

Today follow along we will install tomcat & jenkins

## 1) Launch an ec2 instance

The screenshot shows the 'Launch an instance' wizard in the AWS Management Console. The 'Name and tags' section has 'WEBSERVER' entered in the 'Name' field. The 'Application and OS Images (Amazon Machine Image)' section shows a search bar and a 'Quick Start' tab selected, with various OS icons (Amazon Linux, macOS, Ubuntu, Windows, Red Hat, SUSE Linux) available. The 'Summary' section on the right shows 1 instance being launched, using the ami-0aa8fc2422063977a AMI, t2.micro instance type, default security group, and 1 volume (10 GB). A tooltip for the free tier is visible, and the 'Launch instance' button is at the bottom.

This screenshot shows the 'Launch an instance' wizard with a more detailed view of the AMI selection. It highlights the 'Red Hat Enterprise Linux 9 (HVM), SSD Volume Type' AMI. The 'Description' section details the AMI as Red Hat Enterprise Linux version 9 (HVM), EBS General Purpose (SSD) Volume Type. The 'Architecture' dropdown is set to 64-bit (x86). The 'AMI ID' is ami-0aa8fc2422063977a, and the 'Username' is ec2-user. The 'Summary' section remains the same, showing 1 instance being launched with the specified AMI and instance type. The 'Launch instance' button is present at the bottom.

**aws Services VPC**

**Instance type**

**t2.micro** Family: t2 1 vCPU 1 GiB Memory Current generation: true Free tier eligible

On-Demand Linux base pricing: 0.0116 USD per Hour  
On-Demand SUSE base pricing: 0.0116 USD per Hour  
On-Demand Windows base pricing: 0.0162 USD per Hour  
On-Demand RHEL base pricing: 0.026 USD per Hour

All generations Compare instance types

Additional costs apply for AMIs with pre-installed software

**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**

VPC - required Info

vpc-08f937497665e0196 (default)  
172.31.0.0/16

Subnet Info Create new subnet

No preference

**Summary**

Number of instances Info 1

Software Image (AMI) Provided by Red Hat, Inc. ami-0aa8fc2422063977a

Virtual server type (instance type) t2.micro

Firewall (security group) default

Storage (volumes) 1 volume(s) - 10 GiB

**Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)**

Cancel Launch instance Preview code

<https://us-east-2.console.aws.amazon.com/console/home?region=us-east-2>

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**aws Services VPC**

**VPC - required Info**

vpc-08f937497665e0196 (default)  
172.31.0.0/16

Subnet Info Create new subnet

No preference

Auto-assign public IP Info Enable

Additional charges apply when outside of free tier allowance

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

Common security groups Info

Select security groups

default sg-08d26f5903649e5e5 X  
VPC: vpc-08f937497665e0196 X

Compare security group rules

Security groups that you add or remove here will be added to or removed from all your network interfaces.

**Configure storage Info Advanced**

1x 10 GiB gp3 Root volume (Not encrypted)

CloudShell Feedback

**Summary**

Number of instances Info 1

Software Image (AMI) Provided by Red Hat, Inc. ami-0aa8fc2422063977a

Virtual server type (instance type) t2.micro

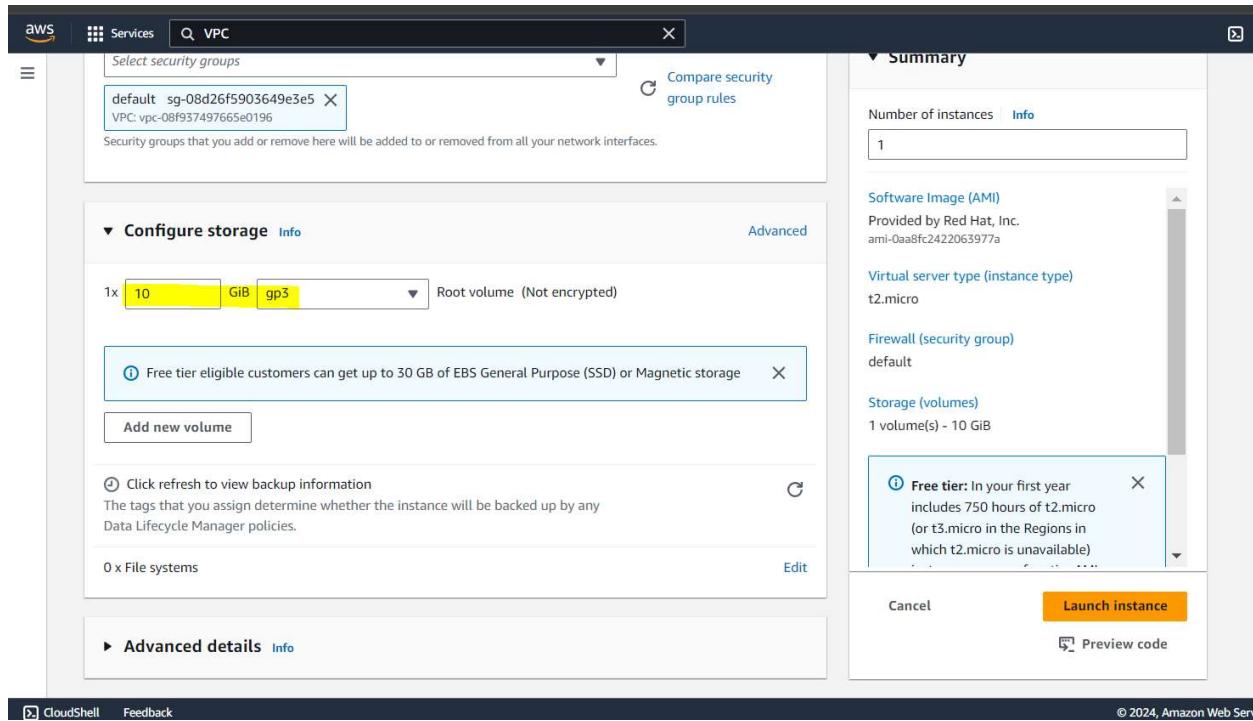
Firewall (security group) default

Storage (volumes) 1 volume(s) - 10 GiB

**Free tier: In your first year includes 750 hours of t2.micro (or t3.micro in the Regions in which t2.micro is unavailable)**

Cancel Launch instance Preview code

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Instances (1) <a href="#">Info</a>	
Last updated less than a minute ago	
<input type="checkbox"/> Name <a href="#">Filter</a>	Instance ID
<input type="checkbox"/> WEBSERVER	i-029068e74f0bbba48

## 2) Connect to the ec2 instance

```
ec2-user@ip-172-31-30-113:~
```

```
AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~
$ cd downloads

AzureAD+Manohar@LAPTOP-89TC2GCF MINGW64 ~/downloads
$ ssh -i "AWS.pem" ec2-user@ec2-3-143-108-51.us-east-2.compute.amazonaws.com
The authenticity of host 'ec2-3-143-108-51.us-east-2.compute.amazonaws.com (3.14
3.108.51)' can't be established.
ED25519 key fingerprint is SHA256:eEUohTVwfnfBtfyuqY9meQQ569gJX2j7k/0cJfteF3Y.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-3-143-108-51.us-east-2.compute.amazonaws.com' (E
D25519) to the list of known hosts.
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
[ec2-user@ip-172-31-30-113 ~]$ |
```

### 3) Go inside the root user

```
[ec2-user@ip-172-31-30-113 ~]$ sudo -i
[root@ip-172-31-30-113 ~]# |
```

### 4) Update the ec2 server

```
[root@ip-172-31-30-113 ~]# yum update -y
Updating Subscription Management repositories.
Unable to read consumer identity

This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.

Red Hat Enterprise Linux 9 for x86_64 - AppStream from RHUI (RPMS)
Red Hat Enterprise Linux 9 for x86_64 - BaseOS from RHUI (RPMS)
Red Hat Enterprise Linux 9 Client Configuration
Dependencies resolved.

=====
Package           Architecture Version      Repository   Size
=====
Installing:
kernel            x86_64      5.14.0-427.40.e19_4      rhel-9-baseos-rhui-rpms   4.6 M
kernel-core        x86_64      5.14.0-427.40.e19_4      rhel-9-baseos-rhui-rpms   20 M
kernel-modules     x86_64      5.14.0-427.40.e19_4      rhel-9-baseos-rhui-rpms   38 M
kernel-modules-core x86_64      5.14.0-427.40.e19_4      rhel-9-baseos-rhui-rpms   33 M
Upgrading:
NetworkManager     x86_64      1:1.46.0-19.e19_4       rhel-9-baseos-rhui-rpms   2.3 M
NetworkManager-cloud-setup x86_64      1:1.46.0-19.e19_4       rhel-9-appstream-rhui-rpms 76 k
NetworkManager-tiбини x86_64      1:1.46.0-19.e19_4       rhel-9-baseos-rhui-rpms   1.8 M
NetworkManager-team x86_64      1:1.46.0-19.e19_4       rhel-9-baseos-rhui-rpms   42 k
NetworkManager-tui  x86_64      1:1.46.0-19.e19_4       rhel-9-baseos-rhui-rpms   248 k
ca-certificates    noarch     2024.2.69.v8.0.303-91.4.e19_4   rhel-9-baseos-rhui-rpms   1.0 M
cloud-init         noarch     23.4-7.e19_4.6          rhel-9-appstream-rhui-rpms 1.3 M
curl               x86_64      7.76.1-29.e19_4.1       rhel-9-baseos-rhui-rpms   297 k
expat              x86_64      2.5.0-2.e19_4.1          rhel-9-baseos-rhui-rpms   119 k
glibc2             x86_64      2.68.4-14.e19_4.1       rhel-9-baseos-rhui-rpms   2.6 M
glibc               x86_64      2.34-100.e19_4.4        rhel-9-baseos-rhui-rpms   2.0 M
glibc-common       x86_64      2.34-100.e19_4.4        rhel-9-baseos-rhui-rpms   307 k
glibc-gconv-extra  x86_64      2.34-100.e19_4.4        rhel-9-baseos-rhui-rpms   1.7 M
glibc-langpack-en  x86_64      2.34-100.e19_4.4        rhel-9-baseos-rhui-rpms   659 k
grub2-common       noarch     1:2.06-82.e19_4          rhel-9-baseos-rhui-rpms   916 k
```

### 5) Install java

```
[root@ip-172-31-30-113 ~]# yum install java-17-openjdk -y
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.

Red Hat Enterprise Linux 9 for x86_64 - AppStream from RHUI (RPMS)           84 kB/s | 4.5 kB    00:00
Red Hat Enterprise Linux 9 for x86_64 - BaseOS from RHUI (RPMS)             81 kB/s | 4.1 kB    00:00
Red Hat Enterprise Linux 9 Client Configuration                           32 kB/s | 1.5 kB    00:00
Dependencies resolved.

Transaction Summary
  Install  1 package

Total download size: 4.5 kB
Is this ok [y/N]: y

