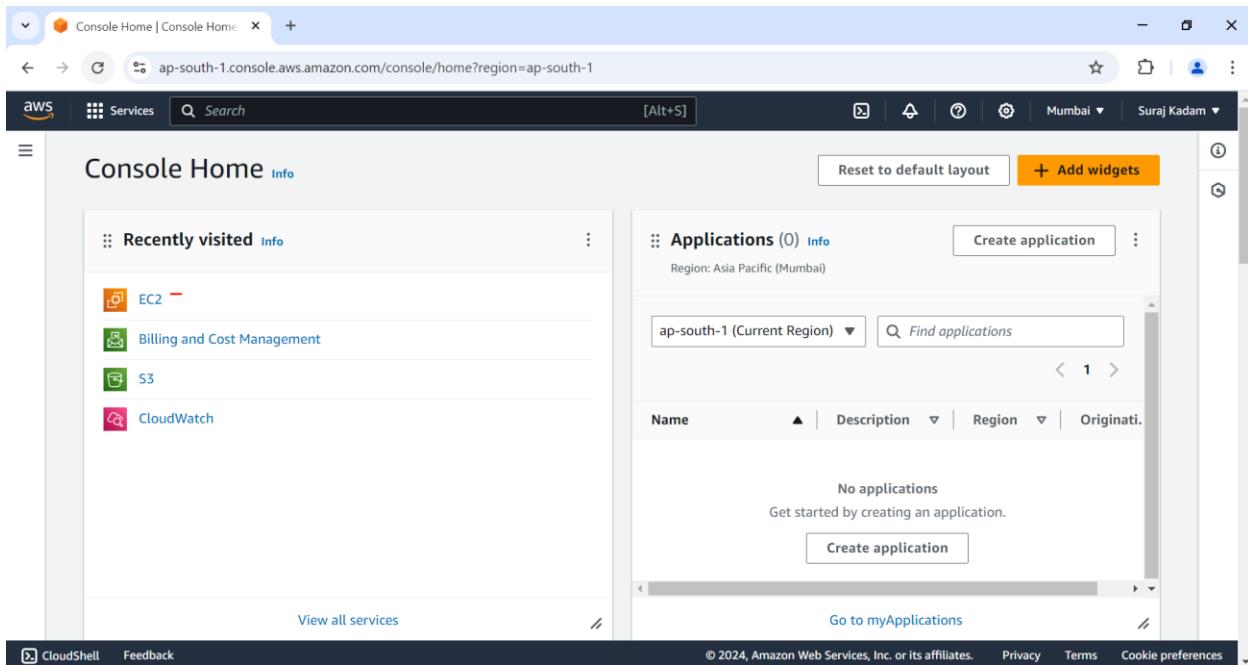
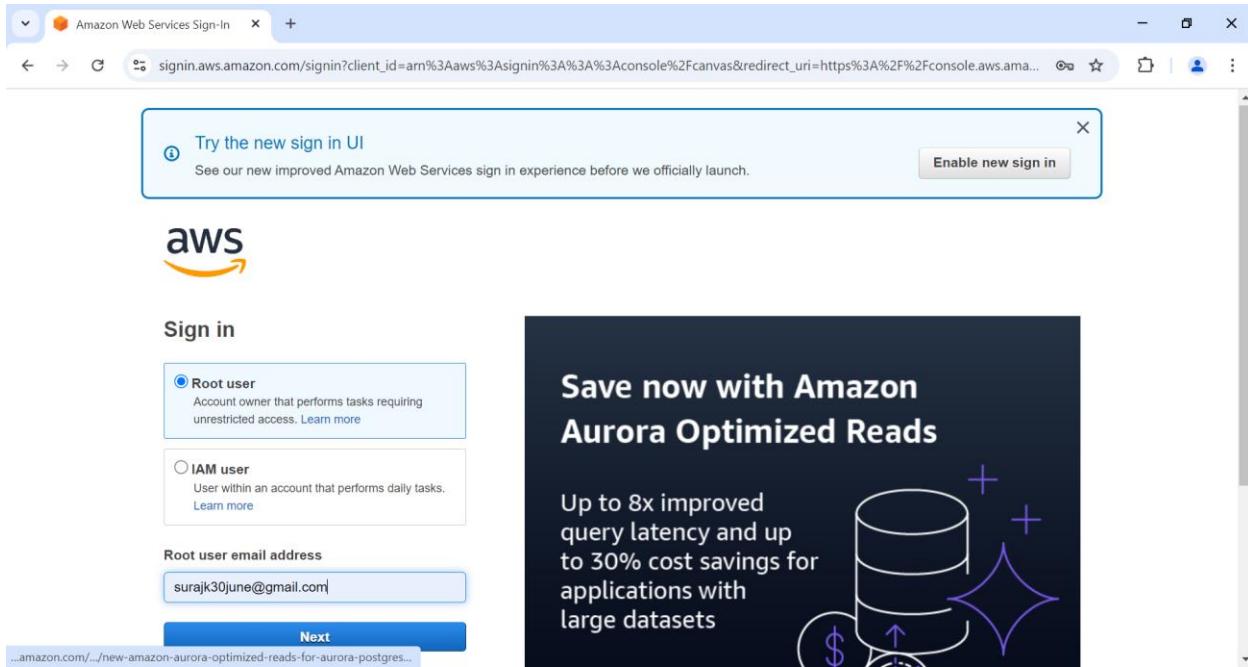


