

# PROJECT-5

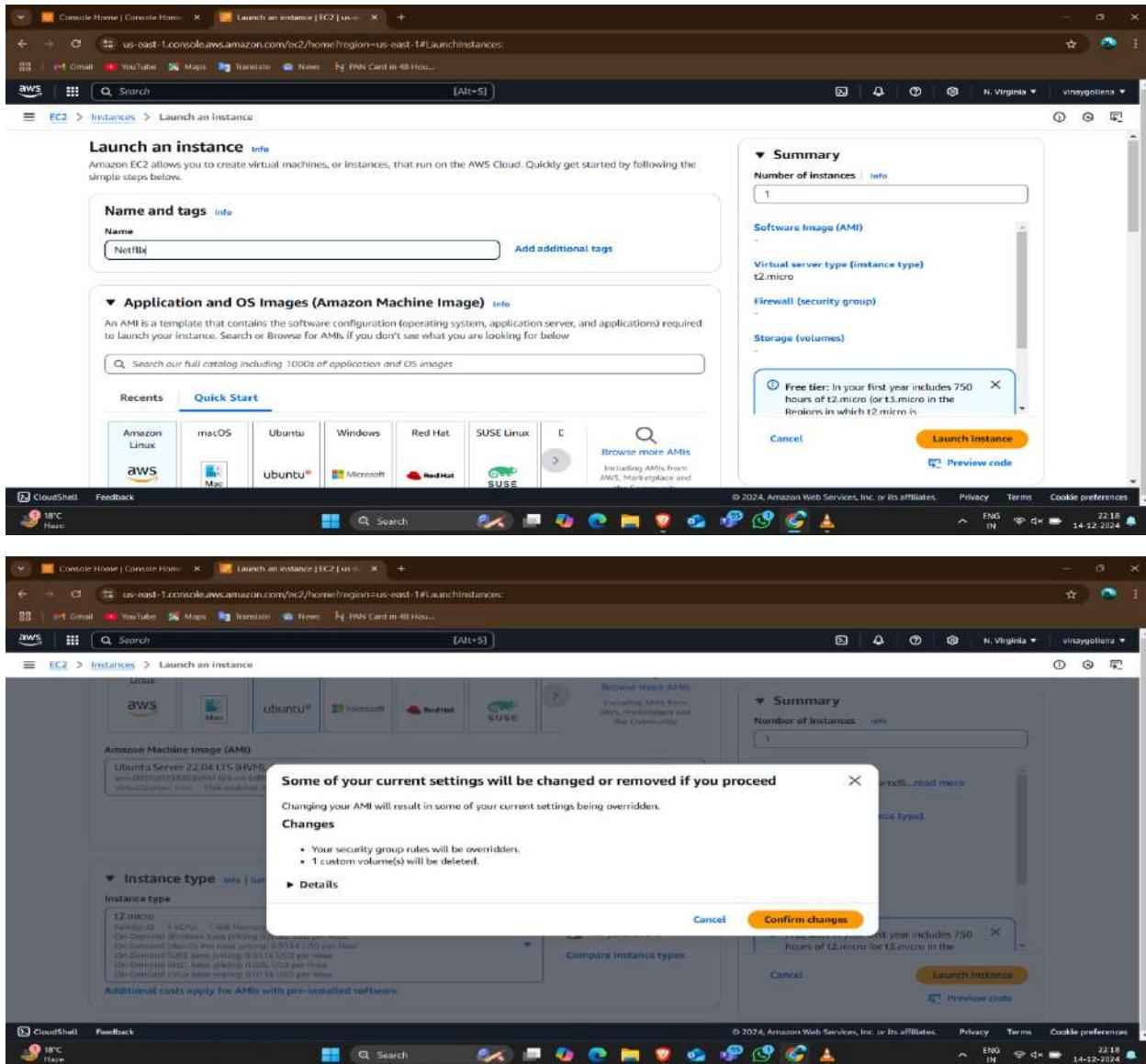
## DEPLOY NETFLIX CLONE

G Vinay

### Phase-1:

Deploy Netflix Application by manually using docker.

- Launch the ec2 instance using Ubuntu.



- Select the instance type is t2.large.

The screenshot shows the 'Launch an instance' wizard on the AWS EC2 console. In the 'Instance type' section, 't2.large' is selected. Below it, a detailed description of the instance type is provided, including its price per hour for various AMIs. A note states 'Additional costs apply for AMIs with pre-installed software'. To the right, a summary panel shows 'Number of instances: 1', 'Software Image (AMI): Canonical, Ubuntu, 22.04 LTS', 'Virtual server type (instance type): t2.large', and 'Storage (volumes): 1 volume(s) - 8 GiB'. A promotional message for the free tier is visible. At the bottom right are 'Cancel', 'Launch instance', and 'Preview code' buttons.

The screenshot shows the 'Launch an instance' wizard on the AWS EC2 console, currently on the 'Inbound Security Group Rules' step. It displays two security group rules. Rule 1 allows SSH traffic from anywhere on port 22. Rule 2 allows all traffic from anywhere on port All. A warning message at the bottom states: '⚠️ Rules with source of 0.0.0.0/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.' To the right, the summary panel remains the same as in the previous step, showing 1 instance, Canonical Ubuntu 22.04 LTS AMI, t2.large instance type, and 8 GiB storage. The 'Launch instance' button is prominent at the bottom right.

The screenshot shows the AWS EC2 Instances page. The left sidebar includes options like Dashboard, EC2 Global View, Events, Instances (selected), Instance Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images (AMIs, Catalog), and Elastic Block Store (Volumes, Snapshots, Lifecycle Manager). The main content area displays two instances:

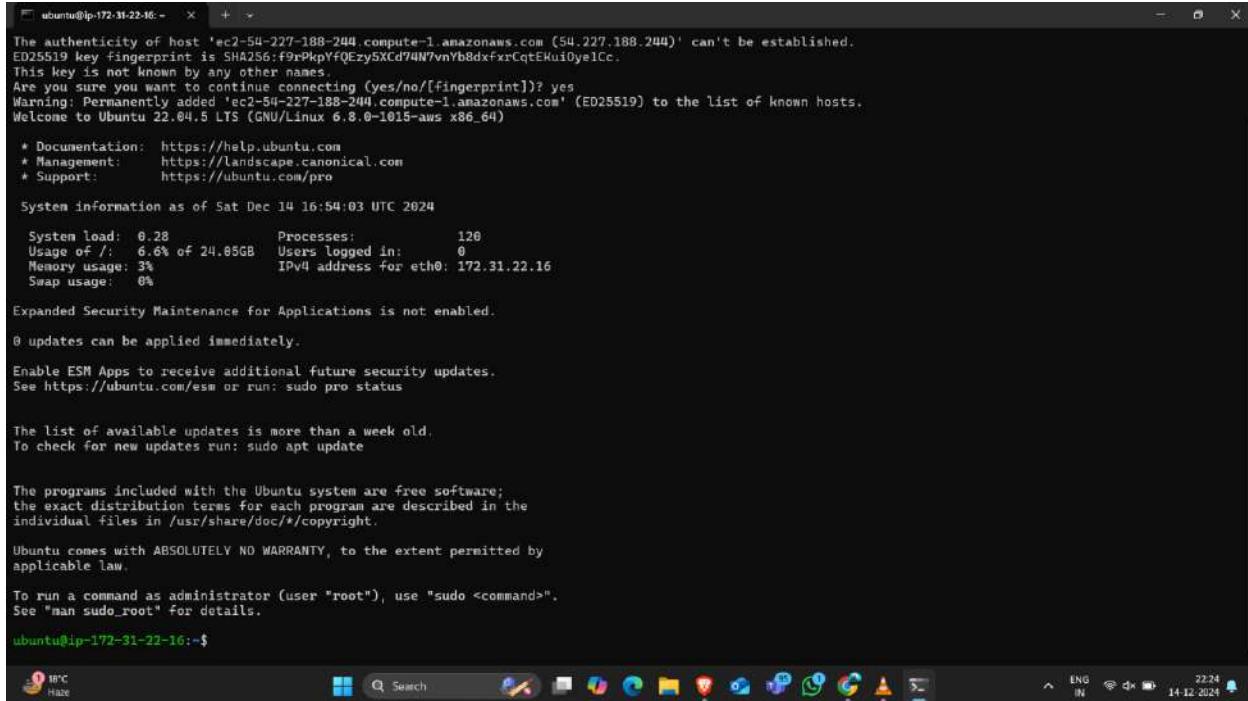
Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
Netflix	i-0bc1a119ddb64ffe2	Terminated	t2.large	-	-	us-east-1a	-
Netflix	i-09a7ea3468b67519e	Running	t2.large	Initializing	View alarms	us-east-1a	ec2-54-2

A modal window for the instance i-09a7ea3468b67519e (Netflix) is open, showing details such as AMI name (ubuntu/images/hvm-ssd/ubuntu-jammy-22.04-amd64-server-20240927), Stop protection (Disabled), Launch time (Sat Dec 14 2024 22:23:14 GMT+0530 (India Standard Time) (less than a minute)), Lifecycle (Normal), and Termination protection (Disabled).

The screenshot shows the AWS EC2 Instances page with the Details tab selected for the instance i-09a7ea3468b67519e (Netflix). The left sidebar is identical to the first screenshot. The main content area shows the instance summary and its network details:

Details	Status and alarms	Monitoring	Security	Networking	Storage	Tags
<b>Instance summary</b>						
Instance ID: i-09a7ea3468b67519e	Public IPv4 address: 54.227.188.244   <a href="#">open address</a>	Private IPv4 addresses: 172.31.22.16				
IPv6 address: -	Instance state: Running	Public IPv4 DNS: ec2-54-227-188-244.compute-1.amazonaws.com   <a href="#">open address</a>				
Hostname type: -	Private IP DNS name (IPv4 only): -					

- Connect it to the terminal.



```

ubuntu@ip-172-31-22-16:~ % 
The authenticity of host 'ec2-54-227-188-244.compute-1.amazonaws.com (54.227.188.244)' can't be established.
ED25519 key fingerprint is SHA256:forPKpYfQExy5Xcd74N7vnY8dxfrxCtEKuIoyeICc.
This key is not known by any other names.
Are you sure you want to continue connecting (yes/no/[fingerprint])? yes
Warning: Permanently added 'ec2-54-227-188-244.compute-1.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 6.8.0-1015-aws x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support:   https://ubuntu.com/pro

System information as of Sat Dec 14 16:54:03 UTC 2024

System load: 0.28      Processes:           120
Usage of /: 6.6% of 24.85GB  Users logged in:    0
Memory usage: 3%          IPv4 address for eth0: 172.31.22.16
Swap usage:  0%

Expanded Security Maintenance for Applications is not enabled.

0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

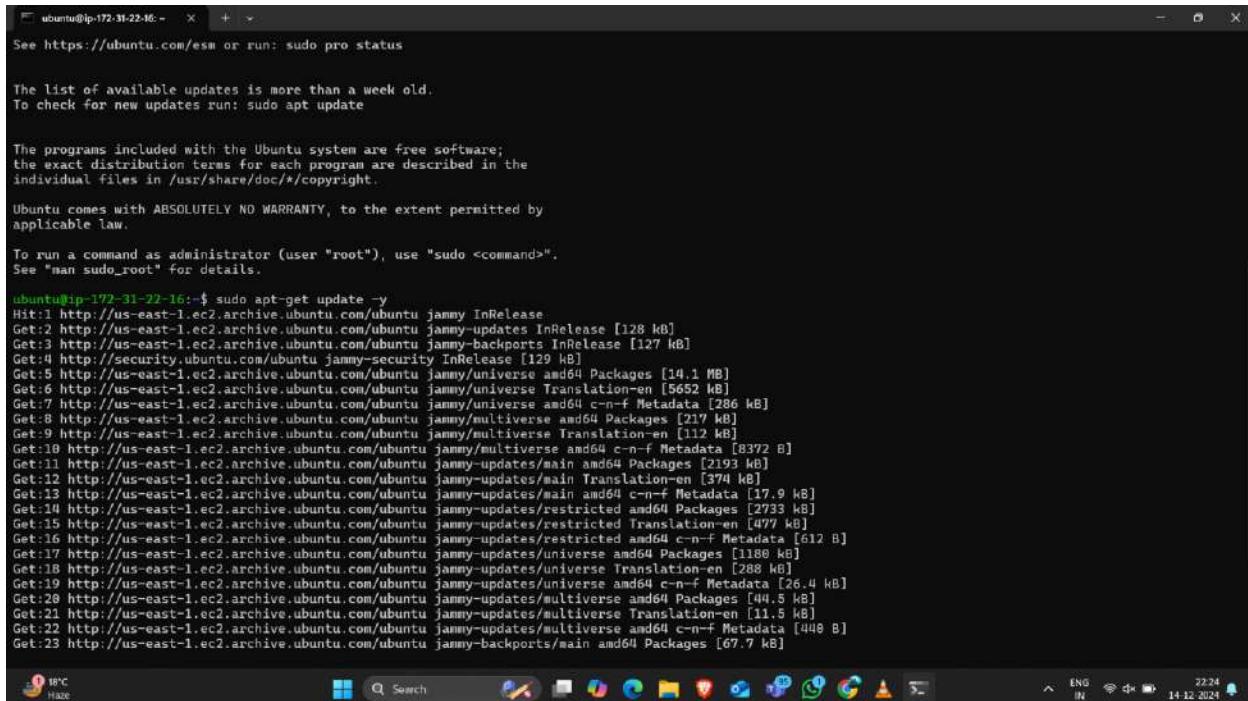
The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-22-16:~$ 
```

- Update it by using “`sudo apt-get update`” command.



```

ubuntu@ip-172-31-22-16:~ % 
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-22-16:~$ sudo apt-get update -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8392 B]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [219 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [374 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.9 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2733 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [477 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [612 B]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1180 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [288 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.4 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [44.5 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [11.5 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [440 B]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.7 kB] 
```

```
ubuntu@ip-172-31-22-16:~$ apt update
Get: 5 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 kB]
Get: 6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get: 7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get: 8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get: 9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2193 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [370 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.9 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2933 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [497 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [612 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1180 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [288 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.4 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [44.5 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [11.5 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [448 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.7 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.9 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1968 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [314 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2644 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [460 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [580 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [958 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [204 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.5 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.6 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [8260 kB]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [224 kB]
Fetched 34.8 MB in 15s (2261 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-22-16:~$ |
```

- Install git “sudo apt-get install git -y”. but by default the Ubuntu server has git inside.

```
ubuntu@ip-172-31-22-16:~$ sudo apt-get install git -y
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.11).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 37 not upgraded.
ubuntu@ip-172-31-22-16:~$ |
```

- Than clone the Netflix repository from the github.

```

ubuntu@ip-172-31-22-16:~$ git clone https://github.com/Gouserabbani44/Netflix.git
Cloning into 'Netflix'...
remote: Enumerating objects: 773, done.
remote: Counting objects: 100% (773/773), done.
remote: Compressing objects: 100% (308/308), done.
remote: Total 773 (delta 438), reused 768 (delta 436), pack-reused 0 (from 0)
Receiving objects: 100% (773/773), 13.47 MiB | 18.22 MiB/s, done.
Resolving deltas: 100% (438/438), done.
ubuntu@ip-172-31-22-16:~$ ll
total 32
drwxr-x--- 5 ubuntu ubuntu 4096 Dec 14 16:55 /
drwxr-xr-x 3 root root 4096 Dec 14 16:53 ./
-rw-r--r-- 1 ubuntu ubuntu 228 Jan 6 2022 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwx----- 2 ubuntu ubuntu 4096 Dec 14 16:54 .cache/
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr--r-- 2 ubuntu ubuntu 4096 Dec 14 16:53 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Dec 14 16:54 .sudo_as_admin_successful
drwxrwxr-x 6 ubuntu ubuntu 4096 Dec 14 16:55 Netflix/
ubuntu@ip-172-31-22-16:~$ sudo apt-get install docker.io

```

- Than install the docker “sudo apt-get install docker.io”.

```

ubuntu@ip-172-31-22-16:~$ sudo apt-get install docker.io
Cloning into 'Docker'...
remote: Enumerating objects: 773, done.
remote: Counting objects: 100% (773/773), done.
remote: Compressing objects: 100% (308/308), done.
remote: Total 773 (delta 438), reused 768 (delta 436), pack-reused 0 (from 0)
Receiving objects: 100% (773/773), 13.47 MiB | 18.22 MiB/s, done.
Resolving deltas: 100% (438/438), done.
ubuntu@ip-172-31-22-16:~$ ll
total 32
drwxr-x--- 5 ubuntu ubuntu 4096 Dec 14 16:55 /
drwxr-xr-x 3 root root 4096 Dec 14 16:53 ./
-rw-r--r-- 1 ubuntu ubuntu 228 Jan 6 2022 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwx----- 2 ubuntu ubuntu 4096 Dec 14 16:54 .cache/
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr--r-- 2 ubuntu ubuntu 4096 Dec 14 16:53 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Dec 14 16:54 .sudo_as_admin_successful
drwxrwxr-x 6 ubuntu ubuntu 4096 Dec 14 16:55 Docker/
ubuntu@ip-172-31-22-16:~$ sudo apt-get install docker.io

```

- Give the usermod permissions” sudo usermod –aG Ubuntu”.

```

ubuntu@ip-172-31-22-16:~$ sudo usermod -aG docker ubuntu
usermod: user 'ubuntu' does not exist
ubuntu@ip-172-31-22-16:~$ sudo usermod -aG docker ubuntu
ubuntu@ip-172-31-22-16:~$ newgrp docker
ubuntu@ip-172-31-22-16:~$ sudo chmod 777 /var/run/docker.sock

```

- Here in ubuntu flavor it run docker automatically.
- Now create a group “newgrp docker”.
- Give the permission for docker.sock “sudo chmod 777 /var/run/docker.sock”

```

ubuntu@ip-172-31-22-16:~$ sudo usermod -aG docker ubuntu
usermod: user 'ubuntu' does not exist
ubuntu@ip-172-31-22-16:~$ sudo usermod -aG docker ubuntu
ubuntu@ip-172-31-22-16:~$ newgrp docker
ubuntu@ip-172-31-22-16:~$ sudo chmod 777 /var/run/docker.sock

```

- Now build the new image from cloned repo “docker build –t netflix”.

```

ubuntu@ip-172-31-22-16:~/Netfli$ docker build -t netflix
Created symlink /etc/systemd/system/multi-user.target.wants/docker.service → /lib/systemd/system/docker.service.
Created symlink /etc/systemd/system/sockets.target.wants/docker.socket → /lib/systemd/system/docker.socket.
Processing triggers for dbus (1.12.20-2ubuntu4.1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-22-16:~$ sudo usermod -aG docker ubuntu
usermod: user 'ubuntu' does not exist
ubuntu@ip-172-31-22-16:~$ sudo usermod -aG docker ubuntu
ubuntu@ip-172-31-22-16:~$ newgrp docker
ubuntu@ip-172-31-22-16:~$ sudo chmod 777 /var/run/docker.sock
ubuntu@ip-172-31-22-16:~$ docker build -t netflix .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

unable to prepare context: unable to evaluate symlinks in Dockerfile path: lstat /home/ubuntu/Dockerfile: no such file or directory
ubuntu@ip-172-31-22-16:~$ cd Netflix/
ubuntu@ip-172-31-22-16:~/Netflix$ docker build -t netflix .
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/

Sending build context to Docker daemon 8.218MB
Step 1/16 : FROM node:16.17.0-alpine as builder
16.17.0-alpine: Pulling from library/node
213ec9aee27d: Pull complete
864a973dbf1: Extracting [=====] 35.78MB/36.45MB
88fe61ad56f5: Download complete
e3887ab559e6: Download complete
|
```

Ubuntu 22.04 LTS - 64-bit (2024-12-14)

ENG IN 22:29 14.12.2024

```

ubuntu@ip-172-31-22-16:~/Netfli$ docker build -t netflix
() Some chunks are larger than 500 KiB after minification. Consider:
- Using dynamic import() to code-split the application
- Use build.rollupOptions.output.manualchunks to improve chunking: https://rollupjs.org/guide/en/#output#manualchunks
- Adjust chunk size limit for this warning via build.chunkSizeWarningLimit.
Done in 30.89s.
Removing intermediate container e5007b35cb1b
--> d0e222e3fb85
Step 1/16 : FROM nginx:stable-alpine
stable-alpine: Pulling from library/nginx
d49db072f522: Pull complete
068b4536fb82: Pull complete
9381b75a59e7: Pull complete
f69a73dd210e: Pull complete
6715a1066dac: Pull complete
a19f1e837f4f: Pull complete
edec6cd11b305: Pull complete
10e76302afc6: Pull complete
Digest: sha256:35e323bf2ff8925a505d5d697df9a9148db9a0c78e89fd2e253919847b3cec824
Status: Downloaded newer image for nginx:stable-alpine
--> 60847f99ea69
Step 12/16 : WORKDIR /usr/share/nginx/html
--> Running in 84ee9cbbdc9
Removing intermediate container 84ee9cbbdc9
--> dee23731445
Step 13/16 : RUN rm -rf ./*
--> Running in 563f9bc86956
Removing intermediate container 563f9bc86956
--> 31aee27b24b4
Step 14/16 : COPY --from=builder /app/dist .
--> 928aeac04cc2
Step 15/16 : EXPOSE 80
--> Running in 44c644aa8253
Removing intermediate container 44c644aa8253
--> b6aa1e599b67
Step 16/16 : ENTRYPOINT ["nginx", "-g", "daemon off;"]
--> Running in b9bac2352a00
Removing intermediate container b9bac2352a00
--> 31d04b410386
Successfully built 31d04b410386
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/Netflix$ |
```

Ubuntu 22.04 LTS - 64-bit (2024-12-14)

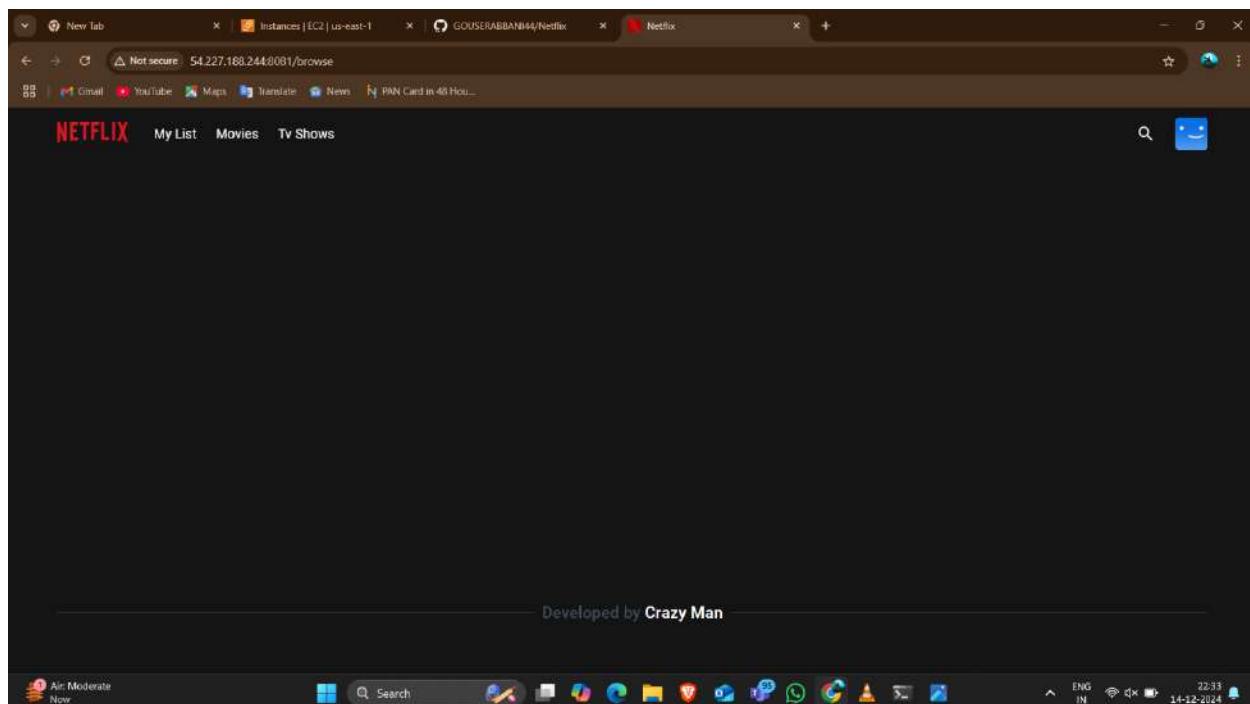
ENG IN 22:31 14.12.2024

- To run container “`docker run -dt --name Netflix -p 8081:80 netflix:latest`”
- Check the container “`docker ps`”

```

ubuntu@ip-172-31-22-16: ~$ docker build .
-- Use build rollupOptions.output.manualChunks to improve chunking: https://rollupjs.org/guide/en/#outputsmanualchunks
-- Adjust chunk size limit for this warning via build.chunkSizeWarningLimit.
Done in 30.80s.
Removing intermediate container e5007b35cb1b
--> d0e222e3fb85
Step 11/16 : FROM nginx:stable-alpine
stable-alpine: Pulling from library/nginx
da9db072f522: Pull complete
668b453d6fb82: Pull complete
9301b75a59e7: Pull complete
f69e73dd210e: Pull complete
6715a1866dac: Pull complete
a19fe837fd4f: Pull complete
edec5cd1b305: Pull complete
10e76392a4c6: Pull complete
Digest: sha256:35e3238f2f0925a505d5d697df9a0c148db9a0c78e89fd2e253919847b3cec824
Status: Downloaded newer image for nginx:stable-alpine
--> 60847f99ea69
Step 12/16 : WORKDIR /usr/share/nginx/html
--> Running in 84ee9cbbdc9
Removing intermediate container 84ee9cbbdc9
--> deee23731445
Step 13/16 : RUN rm -rf ./*
--> Running in 563f9bc86956
Removing intermediate container 563f9bc86956
--> 31aec27b24b4
Step 14/16 : COPY --from=builder /app/dist .
--> 928aaeac04cc2
Step 15/16 : EXPOSE 80
--> Running in 44c644aa0253
Removing intermediate container 44c644aa0253
--> 6e0aa1699b67
Step 16/16 : ENTRYPOINT ["nginx", "-g", "daemon off;"]
--> Running in b9bac2352a00
Removing intermediate container b9bac2352a00
--> 31d04b410386
Successfully built 31d04b410386
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/Netfli$ docker run -d --name netflix -p 8081:80 netflix:latest
53183ec6f4accb86d4ab35b7be513f0851e8d3738bbe06bcd8767e50d4c2138
ubuntu@ip-172-31-22-16:~/Netfli$
```

- copy the public ip of instance and search in the google along with the port number provided “IP:8081”.



- Here we can observe the images and containers created.

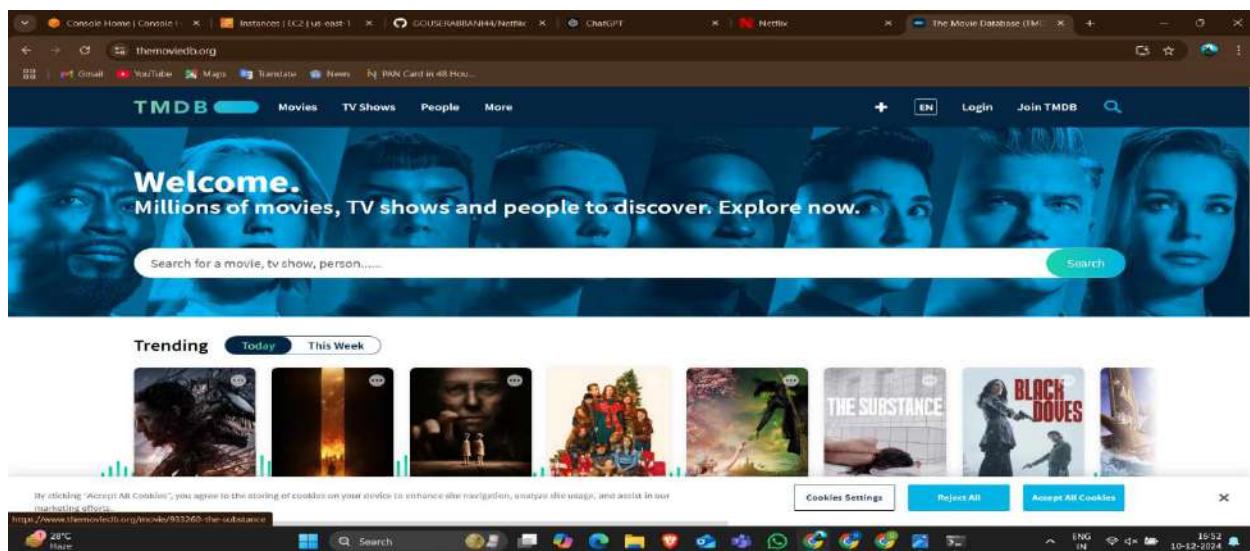
```

ubuntu@ip-172-31-22-16: ~ + %
9301b75a59e7: Pull complete
f69e73d210e: Pull complete
6715a1066da: Pull complete
a19f1e837fdf: Pull complete
edec6d1b305: Pull complete
10e76302afc6: Pull complete
Digest: sha256:35e3238f2f0925a505d5d697df9a0c78e89fd2e253919847b3cec824
Status: Downloaded newer image for nginx:stable-alpine
--> 608847f99ea69
Step 12/16 : WORKDIR /usr/share/nginx/html
--> Running in 84ee9cbbdce9
Removing intermediate container 84ee9cbbdce9
--> dee23731445
Step 13/16 : RUN rm -rf ./*
--> Running in 563f9bc86956
Removing intermediate container 563f9bc86956
--> 31aec27b24b4
Step 14/16 : COPY --from=builder /app/dist .
--> 928aaec04cc2
Step 15/16 : EXPOSE 80
--> Running in 44c644aa0253
Removing intermediate container 44c644aa0253
--> 6e8aa1699b67
Step 16/16 : ENTRYPOINT ["nginx", "-g", "daemon off;"]
--> Running in b9bac2352a00
Removing intermediate container b9bac2352a00
--> 31d04b410386
Successfully built 31d04b410386
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/NetFlix$ docker run -d --name netFlix -p 8081:80 netflix:latest
53183ec6f4accb86d4ab35b7be513f051e8d3738bbe06bcd9767e50d4c2138
ubuntu@ip-172-31-22-16:~/NetFlix$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
53183ec6f4ac netFlix:latest "nginx -g 'daemon off;'" 54 seconds ago Up 53 seconds 0.0.0.0:8081->80/tcp, :::8081->80/tcp netFlix
ubuntu@ip-172-31-22-16:~/NetFlix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netFlix latest 31d04b410386 2 minutes ago 58MB
<none> <none> d0e222e3fb85 2 minutes ago 844MB
nginx stable-alpine 608847f99ea69 4 months ago 48.8MB
node 16.17.0-alpine 5ddcf1f6157bd 2 years ago 115MB
ubuntu@ip-172-31-22-16:~/NetFlix$ 

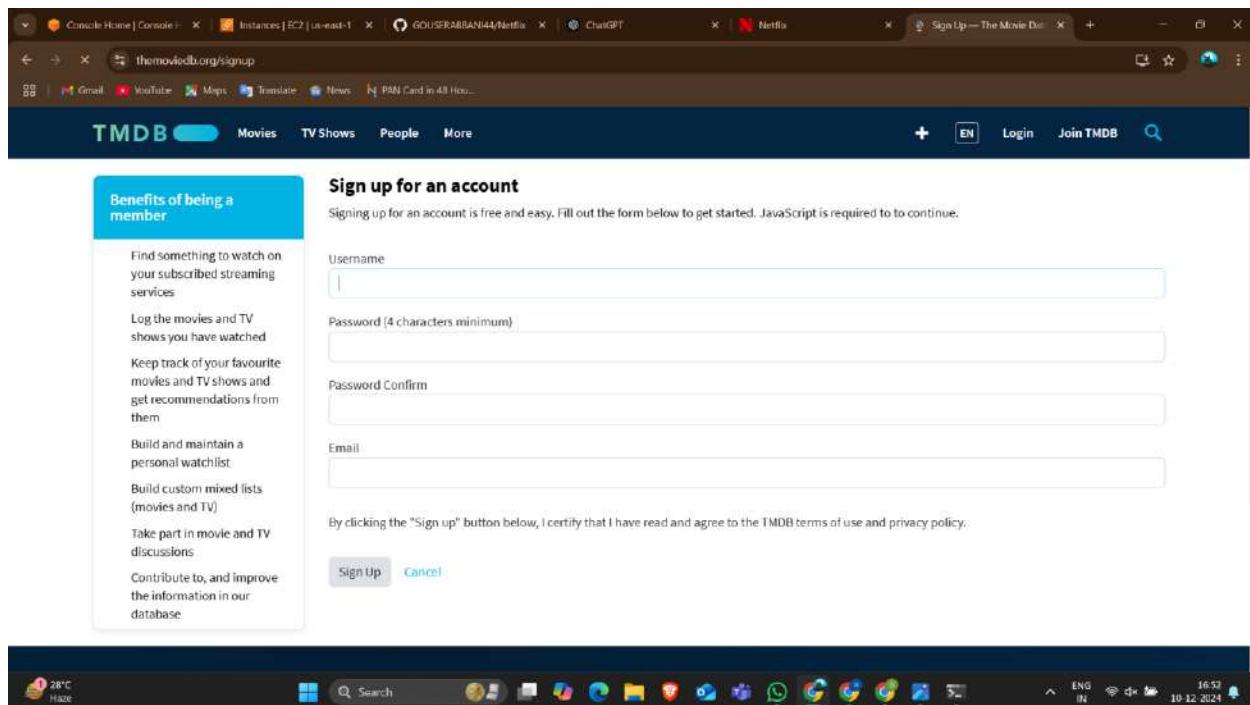
```

Ubuntu desktop interface showing terminal window, taskbar with icons like Watchlist, Ideas, and system status bar.

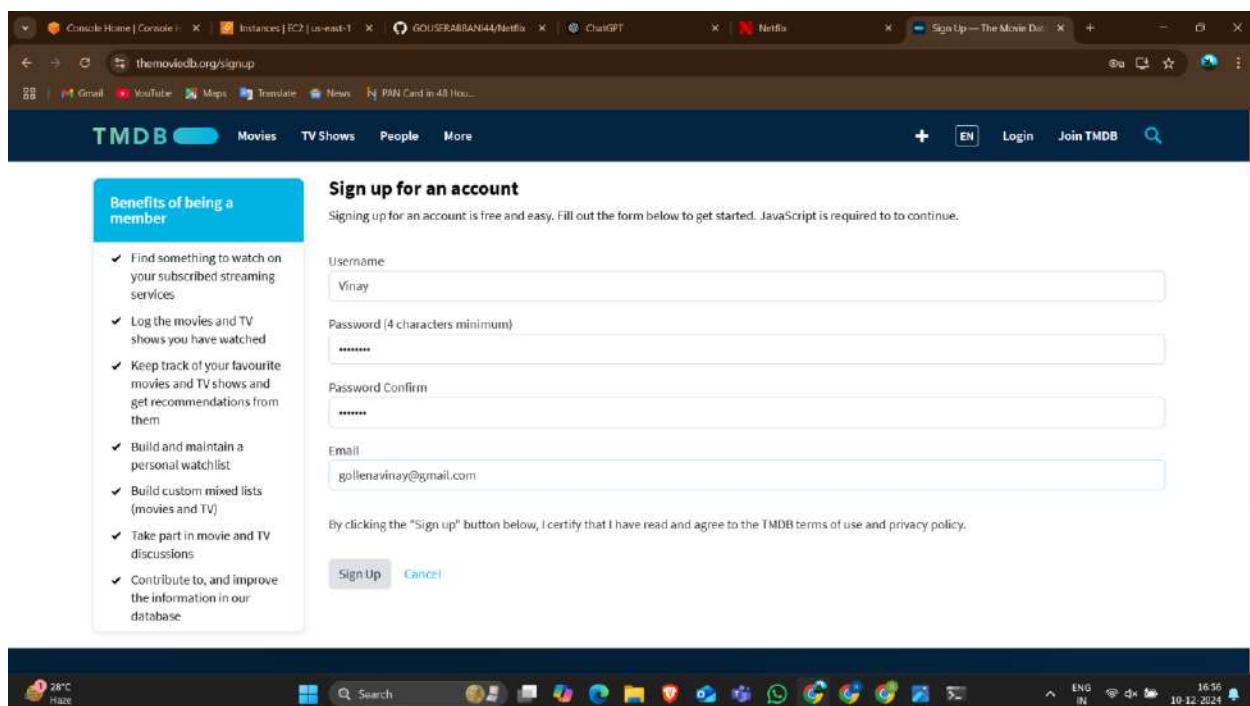
- Here we have hosted Netflix application but not have database for we cannot see anything to watch we have to generate API key to communicate TMDB The movie database.
- Now search in google tmdb click on official site.



- Create the account.



