |            |        |
| Transaction test succeeded. |          |           |            |        |
| Running transaction |          |           |            |        |
| Preparing : |          |           |            |        |
|   Running scriptlet: jenkins-2.462.1-1.1.noarch |          |           |        |
|   Installing : jenkins-2.462.1-1.1.noarch |          |           |        |
|   Running scriptlet: jenkins-2.462.1-1.1.noarch |          |           |        |
|   Verifying     : jenkins-2.462.1-1.1.noarch |          |           |        |
|=====             |              |           |            |        |
| 1/1             |          |           |            |        |
| 1/1             |          |           |            |        |
| 1/1             |          |           |            |        |
| 1/1             |          |           |            |        |
| 1/1             |          |           |            |        |
Installed:
 jenkins-2.462.1-1.1.noarch
=====
Complete!
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; disabled; preset: disabled)
     Active: inactive (dead)
[ec2-user@ip-172-31-41-64 ~]$
```

Step -16: Enable the Jenkins service to start at boot

```
$ sudo systemctl enable jenkins
```

```
← → C ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?region=ap-south-1&connType=standard&instanceId=i-0efeb49d1dc036d35&osUser... ☆ 📁 🌐 🔍
aws Services Search [Alt+S] Mumbai AWS DevOps Learning
Downloading Packages:
jenkins-2.462.1-1.1.noarch.rpm
Total 13 MB/s | 89 MB 00:07
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Running scriptlet: jenkins-2.462.1-1.1.noarch 1/1
Installing : jenkins-2.462.1-1.1.noarch 1/1
Running scriptlet: jenkins-2.462.1-1.1.noarch 1/1
Verifying : jenkins-2.462.1-1.1.noarch 1/1

Installed:
 jenkins-2.462.1-1.1.noarch

Complete!
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; disabled; preset: disabled)
     Active: inactive (dead)
[ec2-user@ip-172-31-41-64 ~]$ ll
total 0
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-41-64 ~]$
```

```
aws Services Search [Alt+S] Mumbai AWS DevOps Learning
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Running scriptlet: jenkins-2.462.1-1.1.noarch 1/1
Installing   : jenkins-2.462.1-1.1.noarch 1/1
Running scriptlet: jenkins-2.462.1-1.1.noarch 1/1
Verifying    : jenkins-2.462.1-1.1.noarch 1/1

Installed:
 jenkins-2.462.1-1.1.noarch

Complete!
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; disabled; preset: disabled)
     Active: inactive (dead)
[ec2-user@ip-172-31-41-64 ~]$ ll
total 0
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
     Active: inactive (dead)
[ec2-user@ip-172-31-41-64 ~]$
```

## Step – 17: Start Jenkins as a service