```

Package	Architecture	Version	Repository	Size
java-17-openjdk	x86_64	1:17.0.13.0.11-3.e19	rhel-9-appstream-rhui-rpms	459 k
Installing:				
java-17-openjdk	x86_64	1.20.2-1.e19	rhel-9-baseos-rhui-rpms	337 k
Installing dependencies:				
ModemManager-glib	x86_64	2.0.30-1.0.50-12.e19.1	rhel-9-appstream-rhui-rpms	836 k
adobe-source-code-pro-fonts	noarch	40.1.1-3.e19	rhel-9-appstream-rhui-rpms	655 k
adwaiata-cursor-theme	noarch	40.1.1-3.e19	rhel-9-appstream-rhui-rpms	12 M
alsa-lib	x86_64	1.2.10-2.e19	rhel-9-appstream-rhui-rpms	527 k
at-sp12-atk	x86_64	2.38.0-4.e19	rhel-9-appstream-rhui-rpms	90 k
at-sp12-core	x86_64	2.40.3-1.e19	rhel-9-appstream-rhui-rpms	199 k
atk	x86_64	2.36.0-5.e19	rhel-9-appstream-rhui-rpms	296 k
avahi-glib	x86_64	0.8-20.e19	rhel-9-appstream-rhui-rpms	18 k
audiolibs	x86_64	0.8-19.e19	rhel-9-baseos-rhui-rpms	72 k
bluez-libs	x86_64	5.64-1.e19	rhel-9-baseos-rhui-rpms	33 k
bubblewrap	x86_64	0.1-1.7.e19.4	rhel-9-baseos-rhui-rpms	53 k
cairo	x86_64	1.17.4-7.e19	rhel-9-appstream-rhui-rpms	664 k
cairo-gobject	x86_64	1.17.4-7.e19	rhel-9-appstream-rhui-rpms	20 k
colord-libs	x86_64	1.4.5-4.e19	rhel-9-appstream-rhui-rpms	233 k
composefs-libs	x86_64	1.0.3-2.e19	rhel-9-appstream-rhui-rpms	63 k
copy-jdk-configs	noarch	4.0-3.e19	rhel-9-appstream-rhui-rpms	29 k
cups-libs	x86_64	1:2.3.3op2-27.e19.4	rhel-9-baseos-rhui-rpms	264 k
exempi	x86_64	2.6.0-0.2.20211007gite23c213.e19	rhel-9-appstream-rhui-rpms	528 k
exiv2-libs	x86_64	0.27.5-2.e19	rhel-9-appstream-rhui-rpms	782 k
fdk-aac-free	x86_64	2.0.0-8.e19	rhel-9-appstream-rhui-rpms	327 k
flac-libs	x86_64	1.3.3-10.e19.2.1	rhel-9-appstream-rhui-rpms	221 k
flatpak-selinux	noarch	1.12.9-3.e19.4	rhel-9-appstream-rhui-rpms	22 k
flatpak-session-helper	x86_64	1.12.9-3.e19.4	rhel-9-appstream-rhui-rpms	75 k
fontconfig	x86_64	2.14.0-2.e19.1	rhel-9-appstream-rhui-rpms	301 k
fribidi	x86_64	1.0.10-6.e19.2	rhel-9-appstream-rhui-rpms	89 k
fuse	x86_64	2.9.9-15.e19	rhel-9-baseos-rhui-rpms	84 k
fuse-common	x86_64	3.10.2-8.e19	rhel-9-baseos-rhui-rpms	8 k
gdk-pixbuf2	x86_64	2.42.0-1.e19.4	rhel-9-appstream-rhui-rpms	496 k
gdk-pixbuf2-modules	x86_64	2.42.0-6.e19.4	rhel-9-appstream-rhui-rpms	93 k
gnutls2	x86_64	2.6.0-7.e19	rhel-9-appstream-rhui-rpms	128 k

```
[root@ip-172-31-30-113 ~]# yum install java-17-openjdk -y
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.

Red Hat Enterprise Linux 9 for x86_64 - AppStream from RHUI (RPMS)           84 kB/s | 4.5 kB    00:00
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Red Hat Enterprise Linux 9 Client Configuration                           32 kB/s | 1.5 kB    00:00
Dependencies resolved.

Transaction Summary
  Install  1 package

Total download size: 4.5 kB
Is this ok [y/N]: y

```

Package	Architecture	Version	Repository	Size
java-17-openjdk	x86_64	1:17.0.13.0.11-3.e19	rhel-9-appstream-rhui-rpms	459 k
Installing:				
flatpak-1.12.9-3.e19.4.x86_64			flatpak-selinux-1.12.9-3.e19.noarch	
fontconfig-2.14.0-2.e19.1.x86_64			flatpkl-1.0-10.e19.2.x86_64	
fuse-common-3.10-2.e19.1.x86_64			flatpkl-1.0-12.1-4.e19.4.x86_64	
glib-networking-2.68.3-3.e19.x86_64			flatpkl-1.0-12.2-1.e19.x86_64	
gsm-1.0.19-6.e19.x86_64			flatpkl-1.0-12.2-1.e19.x86_64	
gtk-update-icon-cache-3.24.31-2.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
iso-codes-6.0-0-3.e19.noarch			flatpkl-1.0-12.3-1.e19.x86_64	
javapackages-filesystem-6.0-0-4.e19.noarch			flatpkl-1.0-12.3-1.e19.x86_64	
libblk1-1.7.0-9.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libboxau-1.0-9-8.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libxdamage-1.1.5-7.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libxf86-dri-2.3-3-8.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libxf86-randr-1.5.2-8.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libXv-1.0.11-16.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libasynchm-0.8-22.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libcurl-7.63.0-1.30-27.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libdmapoxy-1.5-5.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libexpat-2.0.12.3-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libglvnd-glx-1:1.3.4-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libicu-67.1-9.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libldec-2.1.2.3-10.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libbosinfo-1.10-0-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libproxy-webkitgtk-4.0-15-35.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libosmocore-1.0-31.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libthai-0.1.28-8.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libtalloc-1td1-2.4.6-45.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libvorbis-1.1.3-7.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libwayland-egl-1.1.0-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libxkbcommon-1.0-5-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
libxkbcommon-1.1.1-34.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
lua-5.4.4-4.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
mesa-libgbm-23.3.3-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
mksfontscale-1.2.1-3.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
orc-0.4.31-7.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
ostree-libs-2024.6-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
pipewire-1.0.1-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
pipewire-jack-audio-connection-kit-libs-1.0.1-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
pixman-0.40.6-0.e19.3.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
poppler-glib-22.0.1-0.19.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
sound-theme-Freedesktop-0.8-17.e19.noarch			flatpkl-1.0-12.3-1.e19.x86_64	
tracker-miners-3.1.2-4.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
upower-0.99.13-2.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
wireplumber-0.4.14-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
xdg-desktop-portal-1.12.6-1.e19.x86_64			flatpkl-1.0-12.3-1.e19.x86_64	
xm-1-common-0.6.3-58.e19.noarch			flatpkl-1.0-12.3-1.e19.x86_64	

## 6) Check java version

```
[root@ip-172-31-30-113 ~]# java --version
openjdk 17.0.13 2024-10-15 LTS
OpenJDK Runtime Environment (Red_Hat-17.0.13.0.11-1) (build 17.0.13+11-LTS)
OpenJDK 64-Bit Server VM (Red_Hat-17.0.13.0.11-1) (build 17.0.13+11-LTS, mixed mode, sharing)

```

7) Download and install tomcat- right click on zip (pgp. Shah512 and click on copy link)

The screenshot shows the Apache Tomcat download page for version 9.0.96. The left sidebar includes links for Taglibs, Archives, Documentation (Tomcat 11.0, Tomcat 10.1, Tomcat 9.0, Upgrading, Tomcat Connectors, Tomcat Native 2, Tomcat Native 1.3, Wiki, Migration Guide, Presentations, Specifications), Problems? (Security Reports, Find help, FAQ, Mailing Lists, Bug Database, IRC), Get Involved (Overview, Source code, Buildbot, Tools), and Media. The main content area is titled '9.0.96' and contains a note to see the [README](#) file for packaging information. It lists 'Binary Distributions' and 'Source Code Distributions'. Under 'Binary Distributions', there are sections for Core, Full documentation, Deployer, and Embedded. Under 'Core', there are links for [zip \(pgp, sha512\)](#), [tar.gz \(pgp, sha512\)](#), [32-bit Windows zip \(pgp, sha512\)](#), [64-bit Windows zip \(pgp, sha512\)](#), and [32-bit/64-bit Windows Service Installer \(pgp, sha512\)](#). The [zip \(pgp, sha512\)](#) link is highlighted with a yellow box. Under 'Full documentation', there are links for [tar.gz \(pgp, sha512\)](#) and [tar.gz \(pgp, sha512\)](#). Under 'Deployer', there are links for [zip \(pgp, sha512\)](#) and [tar.gz \(pgp, sha512\)](#). Under 'Embedded', there are links for [tar.gz \(pgp, sha512\)](#) and [zip \(pgp, sha512\)](#). The 'Source Code Distributions' section contains links for [tar.gz \(pgp, sha512\)](#) and [zip \(pgp, sha512\)](#).

8) Run the below command in your terminal

wget <package url>

```
[root@ip-172-31-30-113 ~]# wget https://downloads.apache.org/tomcat/tomcat-9/v9.0.96/bin/apache-tomcat-9.0.96.zip.asc
[bash: wget: command not found
[~]#
```

9) Getting error command not found so need to install wget

yum install wget zip unzip

```
[root@ip-172-31-30-113 ~]# yum install wget zip unzip
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.
Last metadata expiration check: 0:02:15 ago on Thu 17 Oct 2024 02:31:24 PM UTC.
Dependencies resolved.
=====
Package           Architecture     Version      Repository      Size
=====
Installing:
unzip            x86_64          6.0-56.e19   rhel-9-baseos-rhui-rpms  186 k
wget             x86_64          1.21.1-8.e19_4 rhel-9-appstream-rhui-rpms  789 k
zip              x86_64          3.0-35.e19   rhel-9-baseos-rhui-rpms  270 k
Transaction Summary
=====
Install 3 Packages
Total download size: 1.2 M
Installed size: 4.2 M
Is this ok [Y/N]: y
Down loading Packages:
(1/3): unzip-6.0-56.e19.x86_64.rpm          3.4 MB/s | 186 kB    00:00
(2/3): zip-3.0-35.e19.x86_64.rpm          4.2 MB/s | 270 kB    00:00
(3/3): wget-1.21.1-8.e19_4.x86_64.rpm      11 MB/s | 789 kB    00:00
-----
Total                                         9.9 MB/s | 1.2 MB    00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing           : 1/1
  Installing         : unzip-6.0-56.e19.x86_64 1/3
  Installing         : zip-3.0-35.e19.x86_64 2/3
  Installing         : wget-1.21.1-8.e19_4.x86_64 3/3
  Running scriptlet: wget-1.21.1-8.e19_4.x86_64
  Verifying          : wget-1.21.1-8.e19_4.x86_64 1/3
  Verifying          : unzip-6.0-56.e19.x86_64 2/3
  Verifying          : zip-3.0-35.e19.x86_64 3/3
Installed products updated.
Installed:
  unzip-6.0-56.e19.x86_64                  wget-1.21.1-8.e19_4.x86_64
                                                zip-3.0-35.e19.x86_64
```

```
[root@ip-172-31-30-113 ~]# yum install wget zip unzip
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.
Last metadata expiration check: 0:02:15 ago on Thu 17 Oct 2024 02:31:24 PM UTC.
Dependencies resolved.
=====
Package           Architecture     Version      Repository      Size
=====
Installing:
unzip            x86_64          6.0-56.e19   rhel-9-baseos-rhui-rpms  186 k
wget             x86_64          1.21.1-8.e19_4 rhel-9-appstream-rhui-rpms  789 k
zip              x86_64          3.0-35.e19   rhel-9-baseos-rhui-rpms  270 k
Transaction Summary
=====
Install 3 Packages
Total download size: 1.2 M
Installed size: 4.2 M
Is this ok [Y/N]: y
Down loading Packages:
(1/3): unzip-6.0-56.e19.x86_64.rpm          3.4 MB/s | 186 kB    00:00
(2/3): zip-3.0-35.e19.x86_64.rpm          4.2 MB/s | 270 kB    00:00
(3/3): wget-1.21.1-8.e19_4.x86_64.rpm      11 MB/s | 789 kB    00:00
-----
Total                                         9.9 MB/s | 1.2 MB    00:00
Running transaction check
Transaction check succeeded.
Running transaction test
Transaction test succeeded.
Running transaction
  Preparing           : 1/1
  Installing         : unzip-6.0-56.e19.x86_64 1/3
  Installing         : zip-3.0-35.e19.x86_64 2/3
  Installing         : wget-1.21.1-8.e19_4.x86_64 3/3
  Running scriptlet: wget-1.21.1-8.e19_4.x86_64
  Verifying          : wget-1.21.1-8.e19_4.x86_64 1/3
  Verifying          : unzip-6.0-56.e19.x86_64 2/3
  Verifying          : zip-3.0-35.e19.x86_64 3/3
Installed products updated.
Installed:
  unzip-6.0-56.e19.x86_64                  wget-1.21.1-8.e19_4.x86_64
                                                zip-3.0-35.e19.x86_64
Complete!
[root@ip-172-31-30-113 ~]#
```

## 10) Install tomcat

```
[root@ip-172-31-30-113 ~]# ls
[root@ip-172-31-30-113 ~]# wget https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.96/bin/apache-tomcat-9.0.96.zip
--2024-10-17 15:08:59--  https://dlcdn.apache.org/tomcat/tomcat-9/v9.0.96/bin/apache-tomcat-9.0.96.zip
Resolving dlcdn.apache.org (dlcdn.apache.org)... 151.101.2.132, 2a04:e442:644
Connecting to dlcdn.apache.org (dlcdn.apache.org)|151.101.2.132|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 13265088 (13M) [application/zip]
Saving to: 'apache-tomcat-9.0.96.zip'

apache-tomcat-9.0.96.zip          100%[=====] 12.65M --.-KB/s  in 0.1s
2024-10-17 15:09:00 (112 MB/s) - 'apache-tomcat-9.0.96.zip' saved [13265088/13265088]
[root@ip-172-31-30-113 ~]# ls
apache-tomcat-9.0.96.zip
```