- Fill the details and signup.



- And folloe the process to create the the account carefully
- Activate the account in gmail.

The screenshot shows the TMDB profile page for user Vinay-18. At the top, there's a large green circular icon with a white 'V'. Below it, the username 'Vinay-18' and the text 'Member since December 2024' are displayed. Two circular progress bars show '0x Average Movie Score' and '0x Average TV Score'. A navigation bar below includes links for Overview, Discussions, Lists, Ratings, and Watchlist. The main content area features sections for Stats (Total Edits: 0, Total Ratings: 0), Rating Overview, and Most Watched Genres (none listed).

This screenshot shows the 'Upcoming From Watchlist' section of the TMDB profile page. It displays a message stating 'There are no upcoming movies on your watchlist.' and a link to 'Go to Watchlist'.

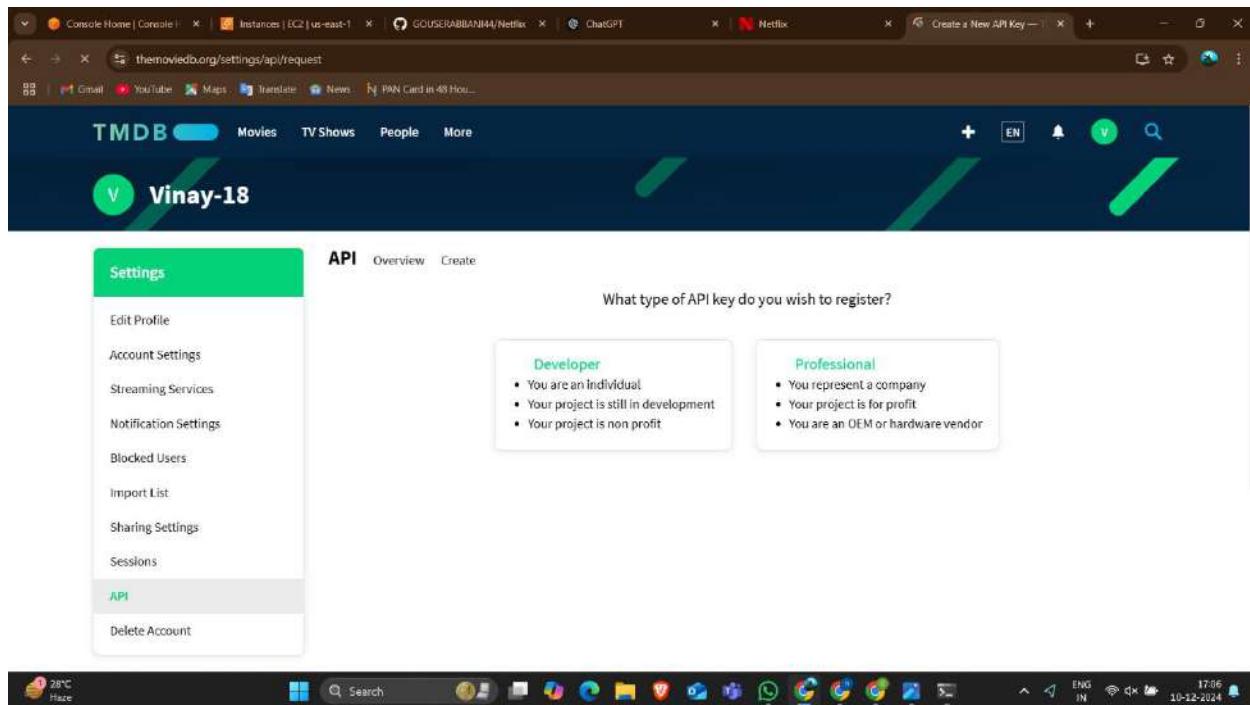
This screenshot shows the 'Recent Discussions' section of the TMDB profile page. It displays a message stating 'You have not yet started any discussions.' and a link to 'Go to Watchlist'.

The screenshot shows the TMDB API Settings page. The left sidebar has a 'Settings' tab selected, with options like Edit Profile, Account Settings, Streaming Services, Notification Settings, Blocked Users, Import List, Sharing Settings, Sessions, API (which is selected and highlighted in green), and Delete Account. The main content area is titled 'API' and contains sections for Overview, Create, Documentation, Support, and Request an API Key.

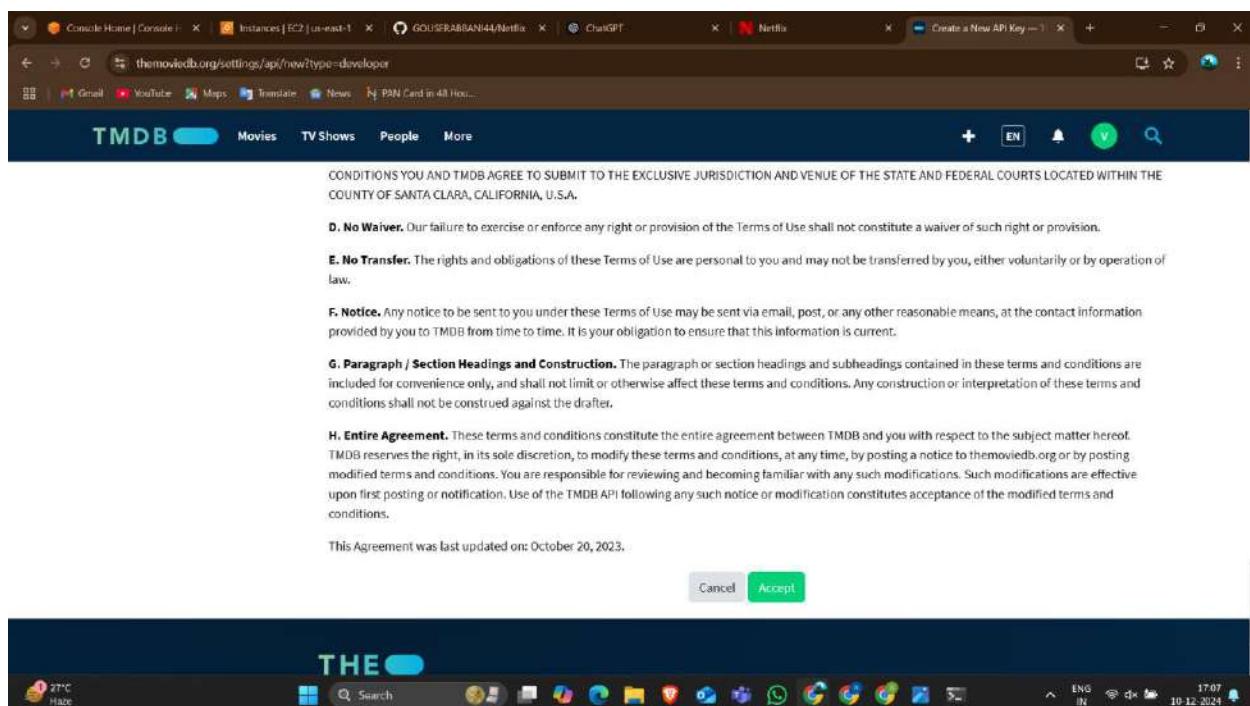
This screenshot shows the 'Request an API Key' section of the TMDB API Settings page. It includes instructions to generate a new API key by clicking a link and provides a note about attribution logos.

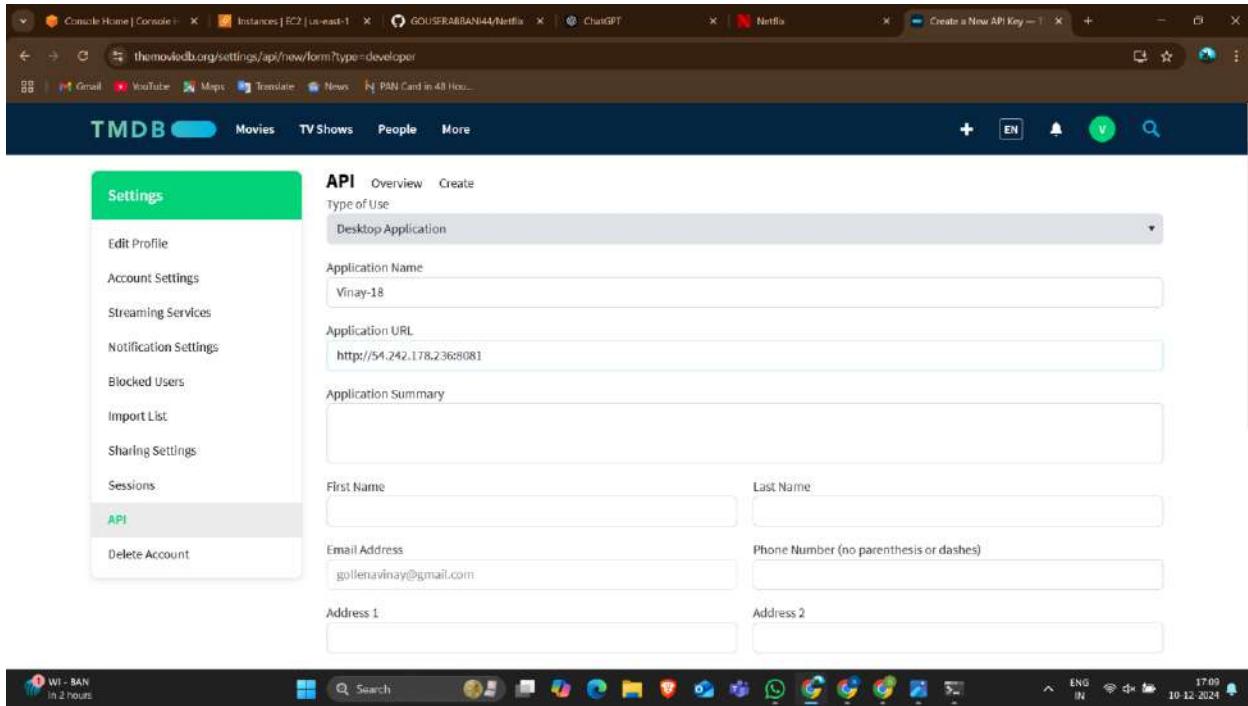
This screenshot is identical to the previous one, showing the 'Request an API Key' section of the TMDB API Settings page.

- Now go to setting → api → click on generate api → developer.



- Now accept the term and conditions.





- After create it save the API key safe and it can helpful for further applications also.
- Now remove the container and images than create again .
- Now remove the running container “docker rm –f cont name”
- Then remove image “docker rmi image id”

```
ubuntu@ip-172-31-22-16:~/n ~ + x
nginx stable-alpine 60847f99ea69 4 months ago 48.8MB
ubuntu@ip-172-31-22-16:~/Netflix$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
53183ec6f4ac netflix:latest "nginx -g 'daemon off;' 4 minutes ago Exited (0) About a minute ago
ubuntu@ip-172-31-22-16:~/Netflix$ docker rm 31d04b110386 60847f99ea69
Error response from daemon: No such container: 31d04b110386
Error response from daemon: No such container: 60847f99ea69
ubuntu@ip-172-31-22-16:~/Netflix$ docker rm -f 53183ec6f4ac
53183ec6f4ac
ubuntu@ip-172-31-22-16:~/Netflix$ docker ps -a
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netflix latest 31d04b110386 6 minutes ago 48.8MB
nginx stable-alpine 60847f99ea69 4 months ago 48.8MB
ubuntu@ip-172-31-22-16:~/Netflix$ docker rm -f 31d04b110386 60847f99ea69
Error response from daemon: No such container: 31d04b110386
Error response from daemon: No such container: 60847f99ea69
ubuntu@ip-172-31-22-16:~/Netflix$ docker rmi 31d04b110386 60847f99ea69
Untagged: netflix:latest
Deleted: sha256:31d04b110386f631ac5329efcn1bf7d32456fe80d1cfacde84d7cf562d5
Deleted: sha256:6e0aa1699bb732003e480acb2762416f3e929a631559834e4f3f8f118c7b1383
Deleted: sha256:928aeac04cc2437198df2f263075eece77015cd5e0977a1b18dcade656c91386405
Deleted: sha256:dic88a21c3f0317288d632a7d3a0c06c61be775536101bcae837676f7a98e94
Deleted: sha256:31aec27b24b499bb432685fd4db1368d1d1a1b9c8d7fd5d8adfffcfb79ff8f
Deleted: sha256:2b58acf9abe68c4725ca28fa44a4d4320b5fF7e5defaa5565468d8340281c9b6
Deleted: sha256:deeef23731445c78289bb78dd39ffd7eb08662273011827e23a0fd785d95b9fc
Untagged: nginx:stable-alpine
Untagged: nginx@sha256:35e3238f2f0925a505d5d697df9a1948b9a0c78e89fd2e253919047b3cec824
Deleted: sha256:60847f99ea697d723c3c98e70276c5abaf6072df4f3282bf4399d127cf7883e
Deleted: sha256:9fb98875b948f9979b9f6cd799f38054668dc217179c6a738166ub1bd1b1691
Deleted: sha256:lae3fa6121cf8e7227f066e7a3c0d55574f6f6ab15501b3b1e338e385180b1ad9
Deleted: sha256:4df5b5a6e9611cbe96841db43e5f076e7a9c23796c0526aca88e9612ac58317
Deleted: sha256:f49461257d7e8f2ca32dace4a0d8512b469698a2f8a942e+e2a68fcab89acdd
Deleted: sha256:230884f8f275a42d3e4015797a56d762cbfc86ec4d5f8780bae791ff8694a8
Deleted: sha256:31e219f9bd26be570a8d53744e34dd6de543a6187cf69b7a23e455x76eb86
Deleted: sha256:88020af878e6e29ee53f6ab6d2738265bc3cde79a042ae3544668018e111156
Deleted: sha256:7565408eeecd3bea97271a102f57cd6b794cc91e442648544963a7e951e9555
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu@ip-172-31-22-16:~/Netflix$ docker build -t netflix:latest --build-arg TMDB_V3_API_KEY=23718be3890c910b0d10fe3e2a1a4205

```

- Than build the image agai with TMDB API key.
- “docker buil -t Netflix:latest --build-arg TMDB\_V3\_API\_KEY=key .”

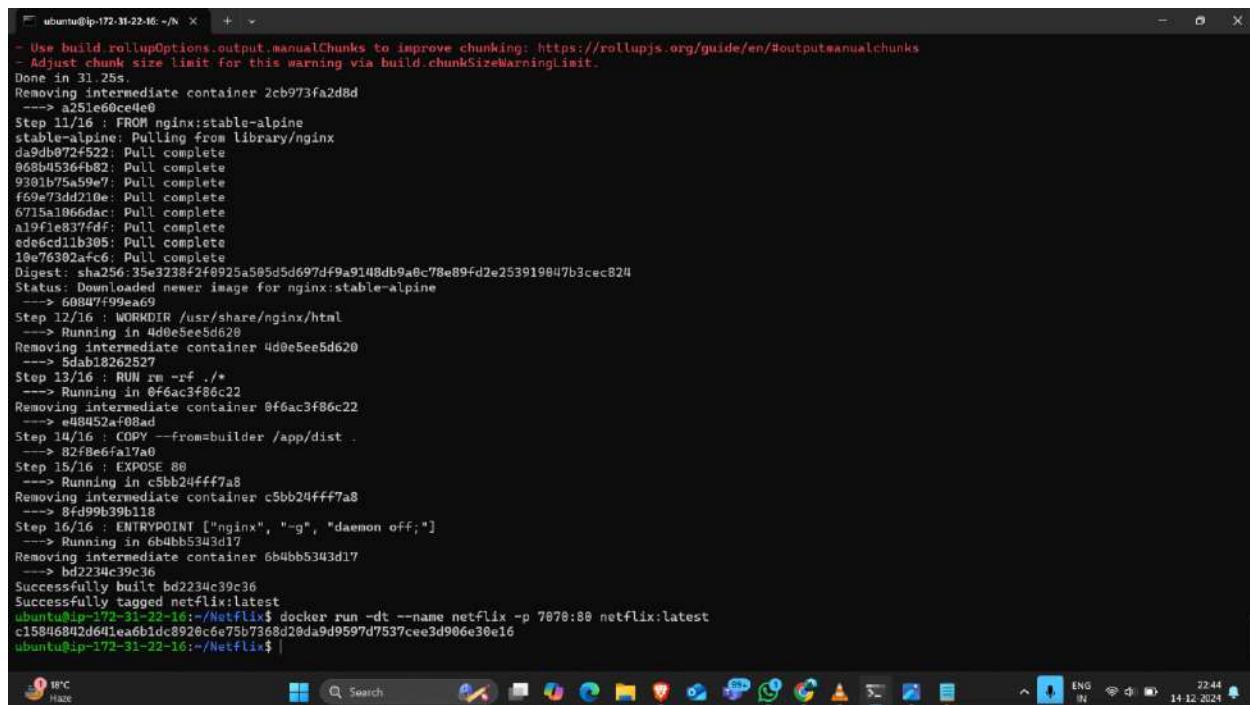
```
ubuntu@ip-172-31-22-16:~/N ~ + ~
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netflix latest 31d04b410386 6 minutes ago 58MB
nginx stable-alpine 60847f99ea69 4 months ago 48.8MB
ubuntu@ip-172-31-22-16:~/Netflix$ docker rm -f 31d04b410386 60847f99ea69
Error response from daemon: No such container: 31d04b410386
Error response from daemon: No such container: 60847f99ea69
ubuntu@ip-172-31-22-16:~/Netflix$ docker rmi 31d04b410386 60847f99ea69
Untagged: netflix:latest
Deleted: sha256:31d04b410386f631ac5329efca1b6f7a4e7d32456fe80d1cfacde84d7cf562d5
Deleted: sha256:6e0aa1699b6732003e480acb82762416f3e929a631559834e43f8f410c7b1383
Deleted: sha256:928aeac04cc2437190df2f263075eeeff7015dc50977a1b10dca6e56c9a1386405
Deleted: sha256:d1c88a21c3f0317288d632a7d3a0c06cc61be7755361010bcae037676f7a98e94
Deleted: sha256:31a6c27b24b4998b32685f7fdb1368d81dia81fb9c8d7fd5d8adfffcfb79f8f
Deleted: sha256:2b58acf9a6e69c0725ca28fa4d4d4320b5f-f7e5defaa5565468d8310281c9b6
Deleted: sha256:dee23731445c78289bb78d0d39fff7fe08662273011827e23a8fd785d95b94c
Untagged: nginx:stable-alpine
Deleted: nginx:sha256:35e2328f2f0925a595d5d697d9e9148db9a0c78e89fd2e253919047b3cec824
Deleted: sha256:60847f99ea697d723c3c9807276c5ba8f6072df5fc3202bf4399d27cf7883e
Deleted: sha256:9fb98875b948f9979b9f6cd799f38546d8dc217179c6ab730166db1db51691
Deleted: sha256:iae3fa642cf0e7227f066e7a3c0d5557f46f6ab15501b3b1e338e385180b1ad9
Deleted: sha256:4df5b5a6941cbe95841db43e5f076e7a9c23296c0526aecd8e9612ac0317
Deleted: sha256:f49a6125d7e8f2ca32dace4a0d8512bae6968d26a942ee2a68fcab89acdd
Deleted: sha256:c3ce8816f8b75a42de34015797a56d762cbfc86ec4d5f8760eae791f#b8691a8
Deleted: sha256:31e319f9bd26be578a8d453744e34dd66e543a6107c69b7a23e05a76eb86
Deleted: sha256:85020aff870e6e29ee53fa6b27387265bc3de79a042ae35446a0818e111156
Deleted: sha256:75654b08eeeb3d3bea97271a102f57cddeb794cc91e442648544963a7e951e95558
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
ubuntu@ip-172-31-22-16:~/Netflix$ docker build -t netflix:latest --build-arg TMDB_V3_API_KEY=23718be3890c910b0d16fe3e2a1a4205
DEPRECATED: The legacy builder is deprecated and will be removed in a future release.
Install the buildx component to build images with BuildKit:
https://docs.docker.com/go/buildx/
"docker build" requires exactly 1 argument.
See 'docker build --help'.

Usage: docker build [OPTIONS] PATH | URL | -
Build an image from a Dockerfile
ubuntu@ip-172-31-22-16:~/Netflix$ docker build -t netflix:latest --build-arg TMDB_V3_API_KEY=23718be3890c910b0d16fe3e2a1a4205 .

```

```
ubuntu@ip-172-31-22-16:~/N ~ + ~
(1) Some chunks are larger than 500 KiB after minification. Consider:
- Using dynamic import() to code-split the application
- Use build.rollupOptions.output.manualChunks to improve chunking: https://rollupjs.org/guide/en/#outputmanualchunks
- Adjust chunk size limit for this warning via build.chunkSizeWarningLimit.
Done in 31.25s.
Removing intermediate container 2cb973fa2d8d
--> a251e60cce4e0
Step 11/16 : FROM nginx:stable-alpine
stable-alpine: Pulling from library/nginx
d49db072f522: Pull complete
6084536fb92: Pull complete
9301b75a59e7: Pull complete
f69e73dd210e: Pull complete
6715a1066dac: Pull complete
a19f1e837fdf: Pull complete
edec6d1b305: Pull complete
10e76302afc6: Pull complete
Digest: sha256:35e3238f2f0925a585d5d697d9a9148db9a0c78e89fd2e253919047b3cec824
Status: Downloaded newer image for nginx:stable-alpine
--> 60847f99ea69
Step 12/16 : WORKDIR /usr/share/nginx/html
--> Running in 4d0e5ee5d620
Removing intermediate container 4d0e5ee5d620
--> 5dab18262527
Step 13/16 : RUN rm -rf ./*
--> Running in 0f6ac3f86c22
Removing intermediate container 0f6ac3f86c22
--> e48452a#8bad
Step 14/16 : COPY --from=builder /app/dist .
--> 82f8e6fa17a8
Step 15/16 : EXPOSE 80
--> Running in c5bb24ffff7a8
Removing intermediate container c5bb24ffff7a8
--> 8f990b39b118
Step 16/16 : ENTRYPOINT ["nginx", "-g", "daemon off;"]
--> Running in 6b4bb5343d17
Removing intermediate container 6b4bb5343d17
--> bd2234c39c36
Successfully built bd2234c39c36
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/Netflix$
```

- Assign port to it.



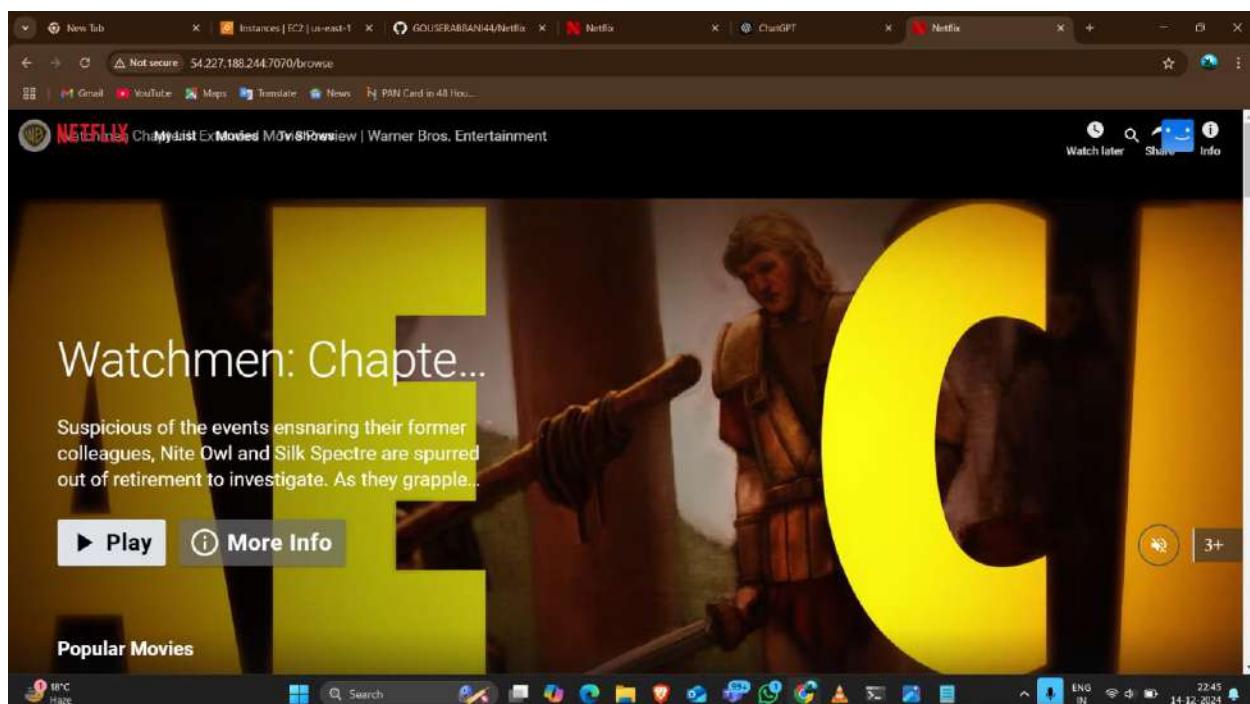
```

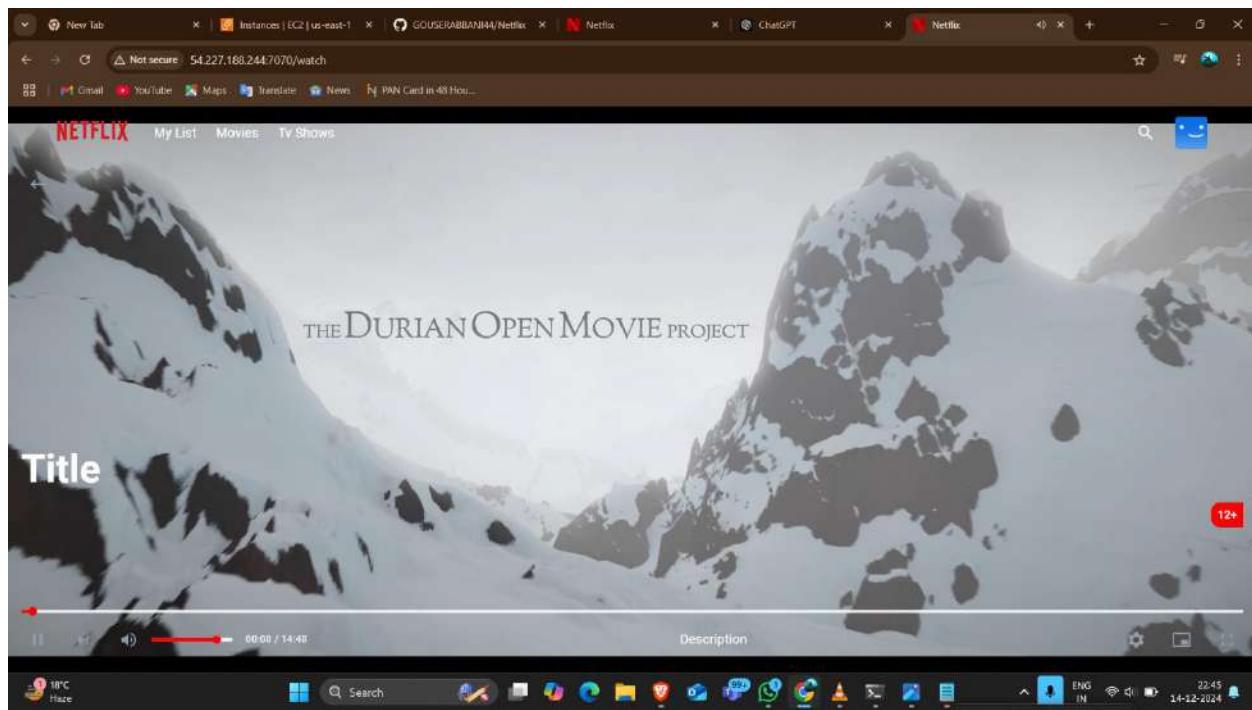
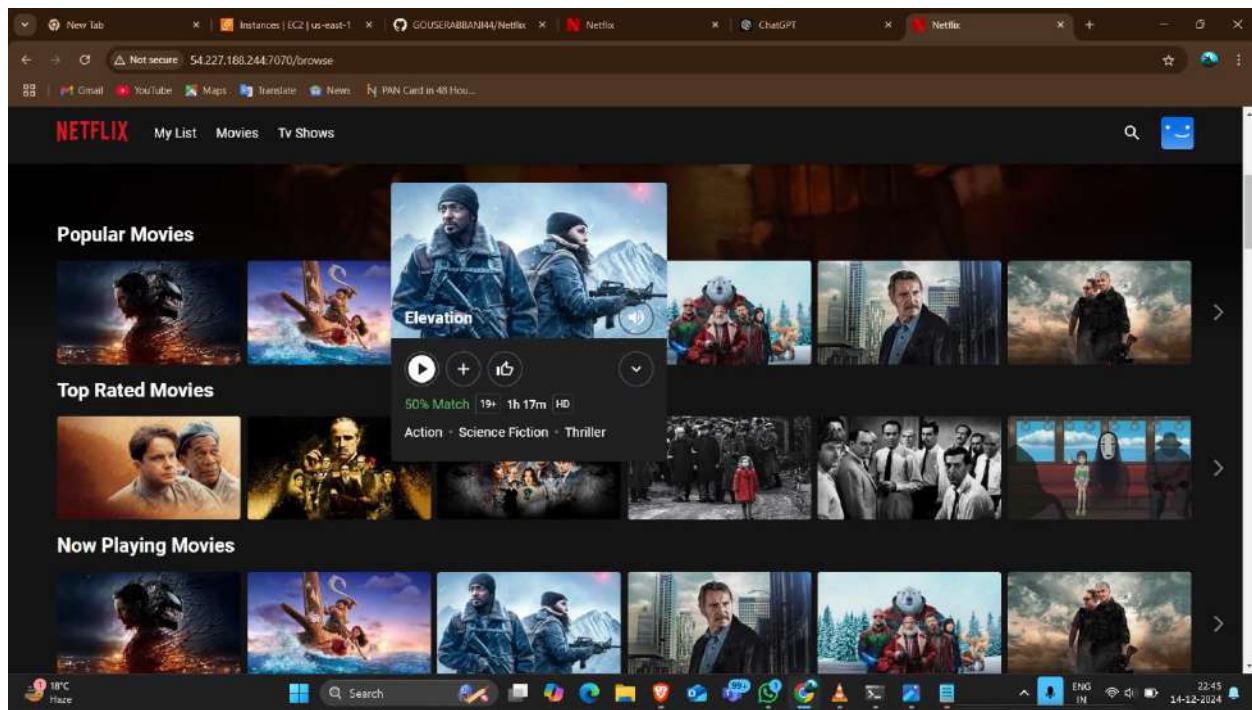
ubuntu@ip-172-31-22-16:~/ ~ + ~
- Use build.rollupOptions.output.manualChunks to improve chunking: https://rollupjs.org/guide/en/#outputmanualchunks
- Adjust chunk size limit for this warning via build.chunkSizeWarningLimit.
Done in 31.25s.
Removing intermediate container 2cb973fa2d8d
--> a25le60ce4e0
Step 11/16 : FROM nginx:stable-alpine
stable-alpine: Pulling from library/nginx
da9db072f522: Pull complete
66804536fb82: Pull complete
9301b75a59e7: Pull complete
f69e73dd210e: Pull complete
6715a1066dac: Pull complete
a19f1e837fd9: Pull complete
edec6cd1b305: Pull complete
10e76302afc6: Pull complete
Digest: sha256:35e3238f2f0925a505d5d697df9a9148db9a0c78e89fd2e253919847b3cec824
Status: Downloaded newer image for nginx:stable-alpine
--> 60847f99ea69
Step 12/16 : WORKDIR /usr/share/nginx/html
--> Running in 4d0e5ee5d620
Removing intermediate container 4d0e5ee5d620
--> 5dab18262527
Step 13/16 : RUN rm -rf ./*
--> Running in 0f6ac3f86c22
Removing intermediate container 0f6ac3f86c22
--> e48452a08bad
Step 14/16 : COPY --from=builder /app/dist .
--> 82f8e6fa17a0
Step 15/16 : EXPOSE 80
--> Running in c5bb24ffff7a8
Removing intermediate container c5bb24ffff7a8
--> 8fd99b39b118
Step 16/16 : ENTRYPOINT ["nginx", "-g", "daemon off;"]
--> Running in 6b4bb5343d17
Removing intermediate container 6b4bb5343d17
--> bd2234c39c36
Successfully built bd2234c39c36
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/Netlix$ docker run -dt --name netflix -p 7070:80 netflix:latest
c15846842de41ea6b1dc8920c6e75b7368d20a9d9597d7537cee3d906e30e16
ubuntu@ip-172-31-22-16:~/Netflix$ 

```

The screenshot shows a terminal window on a Linux desktop environment. The terminal displays the Docker build logs for a Netflix container. The logs show the process of pulling images, creating a work directory, removing temporary files, exposing port 80, and finally running the container with the entrypoint set to nginx. The container is successfully tagged as netflix:latest. The desktop taskbar at the bottom shows various application icons and system status indicators.

- Browse the Public IP of instance along with port number.





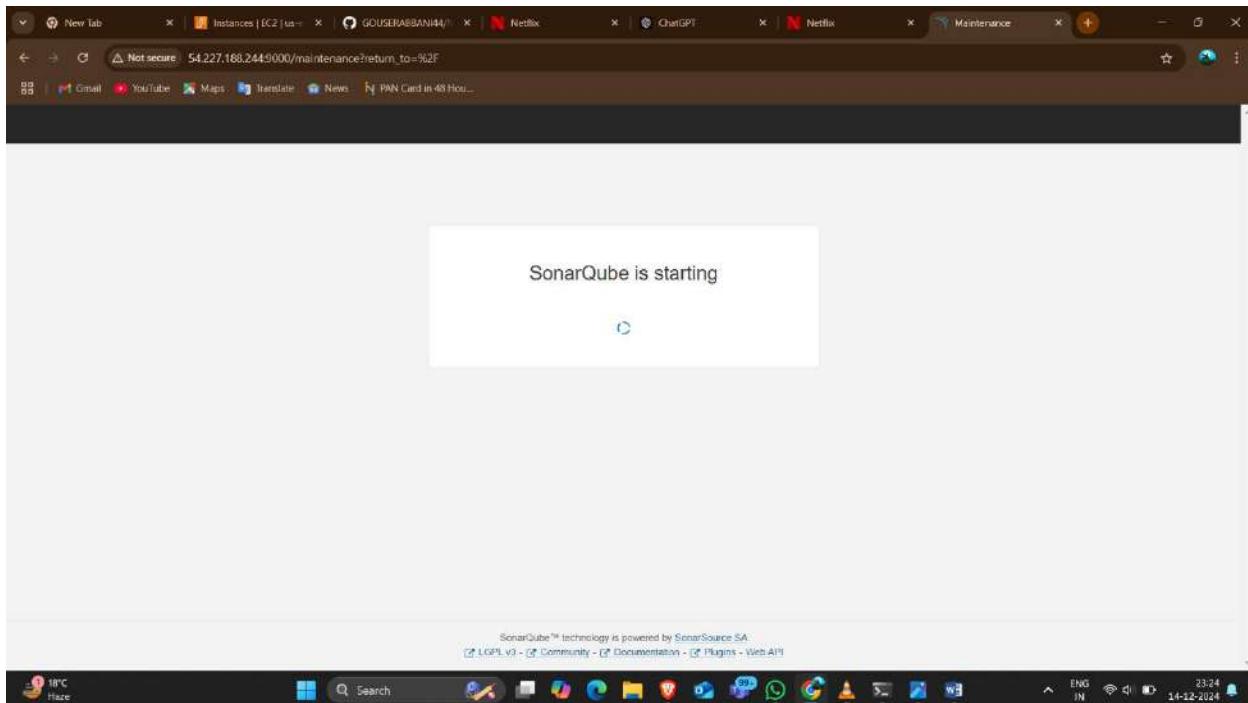
## Phase -2 Implementing security with SonarQube and Trivy

- Install the sonarqube
- Pull the sonarqube from the docker “docker run -d -name sonar -p 9000:9000 sonarqube:lts-community”.