## Jenkins Setup

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

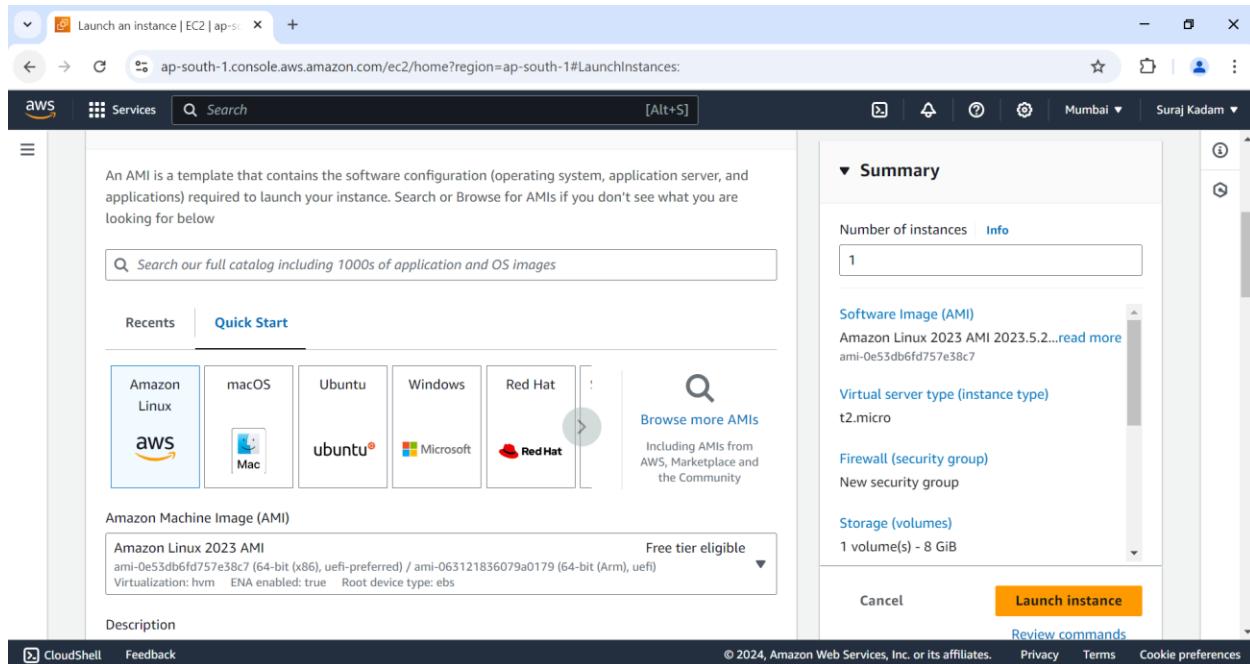


## Step 2: Click on Launch Instance.

The screenshot shows the AWS EC2 Dashboard. On the left, there's a sidebar with various EC2-related options like Instances, Images, and AMIs. The main area has a summary table with metrics like Elastic IPs (0), Instances (3), Key pairs (5), Load balancers (0), Placement groups (0), Security groups (22), Snapshots (0), and Volumes (3). Below this, there's a section titled 'Launch instance' with a large orange 'Launch instance' button. To the right of this is a 'Service health' section showing 'AWS Health Dashboard' and a status message: 'This service is operating normally.' On the far right, there are sections for 'Offer usage (monthly)' and 'Account attributes'. At the bottom, there are links for CloudShell, Feedback, and copyright information.

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

The screenshot shows the 'Launch an instance' wizard. The first step, 'Name and tags', is active. It has a 'Name' field containing 'Jenkins\_Server' and a 'Add additional tags' link. Below this is a section titled 'Application and OS Images (Amazon Machine Image)'. A note says: '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.' To the right, there's a 'Summary' panel with fields for 'Number of instances' (set to 1), 'Software Image (AMI)' (set to 'Amazon Linux 2023 AMI 2023.5.2...'), 'Virtual server type (instance type)' (set to 't2.micro'), 'Firewall (security group)' (set to 'New security group'), and 'Storage (volumes)' (set to '1 volume(s) - 8 GiB'). At the bottom, there are 'Cancel', 'Launch instance' (highlighted in orange), and 'Review commands' buttons. The footer includes links for CloudShell, Feedback, and copyright information.

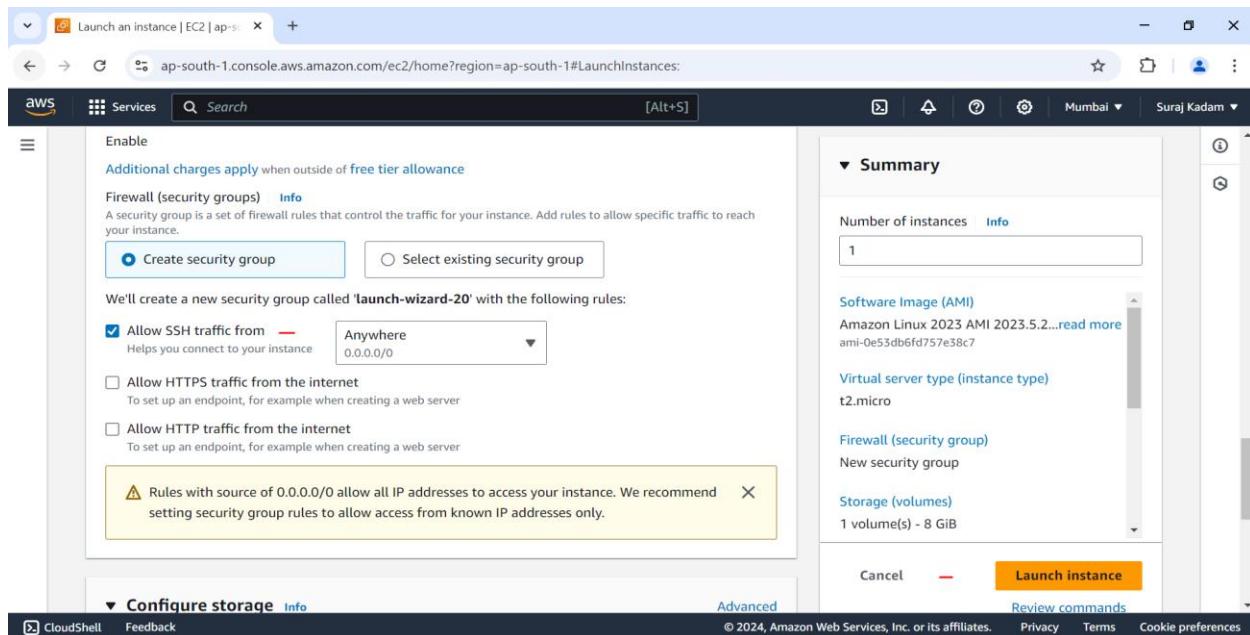


**Step –4: Keep instance type as t2.mico and select Key Pair**

**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 Machin 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 is a green success message: "Successfully initiated launch of instance (i-097d2fef27e295122)". Below this, there is a "Next Steps" section with several options:

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

At the bottom of the page, 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 details page for the instance i-097d2fef27e295122, which is named Jenkins\_Server. The instance is currently running. The public IPv4 address listed is 13.233.28.252. The private IPv4 address listed is 172.31.10.54. The public IPv4 DNS name listed is ec2-13-233-28-252.ap-south-1.compute.amazonaws.com.

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

The screenshot shows the AWS EC2 Instances 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 content area displays 'Instances (1/1) Info' with a last update of '1 minute ago'. A search bar at the top right says 'Find Instance by attribute or tag (case-sensitive)'. Below it is a table with one row for 'Jenkins\_Server'. The table columns are Name, Instance ID, Instance state, Instance type, and Status check. The instance is listed as 'Running' on 't2.micro' with a status of 'Initializing'. At the bottom of the page, there are tabs for Details, Status and alarms, Monitoring, Security, Networking, Storage, and Tags.

The screenshot shows the 'Connect to instance' dialog for the instance 'i-097d2fef27e295122 (Jenkins\_Server)'. It asks for a connection type: 'Connect using EC2 Instance Connect' (selected) or 'Connect using EC2 Instance Connect Endpoint'. It also shows the public IP address '13.233.28.252' and the default username 'ec2-user'. A note at the bottom states: '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.' There are 'Cancel' and 'Connect' buttons at the bottom.