## 11) unzip the downloaded package- unzip apache-tomcat-9.0.96.zip

```
[root@ip-172-31-30-113 ~]# unzip apache-tomcat-9.0.96.zip
Archive: apache-tomcat-9.0.96.zip
  creating: apache-tomcat-9.0.96/
  creating: apache-tomcat-9.0.96/bin/
  creating: apache-tomcat-9.0.96/conf/
  creating: apache-tomcat-9.0.96/lib/
  creating: apache-tomcat-9.0.96/logs/
  creating: apache-tomcat-9.0.96/temp/
  creating: apache-tomcat-9.0.96/webapps/
  creating: apache-tomcat-9.0.96/webapps/ROOT/
  creating: apache-tomcat-9.0.96/webapps/ROOT/WEB-INF/
  creating: apache-tomcat-9.0.96/webapps/docs/
  creating: apache-tomcat-9.0.96/webapps/docs/META-INF/
  creating: apache-tomcat-9.0.96/webapps/docs/WEB-INF/
  creating: apache-tomcat-9.0.96/webapps/docs/WEB-INF/jsp/
  creating: apache-tomcat-9.0.96/webapps/docs/annotationapi/
  creating: apache-tomcat-9.0.96/webapps/docs/api/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/docs/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/src/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/src/mypackage/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/web/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/web/WEB-INF/
  creating: apache-tomcat-9.0.96/webapps/docs/appdev/sample/web/images/
  creating: apache-tomcat-9.0.96/webapps/docs/architecture/
  creating: apache-tomcat-9.0.96/webapps/docs/architecture/requestProcess/
  creating: apache-tomcat-9.0.96/webapps/docs/architecture/startup/
  creating: apache-tomcat-9.0.96/webapps/docs/config/
  creating: apache-tomcat-9.0.96/webapps/docs/elapi/
  creating: apache-tomcat-9.0.96/webapps/docs/images/
  creating: apache-tomcat-9.0.96/webapps/docs/images/fonts/
  creating: apache-tomcat-9.0.96/webapps/docs/jaspicapi/
  creating: apache-tomcat-9.0.96/webapps/docs/jspapi/
  creating: apache-tomcat-9.0.96/webapps/docs/servletapi/
  creating: apache-tomcat-9.0.96/webapps/docs/tribes/
  creating: apache-tomcat-9.0.96/webapps/docs/websocketapi/
  creating: apache-tomcat-9.0.96/webapps/examples/
  creating: apache-tomcat-9.0.96/webapps/examples/META-INF/
```

```

inflating: apache-tomcat-9.0.96/webapps/examples/jsp/tagplugin/notes.html
inflating: apache-tomcat-9.0.96/webapps/examples/jsp/xml/xml.html
inflating: apache-tomcat-9.0.96/webapps/examples/jsp/xml/xml.jsp
inflating: apache-tomcat-9.0.96/webapps/examples/jsp/xml/xml.jsp.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/cookies.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/helloworld.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/images/code.gif
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/images/execute.gif
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/images/return.gif
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/index.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/nonblocking/bytectorner.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/reqheaders.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/reqinfo.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/reqparams.html
inflating: apache-tomcat-9.0.96/webapps/examples/servlets/sessions.html
inflating: apache-tomcat-9.0.96/webapps/examples/websocket/chat.xhtml
inflating: apache-tomcat-9.0.96/webapps/examples/websocket/drawboard.xhtml
inflating: apache-tomcat-9.0.96/webapps/examples/websocket/echo.xhtml
inflating: apache-tomcat-9.0.96/webapps/examples/websocket/index.xhtml
inflating: apache-tomcat-9.0.96/webapps/examples/websocket/snake.xhtml
inflating: apache-tomcat-9.0.96/webapps/host-manager/META-INF/context.xml
inflating: apache-tomcat-9.0.96/webapps/host-manager/WEB-INF/jsp/401.jsp
inflating: apache-tomcat-9.0.96/webapps/host-manager/WEB-INF/jsp/403.jsp
inflating: apache-tomcat-9.0.96/webapps/host-manager/WEB-INF/jsp/404.jsp
inflating: apache-tomcat-9.0.96/webapps/host-manager/WEB-INF/manager.xml
inflating: apache-tomcat-9.0.96/webapps/host-manager/WEB-INF/web.xml
inflating: apache-tomcat-9.0.96/webapps/host-manager/css/manager.css
inflating: apache-tomcat-9.0.96/webapps/host-manager/images/asf-logo.svg
inflating: apache-tomcat-9.0.96/webapps/host-manager/images/tomcat.svg
inflating: apache-tomcat-9.0.96/webapps/host-manager/index.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/META-INF/context.xml
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/401.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/403.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/404.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/connectorCerts.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/connectorCiphers.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/connectorTrustedCerts.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/sessionDetail.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/jsp/sessionsList.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/WEB-INF/web.xml
inflating: apache-tomcat-9.0.96/webapps/manager/css/manager.css
inflating: apache-tomcat-9.0.96/webapps/manager/images/asf-logo.svg
inflating: apache-tomcat-9.0.96/webapps/manager/images/tomcat.svg
inflating: apache-tomcat-9.0.96/webapps/manager/index.jsp
inflating: apache-tomcat-9.0.96/webapps/manager/status.xsd
inflating: apache-tomcat-9.0.96/webapps/manager/xform.xls
[root@ip-172-31-30-113 ~]# ls
apache-tomcat-9.0.96 apache-tomcat-9.0.96.zip
[root@ip-172-31-30-113 ~]#

```

12) move the unzip tomcat folder to the opt

```

apache-tomcat-9.0.96 apache-tomcat-9.0.96.zip
[root@ip-172-31-30-113 ~]# mv apache-tomcat-9.0.96 /opt/tomcat
[root@ip-172-31-30-113 ~]# ls
apache-tomcat-9.0.96.zip
[root@ip-172-31-30-113 ~]#

```

```

apache-tomcat-9.0.96 apache-tomcat-9.0.96.zip
[root@ip-172-31-30-113 ~]# mv apache-tomcat-9.0.96 /opt/tomcat
[root@ip-172-31-30-113 ~]# ls
apache-tomcat-9.0.96.zip
[root@ip-172-31-30-113 ~]# cd /
[root@ip-172-31-30-113 /]# whoami
root
[root@ip-172-31-30-113 /]# pwd
/
[root@ip-172-31-30-113 /]# ls
afs bin boot dev efi etc home lib lib64 media mnt opt proc root run sbin srv sys tmp usr var
[root@ip-172-31-30-113 /]#

```

13) give file permission:

```
chmod -R 755 /opt/tomcat/
```

```
[root@ip-172-31-30-113 ~]# chmod -R 777 /opt/tomcat/
[root@ip-172-31-30-113 ~]# |
```

14) start tomcat:

/opt/tomcat/bin/startup.sh

```
[root@ip-172-31-30-113 ~]# /opt/tomcat/bin/startup.sh
Using CATALINA_BASE:   /opt/tomcat
Using CATALINA_HOME:  /opt/tomcat
Using CATALINA_TMPDIR: /opt/tomcat/temp
Using JRE_HOME:        /
Using CLASSPATH:       /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-172-31-30-113 ~]# |
```

15) in security group allowed below ports

Inbound rules (3)						
	Name	Security group rule...	IP version	Type	Protocol	Port range
<input type="checkbox"/>	-	sgr-0462d3e4d22958...	IPv4	SSH	TCP	22
<input type="checkbox"/>	-	sgr-0b8491e1628eb5...	IPv4	Custom TCP	TCP	8080
<input type="checkbox"/>	-	sgr-07d142699c3ca32...	IPv4	HTTP	TCP	80

16) copy the public ip of the ec2 server & followed by port 8080

**Instances (1/1) Info**

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IPv4 DNS	Publ...
WEBSERVER	i-029068e74f0bbba48	Running	t2.micro	Initializing	View alarms +	us-east-2b	ec2-3-143-108-51.us-e...	3.143

**i-029068e74f0bbba48 (WEBSERVER)**

- Details** | Status and alarms | Monitoring | Security | Networking | Storage | Tags
- Instance summary** | Info
- Instance ID: i-029068e74f0bbba48 (WEBSERVER)
- IPv6 address: -
- Hostname type: -
- Public IPv4 address copied: 3.143.108.51 | open address
- Instance state: Running
- Private IP DNS name (IPv4 only): -
- Private IPv4 addresses: 172.31.30.113
- Public IPv4 DNS: ec2-3-143-108-51.us-east-2.compute.amazonaws.com | open address

Apache Tomcat/9.0.96

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](#)

Developer Quick Start

- [Tomcat Setup](#)
- [First Web Application](#)
- [Realms & AAA](#)
- [JDBC DataSources](#)
- [Examples](#)
- [Servlet Specifications](#)
- [Tomcat Versions](#)

Documentation

- [Tomcat 9.0 Documentation](#)
- [Tomcat 9.0 Configuration](#)
- [Tomcat Wiki](#)

Getting Help

- [FAQ and Mailing Lists](#)
- The following mailing lists are available:
  - [tomcat-announce](#)
  - Important announcements, releases, security vulnerability notifications. (Low volume).

17) how to check if tomcat is working or not in the terminal

```
root@ip-172-31-30-113:~# ps -ef | grep tomcat
root      41350     1  3 15:13 pts/0    00:00:03 //bin/java -Djava.util.logging.config.file=/opt/tomcat/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djdk.tls.ephemeralDHKeySize=2048 -Djava.protocol.handler.pkgs=org.apache.catalina.webresources -Dorg.apache.catalina.security.SecurityListener.UMA_SK=0027 -Dignore.endorsed.dirs= -classpath /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar -Dcatalina.base=/opt/tomcat -Dcatalina.home=/opt/tomcat -Djava.io.tmpdir=/opt/tomcat/temp org.apache.catalina.startup.Bootstrap start
root      41382    3975  0 15:15 pts/0    00:00:00 grep --color=auto tomcat
[root@ip-172-31-30-113 ~]#
```

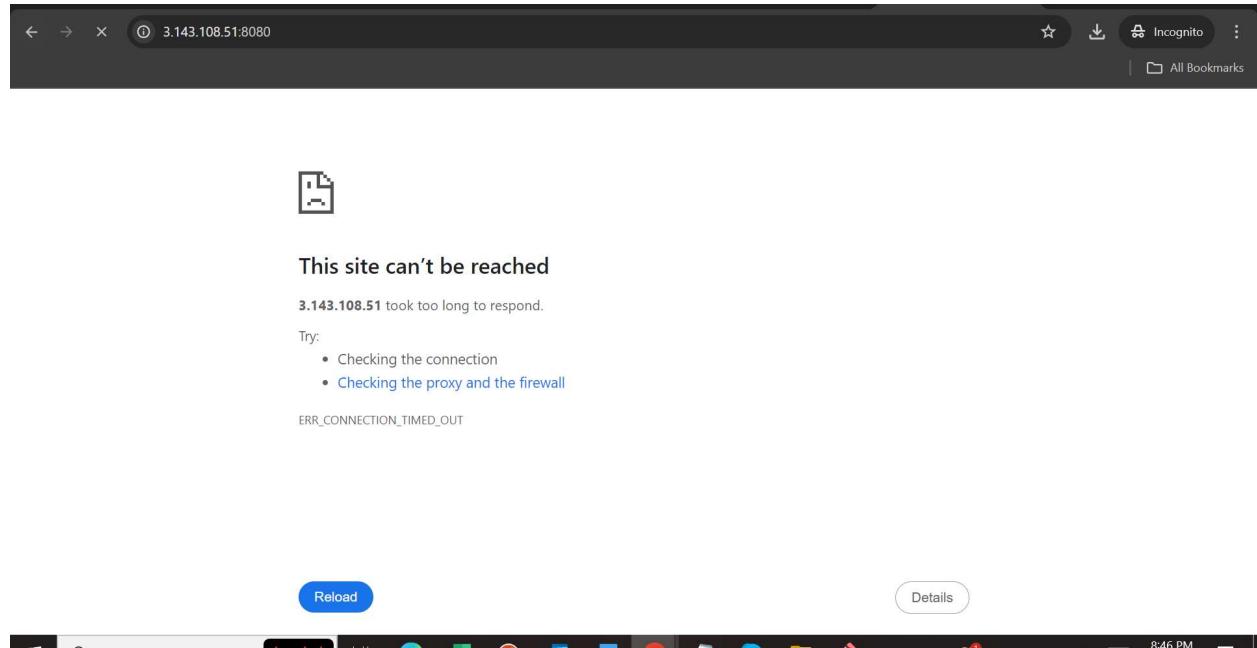
## 18) stop the tomcat

```
[root@ip-172-31-30-113 ~]# ./opt/tomcat/bin/shutdown.sh
Using CATALINA_BASE:  /opt/tomcat
Using CATALINA_HOME:  /opt/tomcat
Using CATALINA_TMPDIR: /opt/tomcat/temp
Using JRE_HOME:      /
Using CLASSPATH:     /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar
Using CATALINA_OPTS:
NOTE: Picked up JDK_JAVA_OPTIONS: --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.base/java.util=ALL-UNNAMED --add-opens=java.base/java.util.concurrent=ALL-UNNAMED --add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED
[root@ip-172-31-30-113 ~]#
```