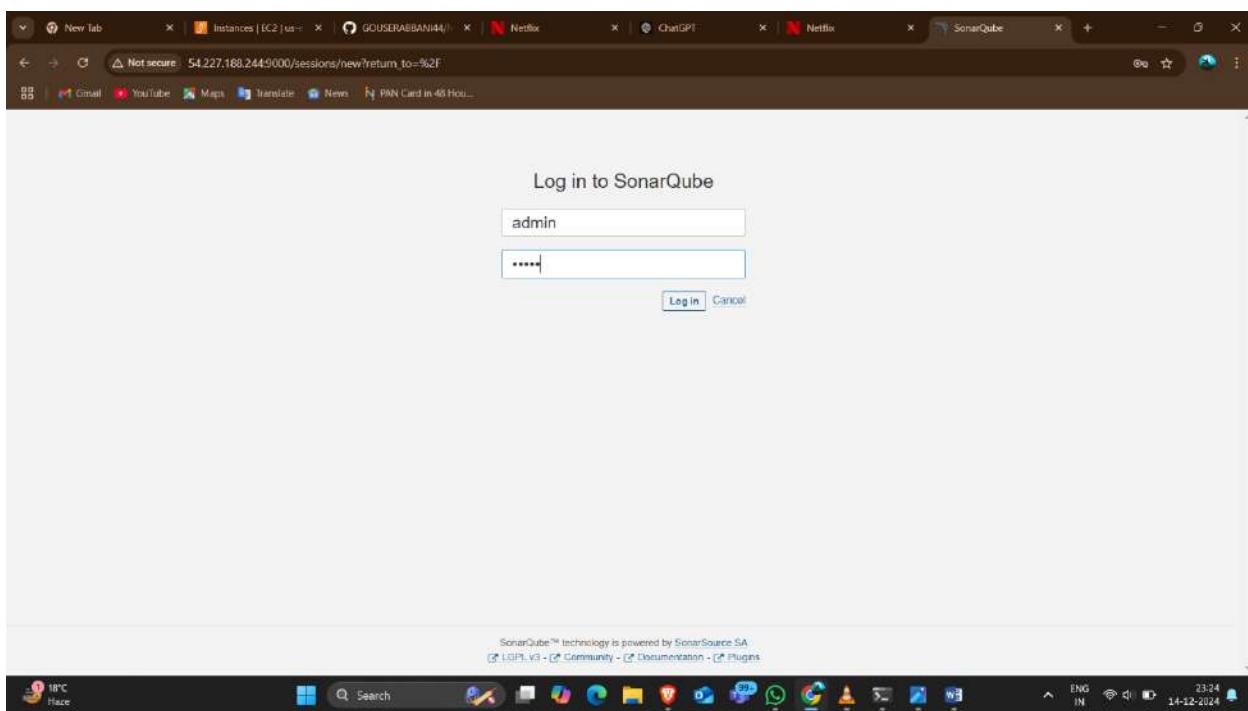
```
ubuntu@ip-172-31-22-16:~/ ~ + x
--> Running in 0f6ac3f86c22
Removing intermediate container 0f6ac3f86c22
--> e48452af88ad
Step 14/16 : COPY --from=builder /app/dist .
--> 82f8e6fa17a0
Step 15/16 : EXPOSE 80
--> Running in c5bb24ffff7a8
Removing intermediate container c5bb24ffff7a8
--> 8fd99b39b118
Step 16/16 : ENTRYPOINT ["nginx", "-g", "daemon off;"]
--> Running in 6b4bb5343d17
Removing intermediate container 6b4bb5343d17
--> bd2234c39c36
Successfully built bd2234c39c36
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/Netflix$ docker run -dt --name netflix -p 7070:80 netflix:latest
c15846842d641ea6b1dc8920c6e75b7368d29d9597d7537cee3d906e30e16
ubuntu@ip-172-31-22-16:~/Netflix$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
c15846842d64 netflix:latest "nginx -g 'daemon of..." About a minute ago Up About a minute 0.0.0.0:7070->80/tcp netflix
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netflix latest bd2234c39c36 2 minutes ago 58MB
<none> <none> a251e60ce4e0 2 minutes ago 844MB
nginx stable-alpine 60847f99ea69 4 months ago 48.8MB
node 16.17.0-alpine 5dcdf1f6157bd 2 years ago 115MB
ubuntu@ip-172-31-22-16:~/Netflix$ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
Unable to find image 'sonarqube:lts' locally
lts: Pulling from library/sonarqube
60114378b6477: Pull complete
17da8ec43a12: Pull complete
d12988e90d61: Pull complete
f4d133ca2b7f: Pull complete
143733ae87a4: Pull complete
8438621478bb: Pull complete
3d0284140b24: Pull complete
4f4fb700ef54: Pull complete
Digest: sha256:c337c407849de45a727f09dbd875779ad7b5784e0b02b096c1f8cd72e27a9fdc
Status: Downloaded newer image for sonarqube:lts
9227d7a2f9ee455cd59d29ed2e8ad3d@8fccacdcbecbf1fd984c26db4941970
ubuntu@ip-172-31-22-16:~/Netflix$ 
```

```
ubuntu@ip-172-31-22-16:~/ ~ + x
--> Running in 6b4bb5343d17
Removing intermediate container 6b4bb5343d17
--> bd2234c39c36
Successfully built bd2234c39c36
Successfully tagged netflix:latest
ubuntu@ip-172-31-22-16:~/Netflix$ docker run -dt --name netflix -p 7070:80 netflix:latest
c15846842d641ea6b1dc8920c6e75b7368d29d9597d7537cee3d906e30e16
ubuntu@ip-172-31-22-16:~/Netflix$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
c15846842d64 netflix:latest "nginx -g 'daemon of..." About a minute ago Up About a minute 0.0.0.0:7070->80/tcp netflix
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netflix latest bd2234c39c36 2 minutes ago 58MB
<none> <none> a251e60ce4e0 2 minutes ago 844MB
nginx stable-alpine 60847f99ea69 4 months ago 48.8MB
node 16.17.0-alpine 5dcdf1f6157bd 2 years ago 115MB
ubuntu@ip-172-31-22-16:~/Netflix$ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
Unable to find image 'sonarqube:lts' locally
lts: Pulling from library/sonarqube
60114378b6477: Pull complete
17da8ec43a12: Pull complete
d12988e90d61: Pull complete
f4d133ca2b7f: Pull complete
143733ae87a4: Pull complete
8438621478bb: Pull complete
3d0284140b24: Pull complete
4f4fb700ef54: Pull complete
Digest: sha256:c337c407849de45a727f09dbd875779ad7b5784e0b02b096c1f8cd72e27a9fdc
Status: Downloaded newer image for sonarqube:lts
9227d7a2f9ee455cd59d29ed2e8ad3d@8fccacdcbecbf1fd984c26db4941970
ubuntu@ip-172-31-22-16:~/Netflix$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
c15846842d64 netflix:latest "nginx -g 'daemon of..." 18 minutes ago Up 18 minutes 0.0.0.0:7070->80/tcp netflix
ubuntu@ip-172-31-22-16:~/Netflix$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netflix latest bd2234c39c36 19 minutes ago 58MB
<none> <none> a251e60ce4e0 19 minutes ago 844MB
sonarqube lts 3ead5da967ad 12 days ago 665MB
nginx stable-alpine 60847f99ea69 4 months ago 48.8MB
node 16.17.0-alpine 5dcdf1f6157bd 2 years ago 115MB
ubuntu@ip-172-31-22-16:~/Netflix$ 
```

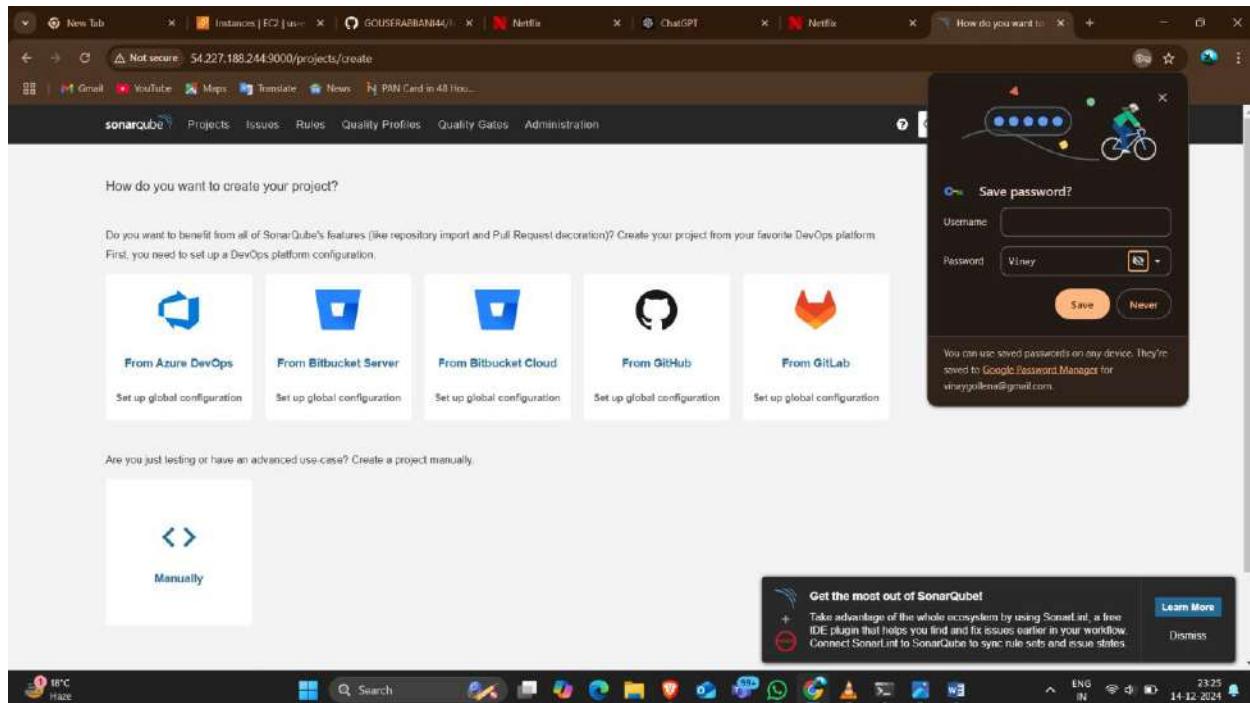
- copy the instance pub Ip along with sonarqube port number.



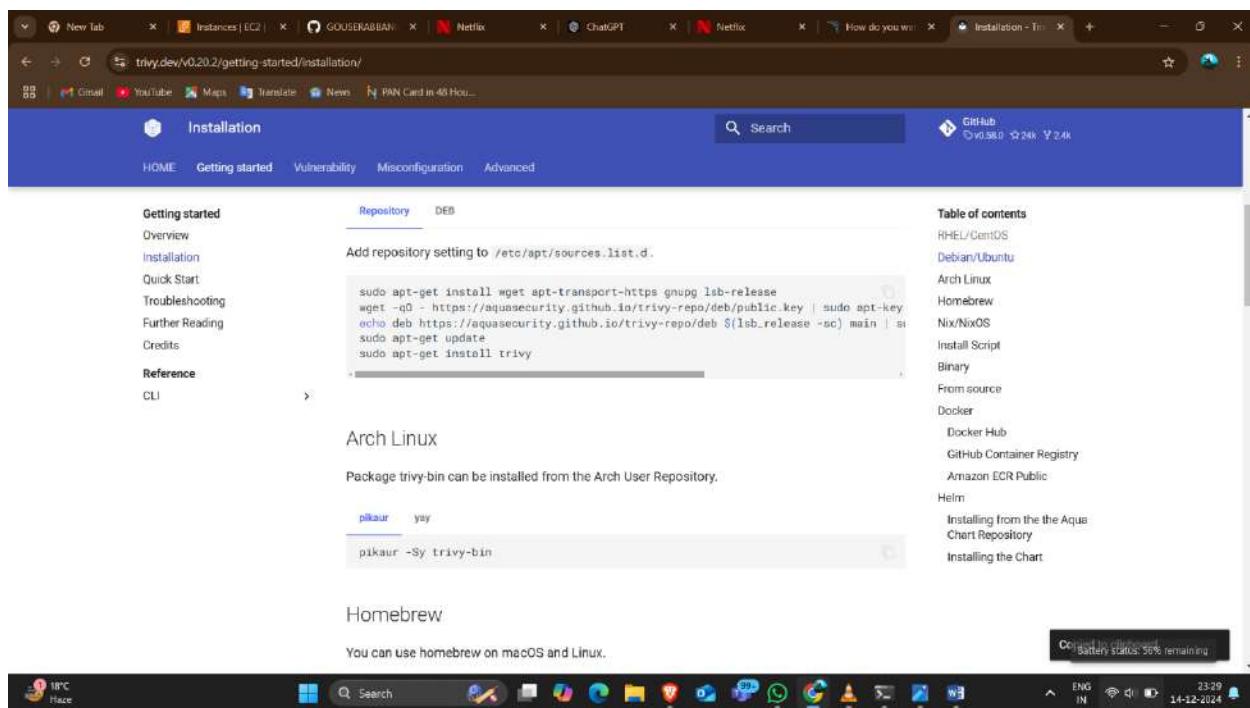
- login with the admin credentials and change the password.

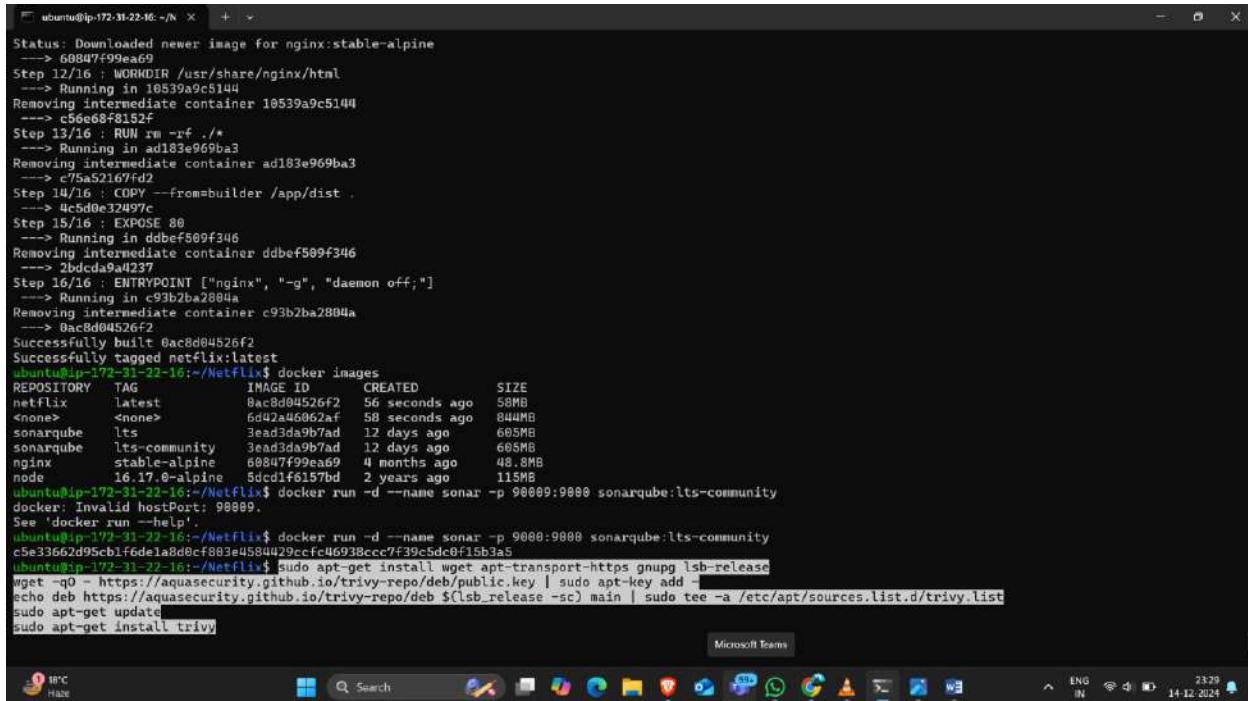


- This is the main page of sonarqube.



- Then install the trivy.
- Search trivy installation in Ubuntu and copy the commands and paste in terminal.



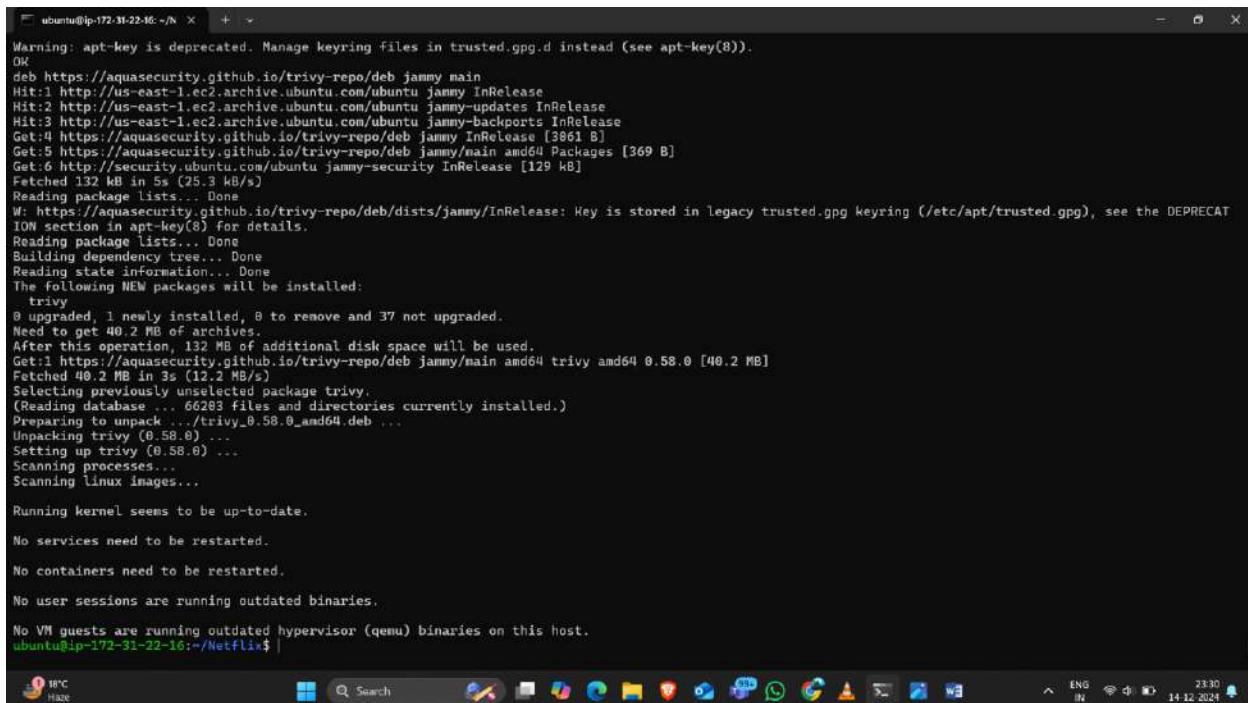


```

ubuntu@ip-172-31-22-16:~/Netfli$ docker images
REPOSITORY TAG IMAGE ID CREATED SIZE
netflix latest 8ac8d04526f2 56 seconds ago 58MB
<none> <none> 6d42a46062af 58 seconds ago 844MB
sonarqube lts 3ead3da9b7ad 12 days ago 605MB
sonarqube lts-community 3ead3da9b7ad 12 days ago 605MB
nginx stable-alpine 608uf799ea69 4 months ago 48.8MB
node 16.17.0-alpine 5dc1f6157bd 2 years ago 115MB
ubuntu@ip-172-31-22-16:~/Netfli$ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
docker: Invalid hostPort: 9000.
See 'docker run --help'.
ubuntu@ip-172-31-22-16:~/Netfli$ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
c5e33662d95cb1f6de1a80cf883e4584429ccfc46938cc7f39c5dc0f15b3a5
ubuntu@ip-172-31-22-16:~/Netfli$ sudo apt-get install wget apt-transport-https gnupg lsb-release
wget -qO - https://aquasecurity.github.io/trivy-repo/deb/public.key | sudo apt-key add -
echo deb https://aquasecurity.github.io/trivy-repo/deb $(lsb_release -sc) main | sudo tee -a /etc/apt/sources.list.d/trivy.list
sudo apt-get update
sudo apt-get install trivy

```

- Trivy has installed.



```

ubuntu@ip-172-31-22-16:~/Netfli$ 
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
deb https://aquasecurity.github.io/trivy-repo/deb jammy main
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 https://aquasecurity.github.io/trivy-repo/deb jammy InRelease [3861 B]
Get:5 https://aquasecurity.github.io/trivy-repo/deb jammy/main amd64 Packages [369 B]
Get:6 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Fetched 132 kB in 5s (25.3 kB/s)
Reading package lists... Done
W: https://aquasecurity.github.io/trivy-repo/deb/dists/jammy/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  trivy
0 upgraded, 1 newly installed, 0 to remove and 37 not upgraded.
Need to get 40.2 MB of archives.
After this operation, 132 MB of additional disk space will be used.
Get:1 https://aquasecurity.github.io/trivy-repo/deb jammy/main amd64 trivy amd64 0.58.0 [40.2 MB]
Fetched 40.2 MB in 3s (12.2 MB/s)
Selecting previously unselected package trivy.
(Reading database ... 66283 files and directories currently installed.)
Preparing to unpack .../trivy_0.58.0_amd64.deb ...
Unpacking trivy (0.58.0) ...
Setting up trivy (0.58.0) ...
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-22-16:~/Netfli$ 

```

- Than copy the image ids to scan.
- Provide the command to scan images by trivy.

- “trivy image image id”
- It will scan the images and provide the results in the tabular form.

```
ubuntu@ip-172-31-22-16:~/n ~ + >
[libcurl]
ubuntu@ip-172-31-22-16:~/n ~ + >
ubuntu@ip-172-31-22-16:~/n ~ + > trivy image 3ead3da9b7ad
2024-12-14T18:03:25Z [vuln] Vulnerability scanning is enabled
2024-12-14T18:03:25Z [INFO] [secret] Secret scanning is enabled
2024-12-14T18:03:25Z [INFO] [secret] If your scanning is slow, please try '--scanners vuln' to disable secret scanning
2024-12-14T18:03:25Z [INFO] [secret] Please see also https://aquasecurity.github.io/trivy/v0.58/docs/scanner/secret#recommendation for faster secret detection
2024-12-14T18:03:32Z [INFO] [javadb] Downloading Java DB...
2024-12-14T18:03:32Z [INFO] [javadb] Downloading artifact... repo="mirror.gcr.io/aquasec/trivy-java-db:1"
3.92 MiB / 669.47 MiB [>.....] 8.59% ? p/s ?
2024-12-14T18:03:34Z [WARN] [secret] The size of the scanned file is too large. It is recommended to use '--skip-files' for this file to avoid high memory consumption. file_path="/opt/sonarcube/web/js/out/KPYOVS72.js.map" size (MB)=11
669.47 MiB / 669.47 MiB [-----] 100.00% 30.74 MiB p/s 22s
2024-12-14T18:03:56Z [INFO] [javadb] Artifact successfully downloaded repo="mirror.gcr.io/aquasec/trivy-java-db:1"
2024-12-14T18:03:56Z [INFO] [javadb] Java DB is cached for 3 days. If you want to update the database more frequently, "trivy clean --java-db" command clears the DB cache
2024-12-14T18:03:56Z [INFO] Detected OS family="ubuntu" version="22.04"
2024-12-14T18:03:56Z [INFO] [ubuntu] Detecting vulnerabilities... os_version="22.04" pkg_num=143
2024-12-14T18:03:56Z [INFO] Number of language-specific files num=1
2024-12-14T18:03:56Z [INFO] [jar] Detecting vulnerabilities...
3ead3da9b7ad (ubuntu 22.04)

Total: 61 (UNKNOWN: 0, LOW: 45, MEDIUM: 16, HIGH: 8, CRITICAL: 0)

+-----+
| Library | Vulnerability | Severity | Status | Installed Version | Fixed Version | Title |
+-----+
| coreutils parent | CVE-2016-2781 | LOW | affected | 8.32-4.1ubuntu1.2 | | coreutils: Non-privileged session can escape to the session in chroot | https://nvd.aquasec.com/nvd/cve-2016-2781 |
+-----+

```

```
ubuntu@ip-172-31-22-16:~/n ~ + >
[libcurl]
ubuntu@ip-172-31-22-16:~/n ~ + >
ubuntu@ip-172-31-22-16:~/n ~ + > trivy image 3ead3da9b7ad
2024-12-14T18:03:25Z [vuln] Vulnerability scanning is enabled
2024-12-14T18:03:25Z [INFO] [secret] Secret scanning is enabled
2024-12-14T18:03:25Z [INFO] [secret] If your scanning is slow, please try '--scanners vuln' to disable secret scanning
2024-12-14T18:03:25Z [INFO] [secret] Please see also https://aquasecurity.github.io/trivy/v0.58/docs/scanner/secret#recommendation for faster secret detection
2024-12-14T18:03:32Z [INFO] [javadb] Downloading Java DB...
2024-12-14T18:03:32Z [INFO] [javadb] Downloading artifact... repo="mirror.gcr.io/aquasec/trivy-java-db:1"
3.92 MiB / 669.47 MiB [>.....] 8.59% ? p/s ?
2024-12-14T18:03:34Z [WARN] [secret] The size of the scanned file is too large. It is recommended to use '--skip-files' for this file to avoid high memory consumption. file_path="/opt/sonarcube/web/js/out/KPYOVS72.js.map" size (MB)=11
669.47 MiB / 669.47 MiB [-----] 100.00% 30.74 MiB p/s 22s
2024-12-14T18:03:56Z [INFO] [javadb] Artifact successfully downloaded repo="mirror.gcr.io/aquasec/trivy-java-db:1"
2024-12-14T18:03:56Z [INFO] [javadb] Java DB is cached for 3 days. If you want to update the database more frequently, "trivy clean --java-db" command clears the DB cache
2024-12-14T18:03:56Z [INFO] Detected OS family="ubuntu" version="22.04"
2024-12-14T18:03:56Z [INFO] [ubuntu] Detecting vulnerabilities... os_version="22.04" pkg_num=143
2024-12-14T18:03:56Z [INFO] Number of language-specific files num=1
2024-12-14T18:03:56Z [INFO] [jar] Detecting vulnerabilities...
3ead3da9b7ad (ubuntu 22.04)

Total: 61 (UNKNOWN: 0, LOW: 45, MEDIUM: 16, HIGH: 8, CRITICAL: 0)

+-----+
| Library | Vulnerability | Severity | Status | Installed Version | Fixed Version | Title |
+-----+
| binutils | CVE-2022-27943 | LOW | affected | 2.37-1.1ubuntu1 | | binutils: libiberty/rust-demangle.c in GNU GCC 11.2 stack exhaustion in demangle_const | https://nvd.aquasec.com/nvd/cve-2022-27943 |
+-----+
| gnupg-110n n) using | CVE-2022-3219 | | 2.2.27-3ubuntu2.1 | | gnupg: denial of service issue (resource consumption compressed packets | https://nvd.aquasec.com/nvd/cve-2022-3219 |
+-----+
| gnupg-utils | | | | | |
+-----+
| gpg | | | | | |
+-----+
| gpg-agent | | | | | |
+-----+

```

Libc-bin kernels to	CVE-2016-20013		2.35-0ubuntu3.8	sha256crypt and sha512crypt through 0.6 allow attac... cause a denial of... <a href="https://avd.aquasec.com/nvd/cve-2016-20013">https://avd.aquasec.com/nvd/cve-2016-20013</a>
libc6				
libgcc-s1	CVE-2023-4039	MEDIUM	12.3.0-1ubuntu1~22.04	gcc: -fstack-protector fails to guard dynamic stack allocations on ARM64 <a href="https://avd.aquasec.com/nvd/cve-2023-4039">https://avd.aquasec.com/nvd/cve-2023-4039</a>
allows	CVE-2022-27943	LOW		binutils: libiberty/rust-demangle.c in GNU GCC 11.2 stack exhaustion in demangle_const <a href="https://avd.aquasec.com/nvd/cve-2022-27943">https://avd.aquasec.com/nvd/cve-2022-27943</a>
libgcrypt20	CVE-2024-2236		1.9.4-3ubuntu3	libgcrypt: vulnerable to Marvin Attack <a href="https://avd.aquasec.com/nvd/cve-2024-2236">https://avd.aquasec.com/nvd/cve-2024-2236</a>

alv3.c	CVE-2024-26461			krb5: Memory leak at /krb5/src/Lib/gssapi/krb5/k5se... <a href="https://avd.aquasec.com/nvd/cve-2024-26461">https://avd.aquasec.com/nvd/cve-2024-26461</a>
libncurses6	CVE-2023-445918		6.3-2ubuntu0.1	ncurses: NULL pointer dereference in tgetstr in tinfo/lib_terminfo.c <a href="https://avd.aquasec.com/nvd/cve-2023-445918">https://avd.aquasec.com/nvd/cve-2023-445918</a>
	CVE-2023-50495			ncurses: segmentation fault via _nc_wrap_entry() <a href="https://avd.aquasec.com/nvd/cve-2023-50495">https://avd.aquasec.com/nvd/cve-2023-50495</a>
libncursesw6	CVE-2023-45918			ncurses: NULL pointer dereference in tgetstr in tinfo/lib_terminfo.c <a href="https://avd.aquasec.com/nvd/cve-2023-45918">https://avd.aquasec.com/nvd/cve-2023-45918</a>
	CVE-2023-50495			ncurses: segmentation fault via _nc_wrap_entry() <a href="https://avd.aquasec.com/nvd/cve-2023-50495">https://avd.aquasec.com/nvd/cve-2023-50495</a>
libpam-modules	CVE-2024-10041	MEDIUM	1.4.0-1ubuntu2.4	pam: libpam: Libpam vulnerable to read hashed passw... <a href="https://avd.aquasec.com/nvd/cve-2024-10041">https://avd.aquasec.com/nvd/cve-2024-10041</a>

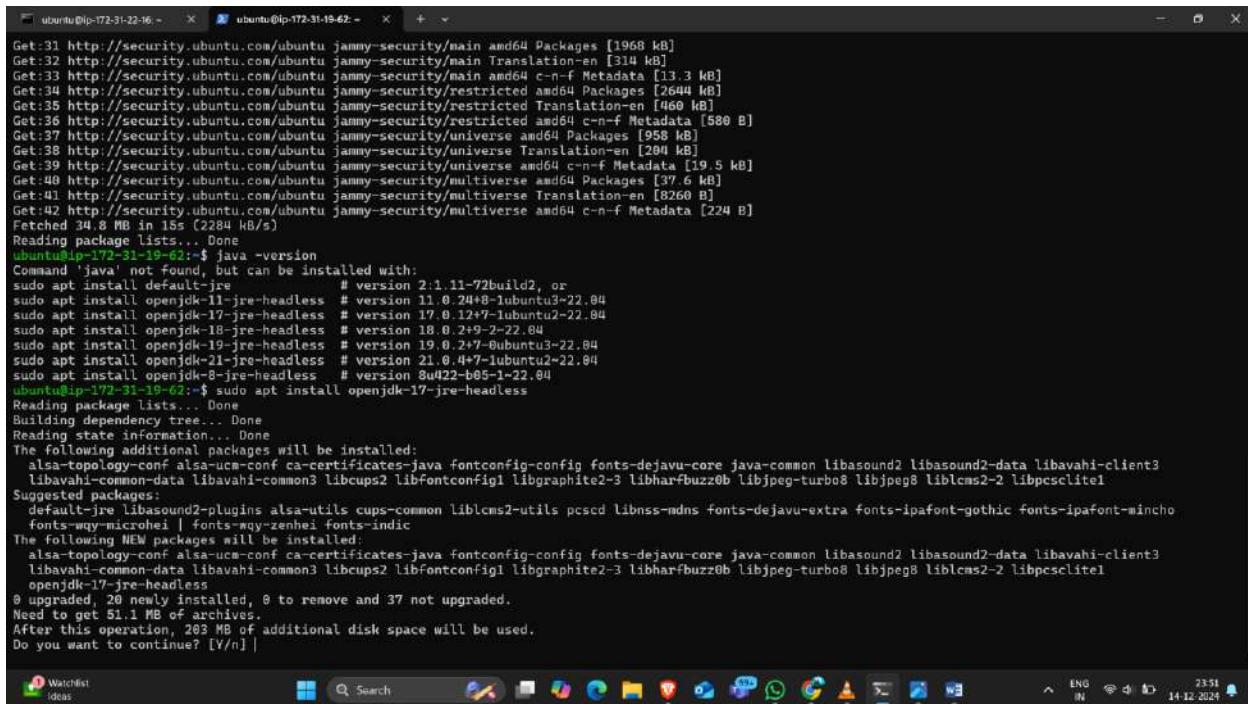
libpcre2-8-0 line	CVE-2022-41409	LOW	10.39-3ubuntu0.1	Access Control Bypass   https://avd.aquasec.com/nvd/cve-2022-41409	
libpcre3	CVE-2017-11164		2.8.39-13ubuntu0.22.04.1	pcre: OP_KETRMAX feature in the match function in   pcre_exec.c   https://avd.aquasec.com/nvd/cve-2017-11164	
libssl3 trigger	CVE-2024-41996		3.0.2-8ubuntu1.18	openssl: remote attackers (from the client side) to   unnecessarily expensive server-side...   https://avd.aquasec.com/nvd/cve-2024-41996	
libstdc++6	CVE-2023-4839	MEDIUM	12.3.0-1ubuntu1~22.04	gcc: -fstack-protector fails to guard dynamic stack   allocations on ARM64   https://avd.aquasec.com/nvd/cve-2023-4839	
allows	CVE-2022-27943	LOW		binutils: libiberty/rust-demangle.c in GNU GCC 11.2   stack exhaustion in demangle_const	

login package	CVE-2023-29383		1:4.8.1-2ubuntu2.2	shadow: Improper input validation in shadow-utils p.   utility chfn   https://avd.aquasec.com/nvd/cve-2023-29383	
ncurses-base	CVE-2023-45918		6.3-2ubuntu0.1	ncurses: NULL pointer dereference in tgetstr in   tinfo/lib_termcap.c   https://avd.aquasec.com/nvd/cve-2023-45918	
	CVE-2023-50495			ncurses: segmentation fault via _nc_wrap_entry()   https://avd.aquasec.com/nvd/cve-2023-50495	
ncurses-bin	CVE-2023-45918			ncurses: NULL pointer dereference in tgetstr in   tinfo/lib_termcap.c   https://avd.aquasec.com/nvd/cve-2023-45918	
	CVE-2023-50495			ncurses: segmentation fault via _nc_wrap_entry()   https://avd.aquasec.com/nvd/cve-2023-50495	
openssl trigger	CVE-2024-41996		3.0.2-8ubuntu1.18	openssl: remote attackers (from the client side) to   unnecessarily expensive server-side...   https://avd.aquasec.com/nvd/cve-2024-41996	

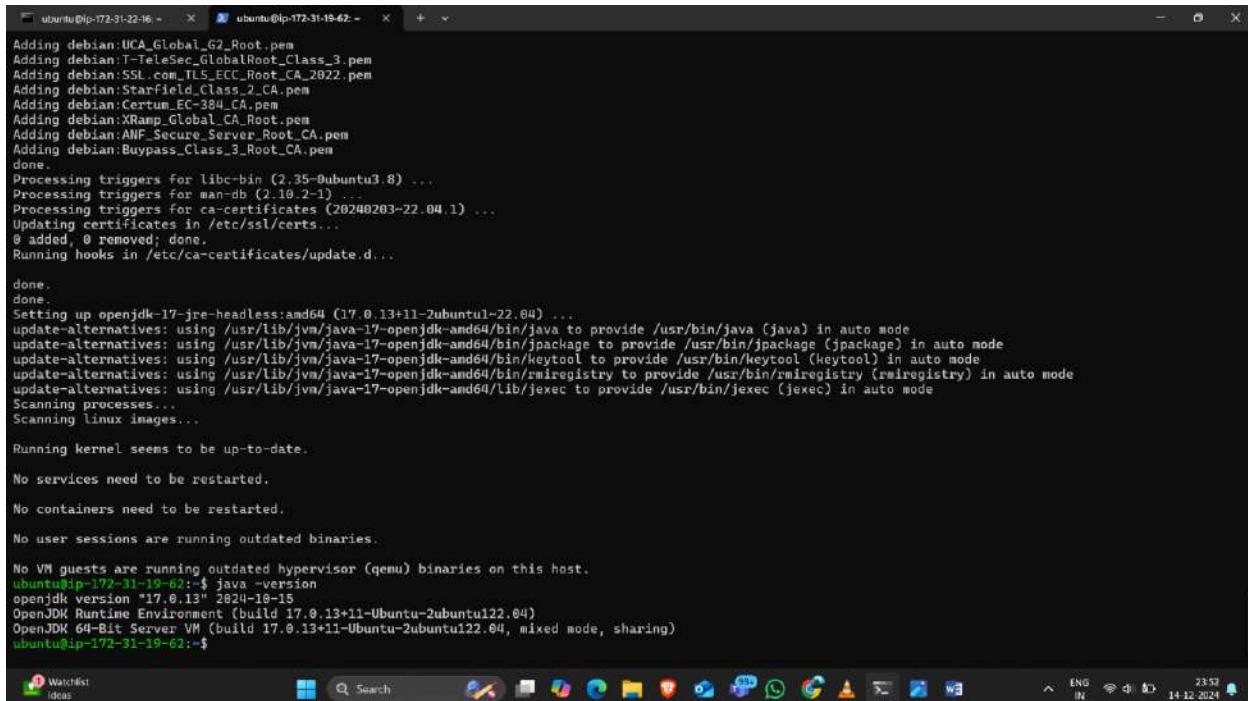
File						
	<a href="https://nvd.squasec.com/nvd/cve-2023-49921">https://nvd.squasec.com/nvd/cve-2023-49921</a>					
	Elasticsearch stores private key on disk unencrypted	CVE-2024-23444			8.13.0, 7.17.23	
	<a href="https://nvd.squasec.com/nvd/cve-2024-23444">https://nvd.squasec.com/nvd/cve-2024-23444</a>					
	elasticsearch: Possible denial of service when processing documents in a deeply nested...	CVE-2024-23450			7.17.19, 8.13.0	
	<a href="https://nvd.squasec.com/nvd/cve-2024-23450">https://nvd.squasec.com/nvd/cve-2024-23450</a>					
org.postgresql:postgresql (postgresql-42.5.1.jar)	pgjdbc: PostgreSQL JDBC Driver allows attacker to inject SQL if using PreferQueryMode=SIMPLE...	CVE-2024-1597	CRITICAL	42.5.1	42.2.28, 42.3.9, 42.4.4, 42.5.5	
42.6.1, 42.7.2	<a href="https://nvd.squasec.com/nvd/cve-2024-1597">https://nvd.squasec.com/nvd/cve-2024-1597</a>					
org.yaml:snakeyaml (snakeyaml-1.33.jar)	SnakeYAML: Constructor Deserialization Remote Code Execution	CVE-2022-1471	HIGH	1.33	2.0	
	<a href="https://nvd.squasec.com/nvd/cve-2022-1471">https://nvd.squasec.com/nvd/cve-2022-1471</a>					
org.yaml:snakeyaml (sonar-application-9.9.8.100196.jar)						