```
$ sudo systemctl start jenkins
```

```

Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
    Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
      Active: inactive (dead)
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl start jenkins
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
    Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
      Active: active (running) since Wed 2024-08-28 09:37:51 UTC; 39s ago
        Main PID: 27961 (java)
          Tasks: 46 (limit: 1112)
            Memory: 332.0M
              CPU: 16.897s
            CGroup: /system.slice/jenkins.service
                    └─27961 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Aug 28 09:37:42 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Aug 28 09:37:42 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: ****
Aug 28 09:37:42 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: ****
Aug 28 09:37:42 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: ****
Aug 28 09:37:51 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:51.897+0000 [id=32]      INFO  jen...
Aug 28 09:37:51 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:51.921+0000 [id=24]      INFO  huds...
Aug 28 09:37:51 ip-172-31-41-64.ap-south-1.compute.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Aug 28 09:37:52 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:52.762+0000 [id=47]      INFO  h.m...
Aug 28 09:37:52 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:52.763+0000 [id=47]      INFO  huds...
Aug 28 09:37:57 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:57.029+0000 [id=62]      WARNING

```

lines 1-20/20 (END)

**Step-18:** Still, we are not able to access the service, so we must Open security group of our Jenkins VM

Security group name	Security group ID	Description	VPC ID
launch-wizard-7	sg-0680e249ad0664939	created 2024-08-28T08:41:51.067Z	vpc-06378c01b5bccf95e

Inbound rules (1)

Name	Security group rule...	IP version	Type	Protocol
-	sgr-0de701a8c225ce057	IPv4	SSH	TCP

The screenshot shows the AWS EC2 ModifyInboundSecurityGroupRules interface. It displays two sets of inbound rules for different security groups.

**Top Security Group (sgr-04d0a8ed58dad0921):**

- Type: SSH
- Protocol: TCP
- Port range: 22
- Source: Custom (Cus...)
- Description: 0.0.0.0/0 (highlighted in blue)

**Bottom Security Group (sgr-0de701a8c225ce057):**

- Type: SSH
- Protocol: TCP
- Port range: 22
- Source: Custom (Cus...)
- Description: 0.0.0.0/0 (highlighted in blue)

**Custom Rule:**

- Type: Custom TCP
- Protocol: TCP
- Port range: 8080
- Source: Any (An...)
- Description: 0.0.0.0/0 (highlighted in blue)

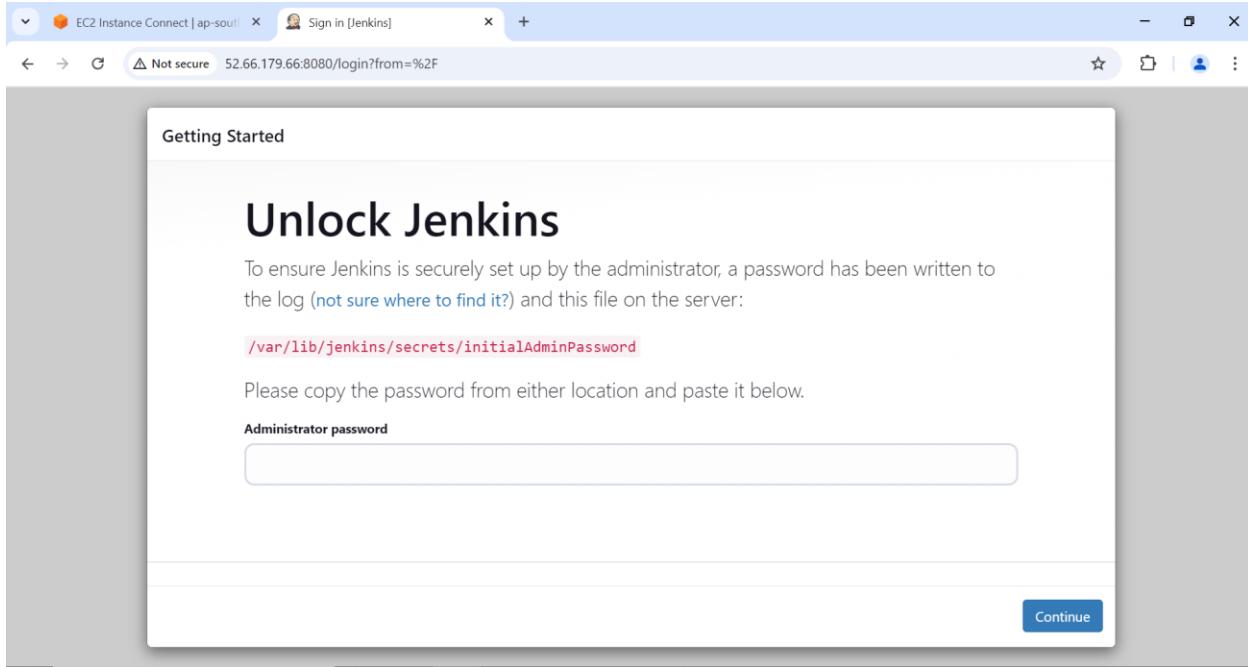
A yellow warning box at the bottom left states: "⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only." A red minus sign icon is next to the 0.0.0.0/0 entry.

Buttons at the bottom right include: Cancel, Preview changes, and Save rules (highlighted in orange).

## Save rules

Step –19: To unlock Jenkins we need an admin password we can copy using the below command.

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