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

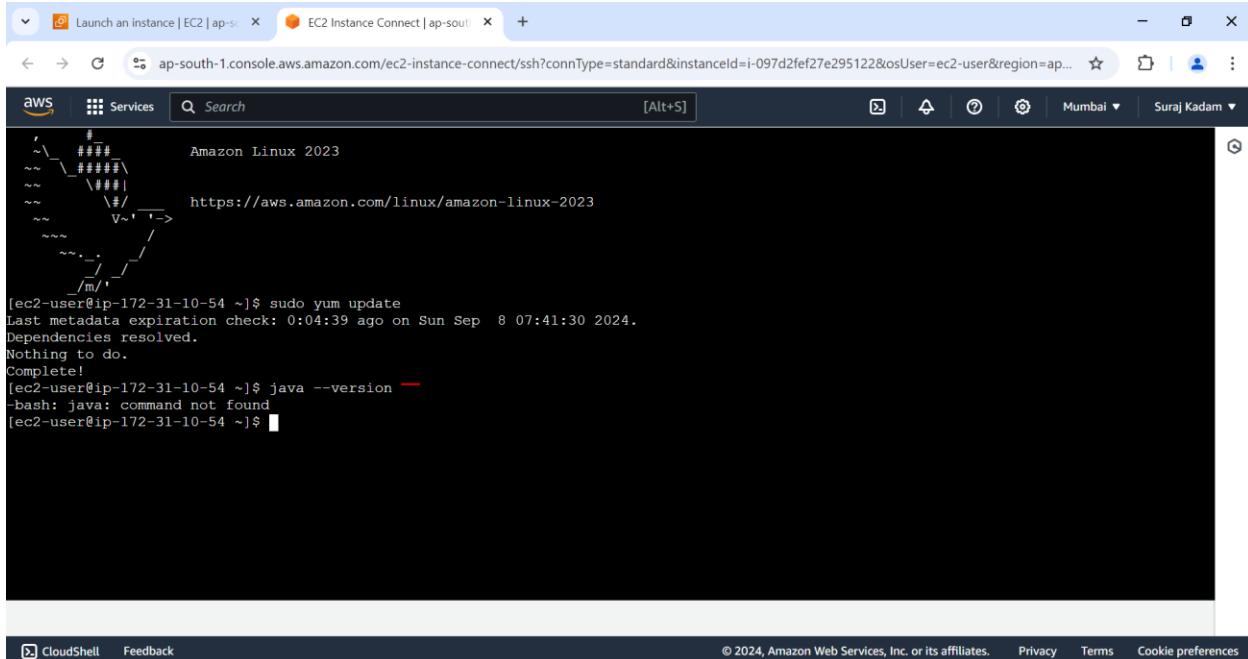
```
[ec2-user@ip-172-31-10-54 ~]$
```

Step -9: Update Packages using the command below.

```
$ sudo yum update
```

```
[ec2-user@ip-172-31-10-54 ~]$ sudo yum update
Last metadata expiration check: 0:04:39 ago on Sun Sep  8 07:41:30 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-10-54 ~]$
```

Step- 10: Check Java Version

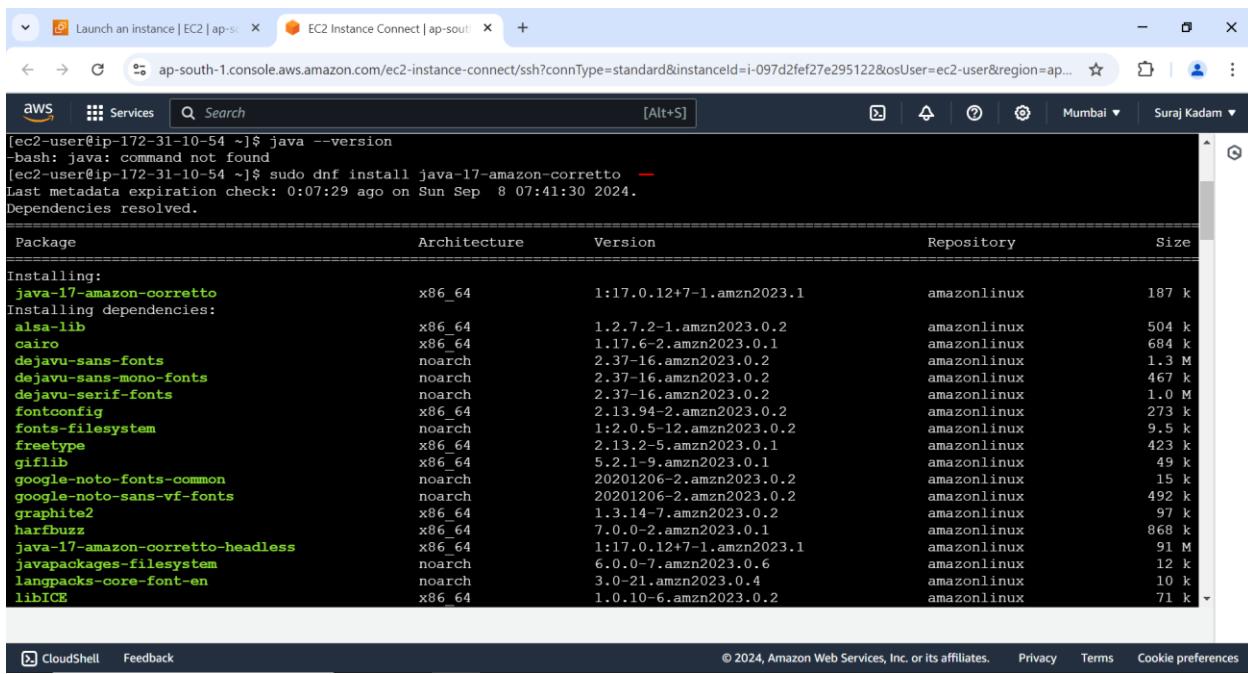


AWS CloudShell terminal session showing the following commands and output:

```
[ec2-user@ip-172-31-10-54 ~]$ sudo yum update
Last metadata expiration check: 0:04:39 ago on Sun Sep  8 07:41:30 2024.
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-10-54 ~]$ java --version
-bash: java: command not found
[ec2-user@ip-172-31-10-54 ~]$
```

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

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



AWS CloudShell terminal session showing the following commands and output:

```
[ec2-user@ip-172-31-10-54 ~]$ java --version
-bash: java: command not found
[ec2-user@ip-172-31-10-54 ~]$ sudo dnf install java-17-amazon-corretto -y
Last metadata expiration check: 0:07:29 ago on Sun Sep  8 07:41:30 2024.
Dependencies resolved.
```

Package	Architecture	Version	Repository	Size
java-17-amazon-corretto	x86_64	1:17.0.12+7-1.amzn2023.1	amazonlinux	187 k
Installing:				
alsa-lib	x86_64	1.2.7.2-1.amzn2023.0.2	amazonlinux	504 k
cairo	x86_64	1.17.6-2.amzn2023.0.1	amazonlinux	684 k
dejavu-sans-fonts	noarch	2.37-16.amzn2023.0.2	amazonlinux	1.3 M
dejavu-sans-mono-fonts	noarch	2.37-16.amzn2023.0.2	amazonlinux	467 k
dejavu-serif-fonts	noarch	2.37-16.amzn2023.0.2	amazonlinux	1.0 M
fontconfig	x86_64	2.13.94-2.amzn2023.0.2	amazonlinux	273 k
fonts-filesystem	noarch	1:2.0.5-12.amzn2023.0.2	amazonlinux	9.5 k
freetype	x86_64	2.13.2-5.amzn2023.0.1	amazonlinux	423 k
glib	x86_64	5.2.1-9.amzn2023.0.1	amazonlinux	49 k
google-noto-fonts-common	noarch	20201206-2.amzn2023.0.2	amazonlinux	15 k
google-noto-sans-vf-fonts	noarch	20201206-2.amzn2023.0.2	amazonlinux	492 k
graphite2	x86_64	1.3.14-7.amzn2023.0.2	amazonlinux	97 k
harfbuzz	x86_64	7.0.0-2.amzn2023.0.1	amazonlinux	868 k
java-17-amazon-corretto-headless	x86_64	1:17.0.12+7-1.amzn2023.1	amazonlinux	91 M
javapackages-filesystem	noarch	6.0.0-7.amzn2023.0.6	amazonlinux	12 k
langpacks-core-font-en	noarch	3.0.21.amzn2023.0.4	amazonlinux	10 k
libICE	x86_64	1.0.10-6.amzn2023.0.2	amazonlinux	71 k