## 19) check if tomcat is working or not

```
[root@ip-172-31-30-113 ~]# ps -ef | grep tomcat
root      41416  3975  0 15:16 pts/0    00:00:00 grep --color=auto tomcat
[root@ip-172-31-30-113 ~]#
```

## 20) check if tomcat is working on the browser- its not working because we stopped it



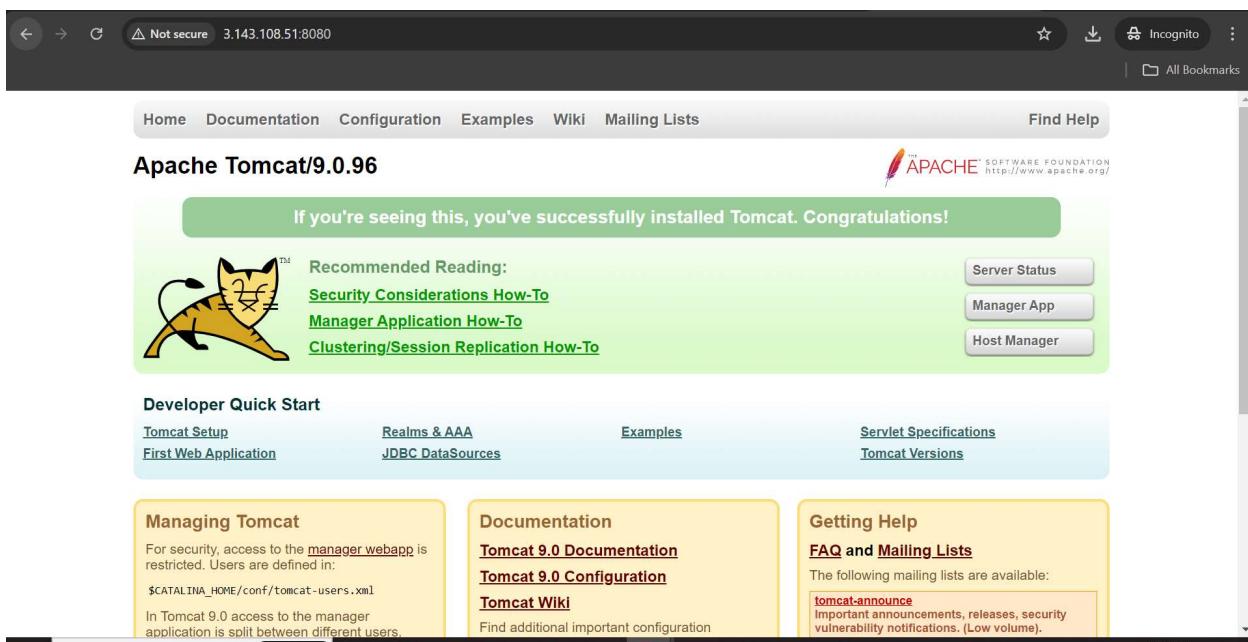
## 21) start the tomcat again

```
[root@ip-172-31-30-113 ~]# /opt/tomcat/bin/startup.sh
Using CATALINA_BASE:   /opt/tomcat
Using CATALINA_HOME:  /opt/tomcat
Using CATALINA_TMPDIR: /opt/tomcat/temp
Using JRE_HOME:        /
Using CLASSPATH:       /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-172-31-30-113 ~]# |
```

## 22) Checking again in terminal

```
[root@ip-172-31-30-113 ~]# ps -ef | grep tomcat
root      41432      1 17 15:17 pts/0    00:00:02 //bin/java -Djava.util.logging.config.file=/opt/tomcat/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djdk.tls.ephemeralDHKeySize=2048 -Djava.protocol.handler.pkgs=org.apache.catalina.webresources -Dorg.apache.catalina.security.SecurityListener.UMA_SK=0027 -Dignore.endorsed.dirs= -classpath /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar -Dcatalina.base=/opt/tomcat -Dcatalina.home=/opt/tomcat -Djava.io.tmpdir=/opt/tomcat/temp org.apache.catalina.startup.Bootstrap start
root      41463      5975      0 15:17 pts/0    00:00:00 grep --color=auto tomcat
[root@ip-172-31-30-113 ~]# |
```

## 23) Checking again in browser



## 24) Checking file permission

Create a file- touch file.txt

```
[root@ip-172-31-30-113 ~]# touch file.txt
[root@ip-172-31-30-113 ~]# ls
apache-tomcat-9.0.96.zip  file.txt
[root@ip-172-31-30-113 ~]# |
```

25) ll to check the file permission

```
[root@ip-172-31-30-113 ~]# ll
total 12956
-rw-r--r--. 1 root root 13265088 Oct  3 20:27 apache-tomcat-9.0.96.zip
-rw-r--r--. 1 root root      0 Oct 17 15:18 file.txt
[root@ip-172-31-30-113 ~]# |
```

26) give full permission to the file

```
[root@ip-172-31-30-113 ~]# chmod 777 file.txt
[root@ip-172-31-30-113 ~]# ll
total 12956
-rw-r--r--. 1 root root 13265088 Oct  3 20:27 apache-tomcat-9.0.96.zip
-rwxrwxrwx. 1 root root      0 Oct 17 15:18 file.txt
[root@ip-172-31-30-113 ~]# |
```

27) Create a directory

```
[root@ip-172-31-30-113 ~]# mkdir devops
[root@ip-172-31-30-113 ~]# ls
apache-tomcat-9.0.96.zip  devops  file.txt
[root@ip-172-31-30-113 ~]# ll
total 12956
-rw-r--r--. 1 root root 13265088 Oct  3 20:27 apache-tomcat-9.0.96.zip
drwxr-xr-x. 2 root root      6 Oct 17 15:21 devops
-rwxrwxrwx. 1 root root      0 Oct 17 15:18 file.txt
[root@ip-172-31-30-113 ~]# |
```

28) Deploy jenkins (CI/CD Tool)

Jenkins	
 2.479	SHA-256: b9cb2aa0d5489805da7b0b198cdedf004#0251eb0848b6cf82128755e76b5d93d Released: Sep 27, 2024
 2.478	SHA-1: e8a9d0f47509fe4156b59c216549617b440851c SHA-256: 910ea36ceef37c45087e39d65e335988e036fccea47c79cc5a52e721a10cb1b49 Released: Sep 24, 2024
 2.477	SHA-1: 02f4f1dc3a0e79d983aae2fcf79ee94f3166b6eb8 SHA-256: 597c8f1c5c01daeb4de84297c749c959ab3469b1cf4c2bbcc2efdf9ae4caf8 Released: Sep 17, 2024
 2.476	SHA-1: 495526f5ff1c11a31da22759f43f2fd2c7ac7 SHA-256: ed925f86a30d57b1534aca0beff84e45815ff86288a4e26d7fc7a3ab43f5c1d9 Released: Sep 10, 2024
 2.475	SHA-1: f604119ff02e2f1760ff0cf613bdcdef8724932e4 SHA-256: 107f3318889ad0f25f49d449dab7f84baaa97f30d0acd59fa1a946cff572e0ad Released: Sep 4, 2024
 2.474	SHA-1: f7442184a7f6e57d5837cc21c138645e3bd0f7aa SHA-256: 0250548d54a5e5b727293283cc1f02b084743eb654c8d797e19cf2d30a52d0b9 Released: Aug 27, 2024
 2.473	SHA-1: 68bc14ef0e575650f101ec41e571406add70d8d SHA-256: fe85dcdd495302c2b2b31b4d2c9899090fdf672fffd092cd5f77294ca6004 Released: Aug 20, 2024
 2.472	SHA-1: 98241cd3d8452bc0a92881f98653bbc4b1f1c5155 SHA-256: fa596feedfb671db51f537c358400a4ca037213cbe5ba8549aacfec01ca20321e Released: Aug 13, 2024

```
wget https://updates.jenkins.io/download/war/2.477/jenkins.war
```

```
[root@ip-172-31-30-113 ~]# wget https://updates.jenkins.io/download/war/2.477/jenkins.war
--2024-10-17 15:22:37-- https://updates.jenkins.io/download/war/2.477/jenkins.war
Resolving updates.jenkins.io (updates.jenkins.io)... 52.202.51.185
Connecting to updates.jenkins.io (updates.jenkins.io)|52.202.51.185|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://get.jenkins.io/war/2.477/jenkins.war [following]
--2024-10-17 15:22:38-- https://get.jenkins.io/war/2.477/jenkins.war
Resolving get.jenkins.io (get.jenkins.io)|20.7.178.24|:2603:1030:408:5:15a
Connecting to get.jenkins.io (get.jenkins.io)|20.7.178.24|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://ftp-chi.osuosl.org/pub/jenkins/war/2.477/jenkins.war [following]
--2024-10-17 15:22:38-- https://ftp-chi.osuosl.org/pub/jenkins/war/2.477/jenkins.war
Resolving ftp-chi.osuosl.org (ftp-chi.osuosl.org)|64.50.236.52|:2600:3402:200:227::2
Connecting to ftp-chi.osuosl.org (ftp-chi.osuosl.org)|64.50.236.52|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95962612 (92M) [application/x-java-archive]
Saving to: 'jenkins.war'

jenkins.war          100%[=====] 91.52M  8.71MB/s   in 10s

2024-10-17 15:22:48 (8.89 MB/s) - 'jenkins.war' saved [95962612/95962612]

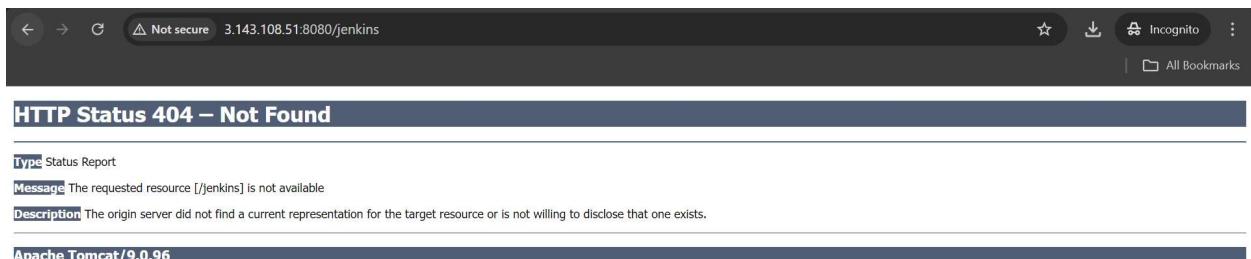
[root@ip-172-31-30-113 ~]# ]
```

```
[root@ip-172-31-30-113 ~]# ls  
apache-tomcat-9.0.96.zip  devops  file.txt  jenkins.war  
[root@ip-172-31-30-113 ~]# |
```

29) Copy the war file to tomcat

```
[root@ip-172-31-30-113 ~]# cp jenkins.war /opt/tomcat/webapps  
[root@ip-172-31-30-113 ~]# ls  
apache-tomcat-9.0.96.zip  devops  file.txt  jenkins.war
```

30) copy the public ip of EC2 server followed by the port 8080/jenkins and paste in the browser