```
Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
Active: inactive (dead)
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl start jenkins
[ec2-user@ip-172-31-41-64 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
  Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
  Active: active (running) since Wed 2024-08-28 09:37:51 UTC; 39s ago
    Main PID: 27961 (java)
      Tasks: 46 (limit: 1112)
     Memory: 332.0M
        CPU: 16.897s
       CGroup: /system.slice/jenkins.service
               └─27961 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Aug 28 09:37:42 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Aug 28 09:37:42 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: ****
Aug 28 09:37:51 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:51.897+0000 [id=32]      INFO      jen>
Aug 28 09:37:51 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:51.921+0000 [id=24]      INFO      hud>
Aug 28 09:37:51 ip-172-31-41-64.ap-south-1.compute.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Aug 28 09:37:52 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:52.762+0000 [id=47]      INFO      h.m>
Aug 28 09:37:52 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:52.763+0000 [id=47]      INFO      hud>
Aug 28 09:37:57 ip-172-31-41-64.ap-south-1.compute.internal jenkins[27961]: 2024-08-28 09:37:57.029+0000 [id=62]      WARNING >
lines 1-20/20 (END)
[ec2-user@ip-172-31-41-64 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
lf46dd05ala545a7964b590991105415
[ec2-user@ip-172-31-41-64 ~]$
```

Step- 20: Click on install suggested plugins

The screenshot shows the Jenkins Setup Wizard interface. The title bar reads "Setup Wizard [Jenkins]". The main content area is titled "Getting Started" and features a large heading "Customize Jenkins". Below it, a sub-section says "Plugins extend Jenkins with additional features to support many different needs." Two options are presented in boxes: "Install suggested plugins" (selected) and "Select plugins to install". The "Install suggested plugins" box contains the text "Install plugins the Jenkins community finds most useful." The "Select plugins to install" box contains the text "Select and install plugins most suitable for your needs." A note at the bottom left says "Jenkins 2.475".

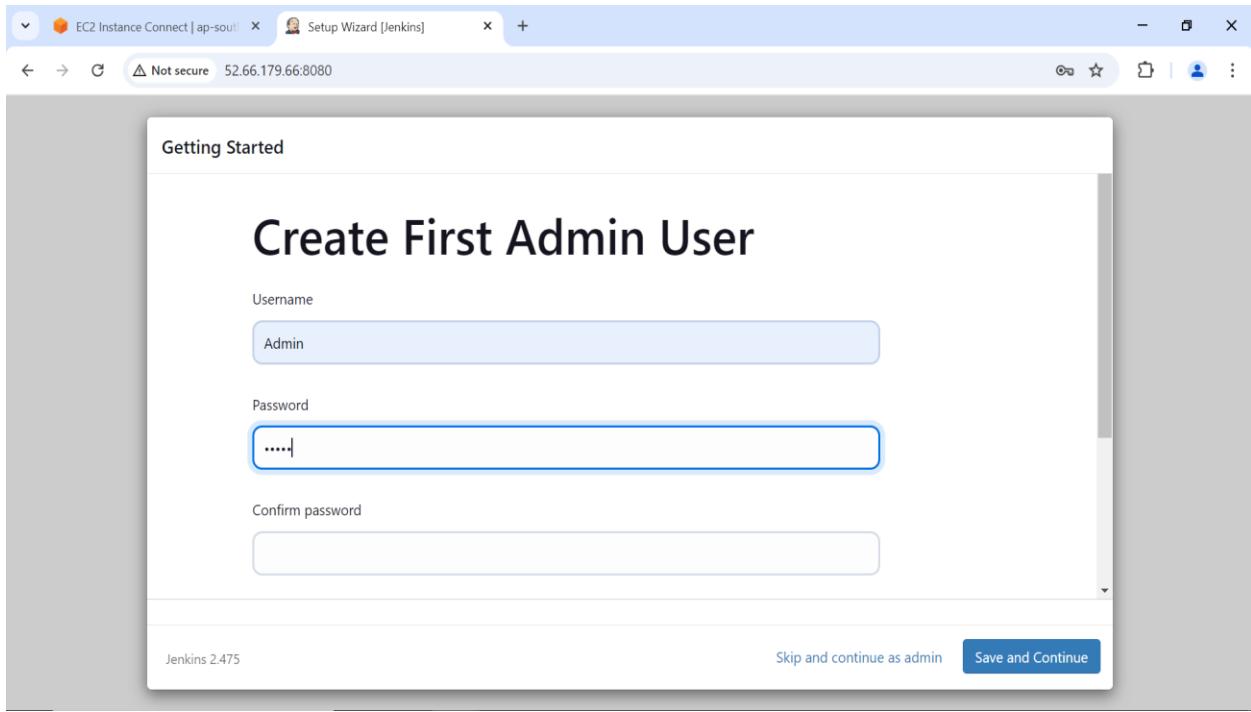
  

The screenshot shows the Jenkins "Getting Started" page. The title bar reads "Setup Wizard [Jenkins]". The main content area is titled "Getting Started" and displays a grid of Jenkins plugins. A tooltip is open over the "Folders" column, listing several dependencies. The tooltip content includes:

- OWASP Markup Formatter
- \*\* ASM API
- \*\* JSON Path API
- \*\* Structs
- \*\* Pipeline: Step API
- \*\* Token Macro
- Build Timeout**
- \*\* bouncycastle API

Below the tooltip, a note says "\*\* - required dependency". A note at the bottom left says "Jenkins 2.475".

## Step – 21: Create admin User Account



EC2 Instance Connect | ap-southeast-1 | Setup Wizard [Jenkins] | Not secure | 52.66.179.66:8080

## Getting Started

# Instance Configuration

Jenkins URL:

The Jenkins URL is used to provide the root URL for absolute links to various Jenkins resources. That means this value is required for proper operation of many Jenkins features including email notifications, PR status updates, and the BUILD\_URL environment variable provided to build steps.

The proposed default value shown is **not saved yet** and is generated from the current request, if possible. The best practice is to set this value to the URL that users are expected to use. This will avoid confusion when sharing or viewing links.

Jenkins 2.475      Not now      Save and Finish

EC2 Instance Connect | ap-southeast-1 | Dashboard [Jenkins] | Not secure | 52.66.179.66:8080

# Jenkins

Search (CTRL+K)      ?      Admin log out

Dashboard >

+ New Item      Add description

Build History      Manage Jenkins      My Views

## Welcome to Jenkins!

This page is where your Jenkins jobs will be displayed. To get started, you can set up distributed builds or start building a software project.

Start building your software project

Build Queue      Create a job      +

No builds in the queue.

Build Executor Status      0/2

Built-In Node      (offline)

Set up a distributed build      Set up an agent      Configure a cloud      Learn more about distributed builds