Step -12: Verify Java Version

```

Launch an instance | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | + | - | X | 
ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-097d2fef27e295122&osUser=ec2-user&region=ap... | 
Services | Search | [Alt+S] | 
Mumbai | Suraj Kadam | 
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-fileref-1:0.5-12.amzn2023.0.2.noarch
giflib-5.2.1-9.amzn2023.0.1.x86_64
google-noto-sans-vf-fonts-20201206-2.amzn2023.0.2.noarch
harfbuzz-7.0.0-2.amzn2023.0.1.x86_64
java-17-amazon-corretto-headless-1:17.0.12+7-1.amzn2023.1.x86_64
langpacks-core-font-en-3.0-21.amzn2023.0.4.noarch
libSM-1.2.3-8.amzn2023.0.2.x86_64
libX11-common-1.7.2-3.amzn2023.0.4.noarch
libXext-1.3.4-6.amzn2023.0.2.x86_64
libXinerama-1.1.4-8.amzn2023.0.2.x86_64
libXrender-0.9.10-14.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
libJVM-1.7.0-10-6.amzn2023.0.1.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-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ 
```

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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

```

```

Launch an instance | EC2 | ap-south-1 | EC2 Instance Connect | ap-south-1 | + | - | X | 
ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-097d2fef27e295122&osUser=ec2-user&region=ap... | 
Services | Search | [Alt+S] | 
Mumbai | Suraj Kadam | 
libSM-1.2.3-8.amzn2023.0.2.x86_64
libX11-common-1.7.2-3.amzn2023.0.4.noarch
libXext-1.3.4-6.amzn2023.0.2.x86_64
libXinerama-1.1.4-8.amzn2023.0.2.x86_64
libXrender-0.9.10-14.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

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-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat/jenkins.repo
--2024-09-08 07:51:59-- https://pkg.jenkins.io/redhat/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 151.101.154.133, 2a04:e42:24:::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|151.101.154.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 71
Saving to: '/etc/yum.repos.d/jenkins.repo'

/etc/yum.repos.d/jenkins.repo    100%[=====] 71 --.-KB/s   in 0s

2024-09-08 07:51:59 (4.60 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [71/71]
[ec2-user@ip-172-31-10-54 ~]$ 
```

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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
```

```
Launch an instance | EC2 | ap-sou... EC2 Instance Connect | ap-sou... +  
← → G ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-097d2fef27e295122&osUser=ec2-user&region=ap... ★ 🗑 🌐 🌐 Mumbai ▾ Suraj Kadam ▾  
aws Services Search [Alt+S] Mumbai ▾ Suraj Kadam ▾  
libX11-common-1.7.2-3.amzn2023.0.4.noarch libXau-1.0.9-6.amzn2023.0.2.x86_64  
libKext-1.3.4-6.amzn2023.0.2.x86_64 libXi-1.7.10-6.amzn2023.0.2.x86_64  
libXinerama-1.1.4-8.amzn2023.0.2.x86_64 libXrandr-1.5.2-6.amzn2023.0.2.x86_64  
libXrender-0.9.10-14.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 libbrotli-1.0.9-4.amzn2023.0.2.x86_64  
libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64 libpng-2.1.6.37-10.amzn2023.0.6.x86_64  
libxcb-1.13.1-7.amzn2023.0.2.x86_64 pixman-0.40.0-3.amzn2023.0.3.x86_64  
xml-common-0.6.3-56.amzn2023.0.2.noarch  
  
Complete!  
{ec2-user@ip-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat/jenkins.repo  
- 2024-09-08 07:51:59-- https://pkg.jenkins.io/redhat/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: 71  
Saving to: '/etc/yum.repos.d/jenkins.repo'  
  
/etc/yum.repos.d/jenkins.repo 100%[=====>] 71 --.-KB/s in 0s  
  
2024-09-08 07:51:59 (4.60 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [71/71]  
  
{ec2-user@ip-172-31-10-54 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key  
{ec2-user@ip-172-31-10-54 ~}$
```

```
$ sudo yum upgrade
```

```
Launch an instance | EC2 | ap-sou... x EC2 Instance Connect | ap-sou... x +  
ap-south-1.console.aws.amazon.com/ec2-instance-connect/ssh?connType=standard&instanceId=i-097d2fef27e295122&osUser=ec2-user&region=ap... ☆ 📁 🔍 🔍 Mumbai ▾ Suraj Kadam ▾  
aws Services Search [Alt+S] 🌐 🔍 🔍 🔍 🔍 🔍 Mumbai ▾ Suraj Kadam ▾  
libjpeg-turbo-2.1.4-2.amzn2023.0.5.x86_64 libpng-2:1.6.37-10.amzn2023.0.6.x86_64  
libxcb-1.13.1-7.amzn2023.0.2.x86_64 pixman-0.40.0-3.amzn2023.0.3.x86_64  
xml-common-0.6.3-56.amzn2023.0.2.noarch  
  
Complete!  
[ec2-user@ip-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat/jenkins.repo  
--2024-09-08 07:51:59-- https://pkg.jenkins.io/redhat/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: 71  
Saving to: '/etc/yum.repos.d/jenkins.repo'  
  
/etc/yum.repos.d/jenkins.repo    100%[=====>]    71  --.-KB/s   in 0s  
  
2024-09-08 07:51:59 (4.60 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [71/71]  
  
[ec2-user@ip-172-31-10-54 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key  
[ec2-user@ip-172-31-10-54 ~]$ sudo yum upgrade --  
Jenkins  
Dependencies resolved.  
Nothing to do.  
Complete!  
[ec2-user@ip-172-31-10-54 ~]$
```

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

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

The screenshot shows a terminal window in the AWS CloudShell interface. The user has run the command `sudo yum install jenkins`. The output shows the package being installed from the `jenkins` repository. The transaction summary indicates one package is being installed, totaling 91 MB at 14 MB/s. The transaction check and test both succeed. Finally, the scriptlet for Jenkins is run.

```
Complete!
[ec2-user@ip-172-31-10-54 ~]$ sudo yum install jenkins --
Last metadata expiration check: 0:00:54 ago on Sun Sep 8 07:54:42 2024.
Dependencies resolved.

Transaction Summary
Install 1 Package

Total download size: 91 M
Installed size: 91 M
Is this ok [y/N]: y
Downloading Packages:
jenkins-2.475-1.1.noarch.rpm                                              14 MB/s | 91 MB   00:06

Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing :                                                 1/1
    Running scriptlet: jenkins-2.475-1.1.noarch
  Installing  : jenkins-2.475-1.1.noarch
  Running scriptlet: jenkins-2.475-1.1.noarch
  Verifying   : jenkins-2.475-1.1.noarch

Installed:
  jenkins-2.475-1.1.noarch

Complete!
```