## Phase – 3 Now automate the whole deployment using by Jenkins pipeline

- Before installing the Jenkins we need to install the java 17 version.
- Give the command “java –version” it will display some java installation commands and choose the java 17 version and download.



```
ubuntu@ip-172-31-19-62:~$ java -version
Command 'java' not found, but can be installed with:
  sudo apt install default-jre           # version 2:1.11-72build2, or
  sudo apt install openjdk-11-jre-headless # version 11.0.2+8~1ubuntu3~22.04
  sudo apt install openjdk-17-jre-headless # version 17.0.12+7~1ubuntu2~22.04
  sudo apt install openjdk-18-jre-headless # version 18.0.2+9~2-22.04
  sudo apt install openjdk-19-jre-headless # version 19.0.2+7~0ubuntu3~22.04
  sudo apt install openjdk-21-jre-headless # version 21.0.4+7~1ubuntu2~22.04
  sudo apt install openjdk-8-jre-headless # version 8u422-b05-1~22.04
ubuntu@ip-172-31-19-62:~$ sudo apt install openjdk-17-jre-headless
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  alsatopology-conf alsaucm-conf ca-certificates-java fontconfig-config fonts-dejavu-core java-common libasound2 libasound2-data libavahi-client3
  libavahi-common-data libavahi-common3 libcupsc2 libfontconfig1 libgraphite2-3 libharfbuzz0b libjpeg-turbo8 libjpeg8 liblcms2-2 libpcslite1
Suggested packages:
  default-jre libsound2-plugins alsauutils cups-common liblcms2-utils pscsd libnss-mdns fonts-dejavu-extra fonts-ipafont-gothic fonts-ipafont-mincho
  fonts-wqy-microhei | fonts-wqy-zenhei fonts-indic
The following NEW packages will be installed:
  alsatopology-conf alsaucm-conf ca-certificates-java fontconfig-config fonts-dejavu-core java-common libasound2 libasound2-data libavahi-client3
  libavahi-common-data libavahi-common3 libcupsc2 libfontconfig1 libgraphite2-3 libharfbuzz0b libjpeg-turbo8 libjpeg8 liblcms2-2 libpcslite1
openjdk-17-jre-headless
0 upgraded, 20 newly installed, 0 to remove and 37 not upgraded.
Need to get 51.1 MB of archives.
After this operation, 203 MB of additional disk space will be used.
Do you want to continue? [Y/n] 
```



```
ubuntu@ip-172-31-22-16:~$ sudo update-ca-certificates
Adding debian:UCA_Global_G2_Root.pem
Adding debian:T-TeleSec_GlobalRoot_Class_3.pem
Adding debian:SSL_com_TLS_ECC_Root_CA_2022.pem
Adding debian:Starfield_Class_2_CA.pem
Adding debian:Certum_EC-384_CA.pem
Adding debian:Xram_Global_CA_Root.pem
Adding debian:ANF_Secure_Server_Root_CA.pem
Adding debian:Bypass_Class_3_Root_CA.pem
done.
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Processing triggers for man-db (2.18.2-1) ...
Processing triggers for ca-certificates (20240203-22.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...

done.
done.
Setting up openjdk-17-jre-headless:amd64 (17.0.13+11~2ubuntu1~22.04) ...
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/java to provide /usr/bin/java (java) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/jpackage to provide /usr/bin/jpackage (jpackage) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/keytool to provide /usr/bin/keytool (keytool) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/rmiregistry to provide /usr/bin/rmiregistry (rmiregistry) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/lib/jexec to provide /usr/bin/jexec (jexec) in auto mode
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-19-62:~$ java -version
openjdk version "17.0.13" 2024-10-15
OpenJDK Runtime Environment (build 17.0.13+11-Ubuntu-2ubuntu122.04)
OpenJDK 64-Bit Server VM (build 17.0.13+11-Ubuntu-2ubuntu122.04, mixed mode, sharing)
ubuntu@ip-172-31-19-62:~$ 
```

- Search the Jenkins installation on Ubuntu commands in google and copy them and paste in the terminal to install the Jenkins.

```

ubuntu@ip-172-31-19-62:~ Adding debian:AMF_Secure_Server_Root_CA.pem
ubuntu@ip-172-31-19-62:~ Adding debian:Buypass_Class_3_Root_CA.pem
done.
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Processing triggers for man-db (2.18.2-1) ...
Processing triggers for ca-certificates (20240203-22.04.1) ...
Updating certificates in /etc/ssl/certs...
0 added, 0 removed; done.
Running hooks in /etc/ca-certificates/update.d...

done.
done.
Setting up openjdk-17-jre-headless:amd64 (17.0.13+11-2ubuntu122.04) ...
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/java to provide /usr/bin/java (java) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/jpackage to provide /usr/bin/jpackage (jpackage) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/keytool to provide /usr/bin/keytool (keytool) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/bin/rmiregistry to provide /usr/bin/rmiregistry (rmiregistry) in auto mode
update-alternatives: using /usr/lib/jvm/java-17-openjdk-and64/lib/jexec to provide /usr/bin/jexec (jexec) in auto mode
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-19-62:~$ java -version
openjdk version "17.0.13" 2024-10-15
OpenJDK Runtime Environment (build 17.0.13+11-Ubuntu-2ubuntu122.04)
OpenJDK 64-Bit Server VM (build 17.0.13+11-Ubuntu-2ubuntu122.04, mixed mode, sharing)
ubuntu@ip-172-31-19-62:~$ sudo wget -O /usr/share/keyrings/jenkins-keyring.asc \
https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key
ubuntu@ip-172-31-19-62:~$ echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.asc]" \
https://pkg.jenkins.io/debian-stable binary | sudo tee \
/etc/apt/sources.list.d/jenkins.list > /dev/null
ubuntu@ip-172-31-19-62:~$ sudo apt-get update
ubuntu@ip-172-31-19-62:~$ sudo apt-get install jenkins

```

- Start and enable the Jenkins by using the commands
- “sudo systemctl start Jenkins”
- “sudo systemctl enable Jenkins”
- Check the status “sudo systemctl status Jenkins”

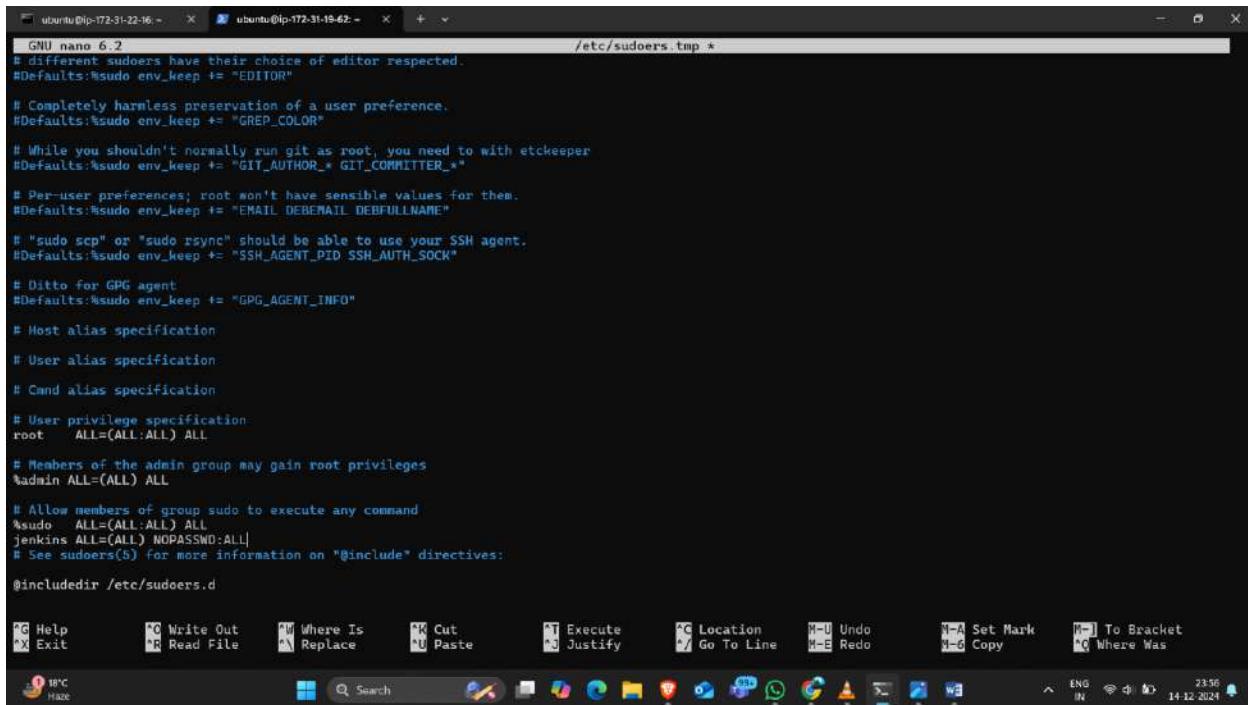
```

ubuntu@ip-172-31-19-62:~$ sudo systemctl start jenkins
ubuntu@ip-172-31-19-62:~$ sudo systemctl enable jenkins
Synchronizing state of jenkins.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable jenkins
ubuntu@ip-172-31-19-62:~$ sudo systemctl status jenkins
● jenkins.service - Jenkins Continuous Integration Server
   Loaded: loaded (/lib/systemd/system/jenkins.service; enabled; vendor preset: enabled)
     Active: active (running) since Sat 2024-12-14 18:22:58 UTC; 37s ago
       Main PID: 4237 (java)
          Tasks: 50 (limit: 9587)
         Memory: 842.2M
            CPU: 16.984s
           CGroup: /system.slice/jenkins.service
                   └─4237 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

Dec 14 18:22:55 ip-172-31-19-62 jenkins[4237]: e457d0e0cb044886bcacf3e8b7034de9a
Dec 14 18:22:55 ip-172-31-19-62 jenkins[4237]: This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Dec 14 18:22:55 ip-172-31-19-62 jenkins[4237]: ****
Dec 14 18:22:55 ip-172-31-19-62 jenkins[4237]: ****
Dec 14 18:22:55 ip-172-31-19-62 jenkins[4237]: ****
Dec 14 18:22:55 ip-172-31-19-62 jenkins[4237]: 2024-12-14 18:22:58.831+0000 [id=32]      INFO    jenkins.InitReactorRunner$1#onAttained: Completed in
Dec 14 18:22:56 ip-172-31-19-62 jenkins[4237]: 2024-12-14 18:22:58.858+0000 [id=23]      INFO    hudson.lifecycle.Lifecycle#onReady: Jenkins is fully
Dec 14 18:22:58 ip-172-31-19-62 systemd[1]: Started Jenkins Continuous Integration Server.
Dec 14 18:22:59 ip-172-31-19-62 jenkins[4237]: 2024-12-14 18:22:59.117+0000 [id=48]      INFO    h.m.DownloadService$Downloadable#Load: Obtained the >
Dec 14 18:22:59 ip-172-31-19-62 jenkins[4237]: 2024-12-14 18:22:59.117+0000 [id=48]      INFO    hudson.util.RetriggerStart: Performed the action chec>
[Lines 1-20/20 (END)]

```

- Edit the visudo file by providing the sudo permissions.



```

GNU nano 6.2                               /etc/sudoers.tmp *
# different sudoers have their choice of editor respected.
Defaults:env_keep += "EDITOR"

# Completely harmless preservation of a user preference.
Defaults:env_keep += "GREP_COLOR"

# While you shouldn't normally run git as root, you need to with etckeeper
Defaults:env_keep += "GIT_AUTHOR_* GIT_COMMITTER_"

# Per-user preferences; root won't have sensible values for them.
Defaults:env_keep += "EMAIL DEBEMAIL DEBFULLNAME"

# "sudo scp" or "sudo rsync" should be able to use your SSH agent.
Defaults:env_keep += "SSH_AGENT_PID SSH_AUTH_SOCK"

# Ditto for GPG agent
Defaults:env_keep += "GPG_AGENT_INFO"

# Host alias specification

# User alias specification

# Cmnd alias specification

# User privilege specification
root    ALL=(ALL:ALL) ALL

# Members of the admin group may gain root privileges
%admin  ALL=(ALL) ALL

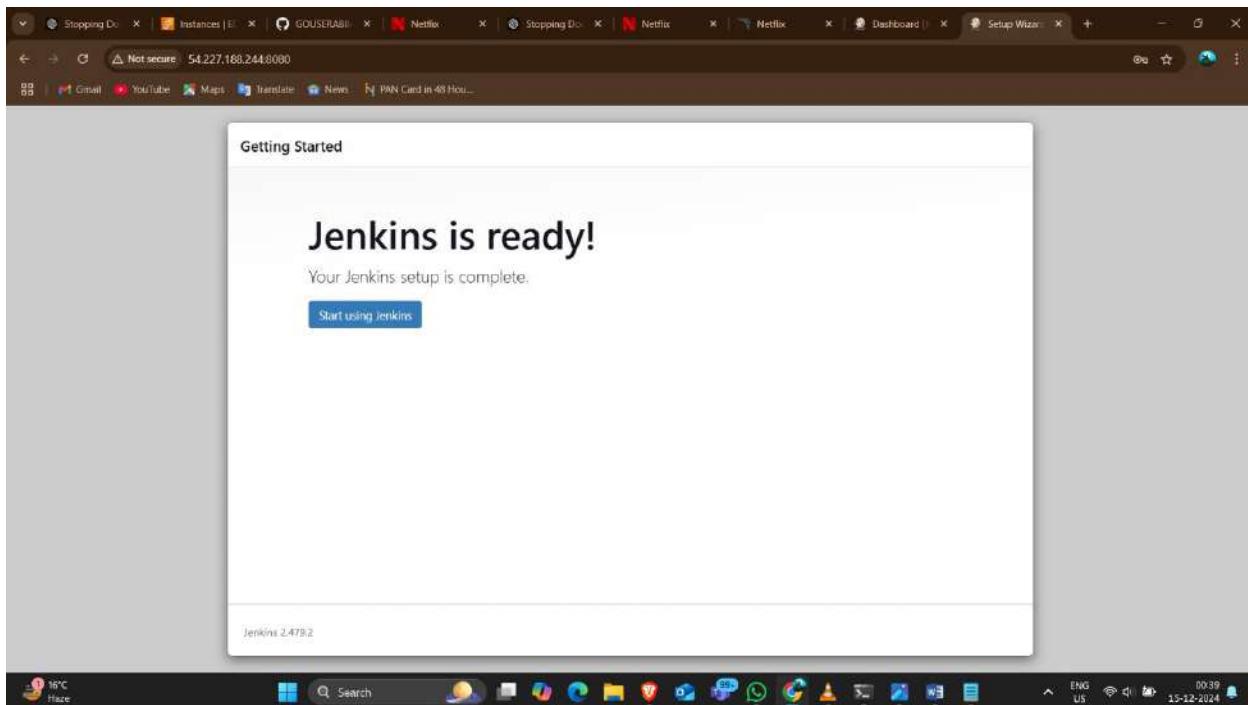
# Allow members of group sudo to execute any command
%sudo  ALL=(ALL:ALL) ALL
jenkins ALL=(ALL) NOPASSWD:ALL
# See sudoers(5) for more information on "@include" directives:

@includedir /etc/sudoers.d

^D Help      ^O Write Out   ^W Where Is      ^K Cut          ^T Execute      ^C Location     M-U Undo      M-A Set Mark   M-J To Bracket
^X Exit      ^R Read File   ^E Replace       ^U Paste         ^J Justify      ^I Go To Line   M-B Redo      M-G Copy      M-O Where Was

```

- Copy the pub ip with port number 8080 and login to the Jenkins.
- Here Jenkins ready page.



- We need the sonarqube token, so go to the sonarqube and create the token.

**Tokens**

If you want to enforce security by not providing credentials of a real SonarQube user to run your code scan or to invoke web services, you can provide a User Token as a replacement of the user login. This will increase the security of your installation by not letting your analysis user's password going through your network.

**Generate Tokens**

Name	Type	Expires in
jenkins	User Token	30 days

No tokens

Enter a new password

All fields marked with \* are required

Old Password \*

New Password \*

**Tokens**

If you want to enforce security by not providing credentials of a real SonarQube user to run your code scan or to invoke web services, you can provide a User Token as a replacement of the user login. This will increase the security of your installation by not letting your analysis user's password going through your network.

**Generate Tokens**

Name	Type	Expires in
Enter Token Name	Select Token Type	30 days

**Info** New token "jenkins" has been created. Make sure you copy it now, you won't be able to see it again!

**Copy** `sqw_c893be63c775e1fac1ab015848f65f0313a4d06`

Name	Type	Project	Last use	Created	Expiration
jenkins	User		Never	December 15, 2024	January 14, 2025

Enter a new password

All fields marked with \* are required

- Go to Jenkins page.

The screenshot shows the Jenkins 'Manage Jenkins' interface. The top navigation bar includes links for 'Dashboard', 'Manage Jenkins', 'Search (CTRL+K)', and 'vinay'. Below the navigation is a search bar labeled 'Search settings'. The main content area is titled 'Manage Jenkins' and contains several sections:

- System Configuration:** Includes 'Build Queue' (0 builds), 'Build Executor Status' (0/2), 'System' (configure global settings), 'Tools' (configure tools), 'Nodes' (add, remove, control nodes), 'Clouds' (configure cloud instances), 'Plugins' (add, remove, disable or enable plugins), and 'Appearance' (configure look and feel).
- Security:** Includes 'Security' (secure Jenkins), 'Credentials' (configure credentials), and 'Credential Providers' (configure credential providers).

At the bottom of the page, there's a footer with links for 'Available plugins', 'Dashboard', 'Manage Jenkins', and 'Log out'. The status bar at the bottom right shows 'ENG US' and the date '15-12-2024'.

- Go to manage Jenkins>plugins.
- Click on available plugins and install the below mentioned plugins.
- Eclipse Temurin installer ,sonarqube scanner,Nodejs, email extension template,docker related plugins all,promotheus metrics and owasp dependency check.

The screenshot shows the Jenkins 'Manage Jenkins > Plugins' page. The top navigation bar includes links for 'Dashboard', 'Manage Jenkins', 'Plugins', 'Search (CTRL+K)', and 'vinay'. Below the navigation is a search bar labeled 'Search available plugins' and a 'Install' button.

The main content area displays a table of available plugins:

Install	Name	Released	
<input checked="" type="checkbox"/>	Eclipse Temurin installer 1.5	Provides an installer for the JDK tool that downloads the JDK from https://adoptium.net	2 yr 2 mo ago
<input checked="" type="checkbox"/>	SonarQube Scanner 2.17.3	External Site/Tool Integrations - Build Reports	26 days ago
<input checked="" type="checkbox"/>	NodeJS 1.6.2	NodeJS Plugin executes NodeJS script as a build step.	4 mo 3 days ago
<input checked="" type="checkbox"/>	Email Extension Template 219.v14ff5e4778d	This plugin allows administrators to create global templates for the Extended Email Publisher.	21 days ago

A note at the bottom of the table states: 'This plugin is up for adoption! We are looking for new maintainers. Visit our Adopt a Plugin initiative for more information.'

On the left sidebar, there are links for 'Updates', 'Available plugins' (which is selected), 'Installed plugins', 'Advanced settings', and 'Download progress'.

At the bottom of the page, there's a footer with links for 'Available plugins', 'Dashboard', 'Manage Jenkins', and 'Log out'. The status bar at the bottom right shows 'ENG US' and the date '15-12-2024'.

Screenshot of a web browser showing the Jenkins plugin manager. The search bar contains "docker". The results list several Docker-related plugins:

- Docker 1.7.0 (Cloud Providers, Cluster Management, docker) - Last updated 2 mo 0 days ago
- Docker Commons 445.v6b\_646c962a\_94 (Utility plugins (for use by other plugins), docker) - Last updated 1 mo 7 days ago
- Docker Pipeline 560.vc0c34d66bb\_54 (pipeline, DevOps, Deployment, docker) - Last updated 6 mo 25 days ago
- Docker API 3.4.1-96.v77147a\_daf6718 (Utility plugins (for use by other plugins), docker) - Last updated 19 hr ago
- docker-build-step 2.12 (Build Tools, docker) - Last updated 6 mo 21 days ago

The Jenkins interface includes a sidebar with "Available plugins" selected, and a bottom navigation bar.

Screenshot of a web browser showing the Jenkins plugin manager. The search bar contains "docker". The results list several Docker-related plugins:

- docker-build-step 2.12 (Build Tools, docker) - Last updated 6 mo 21 days ago. A warning message states: "Warning: This plugin version may not be safe to use. Please review the following security notices:
  - CSRF vulnerability and missing permission check"
- CloudBees Docker Build and Publish 1.4.0 (Build Tools, docker) - Last updated 2 yr 3 mo ago
- Amazon ECR 1.136.v914ea\_5949634 (aws) - Last updated 5 mo 20 days ago
- Docker Compose Build Step 1.0 (Docker Compose, Docker Compose Build Step) - Last updated 6 yr 5 mo ago

The Jenkins interface includes a sidebar with "Available plugins" selected, and a bottom navigation bar.

**Plugins**

Updates

Available plugins

Installed plugins

Advanced settings

Download progress

Search: prom

Name	Description	Last Updated
OWASP Dependency-Check 5.6.0	Uses Docker containers to run Jenkins build agents.	2 days 6 hr ago
Artifactory 4.0.8	This plugin allows your build jobs to deploy artifacts and resolve dependencies to and from Artifactory, and then have them linked to the build job that created them. The plugin includes a vast collection of features, including a rich pipeline API library and release management for Maven and Gradle builds with Staging and Promotion.	5 mo 6 days ago
Prometheus metrics	Jenkins Prometheus Plugin expose an endpoint (default /prometheus) with metrics where a Prometheus Server can scrape.	8 days 12 hr ago
Build With Parameters	Allows the user to provide parameters for a build in the url (similar to /job/JOBNAME/buildWithParameters), prompting for confirmation before triggering the job.	2 yr 0 mo ago
promoted builds	User Interface   Build Tools   Miscellaneous	

**Plugins**

Updates

Available plugins

Installed plugins

Advanced settings

Download progress

Search

Plugin	Status
JSch dependency	Success
Maven Integration	Success
docker-build-step	Success
SSH server	Success
CloudBees Docker Build and Publish	Success
Oracle Java SE Development Kit Installer	Success
Command Agent Launcher	Success
Docker Compose Build Step	Success
Docker Slaves	Success
OWASP Dependency-Check	Success
Pipeline: REST API	Success
Prometheus metrics	Warning: prometheus plugin doesn't support dynamic loading. Jenkins needs to be restarted for the update to take effect.
Loading plugin extensions	Success
Prometheus metrics	Success
Loading plugin extensions	Success

→ Go back to the top page  
(you can start using the installed plugins right away)

→  Restart Jenkins when installation is complete and no jobs are running

REST API Jenkins 2.479.2

- Now goto the manage Jenkins> credentials.

The screenshot shows the Jenkins Manage Jenkins dashboard. The 'Credentials' section is highlighted in the center. Other sections visible include 'Nodes', 'Clouds', 'Appearance', 'Managed files', 'Security', 'Users', 'Status Information', 'System Information', 'System Log', and 'Load Statistics'. The URL in the browser bar is 54.227.188.244:8080/manage/credentials.

- Add the credentials.

The screenshot shows the Jenkins Credentials management page. It displays a table with columns T, P, Store, Domain, ID, and Name. A search bar at the top right shows 'Search (CTRL+K)' and a user 'vinay'. Below the table, it says 'Stores scoped to Jenkins'. A 'Domains' dropdown is set to '(global)'. Underneath, there's a 'System' store and an 'Add credentials' button. The URL in the browser bar is 54.227.188.244:8080/manage/credentials/stores/system/domain/\_/.

- Select the secret text and save the sonarqube token and give the ID name “sonar-token”.
- Create.

Kind  
Secret text

Scope  
Global (Jenkins, nodes, items, all child items, etc.)

Secret  
.....

ID  
sonar-token

Description  
sonar token

Create

Global credentials (unrestricted)

ID	Name	Kind	Description
sonar-token	sonar token	Secret text	sonar token

+ Add Credentials

Icon: S M L



- Again go to credentials and save the docker credentials.

The screenshot shows the Jenkins 'Credentials' page. At the top, there's a table with columns: T, P, Store, Domain, ID, and Name. One row is visible: 'System' under 'Store', '(global)' under 'Domain', 'sonar-token' under 'ID', and 'sonar token' under 'Name'. Below this table, a section titled 'Stores scoped to Jenkins' is shown, featuring a 'Domains' dropdown set to '(global)'. A button labeled 'Add credentials' is visible. The bottom of the screen shows a Windows taskbar with various icons and system status.

- Select the username and password.
- Give the username and password.
- Give the Id name “docker”.
- Create..

The screenshot shows the 'New credentials' creation form for a Docker credential. The 'Scope' dropdown is set to 'Global (Jenkins, nodes, items, all child items, etc.)'. The 'Username' field contains 'vinay182206'. The 'Password' field contains a masked password. The 'ID' field is set to 'docker'. The 'Description' field contains 'docker login'. A 'Create' button is at the bottom left. The bottom of the screen shows a Windows taskbar with various icons and system status.

The screenshot shows the Jenkins Global credentials (unrestricted) page. It lists two credentials:

ID	Name	Kind	Description
sonar-token	sonar token	Secret text	sonar token
docker	vinay192206***** (docker login)	Username with password	docker login

At the bottom, there are icons for sorting by ID, Name, Kind, or Description.

- Go to the manage Jenkins>tools to store installation tool.

The screenshot shows the Jenkins Manage Jenkins page under the System Configuration section. It includes links for System, Tools, Nodes, Clouds, Plugins, and Appearance.

System Configuration

- System**: Configure global settings and paths.
- Tools**: Configure tools, their locations and automatic installers.
- Nodes**: Add, remove, control and monitor the various nodes that Jenkins runs jobs on.
- Clouds**: Add, remove, and configure cloud instances to provision agents on-demand.
- Plugins**: Add, remove, disable or enable plugins that can extend the functionality of Jenkins.
- Appearance**: Configure the look and feel of Jenkins.

- Select the options and install the tool required.
- Follow below steps.

The screenshot shows the Jenkins 'Maven Configuration' page. At the top, there are dropdown menus for 'Default settings provider' (set to 'Use default maven settings') and 'Default global settings provider' (set to 'Use default maven global settings'). Below these are sections for 'JDK installations' and 'Git installations'. Under 'JDK installations', there is a button to 'Add JDK'. Under 'Git installations', there is a section for 'Git' with a 'Name' field set to 'Default'. At the bottom of the page are 'Save' and 'Apply' buttons.

- JDK installation.

The screenshot shows the Jenkins 'Tools' configuration page under the 'JDK installations' section. A dropdown menu lists several Java Development Kits (JDKs) and OpenJDKs, including 'jdk-11.0.19+7', 'jdk-11.0.18+10', 'jdk-11.0.17+8', 'jdk-11.0.16+11', 'jdk-11.0.16+8', 'jdk-11.0.15+10', 'jdk-11.0.14+11', 'jdk-11.0.14+9', 'jdk-11.0.13+8', 'jdk-11.0.13+7', 'OpenJDK 16 - HotSpot', 'OpenJDK 17 - HotSpot', and 'jdk-17.0.8+1'. The option 'jdk-17.0.8+1' is highlighted with a blue selection bar. At the bottom of the page are 'Add Installer' and 'Save' buttons.

The screenshot shows the Jenkins Manage Tools page. The main navigation bar at the top includes links for Stopping Docker, Instances, Gouserabil, Netflix, Tools, Jenkins, and Personal account. Below the navigation, there are several sections:

- Ant installations**: A "Add Ant" button.
- Maven installations**: A "Add Maven" button.
- NodeJS installations**: A "Add NodeJS" button.
- Dependency-Check installations**: A "Add Dependency-Check" button.
- Docker installations**: Buttons for "Save" and "Apply".

The status bar at the bottom shows the date and time as 15-12-2024 and 01:11.

- NodeJS installation.

The screenshot shows the "Add NodeJS" configuration dialog. It has the following fields:

- Name**: node16
- Install automatically**: A checked checkbox.
- Install from nodejs.org**
  - Version**: NodeJS 22.2.0
  - Force 32bit architecture**: An unchecked checkbox.
- Global npm packages to install**: A text input field containing "Specify list of packages to install globally — see npm install -g. Note that you can fix the packages version by using the syntax 'packageName@version'".

At the bottom are "Save" and "Apply" buttons, and the Microsoft Edge browser interface is visible at the very bottom.

The screenshot shows a web browser window with the URL [Not secure 54.227.188.244:8080/manage/configureTools/](http://54.227.188.244:8080/manage/configureTools/). The page is titled "Manage Jenkins > Tools". A search bar at the top contains the text "node16". Below it, there is a checkbox labeled "Install automatically ?" which is checked. A dropdown menu titled "Install from nodejs.org" is open, showing a list of Node.js versions. The version "NodeJS 16.2.0" is highlighted with a blue background. Other versions listed include NodeJS 22.2.0, NodeJS 16.6.2, NodeJS 16.6.1, NodeJS 16.6.0, NodeJS 16.5.0, NodeJS 16.4.2, NodeJS 16.4.1, NodeJS 16.4.0, NodeJS 16.3.0, NodeJS 16.2.0, NodeJS 16.1.0, NodeJS 16.0.0, NodeJS 15.14.0, NodeJS 15.13.0, NodeJS 15.12.0, NodeJS 15.11.0, and NodeJS 15.10.0. At the bottom of the dropdown menu is a blue "Save" button.

The screenshot shows the same Jenkins configuration page as the first one, but with different settings. The "Version" dropdown is now set to "NodeJS 16.2.0". Below the dropdown, there is a checkbox labeled "Force 32bit architecture" which is unchecked. Under the heading "Global npm packages to install", there is a note: "Specify list of packages to install globally -- see npm install -g. Note that you can fix the packages version by using the syntax 'packageName@version'". Below this is an empty input field. Under the heading "Global npm packages refresh hours", there is a note: "Duration, in hours, before a npm cache update. Note that 0 will always update npm cache". Below this is an input field containing the value "72". At the bottom of the page are two buttons: a blue "Save" button and a grey "Apply" button. The browser's status bar at the bottom right shows the date and time as "15-12-2024 01:14".

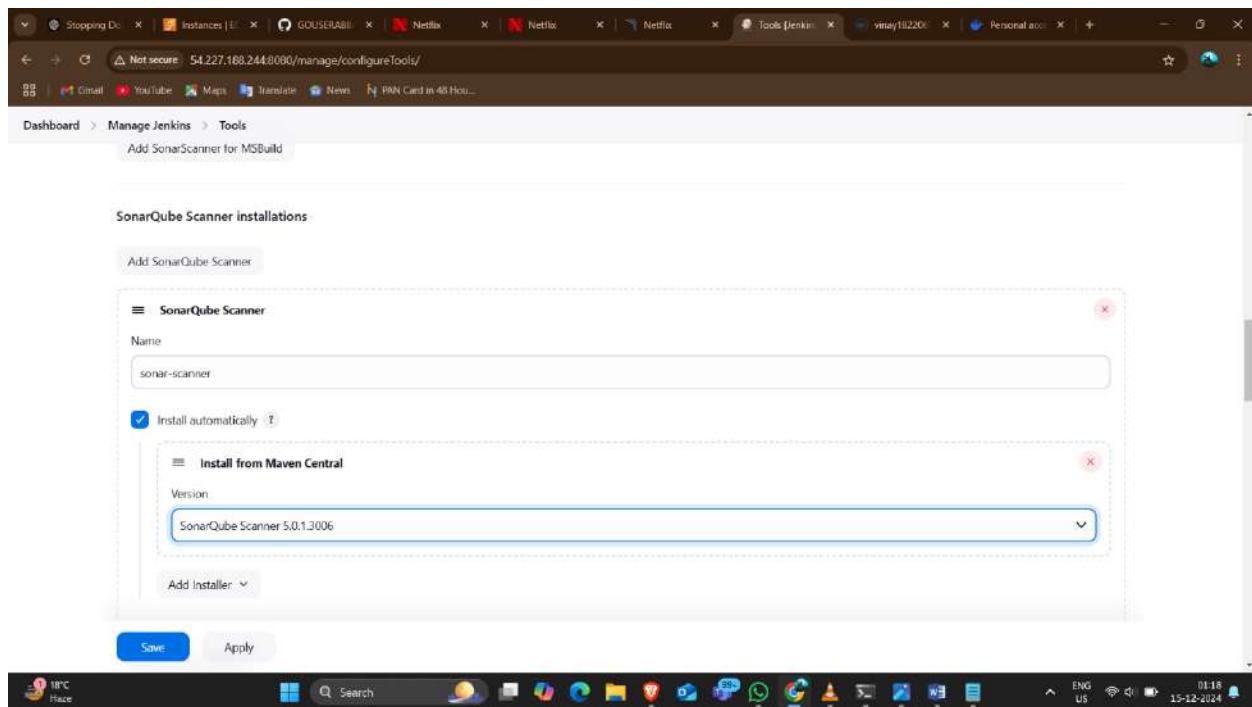
- Docker installation.

The screenshot shows a Jenkins configuration interface. At the top, there's a navigation bar with tabs like 'Dashboard', 'Manage Jenkins', and 'Tools'. Below this, a main section titled 'Docker installations' is displayed. A sub-section titled 'Add Docker' is open, showing fields for 'Name' (with a red asterisk indicating it's required) and 'Installation root'. There's also a checkbox for 'Install automatically'. Below this form, another modal window is open, titled 'Download from docker.com', showing a dropdown for 'Docker version' with 'latest' selected. At the bottom of the screen, there are two buttons: 'Save' and 'Apply'.

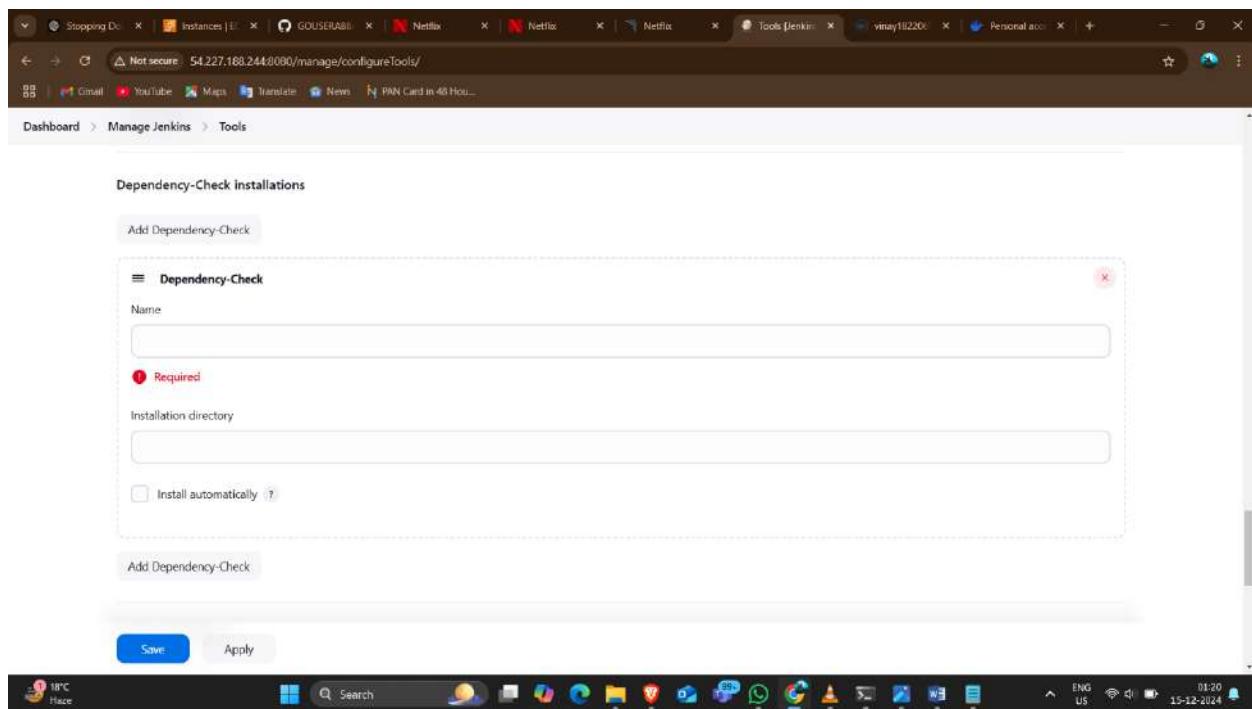
The screenshot shows a web browser window with multiple tabs open. The active tab is 'Not secure 54.227.188.244:8080/manage/configureTools/'. The URL bar also displays '54.227.188.244:8080/manage/configureTools/'. The page content is titled 'Docker installations' and shows a configuration form for a Docker instance named 'docker'. The 'Install automatically?' checkbox is checked. A dropdown menu is open under 'Add Installer' with the following options: 'Download from docker.com', 'Extract \*.zip/\*.tar.gz', 'Run Batch Command', and 'Run Shell Command'. The 'Save' button is visible at the bottom.