31) update to the lastest java

checking java version

remove java - yum remove java\* -y

```
[root@ip-172-31-30-113 ~]# java --version  
openjdk 17.0.13 2024-10-15 LTS  
OpenJDK Runtime Environment (Red Hat-17.0.13.0.11-1) (build 17.0.13+11-LTS)  
OpenJDK 64-Bit Server VM (Red Hat-17.0.13.0.11-1) (build 17.0.13+11-LTS, mixed mode, sharing)  
[root@ip-172-31-30-113 ~]# |
```

Package	Architecture	Version	Repository	Size
<b>Dependencies resolved.</b>				
java-17-openjdk	x86_64	1:17.0.13.0.11-3.e19	@rhel-9-appstream-rhui-rpms	1.3 M
java-17-openjdk-headless	x86_64	1:17.0.13.0.11-3.e19	@rhel-9-appstream-rhui-rpms	195 M
javapackages-fsfsystem	noarch	6.0.0-4.e19	@rhel-9-appstream-rhui-rpms	1.9 kB
<b>Removing:</b>				
ModemManager-glib	x86_64	1.20.2-1.e19	@rhel-9-basesos-rhui-rpms	1.5 M
abattis-cantarell-fonts	noarch	0.301-4.e19	@rhel-9-appstream-rhui-rpms	705 M
adobe-source-pro-fonts	noarch	2.030.1.050-12.e19.1	@rhel-9-appstream-rhui-rpms	1.8 M
adwaita-cursor-theme	noarch	40.1.1-3.e19	@rhel-9-appstream-rhui-rpms	12 M
adwaita-icon-theme	noarch	40.1.1-3.e19	@rhel-9-appstream-rhui-rpms	11 M
alsa-lib	x86_64	1.2.10-2.e19	@rhel-9-appstream-rhui-rpms	1.4 M
at-sp2-atk	x86_64	2.30.0-1.e19	@rhel-9-appstream-rhui-rpms	272 K
atk-sp12-core	x86_64	2.30.0-3.e19	@rhel-9-appstream-rhui-rpms	516 M
atk	x86_64	2.36.0-5.e19	@rhel-9-appstream-rhui-rpms	1.2 M
avahi-glib	x86_64	0.8-20.e19	@rhel-9-appstream-rhui-rpms	19 kB
avahi-tiffs	x86_64	0.8-20.e19	@rhel-9-basesos-rhui-rpms	174 M
bluez-tiffs	x86_64	5.64-2.e19	@rhel-9-basesos-rhui-rpms	215 M
bubblewrap	x86_64	0.4.1-7.e19.4	@rhel-9-appstream-rhui-rpms	1.6 M
cairo	x86_64	1.17.4-7.e19	@rhel-9-appstream-rhui-rpms	43 kB
cairo-gobject	x86_64	1.17.4-7.e19	@rhel-9-appstream-rhui-rpms	837 K
colorl-tiffs	x86_64	1.4.5-4.e19	@rhel-9-appstream-rhui-rpms	162 M
composefs-tiffs	x86_64	1.0.3-2.e19	@rhel-9-appstream-rhui-rpms	19 kB
copy-1dk-configs	noarch	4.0-3.e19	@rhel-9-basesos-rhui-rpms	666 M
cups-tiffs	x86_64	1:2.3.30p2-27.e19.4	@rhel-9-appstream-rhui-rpms	305 K
dconf	x86_64	0.40.0-6.e19	@rhel-9-basesos-rhui-rpms	1.3 M
exempi	x86_64	2.6.0-0.2.20211007gite23c213.e19	@rhel-9-appstream-rhui-rpms	4.4 M
ev1v2	x86_64	0.27.5-2.e19	@rhel-9-appstream-rhui-rpms	
flac-tiffs-1.3.3-10.e19.2.1.x86_64				
flatpak-session-helper-1.12.9-3.e19.4.x86_64				
fuse-2.9.9-15.e19.x86_64				
gdk-pixbuf2-modules-2.42.6-4.e19.4.x86_64				
glib-networking-2.68.3-3.e19.x86_64				
glm-1.9.6-1.e19.x86_64				
gtk-update-icon-cache-3.24.31-2.e19.x86_64				
iso-codes-4.6.0-3.e19.noarch				
javapackages-fsfsystem-6.0.0-4.e19.noarch				
libX11-1.6.9-1.e19.x86_64				
libXau-1.0.9-8.e19.x86_64				
libXdamage-1.1.5-7.e19.x86_64				
libXft-2.3.3-8.e19.x86_64				
libXrandr-1.5.2-8.e19.x86_64				
libXv-0.11-16.e19.x86_64				
libasynccns-0.8-22.e19.x86_64				
libcanberra-gtk3-0.30-27.e19.x86_64				
libepeoxy-1.5.5-4.e19.x86_64				
libgexiv2-0.12.3-1.e19.x86_64				
libglvnd-glx-1:11.3.4-1.e19.x86_64				
libicu-67.1-9.e19.x86_64				
libldac-2.0.7-3-10.e19.x86_64				
libbosinfo-1.10.0-1.e19.x86_64				
libcapnp-0.7.1-1.e19.x86_64				
libcdio-webcam-0.1.1-1.e19.x86_64				
libesdinfo-0.1.31-1.e19.x86_64				
libethai-0.1.28-8.e19.x86_64				
libtboot-1td-2.4.6-45.e19.x86_64				
libvorbis-1:1.3.37-5.e19.x86_64				
libwayland-egl-1:1.21.0-1.e19.x86_64				
libxcb-1.13.1-9.e19.x86_64				
libxslt-1.1.34-9.e19.x86_64				
lua-5.4.4-4.e19.x86_64				
mesa-libgbm-23.3.3-1.e19.x86_64				
mkfontscale-1.2.1-3.e19.x86_64				
orc-0.4.31-7.e19.4.x86_64				
ostree-libs-2024.6-1.e19.4.x86_64				
pipewire-1.0.1-1.e19.x86_64				
pipewire-pulseaudio-connection-kit-libs-1.0.1-1.e19.x86_64				
pixman-0.6.10-2.e19.x86_64				
poppler-0.17.21-0.1-0.e19.x86_64				
sound-theme-freedesktop-0.8-17.e19.noarch				
tracker-miners-3.1.2-4.e19.3.x86_64				
upower-0.99.13-2.e19.x86_64				
wireplumber-0.4.14-1.e19.x86_64				
xdp-desktop-portal-1.12.6-1.e19.x86_64				
xml-common-0.6.3-58.e19.noarch				
<b>Complete!</b>				
[root@ip-172-31-30-113 ~]#				

