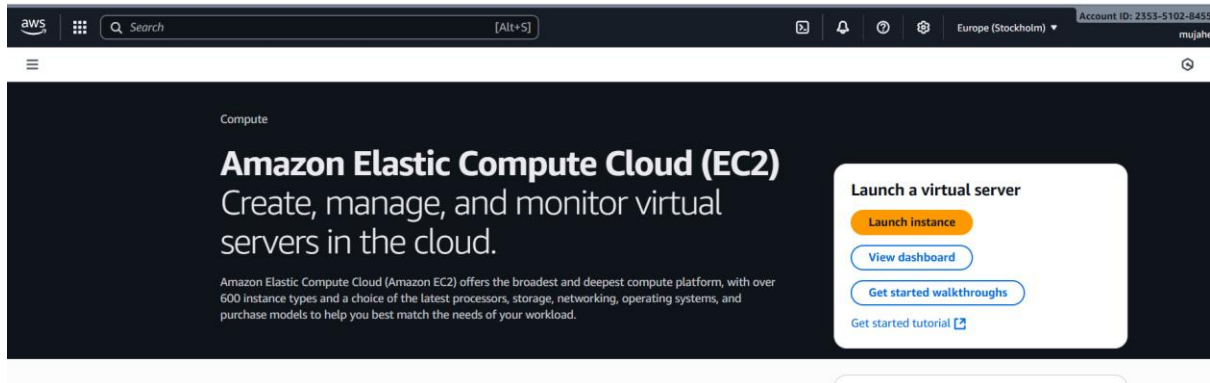
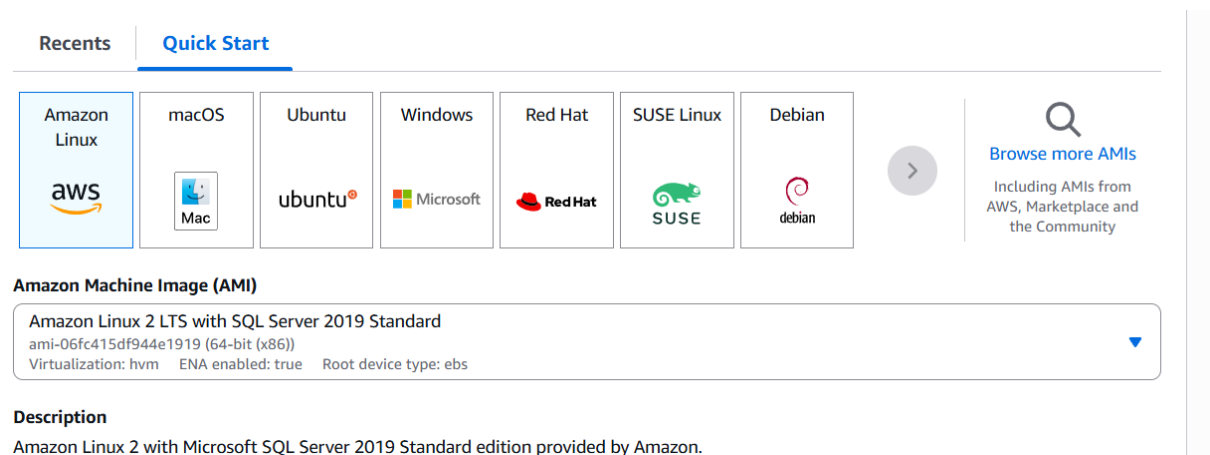


1. Launch one EC2 instance using Amazon Linux 2.

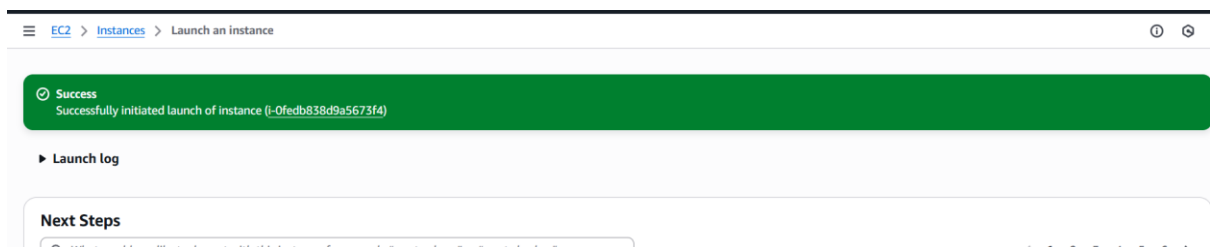
Open EC2 console by logging root user and click on launch instance to create instance.