This screenshot is identical to the one above, but the 'Download from docker.com' option is highlighted in the 'Add Installer' dropdown menu. The rest of the interface and the system tray at the bottom remain the same.

- Sonarqube installation.



- Dependency-check installations.
- Apply and save.



Dependency-Check installations

Add Dependency-Check

**Dependency-Check**

Name: DP-check

Install automatically

Add Installer

Add Dependency-Check

Docker installations

Add Docker

Save Apply

Dependency-Check

Name: DP-check

Install automatically

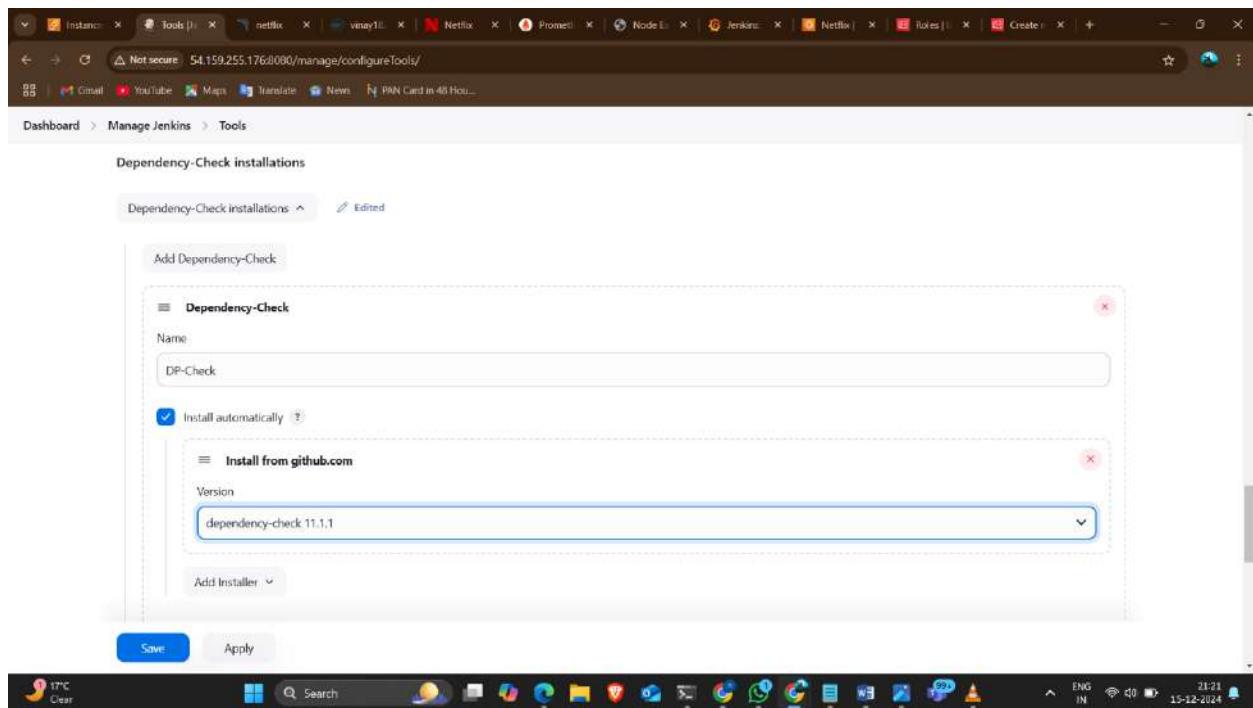
Add Installer

Extract \*.zip/\*.tar.gz  
Install from github.com  
Run Batch Command  
Run Shell Command

Docker

Add Docker

Save Apply

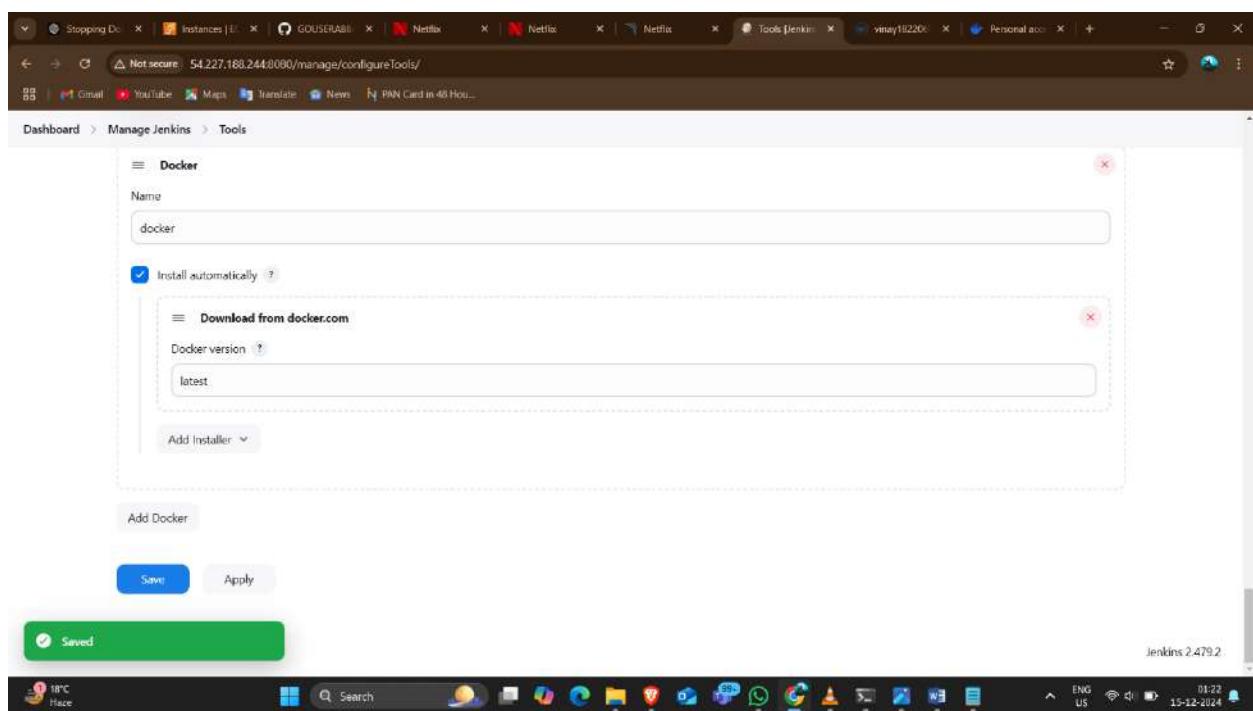


The screenshot shows the Jenkins 'Tools' configuration page for the 'Dependency-Check' tool. The URL is [Not secure 54.159.255.176:8080/manage/configureTools/](http://54.159.255.176:8080/manage/configureTools/). The 'Dependency-Check installations' section is active. A new configuration window titled 'Dependency-Check' is open, showing the following details:

- Name:** DP-Check
- Install automatically:**
- Install from github.com:**

  - Version:** dependency-check 11.1.1

At the bottom of the window are 'Save' and 'Apply' buttons.



The screenshot shows the Jenkins 'Tools' configuration page for the 'Docker' tool. The URL is [Not secure 54.227.188.244:8080/manage/configureTools/](http://54.227.188.244:8080/manage/configureTools/). The 'Docker' section is active. A new configuration window titled 'Docker' is open, showing the following details:

- Name:** docker
- Install automatically:**
- Download from docker.com:**

  - Docker version:** latest

At the bottom of the window are 'Add Docker', 'Save', and 'Apply' buttons. A green success message 'Saved' is displayed above the buttons. In the top right corner of the browser window, it says 'Jenkins 2.479.2'.

- Go to manage Jenkins>system.
- Give the sonarqube running ip and token.

The screenshot shows two instances of the Jenkins management interface side-by-side, both displaying the 'System' configuration page. The top instance shows the 'SonarQube servers' section, which includes a checkbox for injecting SonarQube server configuration as environment variables and a list of SonarQube installations with an 'Add SonarQube' button. The bottom instance shows the 'Docker Slaves' section, which includes a 'Compose docker containers' dropdown menu and a note about creating a build executor as a composition of linked Docker containers. Both instances have a 'Save' and 'Apply' button at the bottom of their respective sections. The background shows a Windows desktop environment with various icons on the taskbar.

**SonarQube servers**

If checked, job administrators will be able to inject a SonarQube server configuration as environment variables in the build

Environment variables

**SonarQube installations**

List of SonarQube installations:

Add SonarQube

**Docker Slaves**

Docker Provisioner

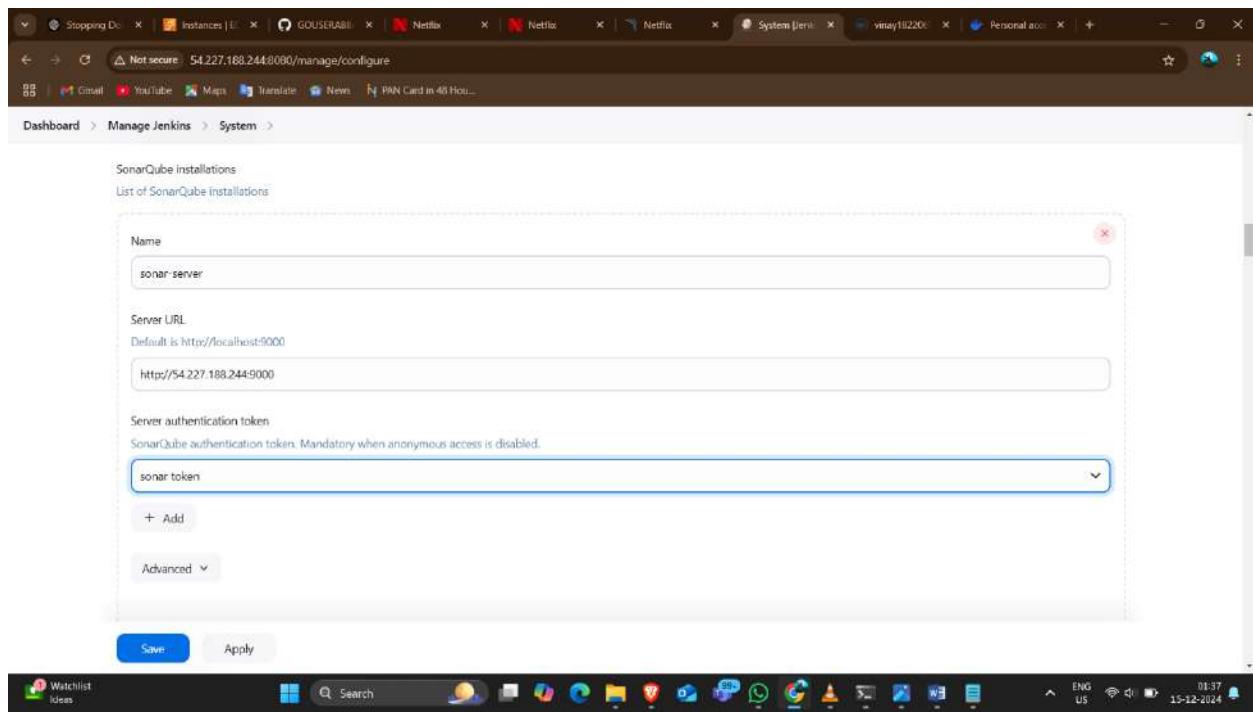
Compose docker containers

Build executor will be created as a composition of linked Docker containers. This offers maximal flexibility on the build and side containers.

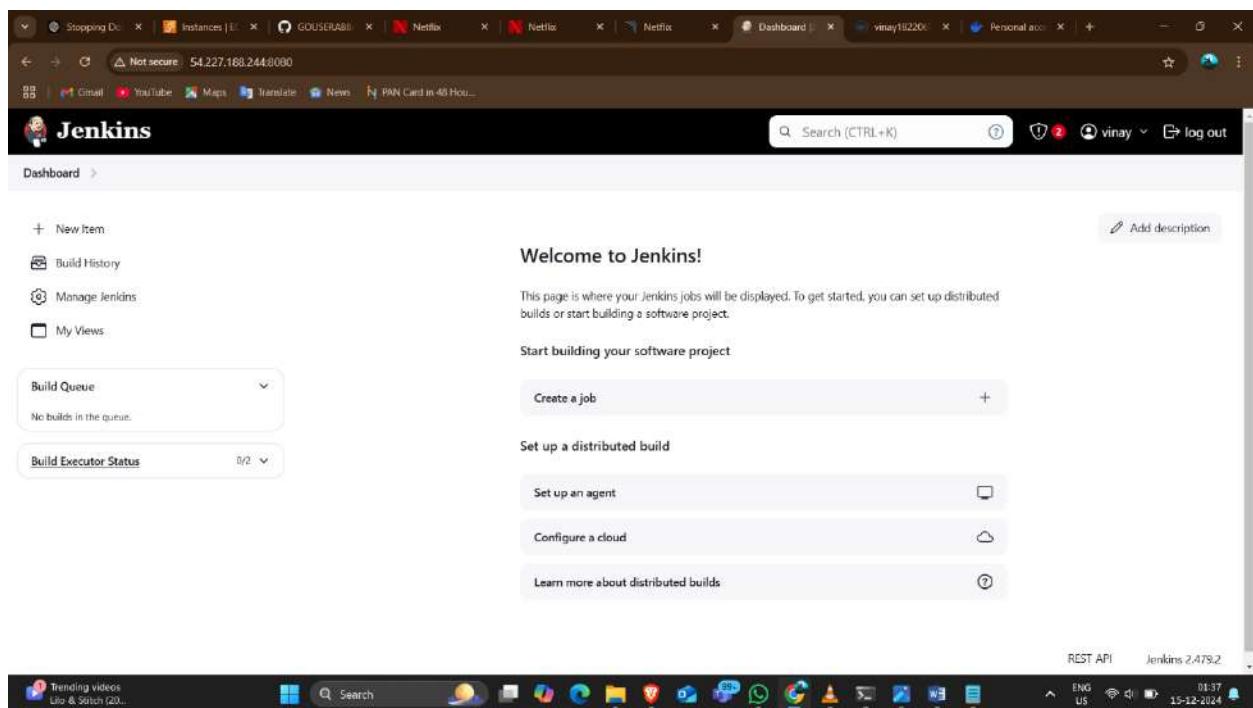
Remoting image ?

jenkins/agent/

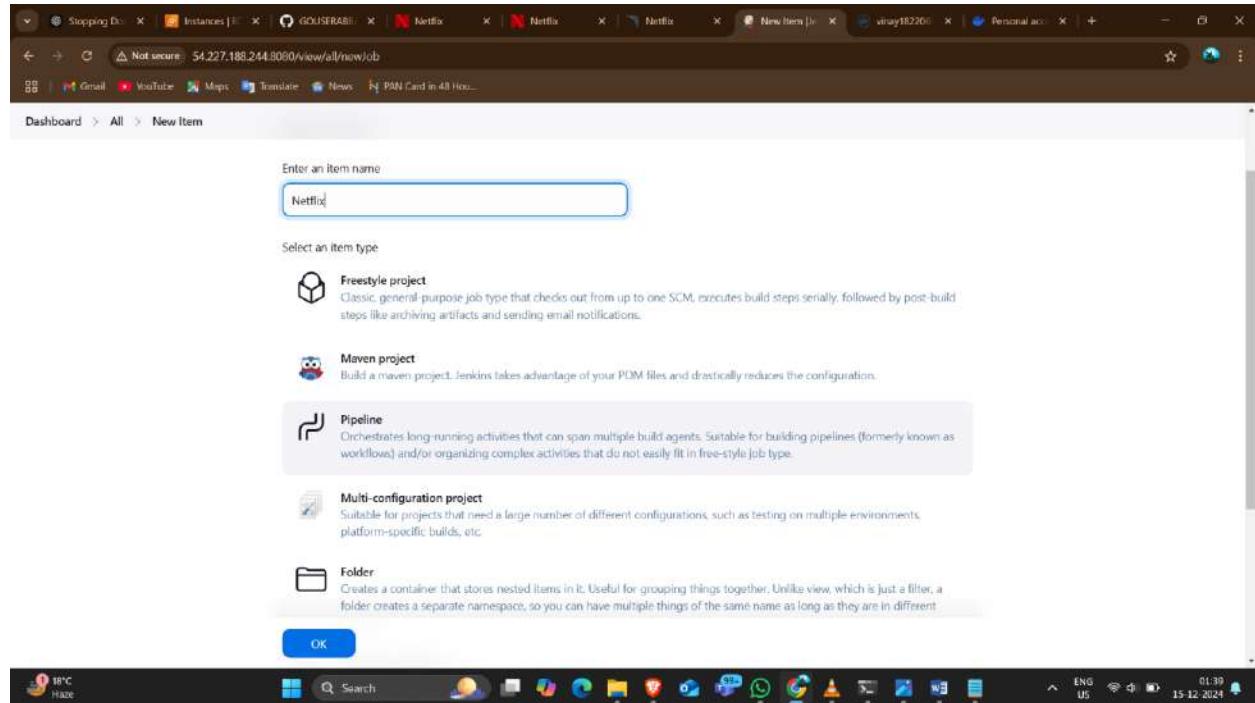
Save      Apply



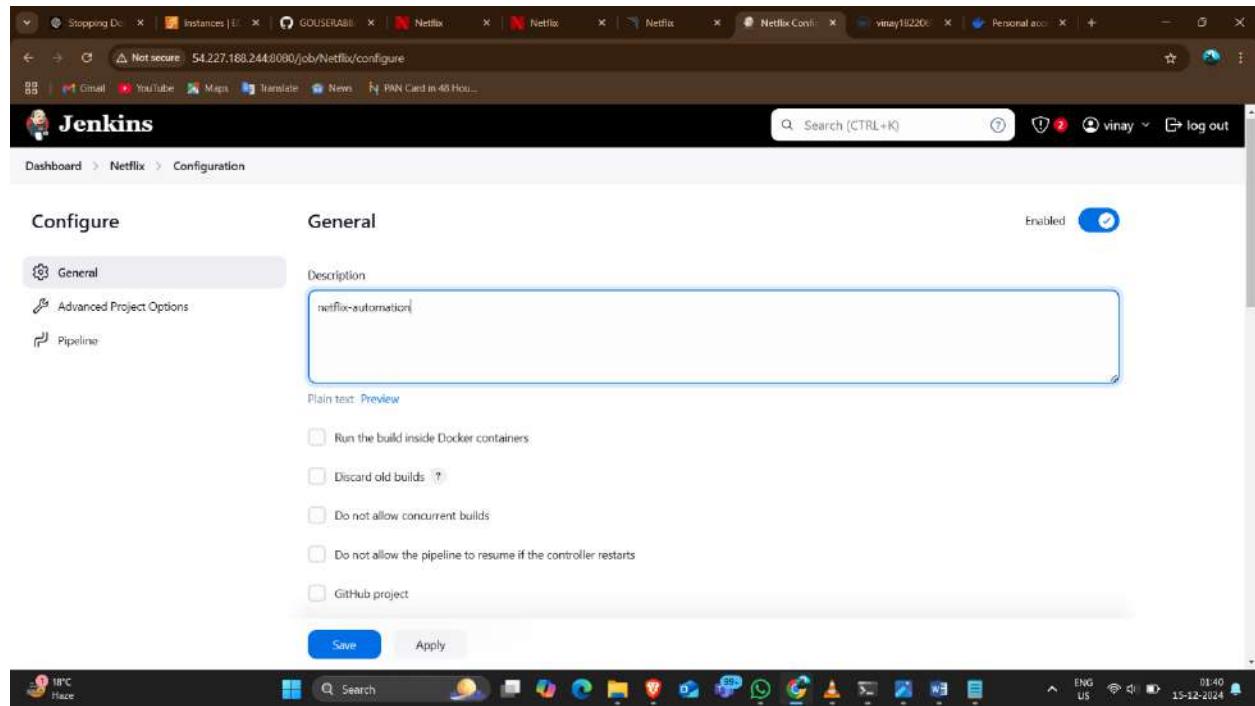
- Now go to dashboard and create new .



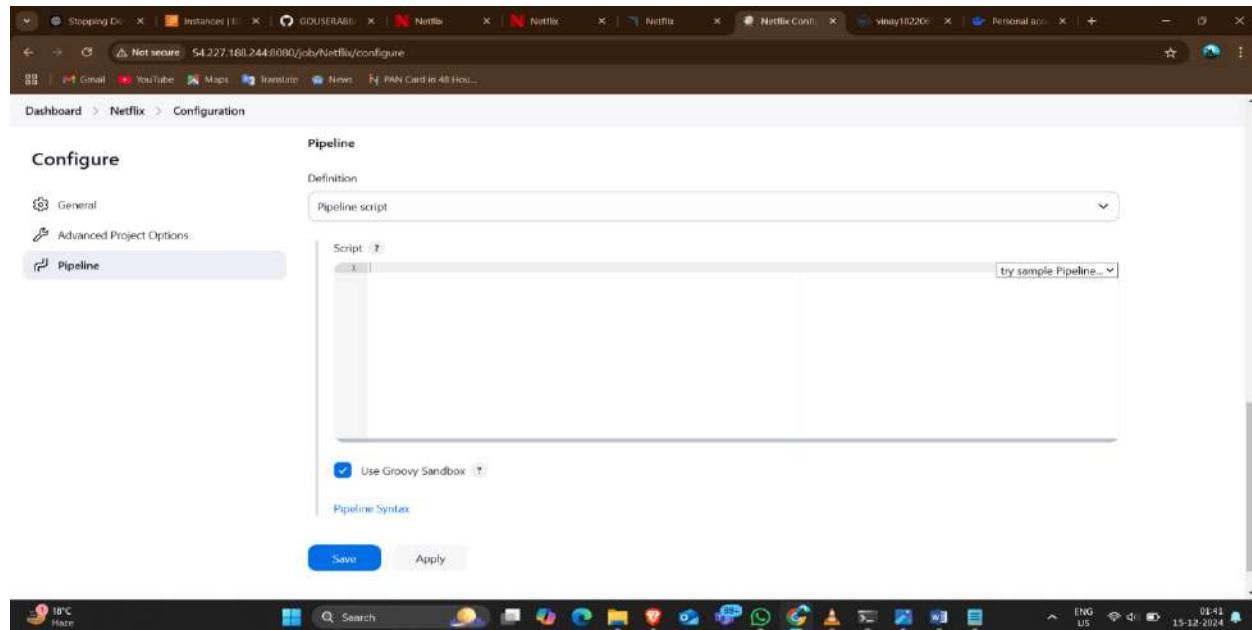
- Name it Netflix.
- Select the item as pipeline.



- Give description.



- Write the pipeline script.
- In that provide the sonar qube token.
- Give the docker user name to push.



- Pipeline script.

```
pipeline{
    agent any
    tools {
        jdk 'jdk17'
        nodejs 'node16'
    }
    environment {
        SCANNER_HOME = tool 'sonar-scanner'
    }
    stages {
        stage('Clean Workspace') {
            steps {
                cleanWs()
            }
        }
    }
}
```

```

        }
    }

stage('Checkout from Git') {
    steps {
        git branch: 'main', url: 'https://github.com/Gouserabbani44/Netflix.git'
    }
}

stage('SonarQube Analysis') {
    steps {
        withSonarQubeEnv('sonar-server') {
            sh """
                $SCANNER_HOME/bin/sonar-scanner \
                -Dsonar.projectName=netflix \
                -Dsonar.projectKey=app
                """
        }
    }
}

stage('Quality Gate') {
    steps {
        script {
            // Wait for the quality gate to pass before proceeding
            waitForQualityGate abortPipeline: false, credentialsId:
'squ_42976979e5ad35f0fce0301de6bc06552023b804'

        }
    }
}

stage('Install Dependencies') {
    steps {

```

```

        sh 'npm install'
    }
}

stage('OWASP Dependency Check') {
    steps {
        // Make sure that the Dependency-Check tool is configured correctly in Jenkins
        dependencyCheck additionalArguments: '--scan ./ --disableYarnAudit -- disableNodeAudit', odcInstallation: 'DP-Check'
    }
}

stage('TRIVY File System Scan') {
    steps {
        // Ensure Trivy is installed and available on the agent
        sh 'trivy fs . > trivyfs.txt'
    }
}

stage('Docker Build & Push') {
    steps {
        script {
            withDockerRegistry(credentialsId: 'docker', toolName: 'docker') {
                sh """
                    docker build --build-arg
                    TMDB_V3_API_KEY=23718be3890c910b0d16fe3e2a1a4205 -t netflix-1 .
                    docker tag netflix-1 vinay182206/netflix:latest
                    docker push vinay182206/netflix:latest
                """
            }
        }
    }
}

```

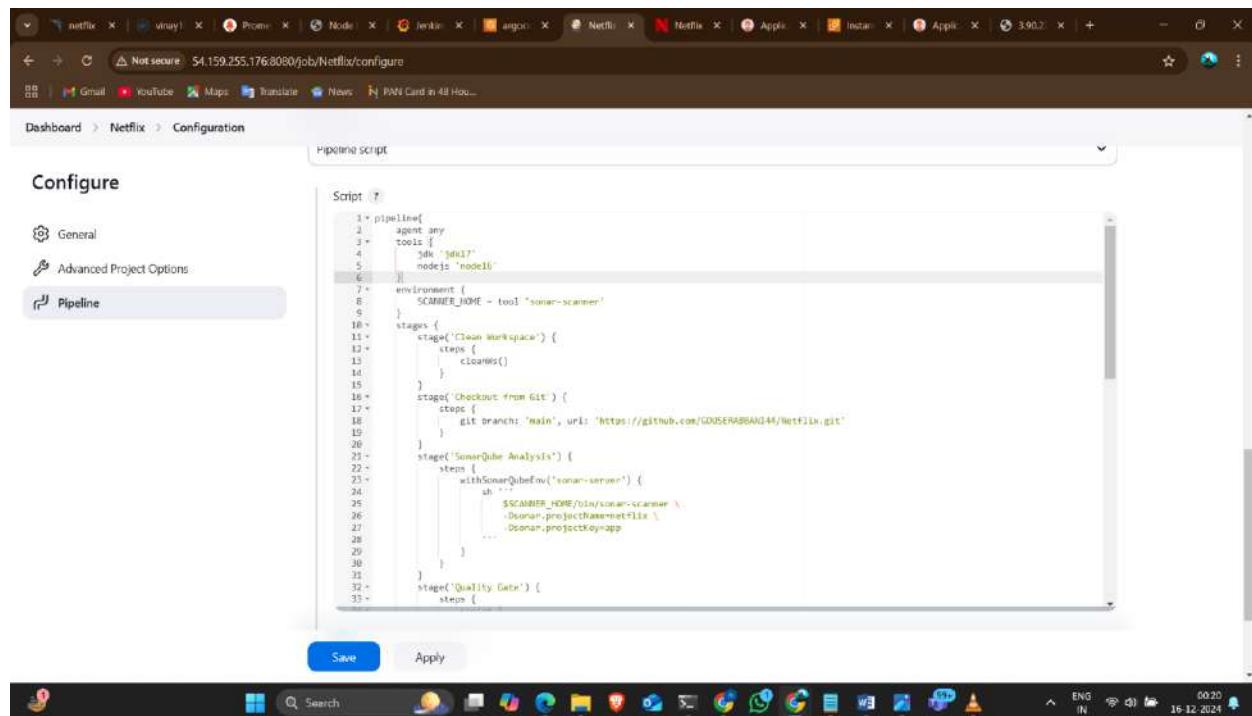
```

    }

stage('TRIVY Image Scan') {
    steps {
        sh 'trivy image vinay182206/netflix:latest > trivyimage.txt'
    }
}

stage('Deploy to Container') {
    steps {
        sh 'docker run -d --name netflixcont2 -p 8082:80 vinay182206/netflix:latest'
    }
}
}

```



```
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```

Configure

General

Advanced Project Options

Pipeline

Script

```
stage('Quality-Gate') {
    steps {
        script {
            // Wait for the quality gate to pass before proceeding.
            waitForQualityGate abortPipeline: false, credentialsId: 'sg_42976979e5ad55f0fc03f1de6cc06552823a0d4'
        }
    }
}

stage('Install Dependencies') {
    steps {
        sh 'npm install'
    }
}

stage('OWASP Dependency Check') {
    steps {
        // Make sure that the Dependency-Check tool is configured correctly in Jenkins.
        dependencyCheck additionalArguments: '--scan ./ --disableYarnAudit --disableDepsAudit', odcInstallation: 'OWC-Check'
    }
}

stage('TRIVY File System Scan') {
    steps {
        // Ensure Trivy is installed and available on the agent.
        sh 'trivy fs .. > trivyfs.txt'
    }
}

stage('Docker Build & Push') {
    steps {
        script {
            withDockerRegistry(credentialsId: 'docker', toolName: 'docker') {
                ...
                sh 'docker build --build-arg INDE_V1_API_KEY=2371be3690c910e0d16fe3e2a1a4205 -t netflix-1 .'
                docker tag netflix-1 vinay182206/netflix:latest
                docker push vinay182206/netflix:latest
            }
        }
    }
}

stage('TRIVY Image Scan') {
    steps {
        sh 'trivy image vinay182206/netflix:latest > triviyimage.txt'
    }
}

stage('Deploy to Container') {
    steps {
        sh 'docker run -d --name netflixcont2 -p 8082:80 vinay182206/netflix:latest'
    }
}
```

Save Apply

```
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```

Configure

General

Advanced Project Options

Pipeline

Script

```
stage('Quality-Gate') {
    steps {
        script {
            // Wait for the quality gate to pass before proceeding.
            waitForQualityGate abortPipeline: false, credentialsId: 'sg_42976979e5ad55f0fc03f1de6cc06552823a0d4'
        }
    }
}

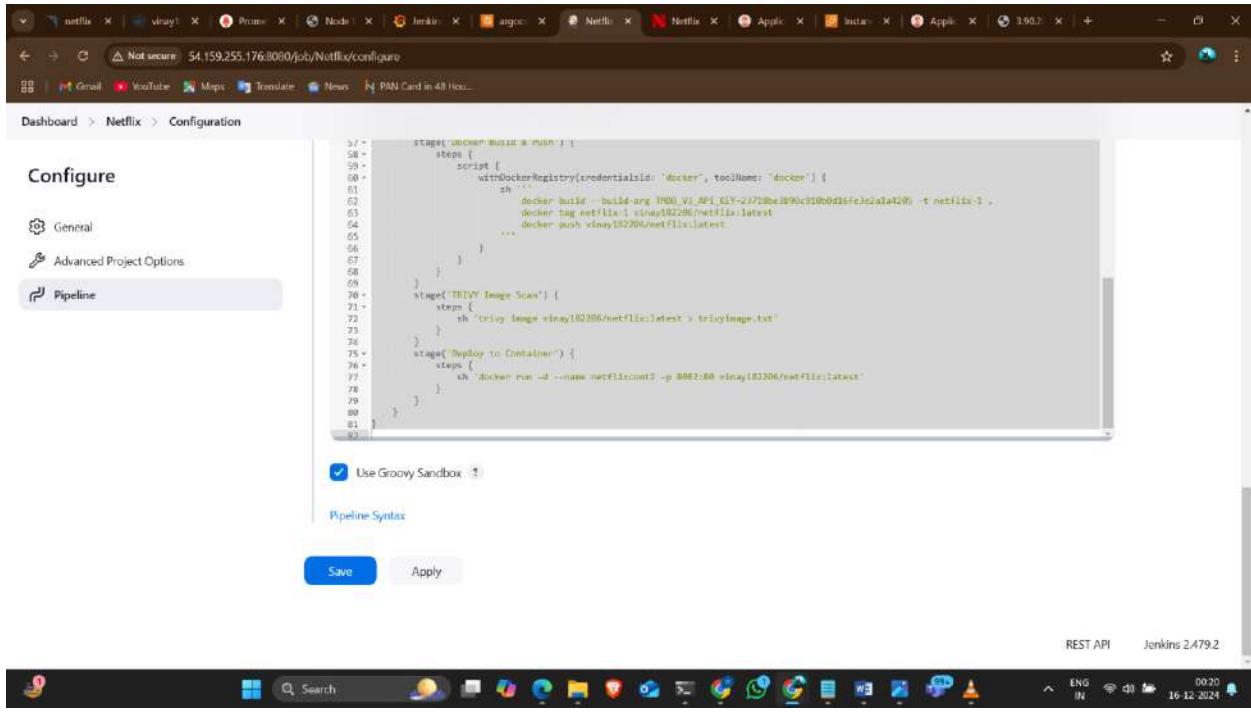
stage('Docker Build & Push') {
    steps {
        script {
            withDockerRegistry(credentialsId: 'docker', toolName: 'docker') {
                ...
                sh 'docker build --build-arg INDE_V1_API_KEY=2371be3690c910e0d16fe3e2a1a4205 -t netflix-1 .'
                docker tag netflix-1 vinay182206/netflix:latest
                docker push vinay182206/netflix:latest
            }
        }
    }
}

stage('TRIVY Image Scan') {
    steps {
        sh 'trivy image vinay182206/netflix:latest > triviyimage.txt'
    }
}

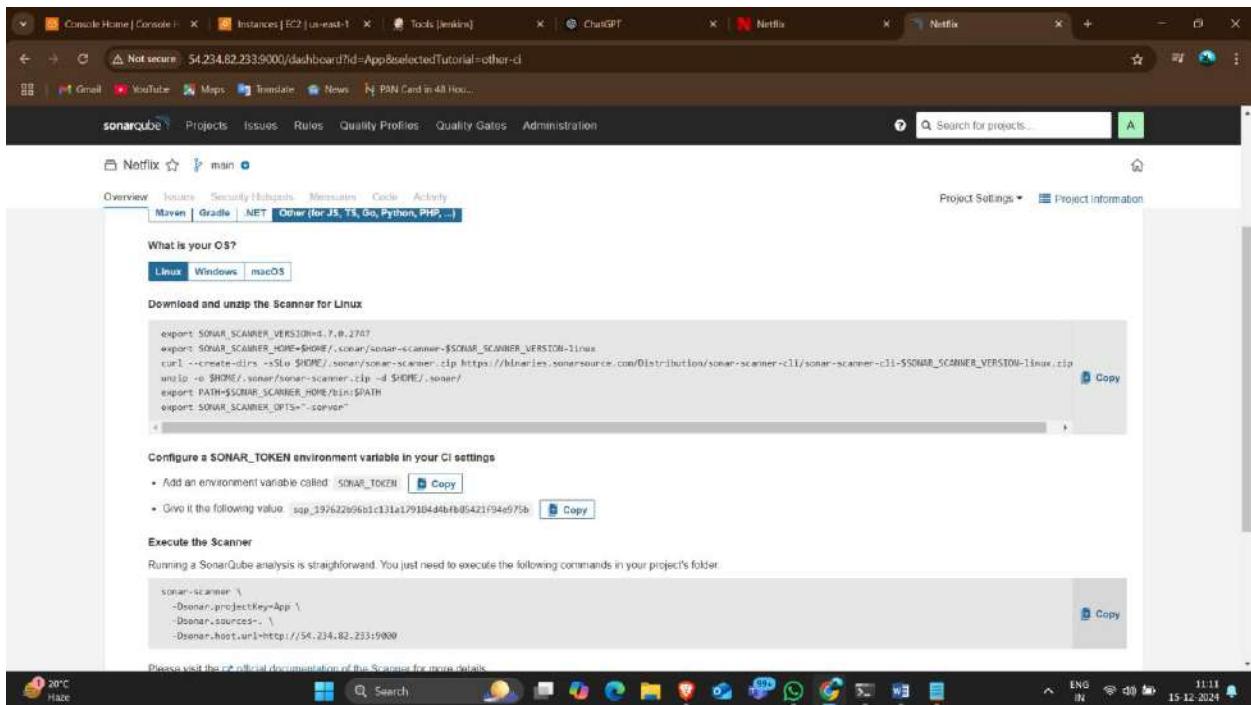
stage('Deploy to Container') {
    steps {
        sh 'docker run -d --name netflixcont2 -p 8082:80 vinay182206/netflix:latest'
    }
}
```

Use Groovy Sandbox

Save Apply



- Before that go to the sonarqube application and create the new project.