32) install 21 version of java- yum install java-21-openjdk -y

```

[root@ip-172-31-30-113 ~]# yum install java-21-openjdk -y
Updating Subscription Management repositories.
Unable to read consumer identity
This system is not registered with an entitlement server. You can use "rhc" or "subscription-manager" to register.
Last metadata expiration check: 0:08:00 ago on Thu 17 Oct 2024 03:18:52 PM UTC.
Dependencies resolved.

=====
Package           Architecture   Version      Repository    Size
=====
Installing:
java-21-openjdk          x86_64        1:21.0.5.0.10-3.el9      rhel-9-appstream-rhui-rpms  433 k
Installing dependencies:
  ModemManager-glib          x86_64        1.20.2-1.el9      rhel-9-baseos-rhui-rpms  337 k
  adobe-source-code-pro-fonts noarch       2.030.1.050-12.el9.1  rhel-9-appstream-rhui-rpms  836 k
  adwaita-cursor-theme       noarch       40.1.1-3.el9      rhel-9-appstream-rhui-rpms  655 k
  adwaita-icon-theme         noarch       40.1.1-3.el9      rhel-9-appstream-rhui-rpms  12 M
  alsalib                   x86_64        1.2.10-2.el9      rhel-9-appstream-rhui-rpms  527 k
  at-spiz-atk                x86_64        2.38-0-4.el9      rhel-9-appstream-rhui-rpms  50 k
  at-spiz-core                x86_64        2.40-0-1.el9      rhel-9-appstream-rhui-rpms  189 k
  atk                        x86_64        2.36-0-5.el9      rhel-9-appstream-rhui-rpms  286 k
  avahi-glib                  x86_64        0.8-20.el9       rhel-9-baseos-rhui-rpms  16 k
  avahi-tlibs                 x86_64        0.8-20.el9       rhel-9-baseos-rhui-rpms  72 k
  bluez-tlibs                 x86_64        5.64-2.el9       rhel-9-baseos-rhui-rpms  85 k
  bubblewrap                 x86_64        0.4.1-7.el9      rhel-9-baseos-rhui-rpms  52 k
  cairo                      x86_64        1.17.4-7.el9      rhel-9-appstream-rhui-rpms  664 k
  cairo-gobject               x86_64        1.17.4-7.el9      rhel-9-appstream-rhui-rpms  20 k
  colord-libs                 x86_64        1.4.5-4.el9      rhel-9-appstream-rhui-rpms  233 k
  composefs-libs              x86_64        1.0.3-2.el9      rhel-9-appstream-rhui-rpms  63 k
  copy-jdk-configs            noarch       4.0-3.el9       rhel-9-appstream-rhui-rpms  29 k
  cups-libs                   x86_64        1:2.3.3op2-27.el9.4  rhel-9-baseos-rhui-rpms  264 k
  exempli                     x86_64        2.6.0-0.2.20211007gite23c213.el9  rhel-9-appstream-rhui-rpms  528 k
  ext2fs-tlibs                 x86_64        0.1.0-1.el9      rhel-9-appstream-rhui-rpms  783 k
  file-aac-free                x86_64        2.0.0-8.el9      rhel-9-appstream-rhui-rpms  327 k
  flac-libs                   x86_64        2.3.3-10.el9.2.1  rhel-9-appstream-rhui-rpms  221 k
  flatpak-schemas             noarch       1.12.9-3.el9.4    rhel-9-appstream-rhui-rpms  22 k
  flatpak-session-helper       x86_64        1.12.9-3.el9.4    rhel-9-appstream-rhui-rpms  75 k
  fontconfig                  x86_64        2.14.0-2.el9.1    rhel-9-appstream-rhui-rpms  301 k
  fribidi                      x86_64        1.0.10-6.el9.2    rhel-9-appstream-rhui-rpms  89 k
  fuse                        x86_64        2.9.9-15.el9      rhel-9-baseos-rhui-rpms  84 k
  fuse-common                 x86_64        3.10.2-8.el9      rhel-9-baseos-rhui-rpms  8.6 k
  gdk-pixbuf2                  x86_64        2.42.6-4.el9.4    rhel-9-appstream-rhui-rpms  496 k
  gdk-pixbuf2-modules          x86_64        2.42.6-4.el9.4    rhel-9-appstream-rhui-rpms  93 k
  geoclue2                    x86_64        2.6.0-7.el9      rhel-9-appstream-rhui-rpms  128 k
  giflib                      x86_64        5.2.1-9.el9      rhel-9-baseos-rhui-rpms  51 k
  glib-networking              x86_64        2.68.3-3.el9      rhel-9-baseos-rhui-rpms  190 k
  graphene                    x86_64        1.10.6-2.el9      rhel-9-appstream-rhui-rpms  67 k
  gsettings-desktop-schemas   x86_64        40.0-6.el9      rhel-9-baseos-rhui-rpms  688 k

=====
flatc-libs-1.3.3-10.el9.2.1.x86_64
flatpak-session-helper-1.12.9-3.el9.4.x86_64
fuse-2.9.9-15.el9.x86_64
gdk-pixbuf2-modules-2.42.6-4.el9.4.x86_64
glib-networkking-1.0.6-3.el9.x86_64
gsm-1.0.19-6.el9.x86_64
gtk-update-icon-cache-3.24.31-2.el9.x86_64
isomedia-4.6.0-3.el9.noarch
javapackages-tools-1.0.0-0.4.el9.noarch
libxau-1.7.0-9.el9.x86_64
libxdamage-1.1.5-7.el9.x86_64
libxft-2.3.3-8.el9.x86_64
libxrandr-1.5.2-8.el9.x86_64
libxv-1.0.11-16.el9.x86_64
libasynccns-0.8-22.el9.x86_64
libcanberra-gtk3-0.30-27.el9.x86_64
libepoxy-1.5.5-4.el9.x86_64
libgexiv2-0.12.3-1.el9.x86_64
libglvnd-0.1<1.1.3-4-1.el9.x86_64
libicu-67.1-9.el9.x86_64
libidac-2.0-1.el9.x86_64
libiosinfo-1.10.0-1.el9.x86_64
libproxy-0.9bktgtk4-0.4.15-35.el9.x86_64
libsdnfile-1.0.31-8.el9.x86_64
libthai-0.1.28-3.el9.x86_64
libttool-ltdl-2.4.6-45.el9.x86_64
libvorbis-1.1.3-7.5.el9.x86_64
libwayland-egl-1.21.0-1.el9.x86_64
libxcb-1.13.1-9.el9.x86_64
libxsit-1.1.34-9.el9.x86_64
lua-5.4.4-4.el9.x86_64
mesa-libGL-23.3.3-1.el9.x86_64
mksfontscale-1.2.1-3.el9.x86_64
orc-0.4.31-7.el9.x86_64
ostree-0.1.1-1.el9.x86_64
pippewire-0.1.0-1.el9.x86_64
pippewire-jack-audio-connection-kit-libs-1.0.1-1.el9.x86_64
pixman-0.40-0.6.el9.3.x86_64
poppler-glib-21.01.0-19.el9.x86_64
sound-theme-freedesktop-0.8-17.el9.noarch
tracker-miners-3.1.2-4.el9.x86_64
upower-0.99.13-2.el9.x86_64
wireplumber-0.4.14-1.el9.x86_64
xdg-desktop-portal-1.12.6-1.el9.x86_64
xml-common-0.6.3-58.el9.noarch

flatpak-1.12.9-3.el9.4.x86_64
fontconfig-2.14.0-2.el9.1.x86_64
fuse-common-3.10.2-8.el9.x86_64
geoclue2-2.6.0-7.el9.x86_64
graphene-0.6-3.el9.x86_64
gstreamer1-1.22.1-2.el9.x86_64
gstreamer1-plugins-base-1.22.1-2.el9.x86_64
gtk-3-24.3-1.el9.x86_64
java-21-openjdk-headless-1:21.0.5.0.10-3.el9.x86_64
libblkid-2.23-1.el9.x86_64
libX11-common-1.7.0-9.el9.noarch
libXcomposite-0.4.5-7.el9.x86_64
libXext-1.3.4-8.el9.x86_64
libXi-1.7.10-8.el9.x86_64
libXrender-0.9.10-16.el9.x86_64
libXXf86vm-1.1.4-18.el9.x86_64
libatomic-11.4.1-3.el9.x86_64
libdatrie-0.2.13-4.el9.x86_64
libexif-0.6-22-6.el9.x86_64
libglvnd-1.1.3-4-1.el9.x86_64
libgsf-1.14.47-5.el9.x86_64
libiptcdatal-0.5-9.el9.x86_64
libnotify-0.7.7-8.el9.x86_64
libpcaclues-0.2-6.el9.x86_64
libpulse-0.4.15-35.el9.x86_64
libproxy-0.4.15-35.el9.x86_64
libtalloc-2.25.7-2.el9.x86_64
libtss2-2.7.2-19.el9.x86_64
libtsoup-2.7.2-8.el9.x86_64
libtheora-1.1.1.31.el9.x86_64
libtracker-sparql-3.1.2-3.el9.1.x86_64
libwayland-client-1.21.0-1.el9.x86_64
libwayland-server-1.21.0-1.el9.x86_64
libxkbcommon-0.3.4-1.el9.x86_64
lksctp-tools-1.0.19-3.el9.4.x86_64
lua-posix-35.0-8.el9.x86_64
mesa-libgbm-23.3.3-1.el9.x86_64
openjpeg-2.4.0-7.el9.x86_64
osinfo-db-tools-1.10.0-1.el9.x86_64
p11-kit-0.24.3-2.el9.x86_64
piper-wire-alsa-1.0.1-1.el9.x86_64
piper-wire-lins-1.0.1-1.el9.x86_64
poppler-21.0-0-19.el9.x86_64
pulseaudio-libs-15.0-2.el9.x86_64
totem-pl-parser-3.26.6-2.el9.x86_64
ttmfdifr-3.0-9-65.el9.x86_64
webkit2gtk3-jsc-2.46.1-2.el9.4.x86_64
wireplumber-0.4.14-1.el9.x86_64
xdg-desktop-portal-gtk-1.12.0-3.el9.x86_64
xorg-x11-fonts-Type1-7.5-33.el9.noarch

flatpak-selinux-1.12.9-3.el9.4.noarch
fribidi-1.0.10-6.el9.2.x86_64
gdk-pixbuf2-2.42.6-4.el9.x86_64
giflib-5.2.1-9.el9.x86_64
gsettings-desktop-schemas-40.0-6.el9.x86_64
gstreamer1-plugins-base-1.22.1-2.el9.x86_64
gstreamer1-1.22.1-2.el9.x86_64
hicolor-icon-theme-1.1-13.el9.noarch
java-21-openjdk-headless-1:21.0.5.0.10-3.el9.x86_64
libX11-xcb-1.7.0-9.el9.x86_64
libXcursor-1.2.0-7.el9.x86_64
libXfixes-5.0.3-16.el9.x86_64
libXinerama-1.1.4-10.el9.x86_64
libXtst-1.2.3-1.el9.x86_64
libappstream-glib-0.7.18-5.el9.4.x86_64
libcanberra-0.30-27.el9.x86_64
libdrm-2.4.117-1.el9.x86_64
libfontenc-1.1.3-7.el9.x86_64
libglvnd-egl-1.1.3-4-1.el9.x86_64
libgxps-0.3-2-3.el9.x86_64
libjpeg-turbo-2.0.90-7.el9.x86_64
libogg-2.1.1-1.el9.x86_64
libproxy-0.4.15-35.el9.x86_64
libtalloc-2.25.7-2.el9.x86_64
libtss2-2.7.2-19.el9.x86_64
libtssmmer-0.18.585svn.el9.x86_64
libtiff-4.0.0-12.el9.x86_64
libvisual-1.0.4.0-3.el9.x86_64
libwayland-cursor-1.21.0-1.el9.x86_64
libwebp-1.2.0-8.el9.3.x86_64
libxshmfence-1.3-10.el9.x86_64
low-memory-monitor-2.1-4.el9.x86_64
mesa-libEGL-23.3.3-1.el9.x86_64
mesa-libglapi-23.3.3-1.el9.x86_64
opus-1.3.1-10.el9.x86_64
osinfo-db-tools-1.10.0-1.el9.x86_64
pango-1.49.4-4.el9.x86_64
pippewire-jack-audio-connection-kit-1.0.1-1.el9.x86_64
pippewire-pulseaudio-1.0.1-1.el9.x86_64
poppler-data-0.4.9-9.el9.noarch
rtkit-0.11-28.el9.x86_64
tracker-3.1.2-3.el9.1.x86_64
tzdata-java-2024a-1.el9.noarch
webrtc-audio-processing-0.3.1-8.el9.x86_64
xdg-dbus-proxy-0.1.3-1.el9.x86_64
xkeyboard-config-2.33-2.el9.noarch

=====
Complete!
[root@ip-172-31-30-113 ~]#

```

### 33) tomcat is running or not- ps -ef | grep tomcat

```

[root@ip-172-31-30-113 ~]# ps -ef | grep tomcat
root      41432      1  1 15:17 pts/0    00:00:06 //bin/java -Djava.util.logging.config.file=/opt/tomcat/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djdk.tls.ephemeralDHKeySize=2048 -Djava.protocol.handler.pkgs=org.apache.catalina.webresources -Dorg.apache.catalina.security.SecurityListener.UMA_SK=0027 -Dignore.endorsed.dirs= -classpath /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar -Dcatalina.base=/opt/tomcat -Dcatalina.home=/opt/tomcat -Djava.io.tmpdir=/opt/tomcat/temp org.apache.catalina.startup.Bootstrap start
root      43249      3975  0 15:28 pts/0    00:00:00 grep --color=auto tomcat

```

### 34) stop the tomcat

```
[root@ip-172-31-30-113 ~]# /opt/tomcat/bin/shutdown.sh
Using CATALINA_BASE:   /opt/tomcat
Using CATALINA_HOME:   /opt/tomcat
Using CATALINA_TMPDIR: /opt/tomcat/temp
Using JRE_HOME:        /
Using CLASSPATH:       /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar
Using CATALINA_OPTS:
NOTE: Picked up JDK_JAVA_OPTIONS: --add-opens=java.base/java.lang=ALL-UNNAMED --add-opens=java.base/java.io=ALL-UNNAMED --add-opens=java.base/java.util=ALL-UNNAMED --add-opens=java.rmi/sun.rmi.transport=ALL-UNNAMED
[root@ip-172-31-30-113 ~]#
```

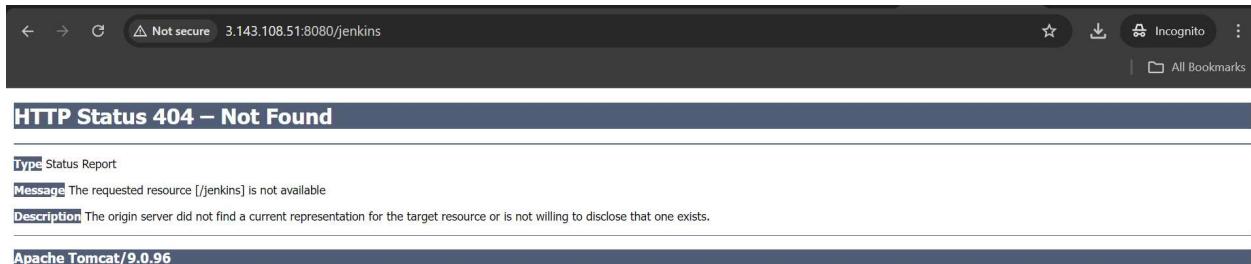
### 35) start the tomcat

```
[root@ip-172-31-30-113 ~]# /opt/tomcat/bin/startup.sh
Using CATALINA_BASE:   /opt/tomcat
Using CATALINA_HOME:   /opt/tomcat
Using CATALINA_TMPDIR: /opt/tomcat/temp
Using JRE_HOME:        /
Using CLASSPATH:       /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar
Using CATALINA_OPTS:
Tomcat started.
[root@ip-172-31-30-113 ~]# |
```

### 36) checking the tomcat status in terminal again

```
[root@ip-172-31-30-113 ~]# ps -ef | grep tomcat
root      4329    1 15 15:29 pts/0    00:00:04 //bin/java -Djava.util.logging.config.file=/opt/tomcat/conf/logging.properties -Djava.util.logging.manager=org.apache.juli.ClassLoaderLogManager -Djdk.tls.ephemeralDHkeySize=2048 -Djava.protocol.handler.pkgs=org.apache.catalina.webresources -Dorg.apache.catalina.security.SecurityListener.UMA_sk=0027 -Dignore.endorsed.dirs= -classpath /opt/tomcat/bin/bootstrap.jar:/opt/tomcat/bin/tomcat-juli.jar -Dcatalina.base=/opt/tomcat -Dcatalina.home=/opt/tomcat -Djava.io.tmpdir=/opt/tomcat/temp org.apache.catalina.startup.Bootstrap start
root      43327  3975    0 15:29 pts/0    00:00:00 grep --color=auto tomcat
[root@ip-172-31-30-113 ~]# |
```

### 37) copy the public ip of the ec2 followed by port 8080 & jenkins



The screenshot shows a web browser window with the following details:

- Address bar: 3.143.108.51:8080/jenkins
- HTTP Status 404 – Not Found
- Type: Status Report
- Message: The requested resource [/jenkins] is not available.
- Description: The origin server did not find a current representation for the target resource or is not willing to disclose that one exists.
- Apache Tomcat/9.0.96