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

```
sudo systemctl status jenkins
```

The screenshot shows the status of the Jenkins service using the command `sudo systemctl status jenkins`. The output indicates that the Jenkins service is currently inactive (dead). It was loaded from the `/usr/lib/systemd/system/Jenkins.service` file and is set to start at boot.

```
Total download size: 91 M
Installed size: 91 M
Is this ok [y/N]: y
Downloading Packages:
jenkins-2.475-1.1.noarch.rpm                                              14 MB/s | 91 MB   00:06

Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing :                                                 1/1
    Running scriptlet: jenkins-2.475-1.1.noarch
  Installing  : jenkins-2.475-1.1.noarch
  Running scriptlet: jenkins-2.475-1.1.noarch
  Verifying   : jenkins-2.475-1.1.noarch

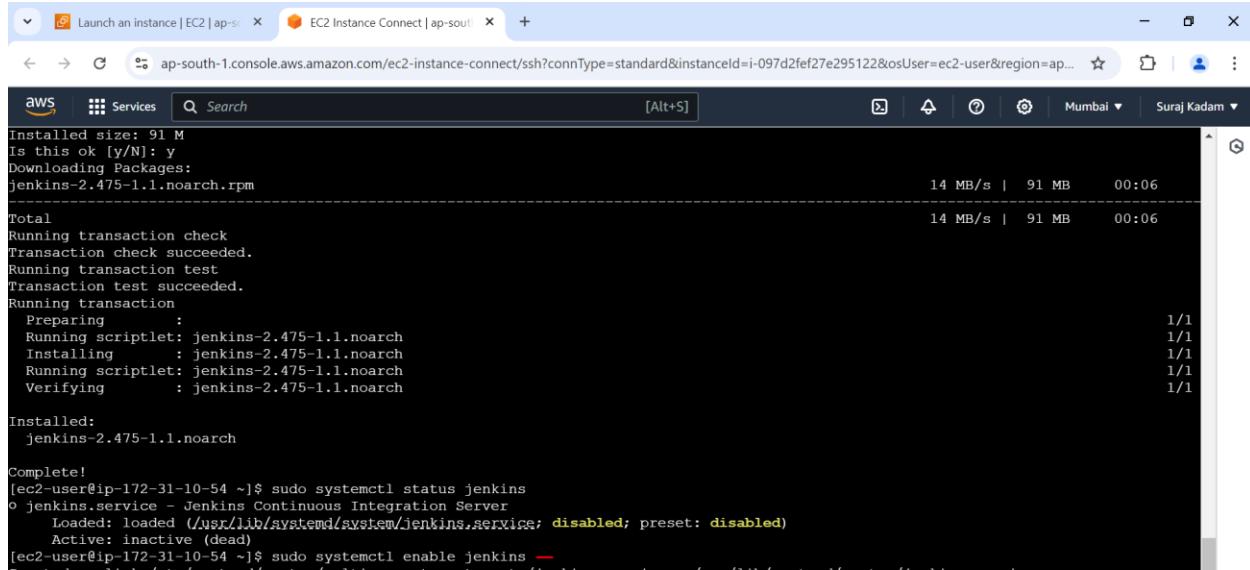
Installed:
  jenkins-2.475-1.1.noarch

Complete!
[ec2-user@ip-172-31-10-54 ~]$ sudo systemctl status jenkins --
● jenkins.service - Jenkins Continuous Integration Server
  Loaded: loaded (/usr/lib/systemd/system/Jenkins.service; disabled; preset: disabled)
    Active: inactive (dead)
      Docs: man:systemd-syscall.service(8)

[ec2-user@ip-172-31-10-54 ~]$
```

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

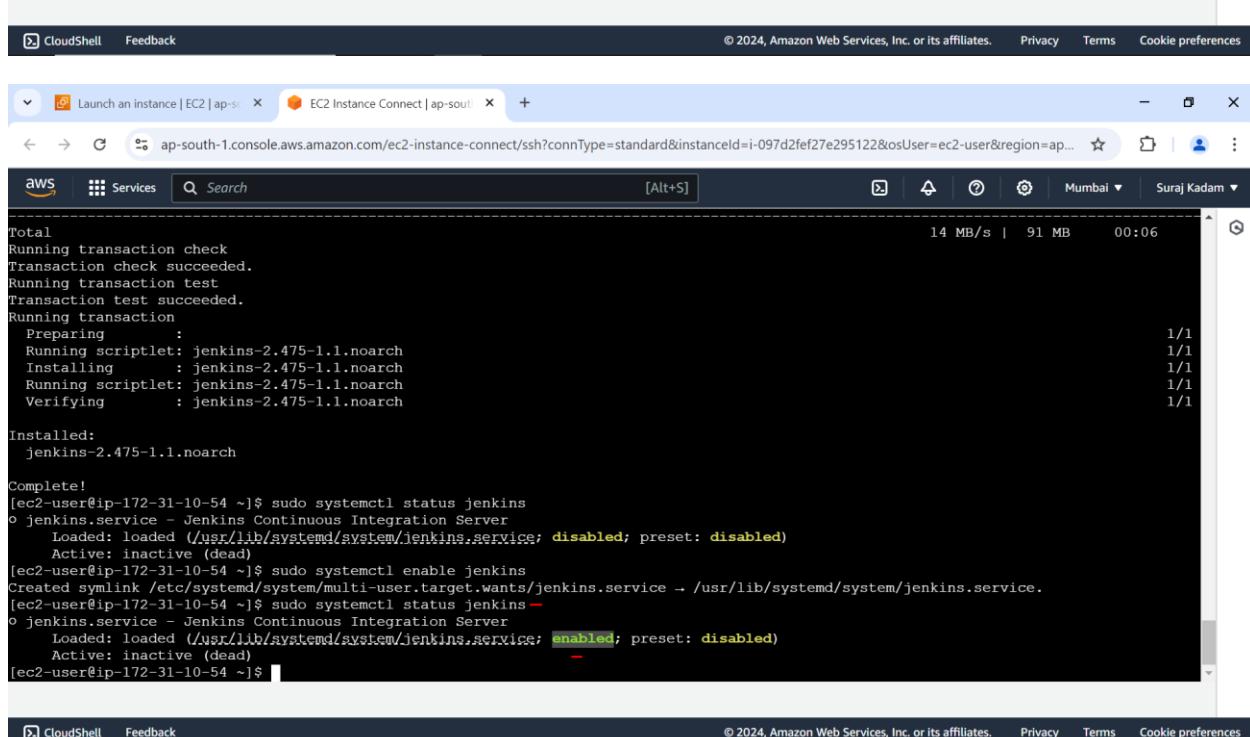
```
$ sudo systemctl enable jenkins
```



```
Installed size: 91 M
Is this ok [y/N]: y
Downloading Packages:
jenkins-2.475-1.1.noarch.rpm
Total                                         14 MB/s |  91 MB   00:06
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Running scriptlet: jenkins-2.475-1.1.noarch 1/1
Installing  : jenkins-2.475-1.1.noarch       1/1
Running scriptlet: jenkins-2.475-1.1.noarch 1/1
Verifying   : jenkins-2.475-1.1.noarch       1/1

Installed:
  jenkins-2.475-1.1.noarch

Complete!
[ec2-user@ip-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ sudo systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-10-54 ~]$
```