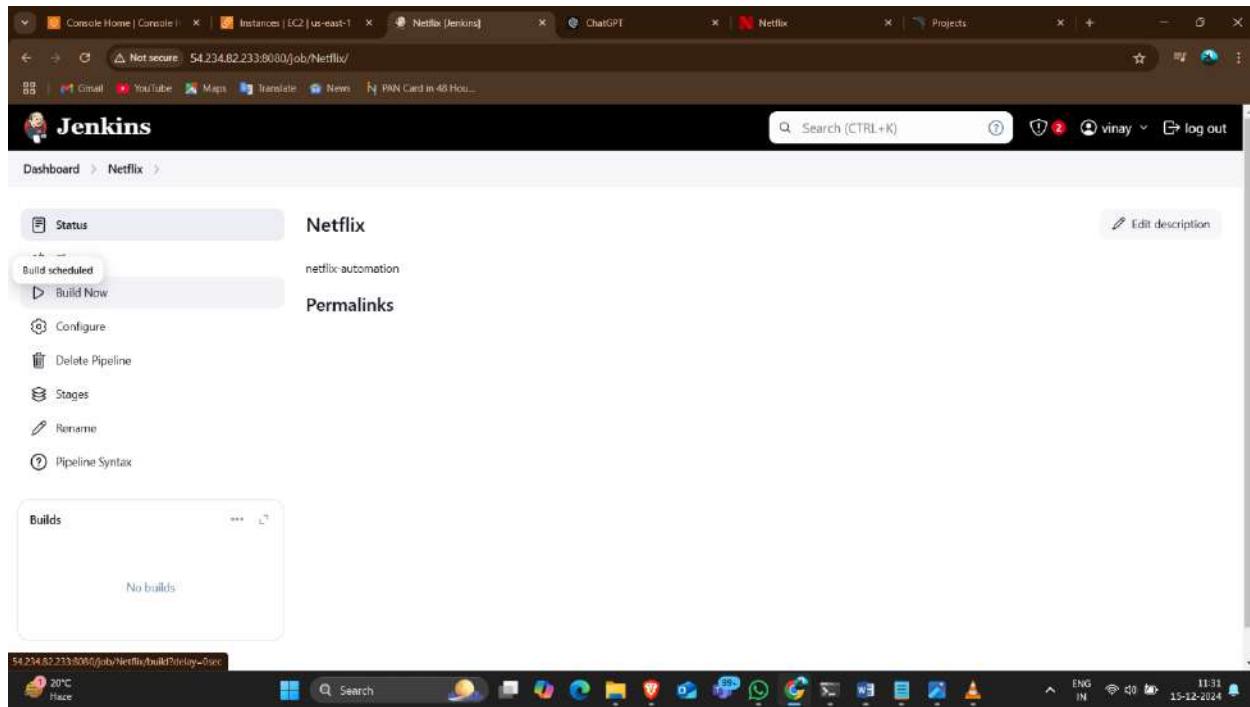


The screenshot shows the SonarQube web application. At the top, there are several tabs: 'Console Home | Console', 'Instances | EC2 | us-east-1', 'Manage Jenkins [Jenkins]', 'ChatGPT', 'Projects', and 'Netflix'. Below the tabs, the address bar shows 'Not secure 54.234.82.233:5000/projects'. The main content area is titled 'sonarcube' and 'Projects'. A search bar at the top right says 'Search for projects...'. On the left, there's a sidebar with 'Filters' and sections for 'Quality Gate' (Passed, Failed), 'Reliability ( Bugs )' (A rating, B rating, C rating, D rating, E rating), and 'Security ( Vulnerabilities )' (A rating, B rating, C rating, D rating, E rating). The central panel displays the 'Netflix' project with the message 'Project's Main Branch is not analyzed yet.' and a 'Configure analysis' button. Below this, there's a note: 'Embedded database should be used for evaluation purposes only. The embedded database will not scale, it will not support upgrading to newer versions of SonarQube, and there is no support for migrating your data out of it into a different database engine.' At the bottom of the page, there's a footer with 'SonarCube™ technology is powered by SonarSource SA. Community Edition - v6.9.0 (build 100196) - GPL v3 - Community - Documentation - Plugins - Web API'.

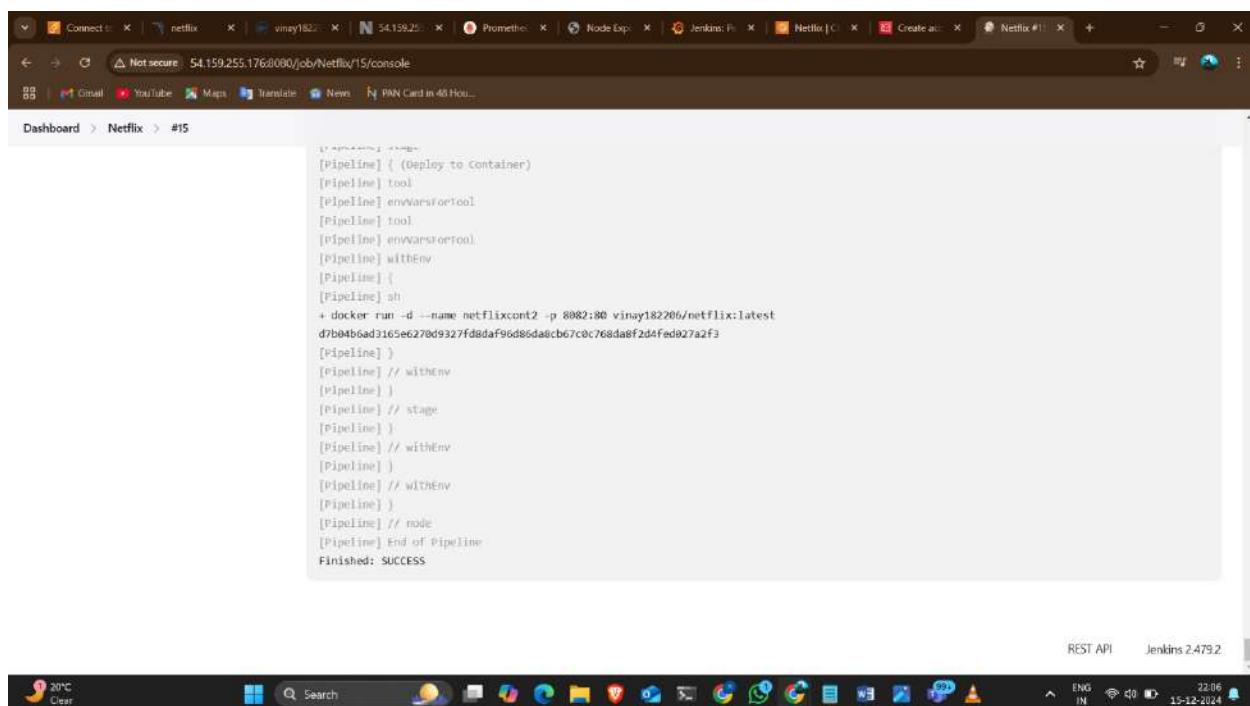
- Than come to the Jenkins page.

The screenshot shows the Jenkins web application. At the top, there are several tabs: 'Console Home | Console', 'Instances | EC2 | us-east-1', 'Netflix [Jenkins]', 'ChatGPT', 'Projects', and 'Netflix'. Below the tabs, the address bar shows 'Not secure 54.234.82.233:8080/job/Netflix/'. The main content area is titled 'Jenkins'. On the left, there's a sidebar with options: 'Status' (selected), 'Changes', 'Build Now', 'Configure', 'Delete Pipeline', 'Stages', 'Rename', and 'Pipeline Syntax'. The central panel shows the 'Netflix' pipeline with the name 'netflix-automation'. Below this, there's a section titled 'Permalinks'. At the bottom of the page, there's a 'Builds' section with the message 'No builds'.

- Build the job.



- Here the build success.



```
[Pipeline] [Pipeline] git  
The recommended git tool is: NONE  
No credentials specified  
Cloning the remote Git repository  
Cloning repository https://github.com/GouserA8BANDAA/Netflix.git  
> git init /var/lib/jenkins/workspace/Netflix@# timeout=10  
Fetching upstream changes from https://github.com/GouserA8BANDAA/Netflix.git  
> git --version # timeout=10  
> git --version # 'git' version 2.34.1'  
> git fetch --tags --force --progress -- https://github.com/GouserA8BANDAA/Netflix.git +refs/heads/*:refs/remotes/origin/* # timeout=10  
> git config remote.origin.url https://github.com/GouserA8BANDAA/Netflix.git # timeout=10  
> git config --add remote.origin.fetch +refs/heads/*:refs/remotes/origin/* # timeout=10  
Avoid second fetch  
> git rev-parse refs/remotes/origin/main^{commit} # timeout=10  
Checking out Revision 503e5071493c49d2568e79375dc4f5c57e9d4326 (refs/remotes/origin/main)  
> git config core.sparsecheckout # timeout=10  
> git checkout -f 503e5071493c49d2568e79375dc4f5c57e9d4326 # timeout=10  
> git branch -a -v --no-abbrev # timeout=10  
> git checkout -b main 503e5071493c49d2568e79375dc4f5c57e9d4326 # timeout=10  
Commit message: "Update deployment.yaml"  
> git rev-list --no-walk 503e5071493c49d2568e79375dc4f5c57e9d4326 # timeout=10  
[Pipeline] [Pipeline] // withEnv  
[Pipeline] [Pipeline] // stage  
[Pipeline] stage  
[Pipeline] (SonarCloud Analysis)
```

```
INFO: Load active rules  
INFO: Load active rules (done) | time=226ms  
INFO: Load analysis cache  
INFO: Load analysis cache | time=37ms  
INFO: Load project repositories  
INFO: Load project repositories (done) | time=27ms  
INFO: Indexing files...  
INFO: Project configuration:  
INFO: 99 files indexed  
INFO: 1 file ignored because of son ignore settings  
INFO: Quality profile for json: Sonar Way  
INFO: Quality profile for tii: Sonar Way  
INFO: Quality profile for web: Sonar Way  
INFO: Quality profile for yaml: Sonar Way  
INFO: ----- Run sensors on module netflix  
INFO: Load metrics repository  
INFO: Load metrics repository (done) | time=46ms  
INFO: Sensor JaCoCo XML Report Importer [jacoco]  
INFO: 'sonar.coverage.jacoco.xmlReportPaths' is not defined. Using default locations: target/site/jacoco/jacoco.xml,target/site/jacoco-it/jacoco.xml,build/reports/jacoco/test/jacocoTestReport.xml  
INFO: No report imported, no coverage information will be imported by JaCoCo XML Report Importer  
INFO: Sensor JaCoCo XML Report Importer [jacoco] (done) | time=2ms  
INFO: Sensor IaC CloudFormation Sensor [iac]  
INFO: 0 source files to be analyzed  
INFO: 0/0 source files have been analyzed  
INFO: Sensor IaC CloudFormation Sensor [iac] (done) | time=36ms  
INFO: Sensor IaC Kubernetes Sensor [iac]  
INFO: 3 source files to be analyzed
```

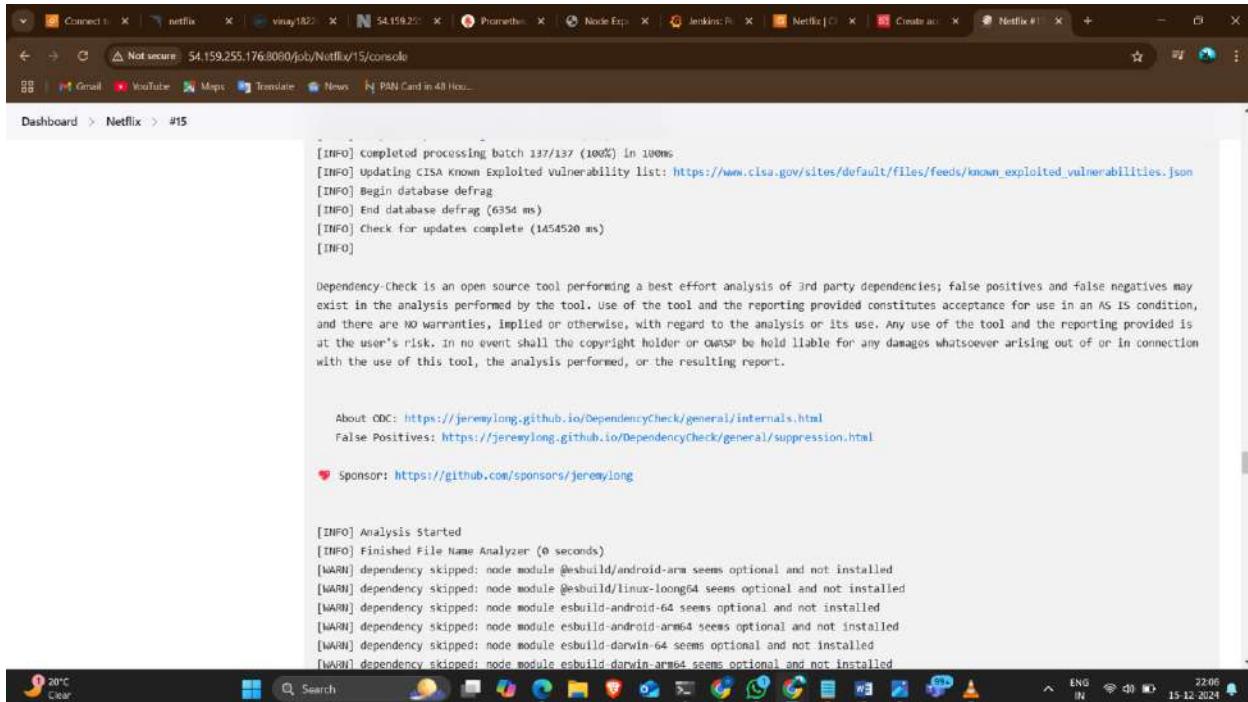
The image shows a Windows desktop environment with two browser windows open, both displaying Jenkins job logs for a Netflix pipeline. The top window shows log output for a build step involving TypeScript analysis, while the bottom window shows log output for a dependency check step that involves downloading a large file from GitHub.

**Top Browser Window Log Output:**

```
INFO: Found 2 tsconfig.json files(s) in /var/lib/jenkins/workspace/Netflix@2/tsconfig.json
INFO: Creating TypeScript program
INFO: TypeScript configuration file /var/lib/jenkins/workspace/Netflix@2/tsconfig.json
INFO: 64 source files to be analyzed
INFO: Creating TypeScript program (done) | time=822ms
INFO: Starting analysis with current program
INFO: Analyzed 0 file(s) with current program
INFO: Creating TypeScript program
INFO: TypeScript configuration file /var/lib/jenkins/workspace/Netflix@2/tsconfig.node.json
INFO: Creating TypeScript program (done) | time=237ms
INFO: Starting analysis with current program
INFO: Analyzed 1 file(s) with current program
INFO: 64/64 source files have been analyzed
INFO: Hit the cache for 0 out of 64
INFO: Miss the cache for 64 out of 64: ANALYSIS_MODE_INELIGIBLE [64/64]
INFO: Sensor TypeScript analysis [javascript] (done) | time=858ms
INFO: Sensor Javascript inside YAML analysis [javascript]
INFO: No input files found for analysis
INFO: Hit the cache for 0 out of 0
INFO: Miss the cache for 0 out of 0
INFO: Sensor JavaScript inside YAML analysis [javascript] (done) | time=4ms
INFO: Sensor CSS Rules [javascript]
INFO: 2 source files to be analyzed
INFO: 2/2 source files have been analyzed
INFO: Hit the cache for 0 out of 0
INFO: Miss the cache for 0 out of 0
INFO: Sensor CSS Rules [javascript] (done) | time=141ms
INFO: Sensor C# Project Type Information [sharp]
```

**Bottom Browser Window Log Output:**

```
[Pipeline] dependencyCheck
unpacking https://github.com/jeremylong/DependencyCheck/releases/download/v11.1.1/dependency-check-11.1.1-release.zip to /var/lib/jenkins/tools/org.jenkinsci.plugins.DependencyCheck.tools.DependencyCheckInstallation/OP-Check on Jenkins
[INFO] Checking for updates
[WARN] An NVD API Key was not provided - it is highly recommended to use an NVD API key as the update can take a VERY long time without an API key
[INFO] NVD API has 273,886 records in this update
[INFO] Downloaded 10,000/273,886 (4%)
[INFO] Downloaded 28,000/273,886 (10%)
[INFO] Downloaded 39,000/273,886 (15%)
[INFO] Downloaded 48,000/273,886 (18%)
[INFO] Downloaded 58,000/273,886 (21%)
[INFO] Downloaded 69,000/273,886 (22%)
[INFO] Downloaded 78,000/273,886 (28%)
[INFO] Downloaded 88,000/273,886 (32%)
[INFO] Downloaded 98,000/273,886 (33%)
[INFO] Downloaded 108,000/273,886 (37%)
[INFO] Downloaded 118,000/273,886 (40%)
[INFO] Downloaded 128,000/273,886 (44%)
[INFO] Downloaded 138,000/273,886 (47%)
[INFO] Downloaded 148,000/273,886 (51%)
[INFO] Downloaded 158,000/273,886 (55%)
[INFO] Downloaded 168,000/273,886 (58%)
[INFO] Downloaded 178,000/273,886 (62%)
[INFO] Downloaded 188,000/273,886 (66%)
[INFO] Downloaded 198,000/273,886 (69%)
[INFO] Downloaded 208,000/273,886 (73%)
[INFO] Downloaded 218,000/273,886 (77%)
```



Dashboard > Netflix > #15

```
[INFO] completed processing batch 137/137 (100%) in 100ms
[INFO] Updating CISA Known Exploited Vulnerability list: https://www.cisa.gov/sites/default/files/feeds/known\_exploited\_vulnerabilities.json
[INFO] Begin database defrag
[INFO] End database defrag (635d ms)
[INFO] check for updates complete (1454520 ms)
[INFO]

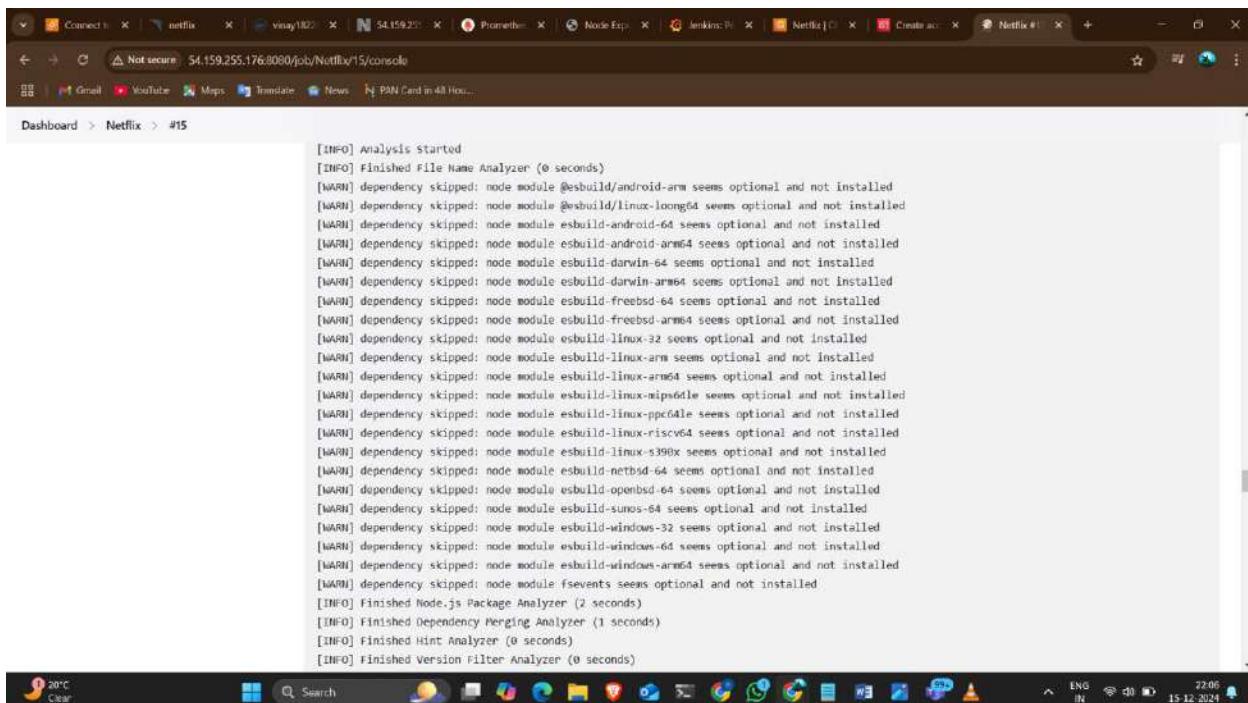
Dependency-Check is an open source tool performing a best effort analysis of 3rd party dependencies; false positives and false negatives may exist in the analysis performed by the tool. Use of the tool and the reporting provided constitutes acceptance for use in an AS IS condition, and there are NO WARRANTIES, IMPLIED OR OTHERWISE, WITH REGARD TO THE ANALYSIS OR ITS USE. ANY USE OF THE TOOL AND THE REPORTING PROVIDED IS AT THE USER'S RISK. IN NO EVENT SHALL THE COPYRIGHT HOLDER OR OWNER BE HELD LIABLE FOR ANY DAMAGES WHATSOEVER ARISING OUT OF OR IN CONNECTION WITH THE USE OF THIS TOOL, THE ANALYSIS PERFORMED, OR THE RESULTING REPORT.

About: CDC: https://jeremylong.github.io/DependencyCheck/general/internals.html
False Positives: https://jeremylong.github.io/DependencyCheck/general/suppression.html

❤ Sponsor: https://github.com/sponsors/jeremylong
```

[INFO] Analysis Started
[INFO] Finished File Name Analyzer (0 seconds)
[WARN] dependency skipped: node module @esbuild/android-arm seems optional and not installed
[WARN] dependency skipped: node module @esbuild/linux-loong64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-android-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-android-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-darwin-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-darwin-arm64 seems optional and not installed

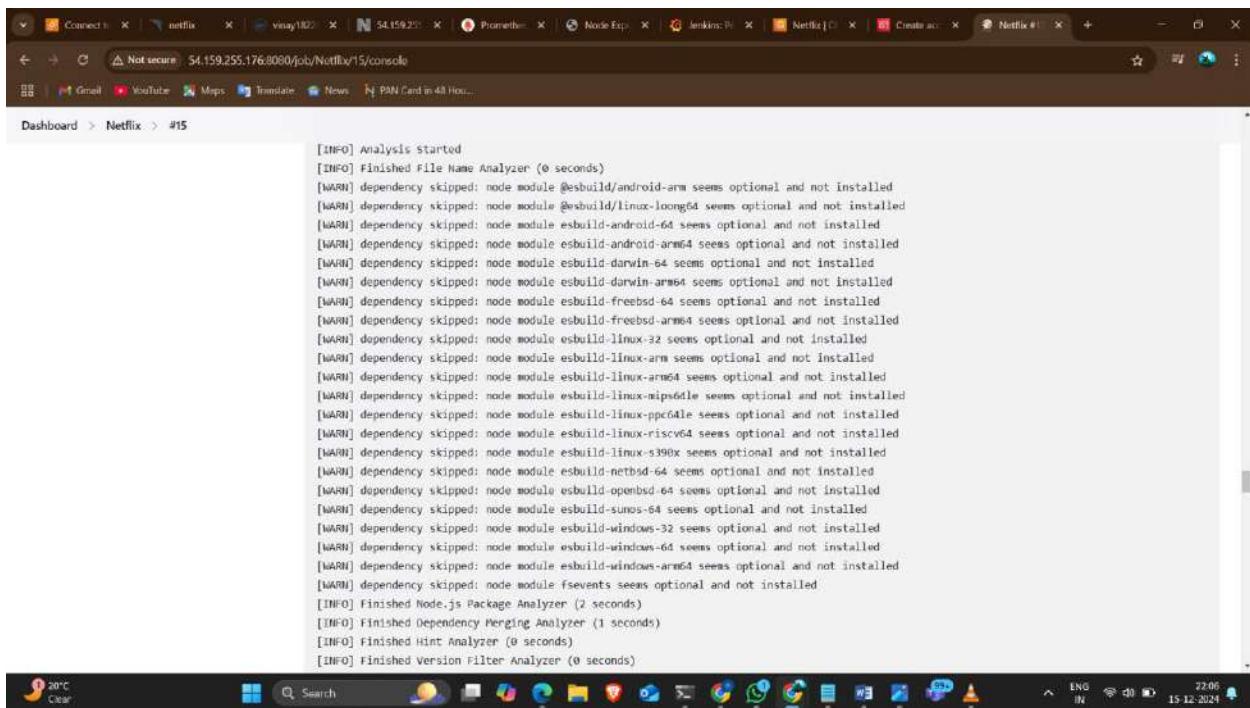
20°C Clear Search ENG IN 22:06 15-12-2024



Dashboard > Netflix > #15

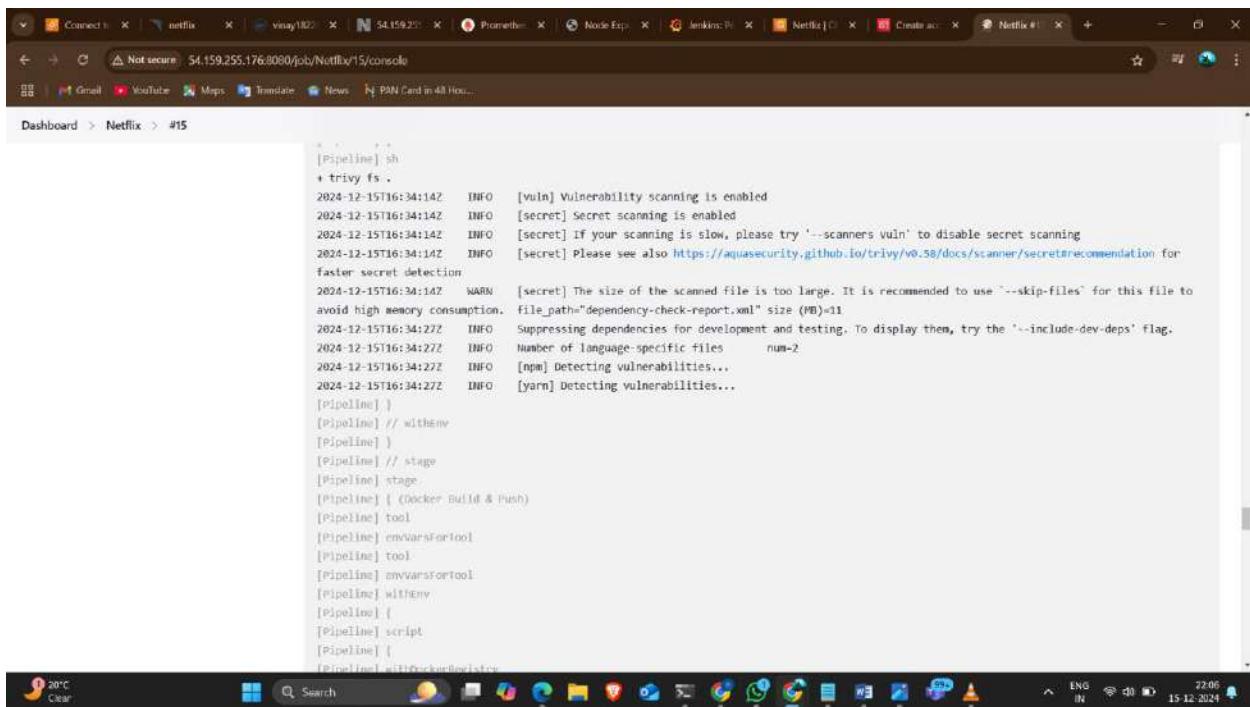
```
[INFO] Analysis started
[INFO] Finished File Name Analyzer (0 seconds)
[WARN] dependency skipped: node module @esbuild/android-arm seems optional and not installed
[WARN] dependency skipped: node module @esbuild/linux-loong64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-android-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-android-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-darwin-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-darwin-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-freebsd-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-freebsd-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-32 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-arm seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-mips64le seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-ppc64le seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-riscv64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-s390x seems optional and not installed
[WARN] dependency skipped: node module esbuild-netbsd-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-openbsd-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-sunos-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-windows-32 seems optional and not installed
[WARN] dependency skipped: node module esbuild-windows-64 seems optional and not installed
[WARN] dependency skipped: node module fsevents seems optional and not installed
[INFO] Finished Node.js Package Analyzer (2 seconds)
[INFO] Finished Dependency Merging Analyzer (1 seconds)
[INFO] Finished Hint Analyzer (0 seconds)
[INFO] Finished Version Filter Analyzer (0 seconds)
```

20°C Clear Search ENG IN 22:06 15-12-2024



Dashboard > Netflix > #15

```
[INFO] Analysis started
[INFO] Finished File Name Analyzer (0 seconds)
[WARN] dependency skipped: node module @esbuild/android-arm seems optional and not installed
[WARN] dependency skipped: node module @esbuild/linux-loong64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-android-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-android-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-darwin-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-darwin-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-freebsd-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-freebsd-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-32 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-arm seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-arm64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-mips64le seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-ppc64le seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-riscv64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-linux-s390x seems optional and not installed
[WARN] dependency skipped: node module esbuild-netbsd-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-openbsd-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-sunos-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-windows-32 seems optional and not installed
[WARN] dependency skipped: node module esbuild-windows-64 seems optional and not installed
[WARN] dependency skipped: node module esbuild-windows-arm64 seems optional and not installed
[WARN] dependency skipped: node module fsevents seems optional and not installed
[INFO] Finished Node.js Package Analyzer (2 seconds)
[INFO] Finished Dependency Merging Analyzer (1 seconds)
[INFO] Finished Hint Analyzer (0 seconds)
[INFO] Finished Version Filter Analyzer (0 seconds)
```



Dashboard > Netflix > #15

```
+-----+
[Pipeline] sh
+ trivy fs .
2024-12-15T16:34:14Z INFO  [vuln] Vulnerability scanning is enabled
2024-12-15T16:34:14Z INFO  [secret] Secret scanning is enabled
2024-12-15T16:34:14Z INFO  [secret] If your scanning is slow, please try '--scanners vuln' to disable secret scanning
2024-12-15T16:34:14Z INFO  [secret] Please see also https://aquasecurity.github.io/trivy/v0.58/docs/scanner/secret#recommendation for faster secret detection
2024-12-15T16:34:14Z WARN  [secret] The size of the scanned file is too large. It is recommended to use "--skip-files" for this file to avoid high memory consumption. file_path="dependency-check-report.xml" size (MB)<1
2024-12-15T16:34:27Z INFO  Suppressing dependencies for development and testing. To display them, try the '--include-dev-deps' flag.
2024-12-15T16:34:27Z INFO  Number of language-specific files num=2
2024-12-15T16:34:27Z INFO  [npm] Detecting vulnerabilities...
2024-12-15T16:34:27Z INFO  [yarn] Detecting vulnerabilities...
[Pipeline] }
[Pipeline] // withEnv
[Pipeline] }
[Pipeline] // stage
[Pipeline] stage
[Pipeline] {
  Docker Build & Push
[Pipeline] tool
[Pipeline] envvarstoretool
[Pipeline] tool
[Pipeline] envvarstoretool
[Pipeline] withEnv
[Pipeline] {
  script
[Pipeline] {
  [Pipeline] withEnv
  [Pipeline] }
```

```
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] withEnv
[Pipeline] {
[Pipeline] sh
+ trivy image vinay182206/netflix:latest
2024-12-15T16:35:01Z INFO [vuln] Vulnerability scanning is enabled
2024-12-15T16:35:01Z INFO [secret] secret scanning is enabled
2024-12-15T16:35:01Z INFO [secret] if your scanning is slow, please try '--scanners vuln' to disable secret scanning
2024-12-15T16:35:01Z INFO [secret] Please see also https://aquasecurity.github.io/trivy/v0.58/docs/scanner/secretrecommendation for faster secret detection
2024-12-15T16:35:01Z INFO Detected OS family="alpine" version="3.20.3"
2024-12-15T16:35:01Z INFO [alpine] Detecting vulnerabilities... os_version="3.20" repository="3.20" pkg_num=66
2024-12-15T16:35:01Z INFO Number of language-specific files num=0
2024-12-15T16:35:01Z WARN Using severities from other vendors for some vulnerabilities. Read https://aquasecurity.github.io/trivy/v0.58/docs/scanner/vulnerability#severity-selection for details.
[Pipeline]
[Pipeline] // withEnv
[Pipeline]
[Pipeline] // stage
[Pipeline] stage
[Pipeline] { (Deploy to Container)
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] withEnv
[Pipeline] {
```

20°C Clear

Search

22:06 15-12-2024

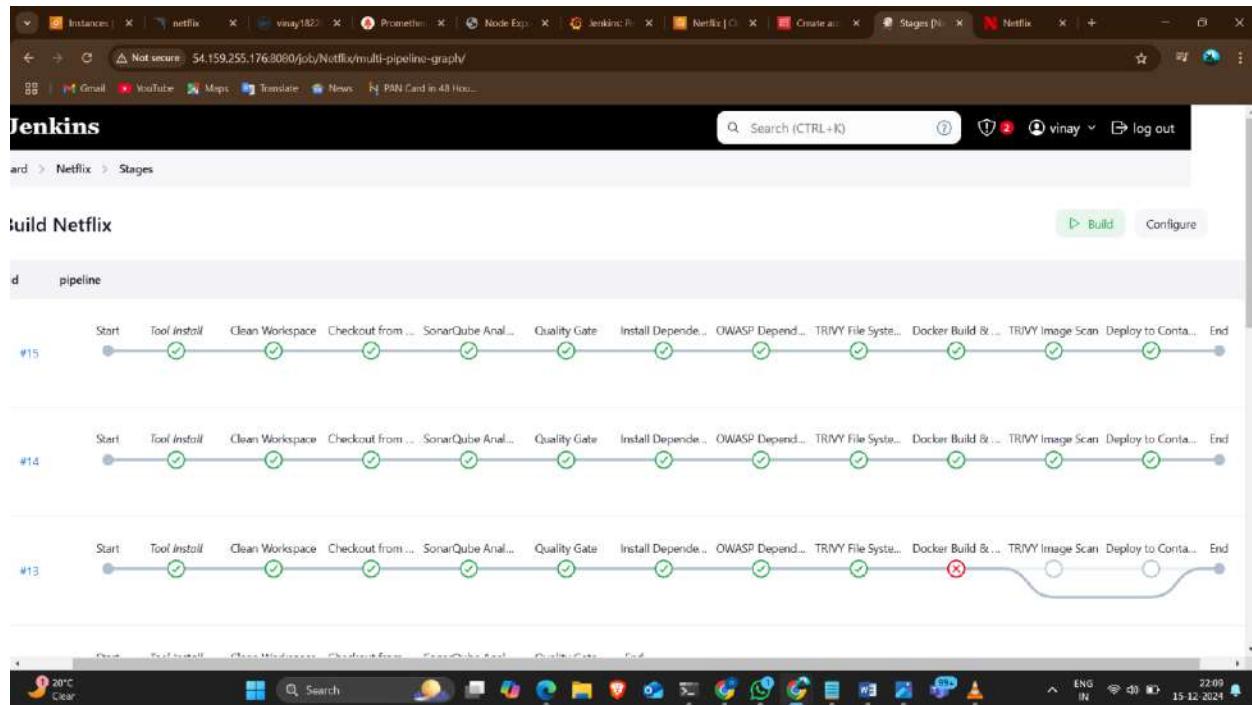
Dashboard > Netflix > #15

**Console Output**

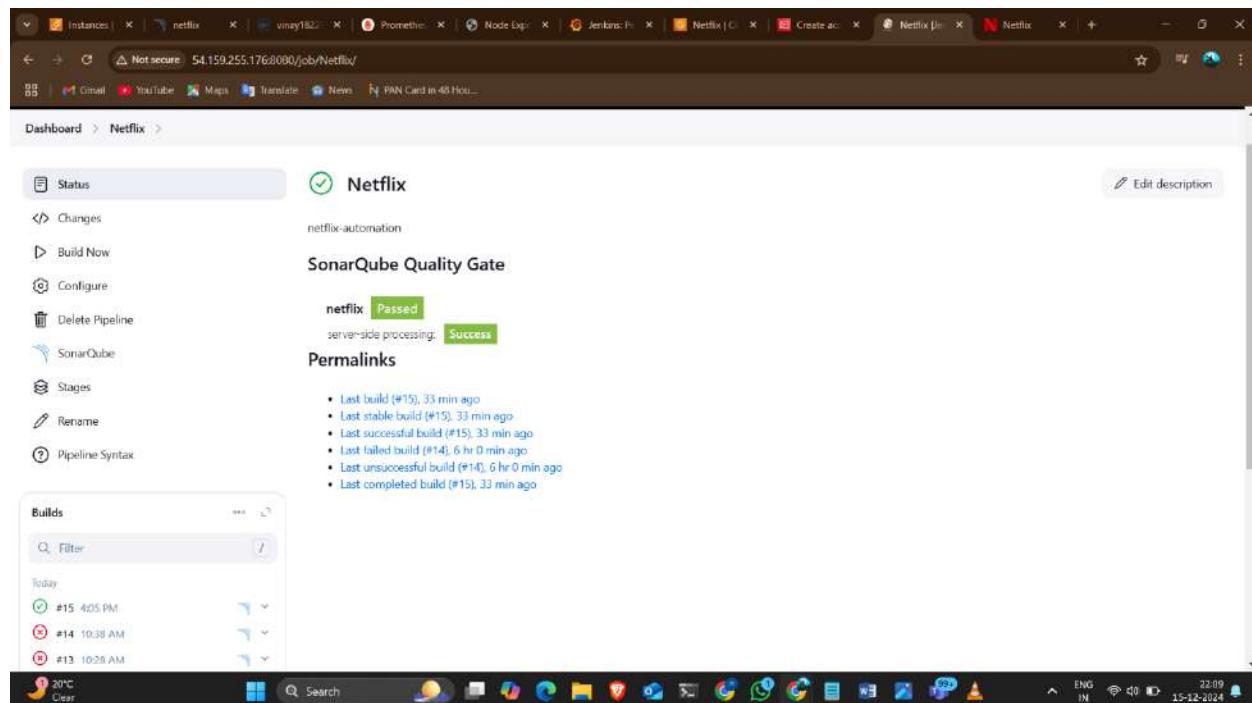
started by user vinay

```
[Pipeline] Start of Pipeline
[Pipeline] node
Running on Jenkins in /var/lib/jenkins/workspace/Netflix@2
[Pipeline] {
[Pipeline] tool
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Declarative: tool Install)
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] tool
[Pipeline] envVarsForTool
[Pipeline] {
[Pipeline] }
[Pipeline] // stage
[Pipeline] withEnv
[Pipeline] {
[Pipeline] stage
[Pipeline] { (Clean workspace)
[Pipeline] tool
```

- Here the result of stages that has been succeeded.