Here we need to create EC2 instace by using amazon linux2.



Instance launched



2. Install Docker

ec2user@16.171.33.97

Use command `sudo yum update -y`

Use command `sudo yum install docker` to install docker

```
[root@ip-172-31-45-252 ~]# sudo yum install docker
Last metadata expiration check: 0:03:24 ago on Tue Sep 16 14:07:49 2025.
Dependencies resolved.
=====
Package                                Architecture      Version
=====
Installing:
docker                                x86_64            25.0.8-1.amzn2023.0.5
Installing dependencies:
container-selinux                     noarch            3:2.233.0-1.amzn2023
containerd                            x86_64            2.0.5-1.amzn2023.0.2
iptables-libs                         x86_64            1.8.8-3.amzn2023.0.2
iptables-nft                         x86_64            1.8.8-3.amzn2023.0.2
libcgroup                             x86_64            3.0-1.amzn2023.0.1
libnetfilter_conntrack                x86_64            1.0.8-2.amzn2023.0.2
libnfnetlink                         x86_64            1.0.1-19.amzn2023.0.2
libnftnl                             x86_64            1.2.2-2.amzn2023.0.2
pigz                                  x86_64            2.5-1.amzn2023.0.3
runc                                   x86_64            1.2.6-1.amzn2023.0.1
=====
Transaction Summary
=====
Install 11 Packages
```

Sudo systemctl start docker to start docker and sudo
systemctl status docker to check the status of docker.

```
[root@ip-172-31-45-252 ~]# sudo systemctl start docker

[root@ip-172-31-45-252 ~]# sudo systemctl status docker
● docker.service - Docker Application Container Engine
   Loaded: loaded (/usr/lib/systemd/system/docker.service; enabled; preset: disabled)
   Active: active (running) since Tue 2025-09-16 14:13:39 UTC; 1min 9s ago
 TriggeredBy: ● docker.socket
    Docs: https://docs.docker.com
   Main PID: 27735 (dockerd)
     Tasks: 9
    Memory: 30.8M
      CPU: 315ms
   CGroup: /system.slice/docker.service
           └─27735 /usr/bin/dockerd -H fd:// --containerd=/run/containerd/containerd.

Sep 16 14:13:38 ip-172-31-45-252.eu-north-1.compute.internal systemd[1]: Starting docke
Sep 16 14:13:38 ip-172-31-45-252.eu-north-1.compute.internal dockerd[27735]: time="2025
Sep 16 14:13:38 ip-172-31-45-252.eu-north-1.compute.internal dockerd[27735]: time="2025
```

3. Install Jenkins

Install java version 21.

```
[ec2-user@ip-172-31-45-252 ~]$ sudo yum install java-21-amazon-corretto -y
warning: failed loading '/etc/yum.repos.d/jenkins.repo', skipping.
Last metadata expiration check: 20:03:05 ago on Tue Sep 16 14:07:49 2025.
Package java-21-amazon-corretto-1:21.0.8+9-1.amzn2023.1.x86_64 is already in
Dependencies resolved.
Nothing to do.
Complete!
[ec2-user@ip-172-31-45-252 ~]$ sudo yum install jenkins -y
warning: failed loading '/etc/yum.repos.d/jenkins.repo', skipping.
Last metadata expiration check: 20:03:20 ago on Tue Sep 16 14:07:49 2025.
No match for argument: jenkins
Error: Unable to find a match: jenkins
[ec2-user@ip-172-31-45-252 ~]$ sudo amazon-linux-extras install java-openjdk
sudo: amazon-linux-extras: command not found
```

Sudo yum install Jenkins -y.

```
[ec2-user@ip-172-31-45-252 ~]$ sudo yum install jenkins -y
warning: failed loading '/etc/yum.repos.d/jenkins.repo', skipping.
Last metadata expiration check: 20:03:20 ago on Tue Sep 16 14:07:49 2025.
```

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

```
[ec2-user@ip-172-31-45-252 ~]$ sudo wget -O /etc/yum.repos.d/jenkins.repo https://pkg.jenkins.io/redhat-stable/jenkins.repo
--2025-09-17 10:12:33-- https://pkg.jenkins.io/redhat-stable/jenkins.repo
Resolving pkg.jenkins.io (pkg.jenkins.io)... 199.232.174.133, 2a04:4e42:6b::645
Connecting to pkg.jenkins.io (pkg.jenkins.io)|199.232.174.133|: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

2025-09-17 10:12:34 (3.83 MB/s) - '/etc/yum.repos.d/jenkins.repo' saved [85/85]
```