### 38) remove jenkins war file & install again

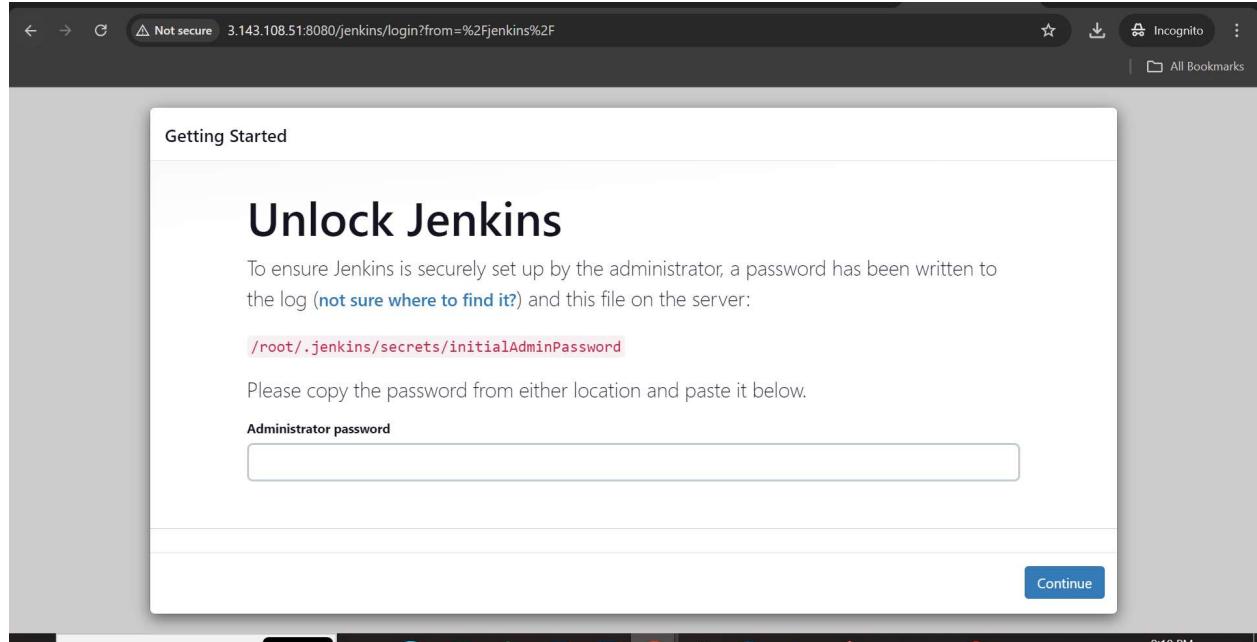
```

root@ip-172-31-30-113:/opt/tomcat/webapps
[root@ip-172-31-30-113 ~]# ls apache-tomcat-9.0.96.zip devops file.txt jenkins.war jenkins.war.i
[root@ip-172-31-30-113 ~]# cd /opt/tomcat/webapps/
[root@ip-172-31-30-113 webapps]# ls
[root@ip-172-31-30-113 webapps]# jenkins.war.1 managed root
[root@ip-172-31-30-113 webapps]# cd
[root@ip-172-31-30-113 ~]# pwd
/root
[root@ip-172-31-30-113 ~]# cd /opt/tomcat/webapps/
[root@ip-172-31-30-113 webapps]# ls
[root@ip-172-31-30-113 webapps]# jenkins.war.1 managed root
[root@ip-172-31-30-113 webapps]# rm -rf jenkins.war.1
[root@ip-172-31-30-113 webapps]# ls
[root@ip-172-31-30-113 webapps]# curl https://updates.jenkins.io/download/war/2.462.2/jenkins.war
[root@ip-172-31-30-113 webapps]# wget https://updates.jenkins.io/download/war/2.462.2/jenkins.war
--2024-10-17 15:39:54-- https://updates.jenkins.io/download/war/2.462.2/jenkins.war
Resolving updates.jenkins.io (updates.jenkins.io)... 52.202.51.185
Connecting to updates.jenkins.io (updates.jenkins.io)|52.202.51.185|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://get.jenkins.io/war-stable/2.462.2/jenkins.war [following]
--2024-10-17 15:39:54-- https://get.jenkins.io/war-stable/2.462.2/jenkins.war
Resolving get.jenkins.io (get.jenkins.io)|20.7.178.24|:2603:1030:408:51:15a
Connecting to get.jenkins.io (get.jenkins.io)|20.7.178.24|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 93344579 (89M) [application/x-java-archive]
Saving to: 'jenkins.war'

jenkins.war          100%[=====] 89.02M  9.53MB/s   in 17s
2024-10-17 15:40:11 (5.35 MB/s) - 'jenkins.war' saved [93344579/93344579]
[root@ip-172-31-30-113 webapps]#

```

### 39) copy the public ip of ec2 followed by port 8080/jenkins



### 40) setup jenkins dashboard

```
2024-10-17 15:40:11 (5.35 MB/s) - 'jenkins.war' saved [93344579/93344579]
[root@ip-172-31-30-113 webapps]# cat /root/.jenkins/secrets/initialAdminPassword
f2b5705270504af59eca585709123ad2
[root@ip-172-31-30-113 webapps]# |
```

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:

```
/root/.jenkins/secrets/initialAdminPassword
```

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

Administrator password

.....

[Continue](#)

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.

Jenkins 2.462.2

Getting Started

# Getting Started

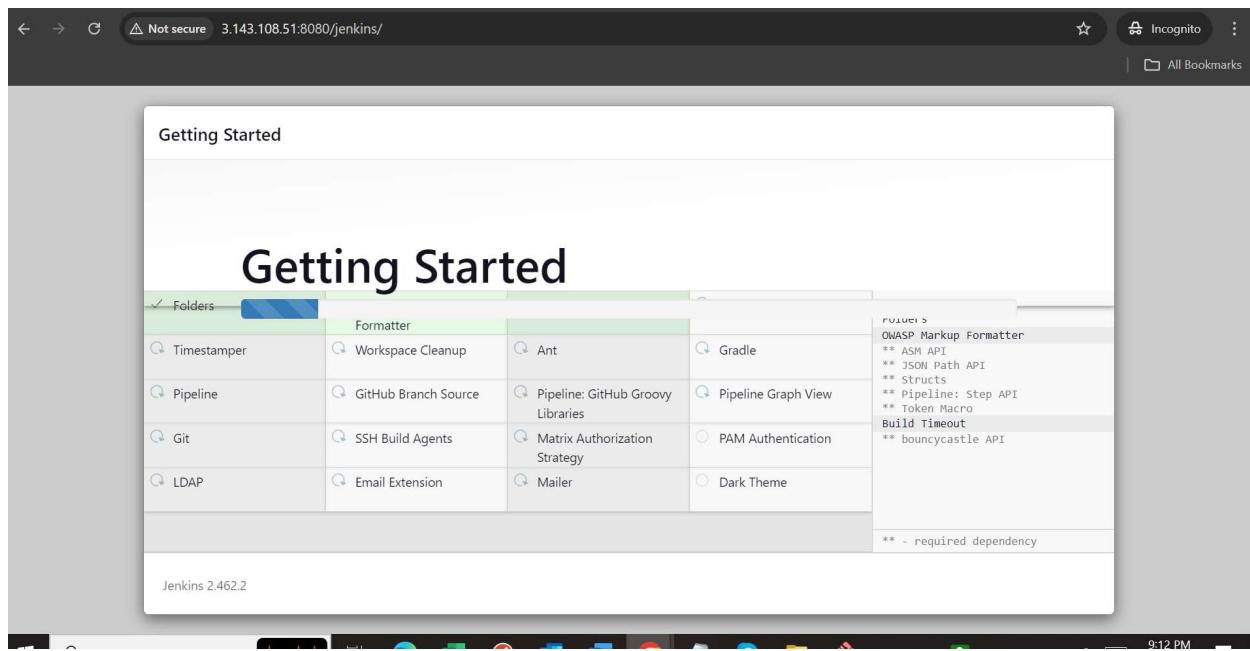
Formatter			
Timestamper	Workspace Cleanup	Ant	Gradle
Pipeline	GitHub Branch Source	Pipeline: GitHub Groovy Libraries	Pipeline Graph View
Git	SSH Build Agents	Matrix Authorization Strategy	PAM Authentication
LDAP	Email Extension	Mailer	Dark Theme