- We can observe here that the sonarqube quality gate check.

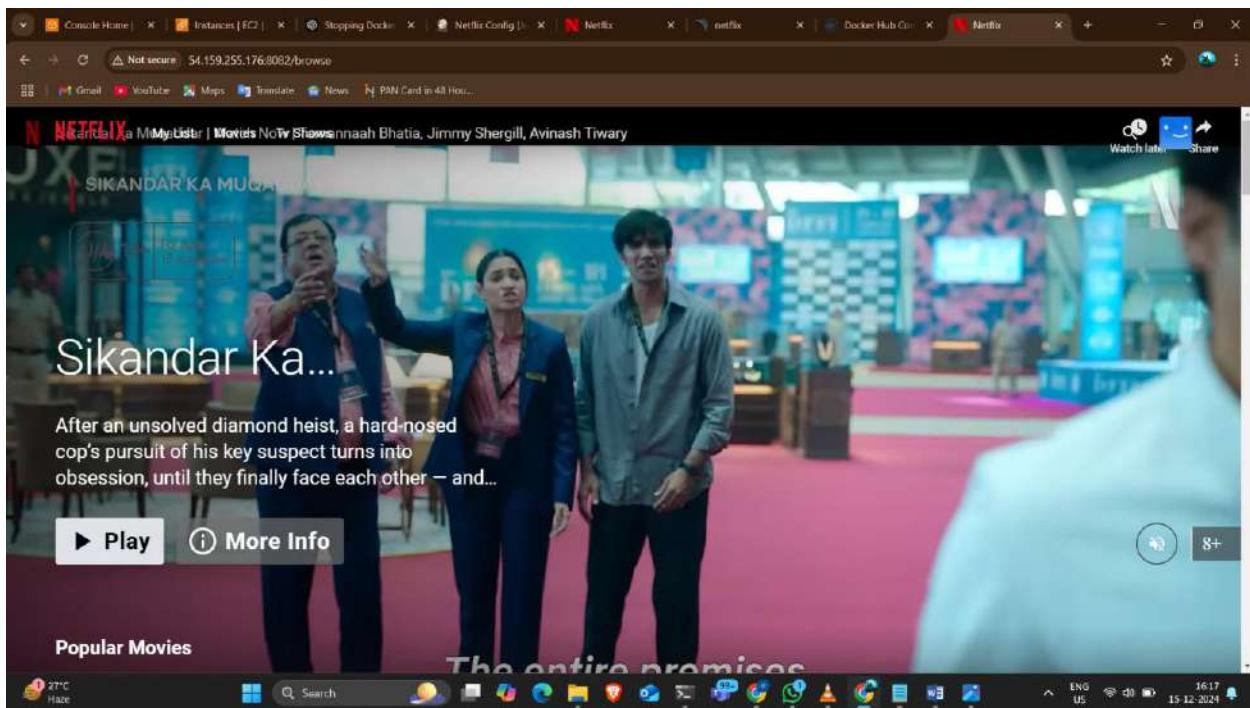


- This is the sonarqube page.

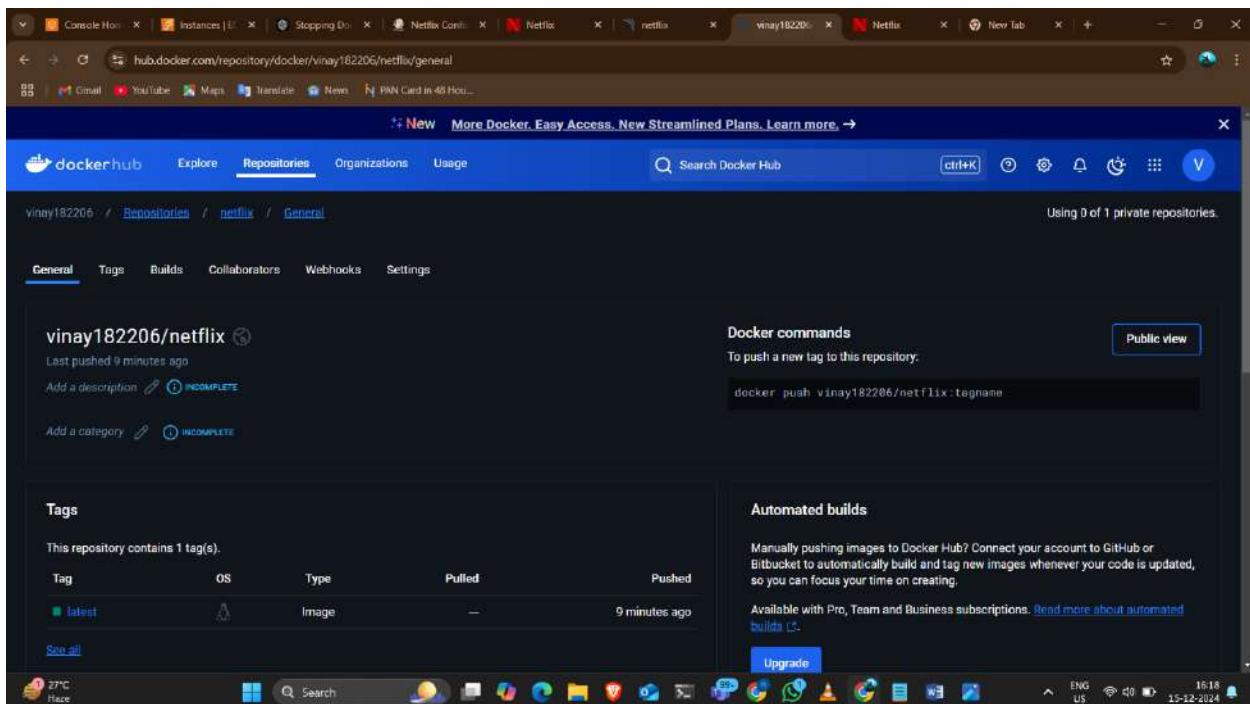
The screenshot shows the SonarQube dashboard for the 'netflix' project. The top navigation bar includes links for Projects, Issues, Rules, Quality Profiles, Quality Gates, Administration, and a search bar. The main content area displays the 'MEASURES' section under the 'Overall Code' tab. A large green box indicates a 'Passed' status with the message 'All conditions passed.' Below this, there are four rows of measures: 'New Code' (0 New Bugs, Reliability A), 'New Vulnerabilities' (0 New Vulnerabilities, Security A), 'New Security Hotspots' (0 Reviewed, Security Review A), and 'Added Debt' (0 New Code Smells, Maintainability A). The bottom of the screen shows a Windows taskbar with various icons and system status.

- Copy the public ip along with given port number and search.
- This is the result.
- Successfully Deployed the Netflix application by using Jenkins pipeline script.

The screenshot shows the Netflix movie page for 'Kraven the Hunter'. At the top, it says 'IN ASSOCIATION WITH MARVEL'. Below that, the title 'Kraven the Hunter' is displayed. A summary text reads: 'Kraven Kravinoff's complex relationship with his ruthless gangster father, Nikolai, starts him down a path of vengeance with brutal consequences...' There are two buttons at the bottom left: 'Play' and 'More Info'. On the right side, there is a '13+' rating indicator. The bottom of the screen shows a Windows taskbar with various icons and system status.



- Successfully pushed the Netflix application into docker by using the Jenkins pipeline script.



## Phase-4 Monitoring via Prometheus and Grafana

- Launch an instance and name as monitoring for monitoring tools.

The image contains two side-by-side screenshots of the AWS EC2 'Launch an instance' wizard, showing the process of creating a new Amazon Linux instance.

**Screenshot 1: Name and tags**

- Name and tags:** The instance is named "monitoring".
- Software Image (AMI):** Canonical, Ubuntu, 22.04 LTS.
- Virtual server type (instance type):** t2.medium.
- Firewall (security group):** New security group.
- Storage (volumes):** 1 volume(s) - 20 GiB.
- Free tier:** In your first year includes 750 hours of t2.micro or t3.micro in the Free Tier.
- Launch instance** button.

**Screenshot 2: Instance type**

- Instance type:** t2.medium.
- Additional costs apply for AMIs with pre-installed software.**
- Key pair (login):** Key pair name is "vinaygollera".
- Free tier:** In your first year includes 750 hours of t2.micro or t3.micro in the Free Tier.
- Launch instance** button.

The screenshot shows the AWS EC2 Instances page. On the left, there's a sidebar with navigation links like Dashboard, EC2 Global View, Events, Instances (selected), Instances Types, Launch Templates, Spot Requests, Savings Plans, Reserved Instances, Dedicated Hosts, Capacity Reservations, Images, AMIs, AMI Catalog, and Elastic Block Store. The main area displays two instances: 'monitoring' (running, t2.medium, initialized, us-east-1a, ec2-54-146-250-91) and 'Netflix' (running, t2.large, 2/2 checks passed, us-east-1a, ec2-54-146-250-91). Below the instances, the 'Details' tab is selected for the 'monitoring' instance, showing its instance ID (i-05cad03d0d0f6ce12), Public IPv4 address (54.146.250.91), Private IP4 addresses (172.31.30.123), and Public IPv4 DNS (ec2-54-146-250-91.compute-1.amazonaws.com).

- Connect to the terminal and update it.

```

ubuntu@ip-172-31-22-16:~$ sudo apt-get update -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]

ubuntu@ip-172-31-30-123:~$ sudo apt update
0 updates can be applied immediately.

Enable ESM Apps to receive additional future security updates.
See https://ubuntu.com/esm or run: sudo pro status

The list of available updates is more than a week old.
To check for new updates run: sudo apt update

The programs included with the Ubuntu system are free software;
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/*copyright.

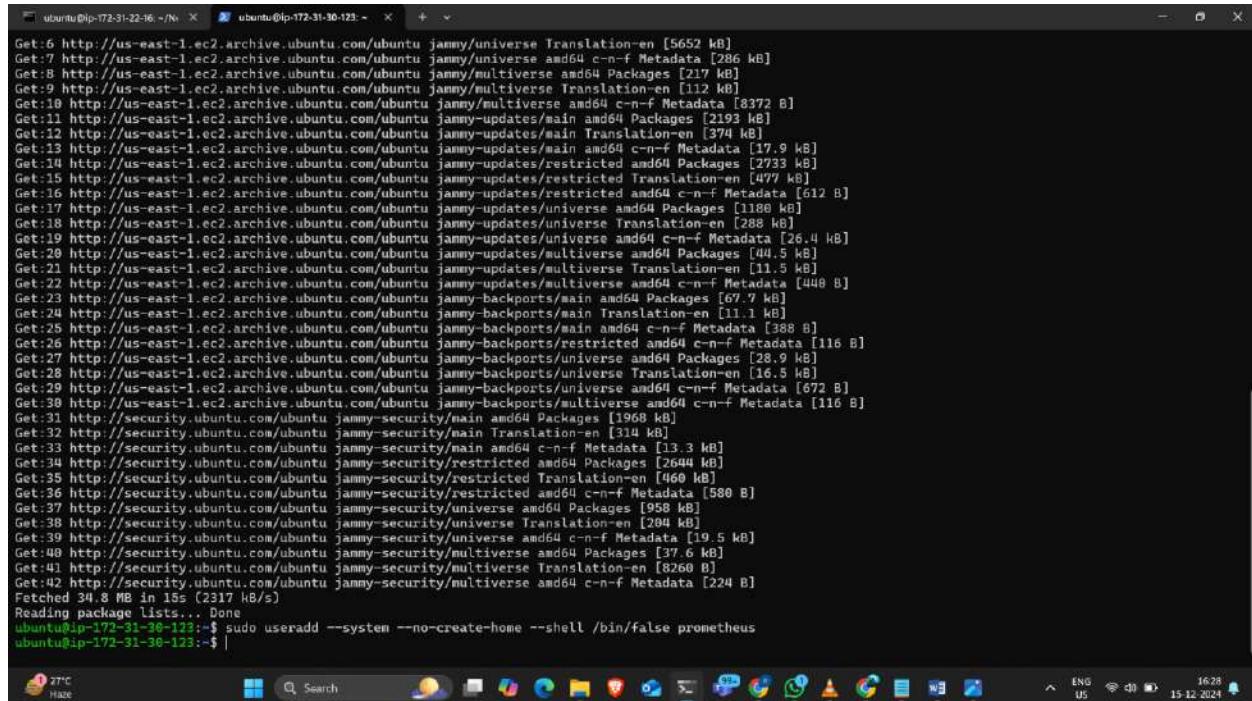
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.

To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.

ubuntu@ip-172-31-30-123:~$ sudo apt-get update -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 Packages [14.1 MB]
Get:5 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]

```

- Now add Prometheus user in terminal.
- “sudo useradd –system –no-create-home –shell /bin/false Prometheus”.

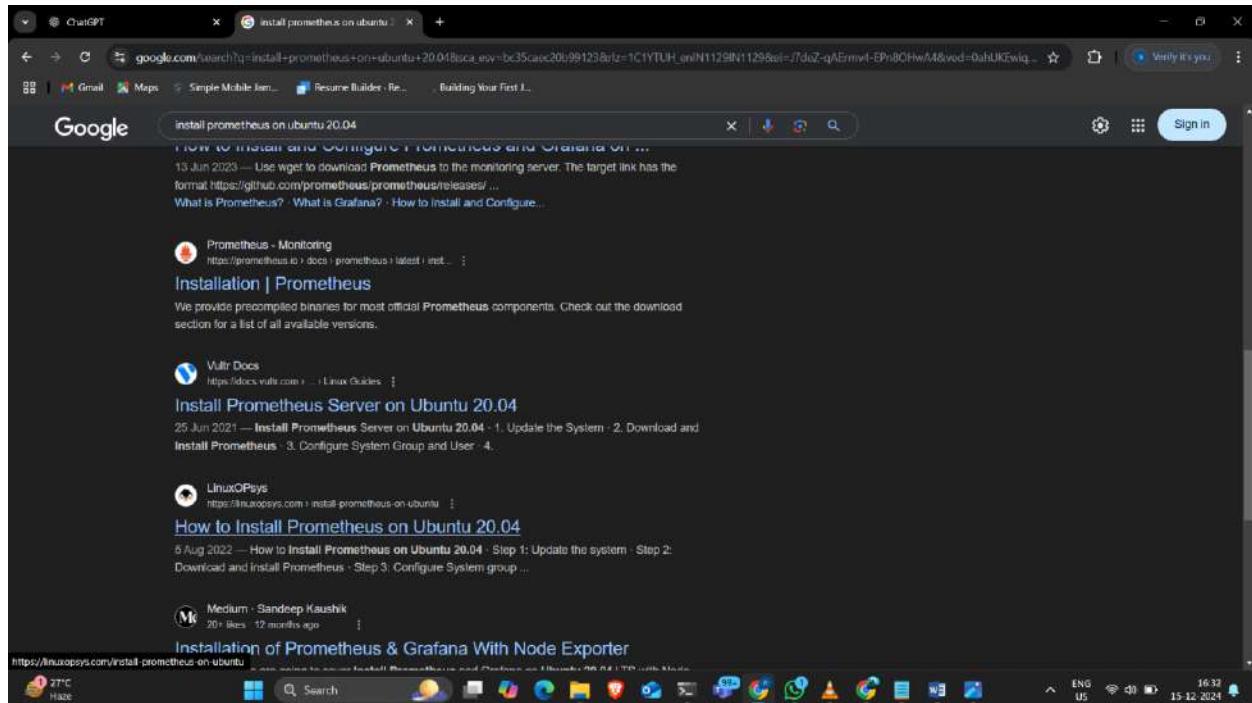


```

Get: 6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get: 7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get: 8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get: 9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get: 10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 kB]
Get: 11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [293 kB]
Get: 12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [374 kB]
Get: 13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.9 kB]
Get: 14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2733 kB]
Get: 15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [477 kB]
Get: 16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [612 kB]
Get: 17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1180 kB]
Get: 18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [288 kB]
Get: 19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.4 kB]
Get: 20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [44.5 kB]
Get: 21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [11.5 kB]
Get: 22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [440 kB]
Get: 23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.7 kB]
Get: 24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get: 25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 kB]
Get: 26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 kB]
Get: 27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.9 kB]
Get: 28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get: 29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 kB]
Get: 30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 kB]
Get: 31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Package [1968 kB]
Get: 32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [314 kB]
Get: 33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get: 34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2644 kB]
Get: 35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [460 kB]
Get: 36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [580 B]
Get: 37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [958 kB]
Get: 38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [204 kB]
Get: 39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.5 kB]
Get: 40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.6 kB]
Get: 41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [8260 B]
Get: 42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [224 B]
Fetched 34.8 MB in 18s (2317 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-30-123:~$ sudo useradd --system --no-create-home --shell /bin/false prometheus
ubuntu@ip-172-31-30-123:~$ |

```

- Go to google and search for install Prometheus on Ubuntu.



**DOWNLOAD**

We provide precompiled binaries and Docker images for most officially maintained Prometheus components. If a component is not listed here, check the respective repository on Github for further instructions.

There is also a constantly growing number of independently maintained exporters listed at [Exporters and Integrations](#).

- prometheus
- alertmanager
- blackbox\_exporter
- consul\_exporter
- graphite\_exporter
- memcached\_exporter
- mysql\_exporter
- node\_exporter
- promlens
- pushgateway
- statsd\_exporter

Operating system popular ▾   Architecture popular ▾

**prometheus**

The Prometheus monitoring system and time series database. [prometheus/prometheus](#)

[3.0.1 / 2024-11-28 Release notes](#)

File name	OS	Arch	Size	SHA256 Checksum
<a href="#">prometheus-3.0.1.linux-amd64.tar.gz</a>	linux	amd64	107.76 MB	e3e223e19dc2f999d89c5cf7cd072551ea094e30eaa1cc31300222918
<a href="#">2.53.3 / 2024-11-04 LTS Release notes</a>				
<a href="#">prometheus-2.53.3.linux-amd64.tar.gz</a>	linux	amd64	99.38 MB	cde40477e639c464e4cfcf0b6d55c9a20971a1a2014c18bf5f264f73e00f6a3

- Select operating system as linux .

Prometheus components. If a component is not listed here, check the respective repository on Github for further instructions.

There is also a constantly growing number of independently maintained exporters listed at [Exporters and Integrations](#).

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Operating system linux ▾   Architecture popular ▾

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File name	OS	Arch	Size	SHA256 Checksum
<a href="#">prometheus-3.0.1.linux-amd64.tar.gz</a>	linux	amd64	107.76 MB	e3e223e19dc2f999d89c5cf7cd072551ea094e30eaa1cc31300222918
<a href="#">2.53.3 / 2024-11-04 LTS Release notes</a>				
<a href="#">prometheus-2.53.3.linux-amd64.tar.gz</a>	linux	amd64	99.38 MB	cde40477e639c464e4cfcf0b6d55c9a20971a1a2014c18bf5f264f73e00f6a3

- Copy the link and paste it in terminal.

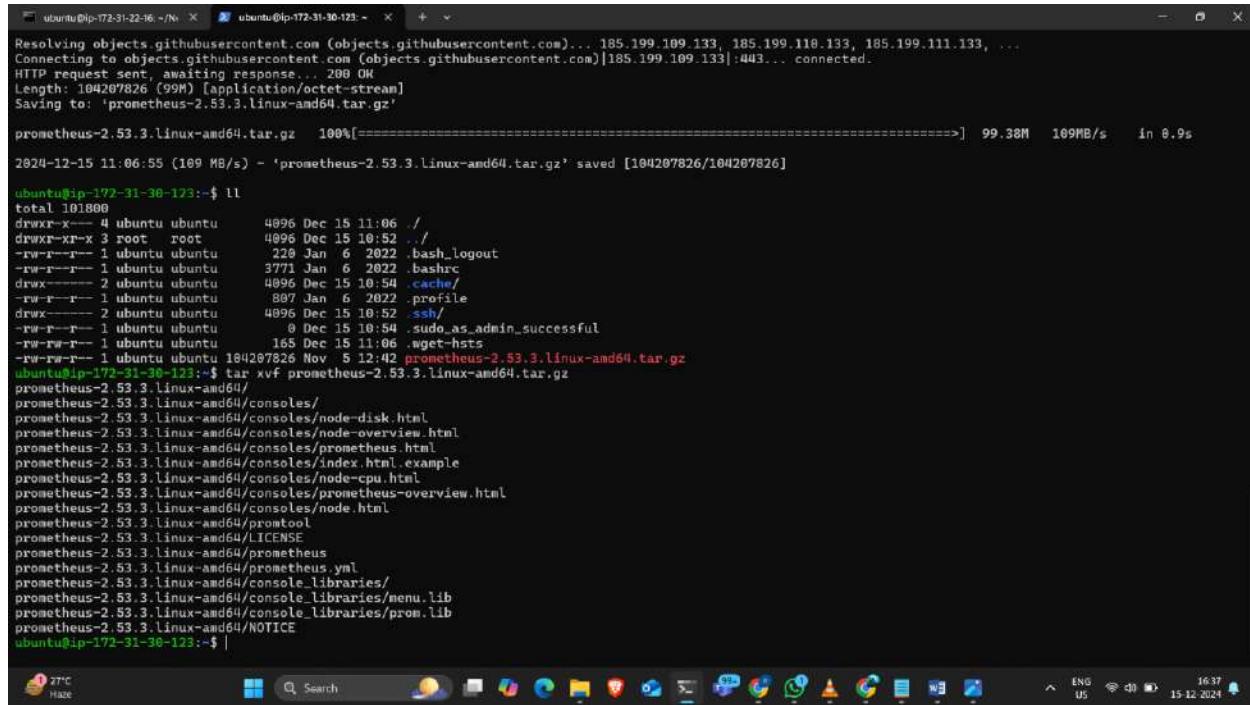
```
ubuntu@ip-172-31-22-16 ~ % ubuntu@ip-172-31-30-123:~ + - 
Get:6 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe Translation-en [5652 kB]
Get:7 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 c-n-f Metadata [286 kB]
Get:8 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 Packages [217 kB]
Get:9 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse Translation-en [112 kB]
Get:10 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/multiverse amd64 c-n-f Metadata [8372 kB]
Get:11 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 Packages [2193 kB]
Get:12 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main Translation-en [374 kB]
Get:13 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 c-n-f Metadata [17.9 kB]
Get:14 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 Packages [2733 kB]
Get:15 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted Translation-en [477 kB]
Get:16 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/restricted amd64 c-n-f Metadata [612 kB]
Get:17 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 Packages [1188 kB]
Get:18 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe Translation-en [288 kB]
Get:19 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 c-n-f Metadata [26.4 kB]
Get:20 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 Packages [44.5 kB]
Get:21 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse Translation-en [11.5 kB]
Get:22 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/multiverse amd64 c-n-f Metadata [448 kB]
Get:23 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 Packages [67.7 kB]
Get:24 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main Translation-en [11.1 kB]
Get:25 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/main amd64 c-n-f Metadata [388 kB]
Get:26 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/restricted amd64 c-n-f Metadata [116 kB]
Get:27 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 Packages [28.9 kB]
Get:28 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe Translation-en [16.5 kB]
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [116 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Package [1968 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [311 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
Get:34 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 Packages [2644 kB]
Get:35 http://security.ubuntu.com/ubuntu jammy-security/restricted Translation-en [460 kB]
Get:36 http://security.ubuntu.com/ubuntu jammy-security/restricted amd64 c-n-f Metadata [580 kB]
Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [958 kB]
Get:38 http://security.ubuntu.com/ubuntu jammy-security/universe Translation-en [204 kB]
Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.5 kB]
Get:40 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 Packages [37.6 kB]
Get:41 http://security.ubuntu.com/ubuntu jammy-security/multiverse Translation-en [8260 kB]
Get:42 http://security.ubuntu.com/ubuntu jammy-security/multiverse amd64 c-n-f Metadata [224 kB]
Fetched 34.8 MB in 15s (2317 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-30-123:~ % sudo useradd --system --no-create-home --shell /bin/false prometheus
ubuntu@ip-172-31-30-123:~ % wget https://github.com/prometheus/releases/download/v2.53.3/prometheus-2.53.3.linux-amd64.tar.gz

```

```
ubuntu@ip-172-31-22-16 ~ % ubuntu@ip-172-31-30-123:~ + - 
Get:29 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/universe amd64 c-n-f Metadata [672 kB]
Get:30 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports/multiverse amd64 c-n-f Metadata [116 kB]
Get:31 http://security.ubuntu.com/ubuntu jammy-security/main amd64 Packages [1968 kB]
Get:32 http://security.ubuntu.com/ubuntu jammy-security/main Translation-en [314 kB]
Get:33 http://security.ubuntu.com/ubuntu jammy-security/main amd64 c-n-f Metadata [13.3 kB]
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Get:37 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 Packages [958 kB]
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Get:39 http://security.ubuntu.com/ubuntu jammy-security/universe amd64 c-n-f Metadata [19.5 kB]
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Reading package lists... Done
ubuntu@ip-172-31-30-123:~ % sudo useradd --system --no-create-home --shell /bin/false prometheus
ubuntu@ip-172-31-30-123:~ % wget https://github.com/prometheus/releases/download/v2.53.3/prometheus-2.53.3.linux-amd64.tar.gz
--2024-12-15 11:06:54-- https://github.com/prometheus/prometheus/releases/download/v2.53.3/prometheus-2.53.3.linux-amd64.tar.gz
Resolving github.com (github.com)... 140.82.112.4
Connecting to github.com (github.com)|140.82.112.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/6838921/555f261a-3131-44a2-86fa-f3baac617a7e?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2F%2Fams1_request%2F%Amz-Date=20241215T100654Z&X-Amz-Expires=300&X-Amz-Signature=2c0e8bc0f71cc67b1c22e0453cca50e7d84df95c9fc1b66e789ed093726X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.53.3.linux-amd64.tar.gz[following]
--2024-12-15 11:06:54-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/6838921/555f261a-3131-44a2-86fa-f3baac617a7e?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2F%2Faws4_request%2F%Amz-Date=20241215T100654Z&X-Amz-Expires=300&X-Amz-Signature=2c6eb6bc0f71cc67b1c22e0453cca58e7d84dff95c9fc1b66e789ed093726X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dprometheus-2.53.3.linux-amd64.tar.gz[following]
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.109.133, 185.199.110.133, 185.199.111.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.109.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 104207826 (99M) [application/octet-stream]
Saving to: 'prometheus-2.53.3.linux-amd64.tar.gz'

prometheus-2.53.3.linux-amd64.tar.gz 100%[=====] 99.38M 109MB/s in 9.9s
2024-12-15 11:06:55 (109 MB/s) - 'prometheus-2.53.3.linux-amd64.tar.gz' saved [104207826/104207826]
ubuntu@ip-172-31-30-123:~ |
```

- A tar file will be downloaded than extract it.

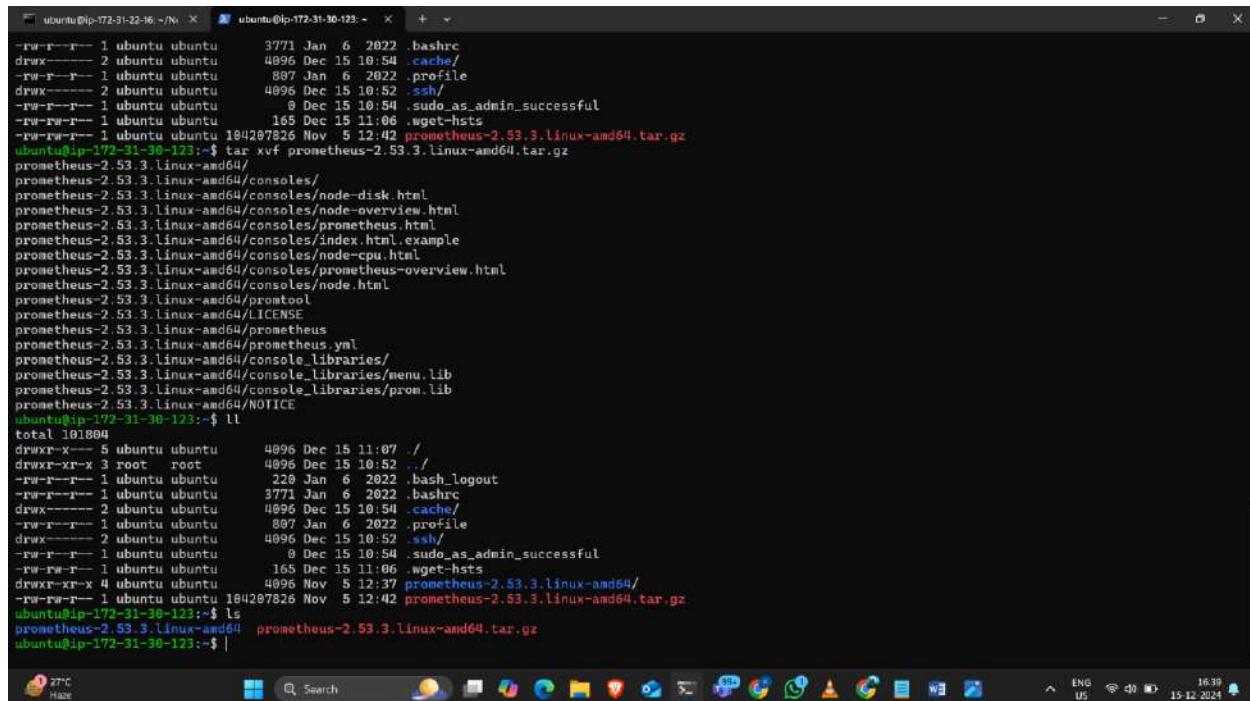


```

ubuntu@ip-172-31-30-123:~$ ll
total 101800
drwxr-x--- 4 ubuntu ubuntu 4096 Dec 15 11:06 /
drwxr-xr-x 3 root root 4096 Dec 15 10:52 ..
-rw-r--r-- 1 ubuntu ubuntu 229 Jan 6 2022 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:54 .cache/
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:52 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Dec 15 10:54 sudo_as_admin_successful
-rw-rw-r-- 1 ubuntu ubuntu 165 Dec 15 11:06 .wget-hsts
-rw-rw-r-- 1 ubuntu ubuntu 184207826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ tar xvf prometheus-2.53.3.linux-amd64.tar.gz
prometheus-2.53.3.linux-amd64/
prometheus-2.53.3.linux-amd64/consoles/
prometheus-2.53.3.linux-amd64/consoles/node-disk.html
prometheus-2.53.3.linux-amd64/consoles/node-overview.html
prometheus-2.53.3.linux-amd64/consoles/prometheus.html
prometheus-2.53.3.linux-amd64/consoles/index.html.example
prometheus-2.53.3.linux-amd64/consoles/node-cpu.html
prometheus-2.53.3.linux-amd64/consoles/prometheus-overview.html
prometheus-2.53.3.linux-amd64/consoles/node.html
prometheus-2.53.3.linux-amd64/promtool
prometheus-2.53.3.linux-amd64/LICENSE
prometheus-2.53.3.linux-amd64/prometheus
prometheus-2.53.3.linux-amd64/prometheus.yml
prometheus-2.53.3.linux-amd64/console_libraries/
prometheus-2.53.3.linux-amd64/console_libraries/menu.lib
prometheus-2.53.3.linux-amd64/console_libraries/prom.lib
prometheus-2.53.3.linux-amd64/NOTICE
ubuntu@ip-172-31-30-123:~$ 

```

- Use command “tar xvf filename” .



```

ubuntu@ip-172-31-30-123:~$ ll
total 101800
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:54 .cache/
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:52 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Dec 15 10:54 sudo_as_admin_successful
-rw-rw-r-- 1 ubuntu ubuntu 165 Dec 15 11:06 .wget-hsts
-rw-rw-r-- 1 ubuntu ubuntu 184207826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ tar xvf prometheus-2.53.3.linux-amd64.tar.gz
prometheus-2.53.3.linux-amd64/
prometheus-2.53.3.linux-amd64/consoles/
prometheus-2.53.3.linux-amd64/consoles/node-disk.html
prometheus-2.53.3.linux-amd64/consoles/node-overview.html
prometheus-2.53.3.linux-amd64/consoles/prometheus.html
prometheus-2.53.3.linux-amd64/consoles/index.html.example
prometheus-2.53.3.linux-amd64/consoles/node-cpu.html
prometheus-2.53.3.linux-amd64/consoles/prometheus-overview.html
prometheus-2.53.3.linux-amd64/consoles/node.html
prometheus-2.53.3.linux-amd64/promtool
prometheus-2.53.3.linux-amd64/LICENSE
prometheus-2.53.3.linux-amd64/prometheus
prometheus-2.53.3.linux-amd64/prometheus.yml
prometheus-2.53.3.linux-amd64/console_libraries/
prometheus-2.53.3.linux-amd64/console_libraries/menu.lib
prometheus-2.53.3.linux-amd64/console_libraries/prom.lib
prometheus-2.53.3.linux-amd64/NOTICE
ubuntu@ip-172-31-30-123:~$ ll
total 101804
drwxr-x--- 5 ubuntu ubuntu 4096 Dec 15 11:07 /
drwxr-xr-x 3 root root 4096 Dec 15 10:52 ..
-rw-r--r-- 1 ubuntu ubuntu 229 Jan 6 2022 .bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 .bashrc
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:51 .cache/
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:52 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 0 Dec 15 10:54 sudo_as_admin_successful
-rw-rw-r-- 1 ubuntu ubuntu 165 Dec 15 11:06 .wget-hsts
drwxr-xr-x 4 ubuntu ubuntu 4096 Nov 5 12:37 prometheus-2.53.3.linux-amd64/
-rw-rw-r-- 1 ubuntu ubuntu 184207826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ ls
prometheus-2.53.3.linux-amd64 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ 