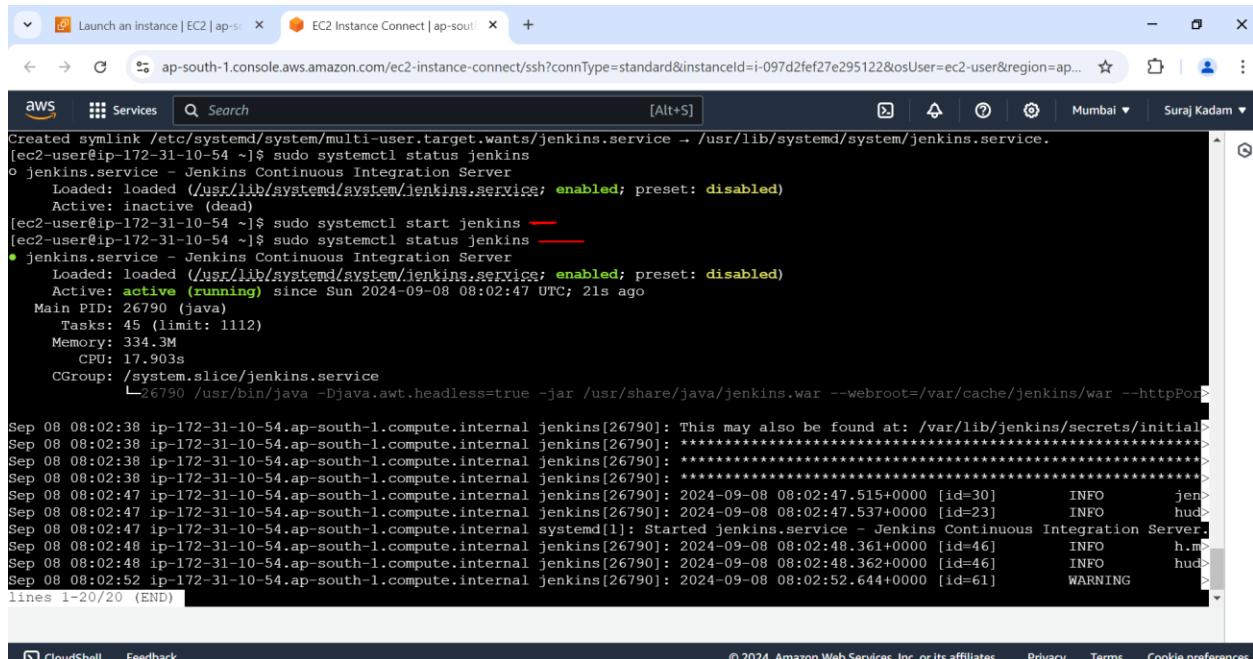
```
Total                                         14 MB/s |  91 MB   00:06
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing : 1/1
Running scriptlet: jenkins-2.475-1.1.noarch 1/1
Installing  : jenkins-2.475-1.1.noarch       1/1
Running scriptlet: jenkins-2.475-1.1.noarch 1/1
Verifying   : jenkins-2.475-1.1.noarch       1/1

Installed:
  jenkins-2.475-1.1.noarch

Complete!
[ec2-user@ip-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ sudo systemctl enable jenkins
Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-10-54 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
  Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
    Active: active (running)
      Docs: man:systemd-sysv-generator(8)
[ec2-user@ip-172-31-10-54 ~]$
```

## Step – 17: Start Jenkins as a service

```
$ sudo systemctl start jenkins
```



The screenshot shows the AWS CloudShell interface with two tabs open: "Launch an instance | EC2 | ap-south-1" and "EC2 Instance Connect | ap-south-1". The main terminal window displays the output of a command to start the Jenkins service on an EC2 instance. The logs show the Jenkins service being loaded and started successfully, with the status changing from "inactive (dead)" to "active (running)". The Jenkins service is running on port 22790.

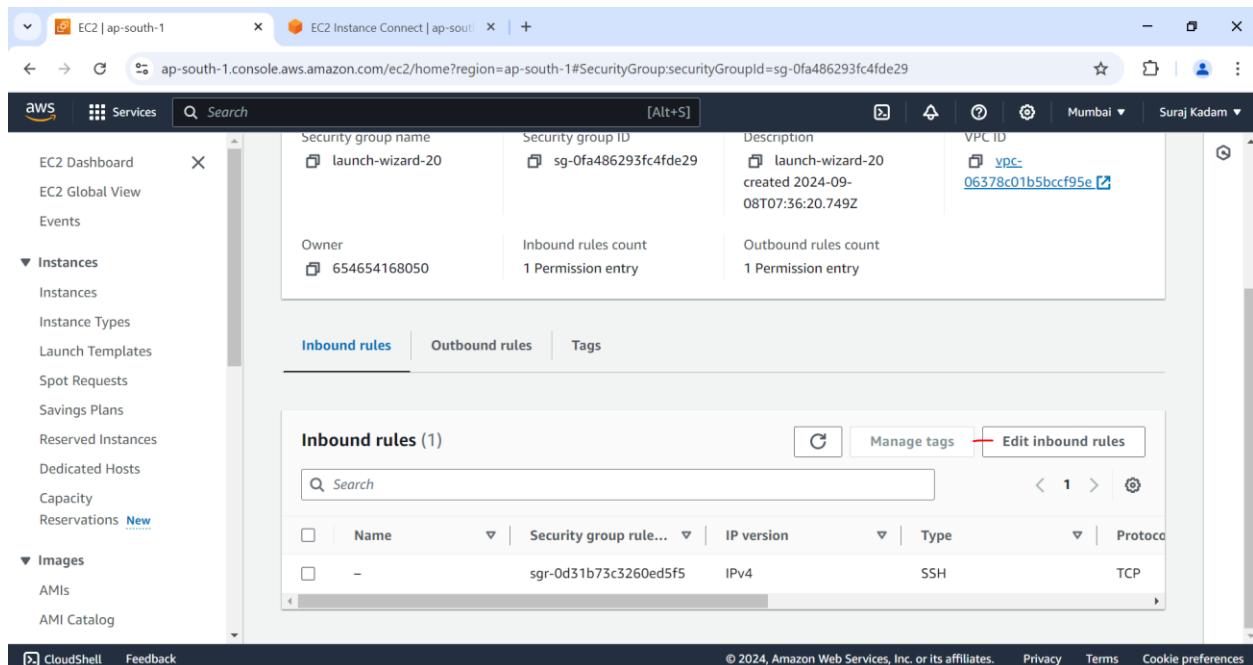
```

Created symlink /etc/systemd/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
[ec2-user@ip-172-31-10-54 ~]$ 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-172-31-10-54 ~]$ sudo systemctl start jenkins
[ec2-user@ip-172-31-10-54 ~]$ 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 Sun 2024-09-08 08:02:47 UTC; 21s ago
        Main PID: 26790 (java)
           Tasks: 45 (limit: 1112)
          Memory: 334.3M
             CPU: 17.903s
            CGroup: /system.slice/jenkins.service
                   ↳ 26790 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=22790

Sep 08 08:02:38 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Sep 08 08:02:38 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: ****
Sep 08 08:02:47 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:47.515+0000 [id=30]      INFO  jen...
Sep 08 08:02:47 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:47.537+0000 [id=23]      INFO  hudson...
Sep 08 08:02:47 ip-172-31-10-54.ap-south-1.compute.internal systemd[1]: Started Jenkins.service - Jenkins Continuous Integration Server.
Sep 08 08:02:48 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:48.361+0000 [id=46]      INFO  hudson...
Sep 08 08:02:48 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:48.362+0000 [id=46]      INFO  hudson...
Sep 08 08:02:52 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:52.644+0000 [id=61]      WARNING