Roles

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

\*\* - required dependency

Jenkins 2.462.2



Getting Started

## Create First Admin User

Username

Password

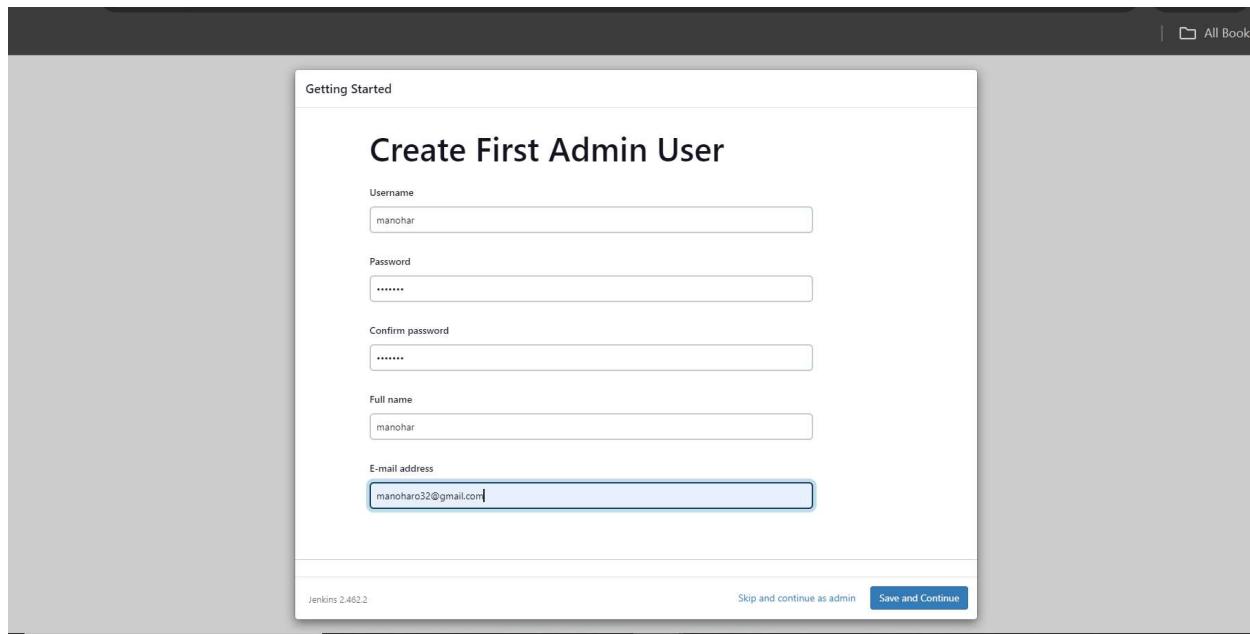
Confirm password

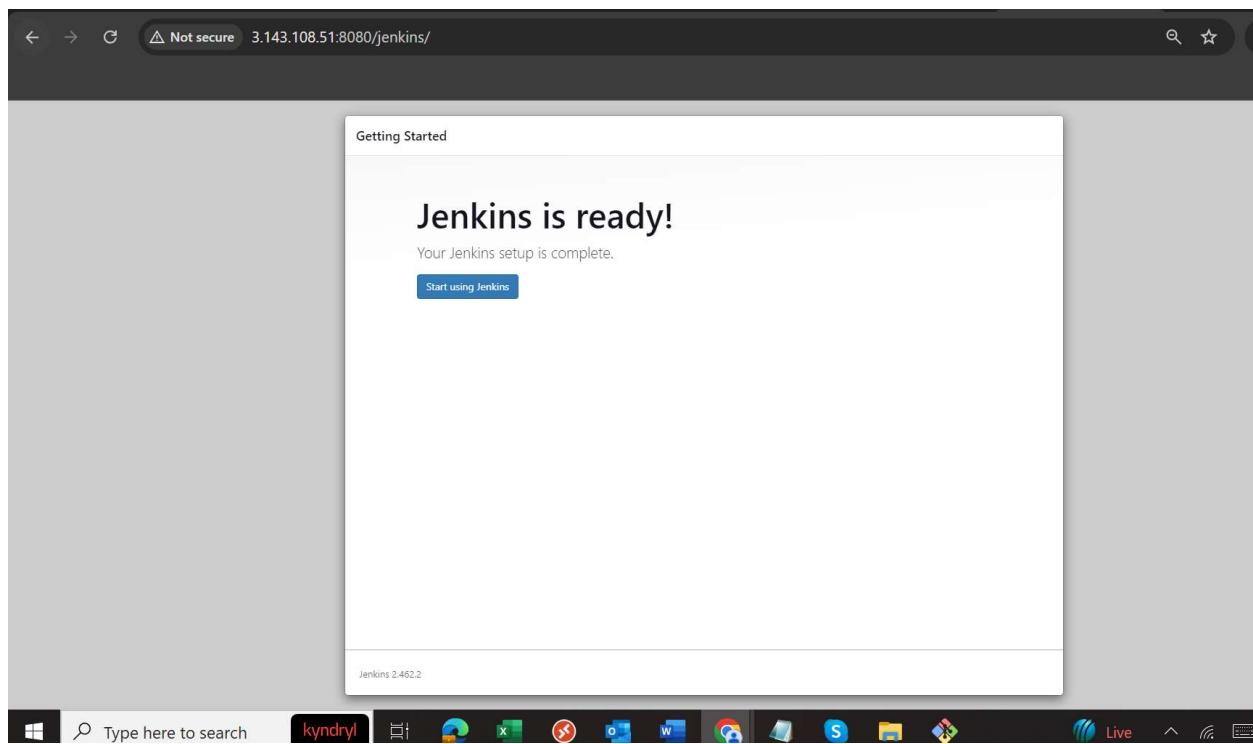
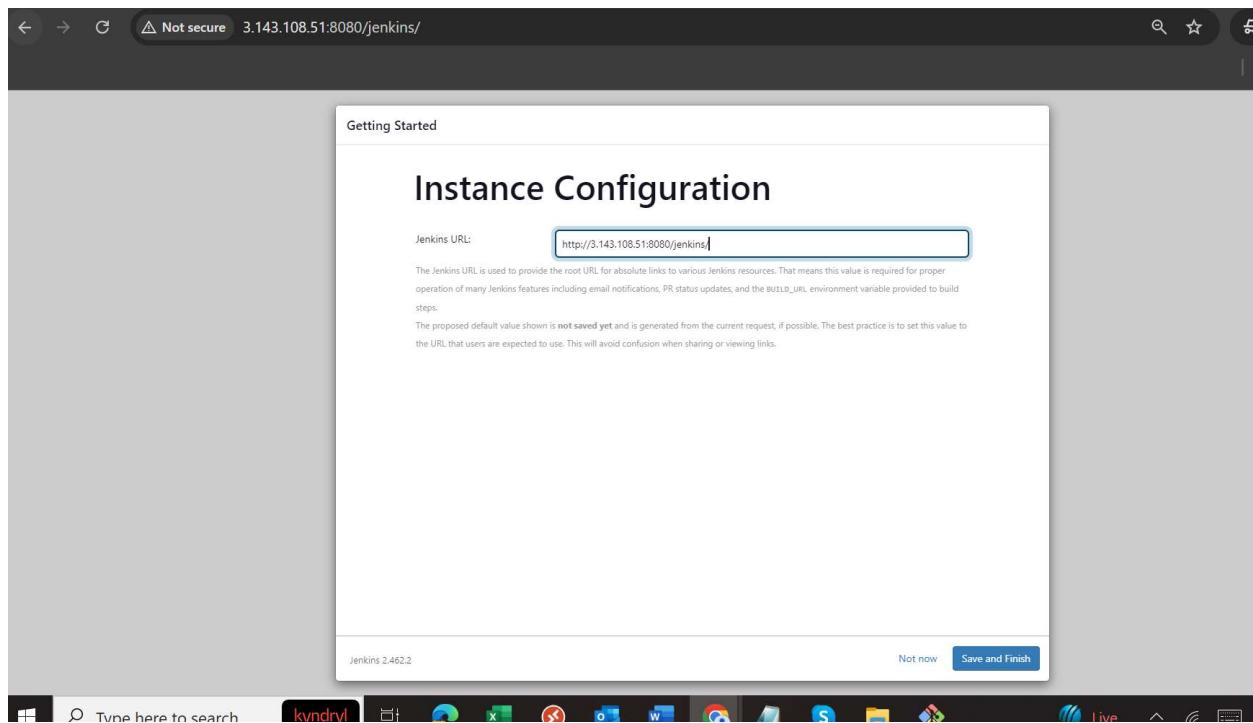
Full name

E-mail address

Skip and continue as admin

Jenkins 2.462.2





The screenshot shows the Jenkins dashboard at the URL [3.143.108.51:8080/jenkins/](http://3.143.108.51:8080/jenkins/). The title bar indicates it's a 'Not secure' connection. The dashboard features a sidebar with links for 'Build History', 'Manage Jenkins', and 'My Views'. It includes sections for 'Build Queue' (empty), 'Build Executor Status' (2 idle), and 'Create a job' (with a '+' button). A central 'Welcome to Jenkins!' message encourages users to start building their software project, with links to 'Set up a distributed build', 'Set up an agent', 'Configure a cloud', and 'Learn more about distributed builds'. The bottom right corner shows 'REST API' and 'Jenkins' links.

The screenshot shows the 'New Item' creation dialog in Jenkins. The title bar shows the user is logged in as 'manohar'. The dialog has a 'New Item' header and a 'Enter an item name' input field containing '1stproject'. Below it, a 'Select an item type' section lists several options: 'Freestyle project' (selected), 'Pipeline', 'Multi-configuration project', 'Folder', and 'Multibranch Pipeline'. Each option has a small icon and a brief description. At the bottom is a green 'OK' button. The background shows the Jenkins interface with various icons and a search bar.

Dashboard > 1stproject > Configuration

### Configure

Build Environment

- General
- Source Code Management
- Build Triggers
- Build Environment**
- Build Steps
- Post-build Actions

Build Steps

Execute shell

Command

See the list of available environment variables

```
date
```

Saved

Save Apply

This screenshot shows the Jenkins configuration interface for a job named '1stproject'. The 'Build Environment' section is active. Under 'Build Steps', there is one step named 'Execute shell' with the command 'date' entered. A green 'Saved' button is visible at the bottom left. The browser address bar shows the URL as 3.143.108.51:8080/jenkins/job/1stproject/configure.

Dashboard > 1stproject /

### Jenkins

1stproject

Status Changes Workspace Build scheduled Build Now Configure Delete Project Rename

Build History trend ▾ No builds Atom feed for all Atom feed for failures

This screenshot shows the Jenkins dashboard for the '1stproject'. The project status is 'Build scheduled'. There is a 'Build Now' button highlighted in yellow. Below the project name, there's a 'Build History' section which currently shows 'No builds'. At the bottom, there are links for 'Atom feed for all' and 'Atom feed for failures'. The browser address bar shows the URL as 3.143.108.51:8080/jenkins/job/1stproject/.

Jenkins

Dashboard > 1stproject >

**1stproject**

Status Changes Workspace Build Now Configure Delete Project Rename

Build History trend Filter... /

Oct 17, 2024 3:45 PM

Atom feed for all Atom feed for failures

REST API Jenkins 2.462.2

Oct 17, 2024 3:45 PM

Jenkins

Dashboard > 1stproject > #1 > Console Output

**Console Output**

Status Changes Console Output Edit Build Information Delete build #1 Timings

Started by user manohar  
Running as SYSTEM  
Building in workspace /root/.jenkins/workspace/1stproject  
[1stproject] \$ /bin/sh -xe /opt/tomcat/temp/jenkins1418081190694536010.sh  
+ date  
Thu Oct 17 03:45:04 UTC 2024  
Finished: SUCCESS

Download Copy View as plain text

```
[root@ip-172-31-30-113 1stproject]# cd /root/.jenkins/
[root@ip-172-31-30-113 .jenkins]# ls
config.xml          jenkins.install.InstallUtil.lastExecVersion    jobs           queue.xml      updates
hudson.model.UpdateCenter.xml  jenkins.install.UpgradeWizard.state   logs           secret.key    userContent
hudson.plugins.git.GitTool.xml  jenkins.model.JenkinsLocationConfiguration.xml nodeMonitors.xml secret.key.not-so-secret users
identity.key.enc      jenkins.telemetry.correlator.xml       plugins        secrets      workspace
```

```
identity.key.enc          jenkins.telemetry.correlator.xml
[root@ip-172-31-30-113 .jenkins]# cd workspace/
[root@ip-172-31-30-113 workspace]# ls
1stproject
[root@ip-172-31-30-113 workspace]# |
```

```
1stproject
[root@ip-172-31-30-113 workspace]# cd 1stproject/
[root@ip-172-31-30-113 1stproject]# ls
[root@ip-172-31-30-113 1stproject]# |
```

Notes:

AWS & devops Day2

```
=====
=====
```

install tomcat

its an application server

connect to ec2 server

go to download folder

copy the command "ssh -i "AWS.pem" ec2-user@ec2-\*\*-\*\*-\*\*.us-east-2.compute.amazonaws.com"and paste in the terminal

\$- normal user

root user- sudo -i

check nginx is running- systemctl status nginx

default port number for nginx- 80

default port number for tomcat- 8080

ssh default port number- 22

https default port number - 443

To install tomcat - java is mandatory

Command to install java- sudo yum install java-17-openjdk -y

java version- java --version

tomcat- we will take it externally

if you want to take any package from outside "wget" is compulsory and without that we can't install any package from outside

in google search: tomcat 9 download

right click on zip pgp.shah512

paste below command in terminal- wget <package URL>

ERROR : command not found

install wget: yum install wget zip unzip -y

install wget- wget <Package URL>

unzip the downloaded package- unzip apache-tomcat-9.0.96.zip

ls

move the unzip tomcat folder to the opt

command to move the folder- mv apache-tomcat-9.0.96 /opt/tomcat "no need to type the complete folder name you can just type ap and tab"

ls

cd / (top level directory)

whoami

pwd

ls

linux default directorie

bin: binary files

boot: booting information

dev: device information xvda1 and xvda2

etc: username and password

home: home related information

lib: library files

media: pendrive & cd rom

mnt: mount related information

opt: keep always software packages "here tomcat is our software package so we kept inside the opt"

proc: process related information

root: root level information

run: run level information  
sys: system related information  
tmp: temporary files  
usr: user related information  
var: log related information

cd "type cd to come out of the any location to the initial location"

give file permission:

=====

```
chmod -R 755 /opt/tomcat/
```

7 "it is user"

5 "it is group"

5 "it is others"

7 is full permission (read, write and execute)

read =4

write=2

x=1

4+2+1=7 (Full permission)

start tomcat: /opt/tomcat/bin/startup.sh

copy the public ip address of the EC2 & FOLLOWED by the port 8080

need to allow port number : "8080" in security group

enable port: 80

enable port: 22

again copy the public ip address of the EC2 & FOLLOWED by the port 8080

how to check if tomcat is working or not in the terminal

command: ps -ef | grep tomcat

ps= process

ef= enterfile

grep= global regular expression

stop the tomcat

/opt/tomcat/bin/shutdown.sh

check if tomcat is working or not: ps -ef | grep tomcat

on the browser you will you not be able to see it

start the tomcat and check if its working or not

File permission:

create an empty file

touch file1.txt

ls

ll (to check file permisson)

-(it will going to denote file permission)

create a directory

mkdir devops

ll

if its a directory d will be there

directory colour will be changed (Blue colour)

file it is always white colour

r (it is a 4 read permission)

w (write it is a 2)

4+2=6

- (it is a no permission)

r-- (r it is a 4)

6+4+4 is a default permission for file1.txt

change file permission

chmod 777 file1.txt

ll

-rwx (r its a 4 read, w is 2 write x-=1 "full permission")

Deploy jenkins (CI/CD Tool)

=====

Deploy jenkins inside the tomcat

in google search: jenkins war

right click on any version and copy link

inside terminal paste below command

wget (URL)

ls

copy the war file to tomcat

cp jenkins.war /opt/tomcat/webapps/

copy the public ip of EC2 server followed by the port 8080/jenkins and paste in the browser

update to the lastest java

```
check java version - java --version  
remove java - yum remove java* -y  
install 21 version of java- yum install java-21-openjdk -y  
tomcat is running or not- ps -ef | grep tomcat  
stop tomcat : /opt/tomcat/bin/shutdown.sh  
start tomcat: /opt/tomcat/bin/startup.sh  
check in the browser if tomcat is working: public ip of ec2 followed by 8080  
check if jenkins is working or not : public ip of ec2 followed by 8080/jenkins
```

```
remove jenkins war file  
cd /opt/tomcat/webapps/jenkins.war  
ls  
rm -rf jenkins jenkins.war  
ls  
wget <package url>  
copy public ip of ec2 followed by 8080/jenkins
```

```
cat /root/.jenkins/secrets/initialAdminPassword  
copy the password and paste in jenkins dashboard  
click install suggested plugins  
username: admin  
password: admin  
confirm password: admin  
full name: admin  
Email: any email address
```

```
click on new item and create a free style project  
name: 1st project
```

click on add build step

click on execute shell

in execute shell you can mention "date"

click on apply and save

click on build now

click on green tick mark and check console output

it will print the date

go to terminal

cd

ll

ls -ltra

cd .jenkins

ls

cd workspace

ls

cd istproject