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

```
[ec2-user@ip-172-31-45-252 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-45-252 ~]$ sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key
[ec2-user@ip-172-31-45-252 ~]$ sudo yum update -y
jenkins-stable 435 k
=====
WARNING:
  A newer release of "Amazon Linux" is available.

  Available Versions:

  Version 2023.8.20250915:
    Run the following command to upgrade to 2023.8.20250915:

      dnf upgrade --releasever=2023.8.20250915

  Release notes:
    https://docs.aws.amazon.com/linux/al2023/release-notes/relnotes-2023.8.20250915.html
=====
Dependencies resolved.
```

Install Jenkins by :sudo yum install Jenkins -y

```
[ec2-user@ip-172-31-45-252 ~]$ sudo yum install jenkins -y
Last metadata expiration check: 0:00:15 ago on Wed Sep 17 10:13:20 2025.
Dependencies resolved.
=====
Package                                Architecture      Version
=====
Installing:
jenkins                                noarch            2.516.2-1.1
=====
Transaction Summary
=====
Install 1 Package

Total download size: 83 M
Installed size: 83 M
Downloading Packages:
jenkins-2.516.2-1.1.noarch.rpm
=====
Total
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
Preparing
```

Not secure 13.53.197.54:8080/login?from=%2F

YouTube Maps

Getting Started

Unlock Jenkins

To ensure Jenkins is securely set up by the administrator, a password has been written to the log ([not sure where to find it?](#)) and this file on the server:

```
/var/lib/jenkins/secrets/initialAdminPassword
```

Please copy the password from either location and paste it below.

Administrator password

```
[ec2-user@ip-172-31-45-252 ~]$ sudo cat /var/lib/jenkins/secrets/initialAdminPassword
b16336133a704ca7931a45381d9ea9e8
[ec2-user@ip-172-31-45-252 ~]$ |
```

Getting Started

Customize Jenkins

Plugins extend Jenkins with additional features to support many different needs.

Install suggested plugins

Install plugins the Jenkins community finds most useful.

Select plugins to install

Select and install plugins most suitable for your needs.

Getting Started

Jenkins is ready!

You have skipped the **setup of an admin user**.

To log in, use the username: "admin" and the administrator password you used to access the setup wizard.

Your Jenkins setup is complete.

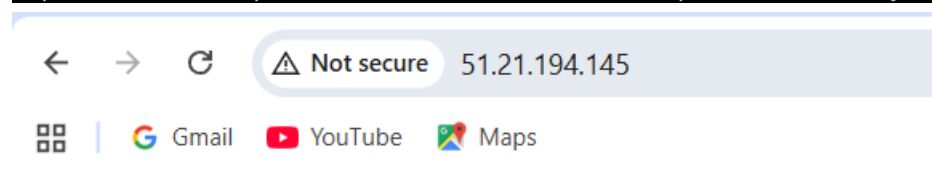
Start using Jenkins

4. Install apache

```
[root@ip-172-31-45-252 ~]# sudo yum install httpd
Warning: failed loading '/etc/yum.repos.d/jenkins.repo', skipping.
Last metadata expiration check: 0:48:15 ago on Tue Sep 16 14:07:49 2025.
Dependencies resolved.
=====
Package                                Architecture      Version
=====
Installing:
  httpd                                x86_64            2.4.64-1.amzn2023.0.1
Installing dependencies:
  apr                                  x86_64            1.7.5-1.amzn2023.0.4
  apr-util                             x86_64            1.6.3-1.amzn2023.0.1
=====
```

```
[root@ip-172-31-45-252 ~]# sudo systemctl start httpd
[root@ip-172-31-45-252 ~]# sudo systemctl enable httpd
[root@ip-172-31-45-252 ~]# sudo systemctl status nginx
Unit nginx.service could not be found.
[root@ip-172-31-45-252 ~]# sudo systemctl status httpd
● httpd.service - The Apache HTTP Server
   Loaded: loaded (/usr/lib/systemd/system/httpd.service; enabled; preset: disabled)
   Active: active (running) since Tue 2025-09-16 14:57:25 UTC; 1min 16s ago
     Docs: man:httpd.service(8)
   Main PID: 30304 (httpd)
    Status: "Total requests: 0; Idle/Busy workers 100/0; Requests/sec: 0; Bytes served: 0"
      Tasks: 177 (limit: 1057)
    Memory: 13.5M
       CPU: 118ms
    CGroup: /system.slice/httpd.service
            └─30304 /usr/sbin/httpd -DFOREGROUND
              └─30305 /usr/sbin/httpd -DFOREGROUND
                └─30306 /usr/sbin/httpd -DFOREGROUND
                  └─30307 /usr/sbin/httpd -DFOREGROUND
                    └─30308 /usr/sbin/httpd -DFOREGROUND

Sep 16 14:57:24 ip-172-31-45-252.eu-north-1.compute.internal systemd[1]: Starting httpd.service: The Apache HTTP Server.
```



It works!