```

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



The screenshot shows the AWS EC2 Security Groups page for the Jenkins VM. It lists a single security group named "launch-wizard-20" with the ID "sg-0fa486293fc4fde29". The group has one inbound rule allowing SSH traffic (TCP port 22) from any IP address. The "Inbound rules" tab is selected.

Security group name	Security group ID	Description	VPC ID
launch-wizard-20	sg-0fa486293fc4fde29	launch-wizard-20 created 2024-09-08T07:36:20.749Z	VPC- 06378c01b5bccf95e

Owner	Inbound rules count	Outbound rules count
654654168050	1 Permission entry	1 Permission entry

**Inbound rules (1)**

Name	Security group rule...	IP version	Type	Protocol
-	sgr-0d31b73c3260ed5f5	IPv4	SSH	TCP

The screenshot shows the AWS EC2 Inbound Rules configuration page. A single rule is listed:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-0d31b73c3260ed5f5	SSH	TCP	22	Cus... ▾	Info
				<input type="text" value="0.0.0.0/0"/> X	

A yellow warning box 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." X

The screenshot shows the AWS EC2 Inbound Rules configuration page with two rules listed:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-0d31b73c3260ed5f5	SSH	TCP	22	Cus... ▾	Info
-	Custom TCP	TCP	8080	An... ▾	Info
				<input type="text" value="0.0.0.0/0"/> X	
				<input type="text" value="0.0.0.0/0"/> X	—

A yellow warning box 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." X

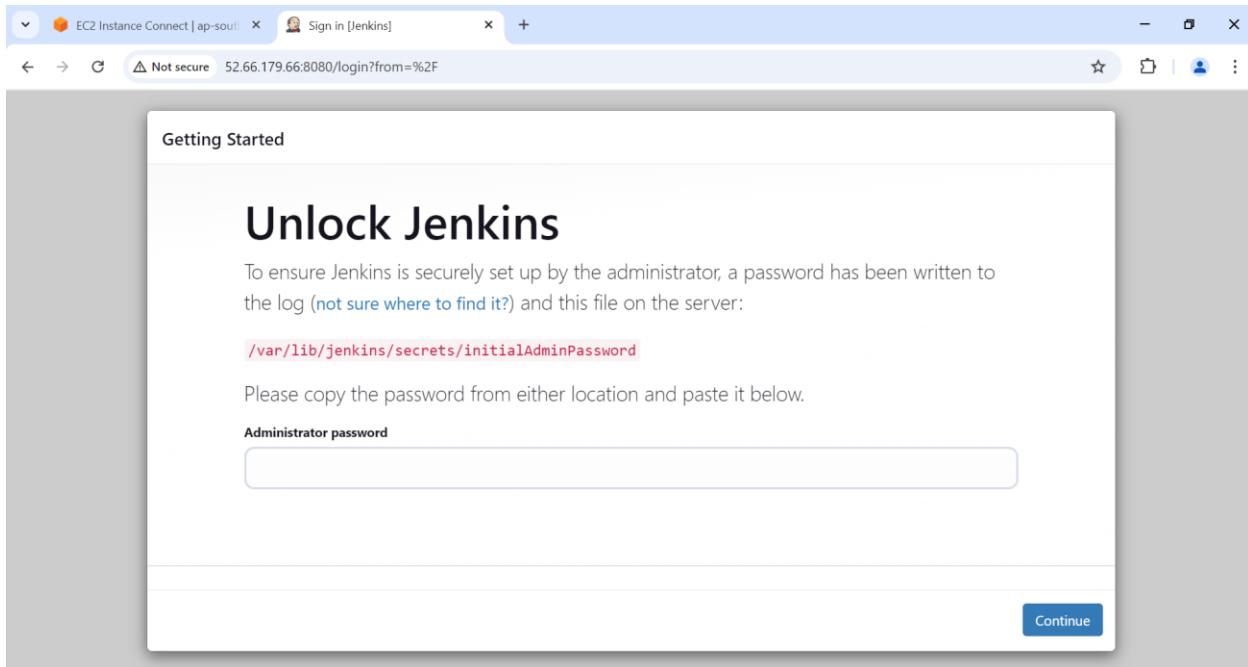
Cancel Save rules

CloudShell Feedback © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences

## 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
```

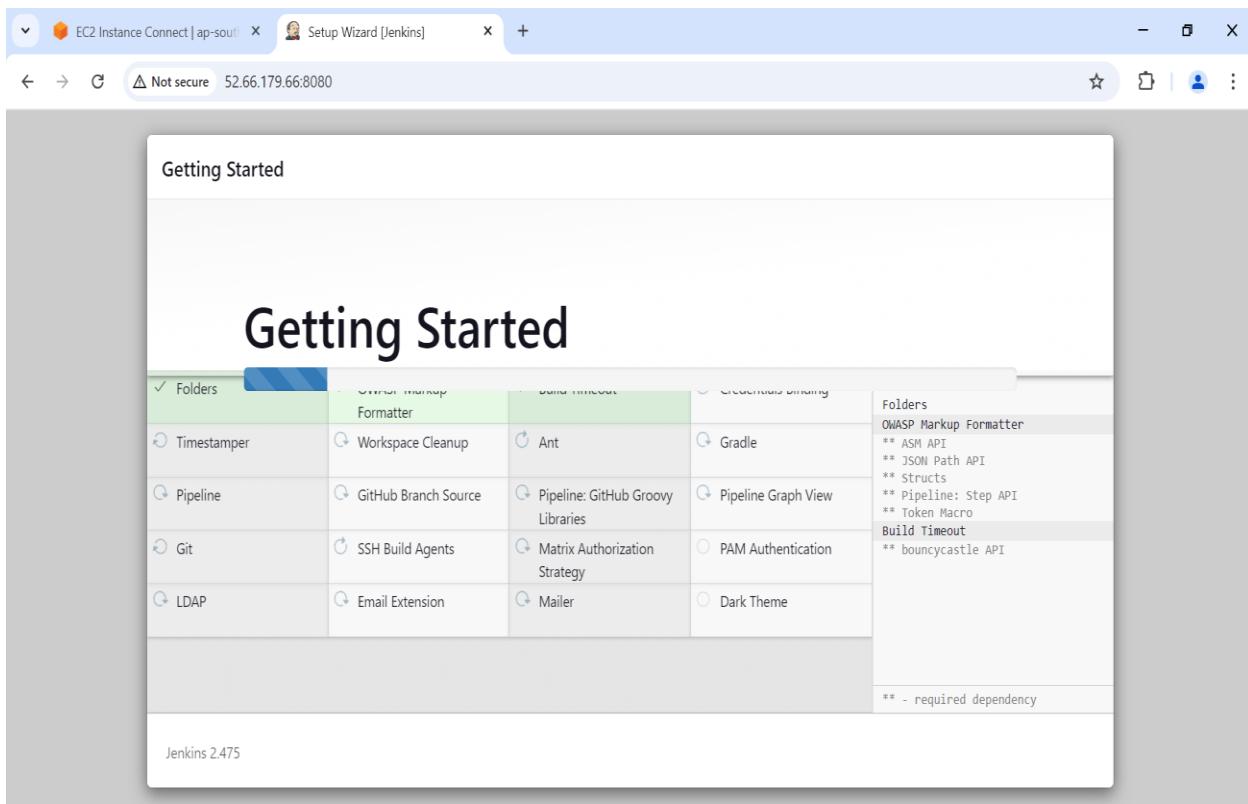
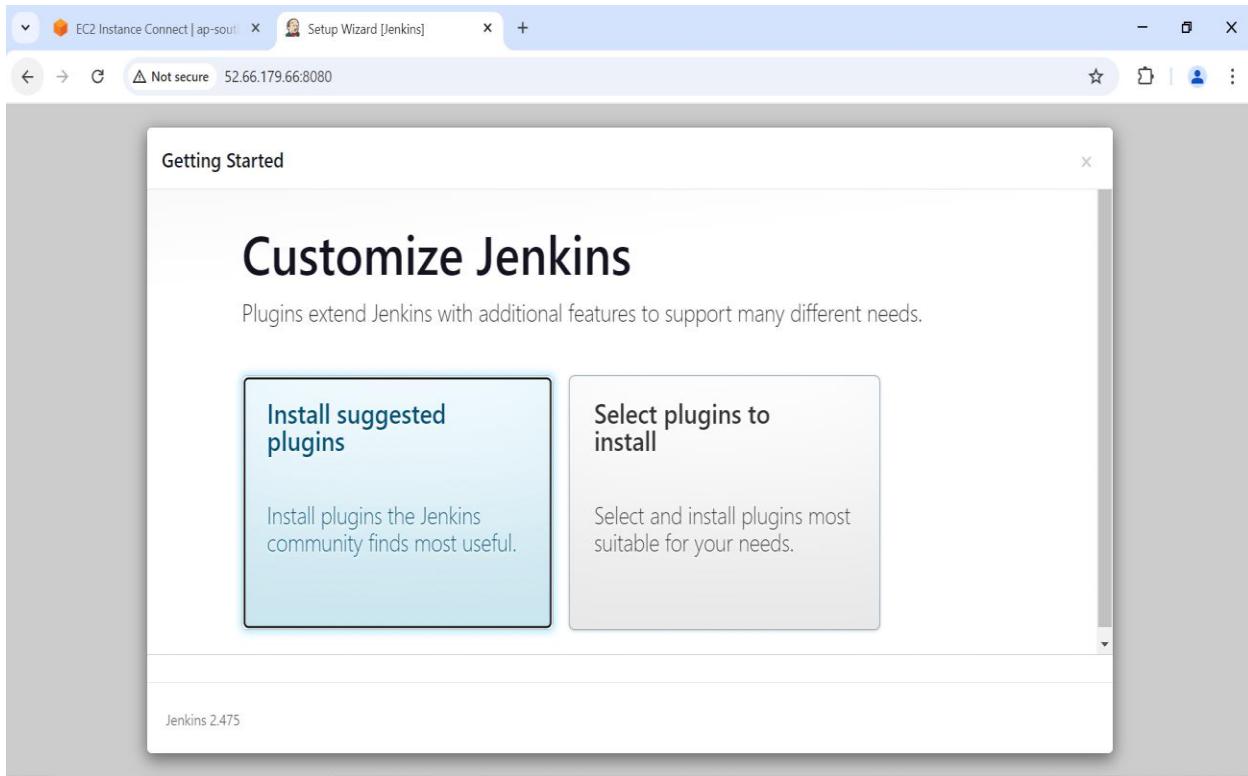


```
Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
Active: inactive (dead)
[ec2-user@ip-172-31-10-54 ~]$ sudo systemctl start jenkins
[ec2-user@ip-172-31-10-54 ~]$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
    Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: disabled)
    Active: active (running) since Sun 2024-09-08 08:02:47 UTC; 21s ago
      Main PID: 26790 (java)
         Tasks: 45 (limit: 1112)
        Memory: 334.3M
          CPU: 17.903s
        CGroup: /system.slice/jenkins.service
               └─26790 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Sep 08 08:02:38 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Sep 08 08:02:38 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: ****
Sep 08 08:02:47 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:47.515+0000 [id=30]      INFO      jen>
Sep 08 08:02:47 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:47.537+0000 [id=23]      INFO      hud>
Sep 08 08:02:47 ip-172-31-10-54.ap-south-1.compute.internal systemd[1]: Started jenkins.service - Jenkins Continuous Integration Server.
Sep 08 08:02:48 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:48.361+0000 [id=46]      INFO      h.m>
Sep 08 08:02:48 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:48.362+0000 [id=46]      INFO      hud>
Sep 08 08:02:52 ip-172-31-10-54.ap-south-1.compute.internal jenkins[26790]: 2024-09-08 08:02:52.644+0000 [id=61]      WARNING 
lines 1-20/20 (END)
[ec2-user@ip-172-31-10-54 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword -
6831fe436db940f7aa46f02a499d4e3a
[ec2-user@ip-172-31-10-54 ~]$
```

The terminal window shows the Jenkins service being started and its logs. It also prints the initial admin password to the terminal. The password is a long, randomly generated string.

Step- 20: Click on install suggested plugins



Step – 21: Create admin User Account

EC2 Instance Connect | ap-southeast-1 | Setup Wizard [Jenkins]

Not secure 52.66.179.66:8080

## Getting Started

### Create First Admin User

Username

Password

Confirm password

Jenkins 2.475

[Skip and continue as admin](#)[Save and Continue](#)

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.

[Not now](#)

[Save and Finish](#)

EC2 Instance Connect | ap-sou... X Dashboard [Jenkins] X +

← → G Not secure 52.66.179.66:8080

 Jenkins

Search (CTRL+K) ? 🔔 1 ⚡ 1 Admin log out

Dashboard >

+ New Item

Build History

Manage Jenkins

My Views

Add description

## 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

No builds in the queue.

Build Executor Status 0/2

 Built-In Node  offline

Create a job +

Set up a distributed build

Set up an agent

Configure a cloud

Learn more about distributed builds ?