5. Install nginx

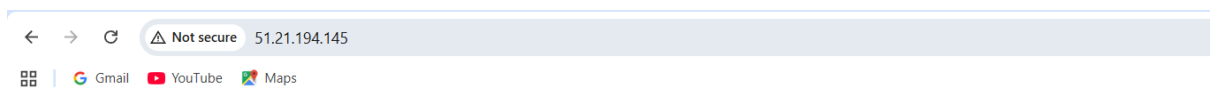
Use command `sudo yum install nginx`

```
[root@ip-172-31-45-252 ~]# sudo yum install nginx
warning: failed loading '/etc/yum.repos.d/jenkins.repo', skipping.
Last metadata expiration check: 16:12:15 ago on Tue Sep 16 14:07:49 2025.
Dependencies resolved.
=====
Package                                Architecture    Version
=====
Installing:
  nginx                                x86_64          1:1.28.0-1.amzn2023.0.2
Installing dependencies:
  gperftools-libs                      x86_64          2.9.1-1.amzn2023.0.3
  libunwind                            x86_64          1.4.0-5.amzn2023.0.2
  nginx-core                           x86_64          1:1.28.0-1.amzn2023.0.2
  nginxfilesystem                      noarch          1:1.28.0-1.amzn2023.0.2
  nginx-mimetypes                      noarch          2.1.49-3.amzn2023.0.3
=====
Transaction Summary
=====
Install 6 Packages
Total download size: 1.1 M
```

Use `sudo systemctl start nginx` to start and use `systemctl status nginx` to check the nginx.

```
[root@ip-172-31-45-252 ~]# sudo systemctl start nginx
[root@ip-172-31-45-252 ~]# sudo systemctl status nginx
● nginx.service - The nginx HTTP and reverse proxy server
   Loaded: loaded (/usr/lib/systemd/system/nginx.service; disabled; preset: disabled)
   Active: active (running) since Wed 2025-09-17 06:28:29 UTC; 10s ago
     Process: 3713 ExecStartPre=/usr/bin/rm -f /run/nginx.pid (code=exited, status=0/SUCCESS)
     Process: 3714 ExecStartPre=/usr/sbin/nginx -t (code=exited, status=0/SUCCESS)
     Process: 3715 ExecStart=/usr/sbin/nginx (code=exited, status=0/SUCCESS)
    Main PID: 3716 (nginx)
       Tasks: 3 (limit: 1057)
      Memory: 3.2M
         CPU: 56ms
      CGroup: /system.slice/nginx.service
              └─3716 "nginx: master process /usr/sbin/nginx"
                  └─3717 "nginx: worker process"
                      └─3718 "nginx: worker process"

Sep 17 06:28:29 ip-172-31-45-252.eu-north-1.compute.internal systemd[1]: Starting nginx.servi
Sep 17 06:28:29 ip-172-31-45-252.eu-north-1.compute.internal nginx[3714]: nginx: the configur
Sep 17 06:28:29 ip-172-31-45-252.eu-north-1.compute.internal nginx[3714]: nginx: configuratio
Sep 17 06:28:29 ip-172-31-45-252.eu-north-1.compute.internal systemd[1]: started nginx.servic
lines 1-19/19 (END)
```



6. Install Apache Tomcat

Check whether the java installed or not in your gitbash.

Use java --version to check the java version.

```
[root@ip-172-31-45-252 ~]# java --version
openjdk 11.0.28 2025-07-15 LTS
OpenJDK Runtime Environment Corretto-11.0.28.6.1 (build 11.0.28+6-LTS)
OpenJDK 64-Bit Server VM Corretto-11.0.28.6.1 (build 11.0.28+6-LTS, mixed mode)
[root@ip-172-31-45-252 ~]# |
```

Go to opt directory and download go to official apache tomcat website and select the latest version of tar file. Copy link address and execute it by wget linkadress.

```
[root@ip-172-31-45-252 opt]# wget https://dlcdn.apache.org/tomcat/tomcat-11/v11.0.11/bin/apache-tomcat-11.0.11.tar.gz
--2025-09-17 07:08:04-- https://dlcdn.apache.org/tomcat/tomcat-11/v11.0.11/bin/apache-tomcat-11.0.11.tar.gz
Resolving dlcdn.apache.org (dlcdn.apache.org)... 151.101.2.132, 2a04:4e42::644
Connecting to dlcdn.apache.org (dlcdn.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 14137461 (13M) [application/x-gzip]
Saving to: 'apache-tomcat-11.0.11.tar.gz'

apache-tomcat-11.0.11.tar.gz  100%[=====>] 13.48M  --.-KB/s  in 0.09s

2025-09-17 07:08:04 (157 MB/s) - 'apache-tomcat-11.0.11.tar.gz' saved [14137461/14137461]

[root@ip-172-31-45-252 opt]# |
```

Extract the tomcat file by using tar xzvf filename.

```
[root@ip-172-31-45-252 opt]# tar xzvf apache-tomcat-11.0.11.tar.gz
apache-tomcat-11.0.11/conf/
apache-tomcat-11.0.11/conf/catalina.properties
apache-tomcat-11.0.11/conf/context.xml
apache-tomcat-11.0.11/conf/jaspic-providers.xml
apache-tomcat-11.0.11/conf/jaspic-providers.xsd
apache-tomcat-11.0.11/conf/logging.properties
apache-tomcat-11.0.11/conf/server.xml
apache-tomcat-11.0.11/conf/tomcat-users.xml
apache-tomcat-11.0.11/conf/tomcat-users.xsd
apache-tomcat-11.0.11/conf/web.xml
apache-tomcat-11.0.11/bin/
apache-tomcat-11.0.11/lib/
apache-tomcat-11.0.11/logs/
apache-tomcat-11.0.11/temp/
apache-tomcat-11.0.11/webapps/
apache-tomcat-11.0.11/webapps/ROOT/
apache-tomcat-11.0.11/webapps/ROOT/WEB-INF/
apache-tomcat-11.0.11/webapps/docs/
apache-tomcat-11.0.11/webapps/docs/META-INF/
apache-tomcat-11.0.11/webapps/docs/WEB-INF/
apache-tomcat-11.0.11/webapps/docs/WEB-INF/isp/
```

Go to tomcat11/bin directory and do ./startup.sh.

```
[root@ip-172-31-45-252 /]# cd opt/
[root@ip-172-31-45-252 opt]# ls
apache-tomcat-11.0.11  apache-tomcat-11.0.11.tar.gz  aws  containerd
[root@ip-172-31-45-252 opt]# rm -rf apache-tomcat-11.0.11.tar.gz
[root@ip-172-31-45-252 opt]# mv apache-tomcat-11.0.11 tomcat11
[root@ip-172-31-45-252 opt]# cd tomcat11/bin
[root@ip-172-31-45-252 bin]# ./start.sh
-bash: ./start.sh: No such file or directory
[root@ip-172-31-45-252 bin]# ./startup.sh
Using CATALINA_BASE:   /opt/tomcat11
Using CATALINA_HOME:   /opt/tomcat11
Using CATALINA_TMPDIR: /opt/tomcat11/temp
Using JRE_HOME:        /usr
Using CLASSPATH:        /opt/tomcat11/bin/bootstrap.jar:/opt/tomcat11/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-172-31-45-252 bin]# |
```

```
<!--
<Connector port="8081" protocol="HTTP/1.1"
           connectionTimeout="20000"
           redirectPort="8443" />
<!-- A "Connector" using the shared thread pool-->
<!--
<Connector executor="tomcatThreadPool"
           port="8080" protocol="HTTP/1.1"
           connectionTimeout="20000"
           redirectPort="8443" />
-->
<!-- Define an SSL/TLS HTTP/1.1 Connector on port 8443
```

Apache Tomcat/9.0.109



If you're seeing this, you've successfully installed Tomcat. Congratulations!



Recommended Reading:

[Security Considerations How-To](#)
[Manager Application How-To](#)
[Clustering/Session Replication How-To](#)

Server Status

Manager App

Host Manager

Developer Quick Start

[Tomcat Setup](#)

[First Web Application](#)

[Realms & AAA](#)

[JDBC DataSources](#)

[Examples](#)

[Servlet Specifications](#)

[Tomcat Versions](#)

Managing Tomcat

For security, access to the `manager.webapp` is restricted. Users are defined in:

Documentation

[Tomcat 9.0 Documentation](#)

Getting Help

[FAQ](#) and [Mailing Lists](#)