```

- Move to the extracted file.

```
ubuntu@ip-172-31-30-123:~$ tar xvf prometheus-2.53.3.linux-amd64.tar.gz
prometheus-2.53.3.linux-amd64/
prometheus-2.53.3.linux-amd64/consoles/
prometheus-2.53.3.linux-amd64/consoles/node-disk.html
prometheus-2.53.3.linux-amd64/consoles/node-overview.html
prometheus-2.53.3.linux-amd64/consoles/prometheus.html
prometheus-2.53.3.linux-amd64/consoles/index.html.example
prometheus-2.53.3.linux-amd64/consoles/node-cpu.html
prometheus-2.53.3.linux-amd64/consoles/prometheus-overview.html
prometheus-2.53.3.linux-amd64/consoles/node.html
prometheus-2.53.3.linux-amd64/promtool
prometheus-2.53.3.linux-amd64/LICENSE
prometheus-2.53.3.linux-amd64/prometheus
prometheus-2.53.3.linux-amd64/prometheus.yml
prometheus-2.53.3.linux-amd64/console_libraries/
prometheus-2.53.3.linux-amd64/console_libraries/menu.lib
prometheus-2.53.3.linux-amd64/console_libraries/prom.lib
prometheus-2.53.3.linux-amd64/NOTICE
ubuntu@ip-172-31-30-123:~$ ll
total 101804
drwxr-x--- 2 ubuntu ubuntu 4096 Dec 15 10:52 .
drwxr-xr-x 3 root root 4096 Dec 15 10:52 ..
-rw-r--r-- 1 ubuntu ubuntu 8 Dec 15 10:50 .sudo_as_admin_successful
-rw-r--r-- 1 ubuntu ubuntu 165 Dec 15 11:06 wget-hsts
-rw-r--r-- 1 ubuntu ubuntu 184287826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ ls
prometheus-2.53.3.linux-amd64 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ cd prometheus-2.53.3.linux-amd64/
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ ls
LICENSE NOTICE console_libraries consoles prometheus prometheus.yaml promtool
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$
```

The screenshot shows a standard Ubuntu desktop environment. At the top is the Unity interface with a search bar and various application icons. Below it is the terminal window displaying the command-line session. The bottom of the screen features the Unity dock with more application icons. The system tray on the right shows network status, battery level (16.39%), and the date (15-12-2024).

```
ubuntu@ip-172-31-22-16:~$ cd /home/ubuntu/prometheus-2.53.3.linux-amd64/
prometheus-2.53.3.linux-amd64/consoles/node-overview.html
prometheus-2.53.3.linux-amd64/consoles/prometheus.html
prometheus-2.53.3.linux-amd64/consoles/index.html.example
prometheus-2.53.3.linux-amd64/consoles/node-cpu.html
prometheus-2.53.3.linux-amd64/consoles/prometheus-overview.html
prometheus-2.53.3.linux-amd64/consoles/node.html
prometheus-2.53.3.linux-amd64/promtool
prometheus-2.53.3.linux-amd64/LICENSE
prometheus-2.53.3.linux-amd64/prometheus
prometheus-2.53.3.linux-amd64/prometheus.yml
prometheus-2.53.3.linux-amd64/console_libraries/
prometheus-2.53.3.linux-amd64/console_libraries/menu.lib
prometheus-2.53.3.linux-amd64/console_libraries/prom.lib
prometheus-2.53.3.linux-amd64/NOTICE
ubuntu@ip-172-31-30-123:~$ ll
total 101804
drwxr-x--- 5 ubuntu ubuntu 4096 Dec 15 11:07 .
drwxr-xr-x 3 root root 4096 Dec 15 10:52 ..
-rw-r--r-- 1 ubuntu ubuntu 228 Jan 6 2022 bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 bashrc
drwxr--r-- 2 ubuntu ubuntu 4096 Dec 15 10:54 .cache/
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr--r-- 2 ubuntu ubuntu 4096 Dec 15 10:52 ssh/
-rw-r--r-- 1 ubuntu ubuntu 9 Dec 15 10:50 .sudo_as_admin_successful
-rw-r--r-- 1 ubuntu ubuntu 165 Dec 15 11:06 wget-hsts
drwxr-xr-x 4 ubuntu ubuntu 4096 Nov 5 12:37 prometheus-2.53.3.linux-amd64/
-rw-r--r-- 1 ubuntu ubuntu 184287826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ ls
prometheus-2.53.3.linux-amd64 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ cd prometheus-2.53.3.linux-amd64/
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ ls
LICENSE NOTICE console_libraries consoles prometheus prometheus.yaml promtool
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ sudo mkdir -p /data/etc/prometheus
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ sudo mv prometheus promtool /usr/local/bin/
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ ls
LICENSE NOTICE console_libraries consoles prometheus.prometheus.yaml
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ ls
LICENSE NOTICE console_libraries consoles prometheus.prometheus.yaml
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.linux-amd64$ cd
ubuntu@ip-172-31-30-123:~$ cd /etc/
ubuntu@ip-172-31-30-123:~$ sudo mkdir prometheus
```

This second screenshot from the same desktop session shows the user navigating into the extracted Prometheus directory. The terminal window displays the contents of the directory, including the LICENSE and NOTICE files, the console\_libraries and consoles sub-directories, and the main prometheus, promtool, and prometheus.yaml files. The system tray and desktop interface remain consistent with the first screenshot.

```
ubuntu@ip-172-31-30-123:~$ ls
-rw-r--r-- 1 ubuntu ubuntu 807 Jan 6 2022 .profile
drwxr--r-- 2 ubuntu ubuntu 4896 Dec 15 10:52 ssh/
-rw-r--r-- 1 ubuntu ubuntu 8 Dec 15 10:54 sudo_as_admin_successful
-rw-rw-r-- 1 ubuntu ubuntu 165 Dec 15 11:06 wget-hsts
drwxr-xr-x 4 ubuntu ubuntu 4096 Nov 5 12:37 prometheus-2.53.3.linux-amd64/
-rw-rw-r-- 1 ubuntu ubuntu 184287826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ ls
prometheus-2.53.3.linux-amd64 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ cd prometheus-2.53.3.linux-amd64/
ubuntu@ip-172-31-30-123:~/prometheus$ ls
LICENSE NOTICE console_libraries consoles prometheus prometheus.yaml promtool
ubuntu@ip-172-31-30-123:~/prometheus$ sudo mkdir -p /data/etc/prometheus
ubuntu@ip-172-31-30-123:~/prometheus$ sudo mv prometheus promtool /usr/local/bin/
ubuntu@ip-172-31-30-123:~/prometheus$ ls
LICENSE NOTICE console_libraries consoles prometheus.yaml
ubuntu@ip-172-31-30-123:~/prometheus$ ls
LICENSE NOTICE console_libraries consoles prometheus.yaml
ubuntu@ip-172-31-30-123:~/prometheus$ cd
ubuntu@ip-172-31-30-123:~$ cd /etc/
ubuntu@ip-172-31-30-123:~/etc$ sudo mkdir prometheus
ubuntu@ip-172-31-30-123:~/etc$ cd
ubuntu@ip-172-31-30-123:~/etc$ ls
LICENSE NOTICE console_libraries consoles prometheus.yaml
ubuntu@ip-172-31-30-123:~/etc$ sudo mv consoles/ console_libraries /etc/prometheus/
ubuntu@ip-172-31-30-123:~/etc$ ls
LICENSE NOTICE prometheus.yaml
ubuntu@ip-172-31-30-123:~/etc$ cd prometheus
ubuntu@ip-172-31-30-123:~/etc$ mv
mv: target '/etc/prometheus/' is not a directory
ubuntu@ip-172-31-30-123:~/etc$ rm prometheus
prometheus: command not found
ubuntu@ip-172-31-30-123:~/etc$ sudo mv consoles/ console_libraries /etc/prometheus/
ubuntu@ip-172-31-30-123:~/etc$ ls
LICENSE NOTICE prometheus.yaml
ubuntu@ip-172-31-30-123:~/etc$ cd /etc/
-bash: cd: too many arguments
ubuntu@ip-172-31-30-123:~/etc$ sudo mkdir prometheus
ubuntu@ip-172-31-30-123:~/etc$ sudo rm -rf prometheus
ubuntu@ip-172-31-30-123:~/etc$ cd
ubuntu@ip-172-31-30-123:~/etc$ sudo mkdir prometheus
ubuntu@ip-172-31-30-123:~/etc$ cd
ubuntu@ip-172-31-30-123:~/etc$ sudo mv consoles/ console_libraries /etc/prometheus/
ubuntu@ip-172-31-30-123:~/etc$ ls
```

```
ubuntu@ip-172-31-30-123:~$ ls
ca-certificates kernel-img.conf modprobe.d polkit-1 shadow update-motd.d
ca-certificates.conf fuse.conf landscape modules pollinate shadow-
ca-certificates.conf.dpkg-old gai.conf ld.so.cache modules-load.d ppp shells usb_modeswitch.conf
chrony groff ld.so.conf mtab profile profile_d skel usb_modeswitch.d
cloud group ld.so.conf.d multipath protocols sos vim
console-setup grub-legal libaudit.conf needrestart python3 ssh
cron.d grub.d libibaudit libblkdev netconfig python3.10 ssl vtrgb
cron.daily gshadow libibaudit.conf libiblockdev netplan re0.0 subgid wgetrc
cron.hourly gshadow- libiblockdev.conf liblmi-3 network rcl.0 subuid xattr.conf
cron.monthly gss locale.alias network shadow subuid zsh_command_not_found
cron.weekly hdparm.conf
ubuntu@ip-172-31-30-123:~/etc$ cd prometheus
ubuntu@ip-172-31-30-123:~/etc/prometheus$ ll
total 12
drwxr-xr-x 3 root root 4896 Dec 15 11:26 .
drwxr-xr-x 90 root root 4896 Dec 15 11:26 ..
drwxr-xr-x 4 root root 4896 Dec 15 11:21 prometheus/
ubuntu@ip-172-31-30-123:~/etc/prometheus$ cd ..
ubuntu@ip-172-31-30-123:~/etc$ cd prometheus
ubuntu@ip-172-31-30-123:~/etc/prometheus$ ll
total 12
drwxr-xr-x 3 root root 4896 Dec 15 11:26 .
drwxr-xr-x 90 root root 4896 Dec 15 11:26 ..
drwxr-xr-x 4 root root 4896 Dec 15 11:21 prometheus/
ubuntu@ip-172-31-30-123:~/etc/prometheus$ cd prometheus/
ubuntu@ip-172-31-30-123:~/etc/prometheus/prometheus$ ll
total 16
drwxr-xr-x 4 root root 4896 Dec 15 11:21 .
drwxr-xr-x 3 root root 4896 Dec 15 11:26 ..
drwxr-xr-x 2 ubuntu ubuntu 4896 Nov 5 12:35 console_libraries/
drwxr-xr-x 2 ubuntu ubuntu 4896 Nov 5 12:35 consoles/
ubuntu@ip-172-31-30-123:~/etc/prometheus/prometheus$ cd ...
-bash: cd: ...: No such file or directory
ubuntu@ip-172-31-30-123:~/etc/prometheus/prometheus$ cd ..
ubuntu@ip-172-31-30-123:~/etc/prometheus$ cd ..
ubuntu@ip-172-31-30-123:~/etc$ cd
ubuntu@ip-172-31-30-123:~/etc$ sudo mv prometheus.yaml /etc/prometheus/prometheus.yaml
ubuntu@ip-172-31-30-123:~/etc$ rm prometheus.yaml
```

```

ubuntu@ip-172-31-30-123:~/Desktop$ cd prometheus
ubuntu@ip-172-31-30-123:/etc/prometheus$ ll
total 12
drwxr-xr-x 3 root root 4096 Dec 15 11:26 .
drwxr-xr-x 94 root root 4096 Dec 15 11:26 ..
drwxr-xr-x 4 root root 4096 Dec 15 11:21 prometheus/
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ..
ubuntu@ip-172-31-30-123:~/Desktop$ cd prometheus
-bash: cd: prometheus: No such file or directory
ubuntu@ip-172-31-30-123:~/Desktop$ cd prometheus
ubuntu@ip-172-31-30-123:/etc/prometheus$ ll
total 12
drwxr-xr-x 3 root root 4096 Dec 15 11:26 .
drwxr-xr-x 94 root root 4096 Dec 15 11:26 ..
drwxr-xr-x 4 root root 4096 Dec 15 11:21 prometheus/
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd prometheus/
ubuntu@ip-172-31-30-123:/etc/prometheus$ ll
total 16
drwxr-xr-x 4 root root 4096 Dec 15 11:21 .
drwxr-xr-x 3 root root 4096 Dec 15 11:26 ..
drwxr-xr-x 2 ubuntu ubuntu 4096 Nov 8 12:35 console_libraries/
drwxr-xr-x 2 ubuntu ubuntu 4096 Nov 8 12:35 consoles/
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ...
-bash: cd: ...: No such file or directory
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ..
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ..
ubuntu@ip-172-31-30-123:~/Desktop$ cd prometheus-2.53.3.linux-amd64/
ubuntu@ip-172-31-30-123:~/Desktop$ sudo mv prometheus.yml /etc/prometheus/prometheus.yml
ubuntu@ip-172-31-30-123:~/Desktop$ sudo chown -R prometheus:prometheus /etc/prometheus/ /data/
chown: cannot access '/etc/prometheus/': No such file or directory
ubuntu@ip-172-31-30-123:~/Desktop$ sudo chown -R prometheus:prometheus /etc/prometheus/ /data/
ubuntu@ip-172-31-30-123:~/Desktop$ ls

```

- Write the Prometheus service file.

`prometheus.service`

[Unit]

Description=Prometheus Monitoring System

Wants=network-online.target

After=network-online.target

StartLimitIntervalSec=500

StartLimitBurst=5

[Service]

User=prometheus

Group=prometheus

Type=simple

Restart=on-failure

RestartSec=5s

ExecStart=/usr/local/bin/prometheus \

--config.file=/etc/prometheus/prometheus.yml \

--storage.tsdb.path=/data \

--web.console.templates=/etc/prometheus/consoles \

--web.console.libraries=/etc/prometheus/console\_libraries \

--web.listen-address=0.0.0.0:9090 \

--web.enable-lifecycle

[Install]

WantedBy=multi-user.target

- Then start and enable the prometheus.
- Check the status.

```
ubuntu@ip-172-31-22-16:~$ sudo vi /etc/systemd/system/prometheus.service
[New] 32L, 71B written
ubuntu@ip-172-31-30-123:~$ sudo systemctl enable prometheus
Created symlink /etc/systemd/system/multi-user.target.wants/prometheus.service → /etc/systemd/system/prometheus.service.
ubuntu@ip-172-31-30-123:~$ sudo systemctl start prometheus
ubuntu@ip-172-31-30-123:~$ sudo systemctl status prometheus
● prometheus.service - Prometheus Monitoring System
   Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; vendor preset: enabled)
     Active: active (running) since Sun 2024-12-15 11:56:27 UTC; 8s ago
       Main PID: 1893 (prometheus)
         Tasks: 7 (limit: 4676)
        Memory: 16.0M
          CPU: 70ms
        CGroup: /system.slice/prometheus.service
                └─1893 /usr/local/bin/prometheus --config.file=/etc/prometheus/prometheus.yml --storage.tsdb.path=/data --web.console.templates=/etc/prometheus

Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.606Z caller=head.go:721 level=info component=tsdb msg="Replaying WAL, this may take a while"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.607Z caller=head.go:793 level=info component=tsdb msg="WAL segment loaded"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.607Z caller=head.go:830 level=info component=tsdb msg="WAL replay completed" checked=true
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.611Z caller=main.go:1169 level=info fs_type=EXT4_SUPER_MAGIC
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.611Z caller=main.go:1172 level=info msg="TSDB started"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.611Z caller=main.go:1354 level=info msg="Loading configuration file" filename=/etc/prometheus/prometheus.yml
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.615Z caller=main.go:1391 level=info msg="updated GOGC old=100 new=75"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.616Z caller=main.go:1406 level=info msg="Completed loading of configuration file"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.616Z caller=main.go:1133 level=info msg="Server is ready to receive web requests."
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.616Z caller=manager.go:164 level=info component="rule manager" msg="Starting rule manager"
[Lines 1-20/20 (END)]
ubuntu@ip-172-31-30-123:~$ |
```

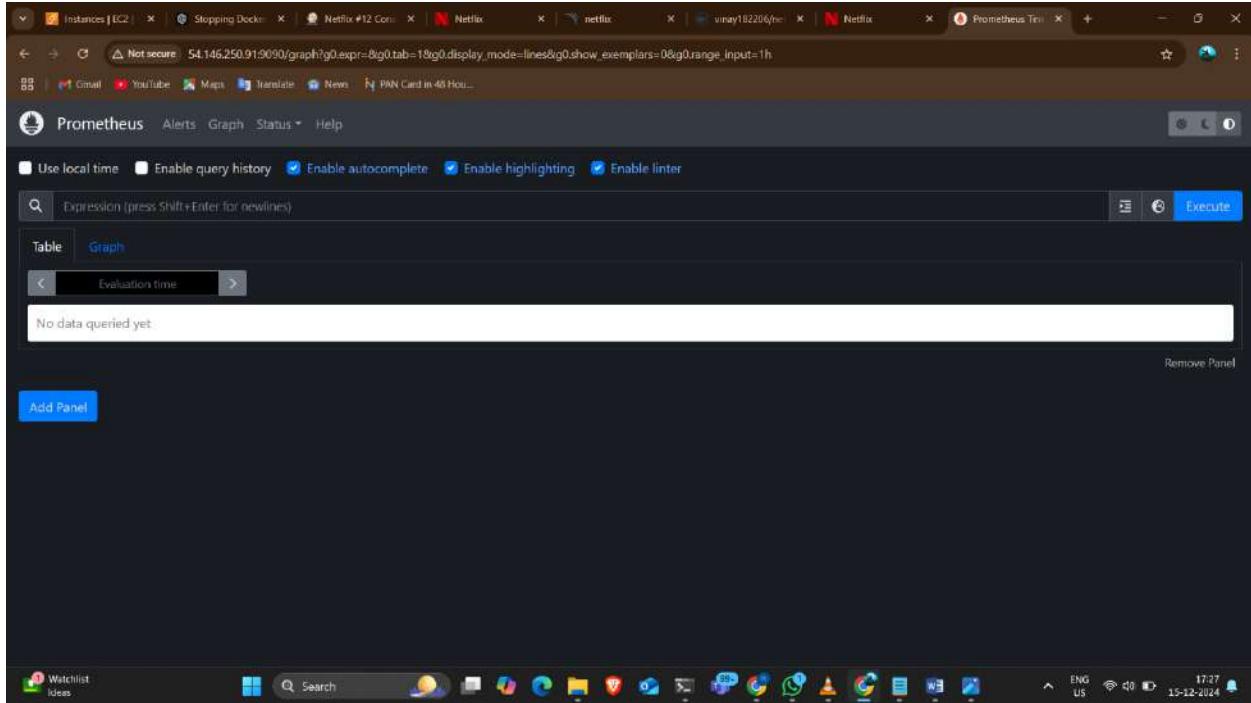
Ubuntu 24.04 LTS desktop environment with Unity interface. Taskbar shows system status (CPU 0.0%, RAM 85% used), network (wlan0 172.31.30.123), and application icons.

```
ubuntu@ip-172-31-22-16:~$ cd /etc/prometheus
drwxr-xr-x 2 ubuntu ubuntu 4896 Nov  5 12:35 consoles/
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ...
-bash: cd: ...: No such file or directory
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ...
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd ..
ubuntu@ip-172-31-30-123:/etc$ cd prometheus-2.53.3.linux-amd64/
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.Linux-amd64$ sudo mv prometheus.yml /etc/prometheus/prometheus.yml
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.Linux-amd64$ sudo chown -R prometheus:prometheus /etc/prometheus/ /data/
chown: cannot access '/etc/prometheus': No such file or directory
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.Linux-amd64$ sudo chown -R prometheus:prometheus /etc/prometheus/ /data/
ubuntu@ip-172-31-30-123:~/prometheus-2.53.3.Linux-amd64$ cd /etc/
ubuntu@ip-172-31-30-123:~/etc$ ls
PackageKit           crontab      hibagent-config.cfg  locale.gen    networkd-dispatcher  rc2.d      sudo.conf
X11                  cryptab      hibinit-config.cfg  localtime   networks            rc3.d      sudo_logsrvd.conf
acpi                 cryptsetup-initramfs host.conf      logcheck     newt               rc4.d      sudoers
adduser.conf         dbus-1       hostname       logrotate.defs  nftables.conf      rc5.d      sudoers.d
alternatives        debconf.conf hosts          logrotate.conf  nftswitch.conf    rc6.d      sysctl.conf
apparmor             debian_version hosts.allow    logrotate.d     opt               rcS.d      sysctl.d
apparmor.d          default      hosts.deny     lsb-release    os-release        resolv.conf  systemd
apport               deluser.conf init.d       lvm            overlayroot.conf  rmt      terminfo
apt                  depmod.d    initramfs-tools machine-id    overlayroot.local.conf  rpc      timezone
bash.bashrc          dhcpc       inputrc       magic          pam.conf          rsyslog.conf  tmpfiles.d
bash_completion      dkpg        iproute2     magic.mime    pam.d             rsyslogd    ubuntu-adantage
bash_completion.d   e2scrub.conf  iscsi        manpath.config  passwd            screenrc    ucf.conf
bindresport          ec2_version issue        maddm        passwd            security    udev
blacklist           environment issue.net    mime.types    perl              selinux    ufw
binfmt.d            ethertypes  kernel       mike2fs.conf  pm               services   update-manager
hybou                fstab       kernel-img.conf  modprobe.d   pollkit-1        shadow    update-motd.d
ca-certificates      fuse.conf   landscape     modules      pollinate        shells   update-notifier
ca-certificates.conf gai.conf   ld.so.cache   modules-load.d  ppp               skel     usb_modeswitch.conf
chrony               groff      ld.so.conf.d  multipath     profile.d        sos      vim
cloud                group      ld.so.conf.d  multipath.conf  prometheus      ssh      vmware-tools
console-setup        grub.d     ldap          legal        protocols        ssl      vtrgb
cron.d               grub.d     libaudit.conf  needrestart  python3          subgid   wgetrc
cron.daily           gshadow   libblkdev     netconfig    python3.10       subgid-  xattr.conf
cron.hourly          gshadow-  libnl-3       netplan      re0.d            subuid   xdg
cron.monthly         gss       locale.alias  network     rcl.d            subuid-  zsh_command_not_found
cron.weekly          hdparm.conf

ubuntu@ip-172-31-30-123:~/etc$ |
```

Ubuntu 24.04 LTS desktop environment with Unity interface. Taskbar shows system status (CPU 0.0%, RAM 26°C Haze), network (wlan0 172.31.30.123), and application icons.

- Browse the public ip along with the prometheus port number “9090”.



- Now node exporter here add node exporter as user.
- “sudo useradd –system –no-create-home –shell /bin/false node\_exporter” .

```
ubuntu@ip-172-31-21-16:~$ sudo useradd --system --no-create-home --shell /bin/false node_exporter
ubuntu@ip-172-31-21-16:~$ wget https://github.com/prometheus/node_exporter/releases/download/v1.8.2/node_exporter-1.8.2.linux-amd64.tar.gz
--2024-12-15 12:17:10-- https://github.com/prometheus/node_exporter/releases/download/v1.8.2/node_exporter-1.8.2.linux-amd64.tar.gz
Resolving github.com (github.com)... 140.82.113.4
Connecting to github.com (github.com)|140.82.113.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/a7e04f41-5543-40e2-9860-26fe32bb4b7X-Amz-Algorithm=AWS4-HMAC-SHA256X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2Fs3%2Faws4_request%2X-Amz-Date=20241215T121710ZX-Amz-Expires=3000X-Amz-Signature=c9b2a656b35dc34182d1172d6c9b5fccc72dc9d4bb354a16ccf1d2071aae7046X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.8.2.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2024-12-15 12:17:10-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/a7e04f41-5543-40e2-9860-26fe32bb4b7X-Amz-Algorithm=AWS4-HMAC-SHA256X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2Fs3%2Faws4_request%2X-Amz-Date=20241215T121710ZX-Amz-Expires=3000X-Amz-Signature=c9b2a656b35dc34182d1172d6c9b5fccc72dc9d4bb354a16ccf1d2071aae7046X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode_exporter-1.8.2.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com)... 185.199.108.133, 185.199.109.133, 185.199.111.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.108.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10676343 (10M) [application/octet-stream]
Saving to: 'node_exporter-1.8.2.linux-amd64.tar.gz'

node_exporter-1.8.2.linux-amd64.tar.gz 100%[=====] 10.18M 30.3MB/s in 0.3s
2024-12-15 12:17:10 (30.3 MB/s) - 'node_exporter-1.8.2.linux-amd64.tar.gz' saved [10676343/10676343]

ubuntu@ip-172-31-21-16:~$ 
```

- Download the node exporter from google.
- Wget link.
- We will get tar file than extract that file.

```
ubuntu@ip-172-31-22-16 ~ % ubuntu@ip-172-31-30-123 ~ % + - 
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.607Z caller=head.go:830 level=info component=tsdb msg="WAL replay completed" check_id=1893
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.611Z caller=main.go:1169 level=info fs_type=EXT4_SUPER_MAGIC
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.611Z caller=main.go:1172 level=info msg="TSDB started"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.611Z caller=main.go:1354 level=info msg="Loading configuration file" filenames=/etc/prometheus/prometheus.yml
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.615Z caller=main.go:1391 level=info msg="updated GOGC old=100 new=75
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.616Z caller=main.go:1402 level=info msg="Completed loading of configuration file"
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.616Z caller=main.go:1133 level=info msg="Server is ready to receive web requests."
Dec 15 11:56:27 ip-172-31-30-123 prometheus[1893]: ts=2024-12-15T11:56:27.616Z caller=manager.go:164 level=info component="rule manager" msg="Starting rule processor"
Lines 1-20/20 (END)
ubuntu@ip-172-31-30-123:~$ sudo useradd --system --no-create-home --shell /bin/false node_exporter
ubuntu@ip-172-31-30-123:~$ wget https://github.com/prometheus/node_exporter/releases/download/v1.8.2/node_exporter-1.8.2.linux-amd64.tar.gz
--2024-12-15 12:17:10-- https://github.com/prometheus/node_exporter/releases/download/v1.8.2/node_exporter-1.8.2.linux-amd64.tar.gz
Resolving github.com (github.com) ... 140.82.113.4
Connecting to github.com (github.com)|140.82.113.4|:443... connected.
HTTP request sent, awaiting response... 302 Found
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/a7e04f41-5543-40e2-9060-26febe32bb4b?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2F%2Faws4_request&X-Amz-Date=20241215T121710Z&X-Amz-Expires=300&X-Amz-Signature=cb9b2a56b25de34182d1172d6c9b5fccc72dc9d4bb354a1eccf1d2071aae7046X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode-exporter-1.8.2.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2024-12-15 12:17:10-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/a7e04f41-5543-40e2-9060-26febe32bb4b?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2F%2Faws4_request&X-Amz-Date=20241215T121710Z&X-Amz-Expires=300&X-Amz-Signature=cb9b2a56b25de34182d1172d6c9b5fccc72dc9d4bb354a1eccf1d2071aae7046X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode-exporter-1.8.2.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com) ... 185.199.108.133, 185.199.109.133, 185.199.111.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.108.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10676343 (10M) [application/octet-stream]
Saving to: 'node_exporter-1.8.2.linux-amd64.tar.gz'

node_exporter-1.8.2.linux-amd64.tar.gz 100%[=====] 10.18M 30.3MB/s in 0.3s

2024-12-15 12:17:10 (30.3 MB/s) - "node_exporter-1.8.2.linux-amd64.tar.gz" saved [10676343/10676343]

ubuntu@ip-172-31-30-123:~$ ls
node_exporter-1.8.2.linux-amd64.tar.gz  prometheus-2.53.3.linux-amd64  prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ tar xf node_exporter-1.8.2.linux-amd64.tar.gz
node_exporter-1.8.2.linux-amd64/
node_exporter-1.8.2.linux-amd64/NOTICE
node_exporter-1.8.2.linux-amd64/node_exporter
node_exporter-1.8.2.linux-amd64/LICENSE
ubuntu@ip-172-31-30-123:~$ 
```

- Than move the file to the /usr/local/bin/.

```
ubuntu@ip-172-31-22-16 ~ % ubuntu@ip-172-31-30-123 ~ % + - 
Location: https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/a7e04f41-5543-40e2-9060-26febe32bb4b?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2F%2Faws4_request&X-Amz-Date=20241215T122651Z&X-Amz-Expires=300&X-Amz-Signature=4b5e8d3db61b42ee800861952891fd9e3d9f6472ed7958dc2417755ca3bf9f&X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode-exporter-1.8.2.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream [following]
--2024-12-15 12:26:51-- https://objects.githubusercontent.com/github-production-release-asset-2e65be/9524057/a7e04f41-5543-40e2-9060-26febe32bb4b?X-Amz-Algorithm=AWS4-HMAC-SHA256&X-Amz-Credential=releaseassetproduction%2F20241215%2Fus-east-1%2F%2Faws4_request&X-Amz-Date=20241215T122651Z&X-Amz-Expires=300&X-Amz-Signature=4b5e8d3db61b42ee800861952891fd9e3d9f6472ed7958dc2417755ca3bf9f&X-Amz-SignedHeaders=host&response-content-disposition=attachment%3B%20filename%3Dnode-exporter-1.8.2.linux-amd64.tar.gz&response-content-type=application%2Foctet-stream
Resolving objects.githubusercontent.com (objects.githubusercontent.com) ... 185.199.108.133, 185.199.109.133, 185.199.110.133, ...
Connecting to objects.githubusercontent.com (objects.githubusercontent.com)|185.199.108.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 10676343 (10M) [application/octet-stream]
Saving to: 'node_exporter-1.8.2.linux-amd64.tar.gz.1'

node_exporter-1.8.2.linux-amd64.tar.gz 100%[=====] 10.18M 44.6MB/s in 0.2s

2024-12-15 12:26:51 (44.6 MB/s) - "node_exporter-1.8.2.linux-amd64.tar.gz.1" saved [10676343/10676343]

node_exporter-1.8.2.linux-amd64/
node_exporter-1.8.2.linux-amd64/NOTICE
node_exporter-1.8.2.linux-amd64/node_exporter
node_exporter-1.8.2.linux-amd64/LICENSE
ubuntu@ip-172-31-30-123:~$ ll
total 122664
drwxr-x 6 ubuntu ubuntu 4096 Dec 15 12:26 .
drwxr-x 3 root root 4096 Dec 15 10:52 ..
-rw-r--r-- 1 ubuntu ubuntu 228 Jan 6 2022 bash_logout
-rw-r--r-- 1 ubuntu ubuntu 3771 Jan 6 2022 bashrc
drwxr--r-- 2 ubuntu ubuntu 4096 Dec 15 10:54 .cache
-rw-r--r-- 1 ubuntu ubuntu 887 Jan 6 2022 .profile
drwxr--r-- 2 ubuntu ubuntu 4096 Dec 15 10:52 .ssh/
-rw-r--r-- 1 ubuntu ubuntu 9 Dec 15 10:54 .sudo_as_admin_successful
-rw-rw-r-- 1 ubuntu ubuntu 165 Dec 15 12:26 wget-hsts
drwxr-xr-x 2 ubuntu ubuntu 4096 Jul 14 11:58 node_exporter-1.8.2.linux-amd64/
-rw-rw-r-- 1 ubuntu ubuntu 18676343 Jul 14 11:58 node_exporter-1.8.2.linux-amd64.tar.gz
-rw-rw-r-- 1 ubuntu ubuntu 18676343 Jul 14 11:58 node_exporter-1.8.2.linux-amd64.tar.gz.1
drwxr-xr-x 2 ubuntu ubuntu 4096 Dec 15 11:30 prometheus-2.53.3.linux-amd64/
-rw-rw-r-- 1 ubuntu ubuntu 184287826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ sudo mv node_exporter-1.8.2.linux-amd64/node_exporter /usr/local/bin/
ubuntu@ip-172-31-30-123:~$ rm -rf node_exporter
ubuntu@ip-172-31-30-123:~$ 
```

- Now create the node exporter file.

```
[Unit]
Description=Node Exporter
Wants=network-online.target
After=network-online.target
StartLimitIntervalSec=500
StartLimitBurst=5

[Service]
User=node_exporter
Group=node_exporter
Type=simple
Restart=on-failure
RestartSec=5s
ExecStart=/usr/local/bin/node_exporter --collector.logind

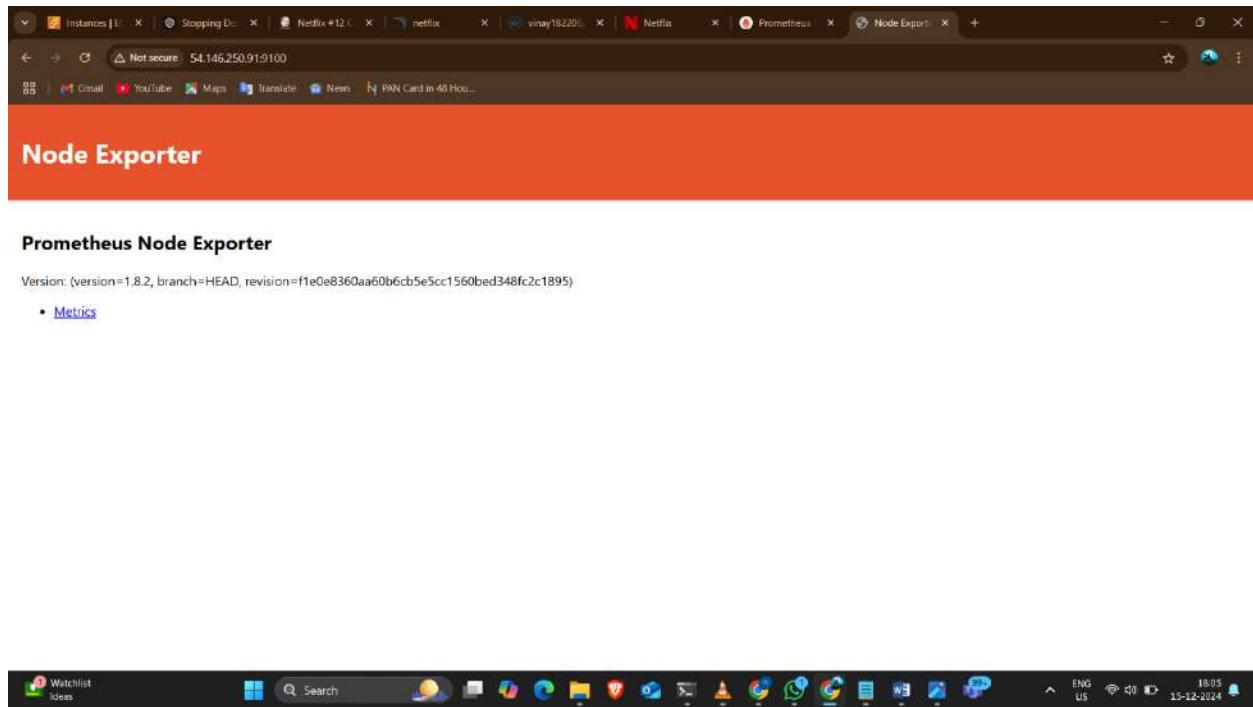
[Install]
WantedBy=multi-user.target
```

- Start and enable the node exporter.
- Check the status.

```
-rw-rw-r-- 1 ubuntu ubuntu 18676343 Jul 14 11:58 node_exporter-1.8.2.linux-amd64.tar.gz
-rw-rw-r-- 1 ubuntu ubuntu 18676343 Jul 14 11:58 node_exporter-1.8.2.linux-amd64.tar.gz.1
drwxr-xr-x 2 ubuntu ubuntu 4096 Dec 15 11:30 prometheus-2.53.3.linux-amd64/
-rw-rw-r-- 1 ubuntu ubuntu 184287826 Nov 5 12:42 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ sudo mv node_exporter-1.8.2.linux-amd64/node_exporter /usr/local/bin/
ubuntu@ip-172-31-30-123:~$ rm -rf node_exporter*
ubuntu@ip-172-31-30-123:~$ ls
prometheus-2.53.3.linux-amd64 prometheus-2.53.3.linux-amd64.tar.gz
ubuntu@ip-172-31-30-123:~$ sudo vi /etc/systemd/system/node_exporter.service
ubuntu@ip-172-31-30-123:~$ sudo systemctl enable node-exporter
Failed to enable unit: Unit file node-exporter.service does not exist.
ubuntu@ip-172-31-30-123:~$ sudo vi /etc/systemd/system/node_exporter.service
ubuntu@ip-172-31-30-123:~$ 17L, 324B written
ubuntu@ip-172-31-30-123:~$ sudo systemctl enable node-exporter
Failed to enable unit: Unit file node-exporter.service does not exist.
ubuntu@ip-172-31-30-123:~$ sudo systemctl enable node-exporter
Created symlink /etc/systemd/system/multi-user.target.wants/node_exporter.service → /etc/systemd/system/node_exporter.service.
ubuntu@ip-172-31-30-123:~$ sudo systemctl start node_exporter
ubuntu@ip-172-31-30-123:~$ sudo systemctl status node_exporter
● node_exporter.service - Node Exporter
   Loaded: loaded (/etc/systemd/system/node_exporter.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2024-12-15 12:34:14 UTC; 8s ago
     Main PID: 2017 (node_exporter)
        Tasks: 4 (limit: 4676)
       Memory: 2.4M
          CPU: 6ms
         CGroup: /system.slice/node_exporter.service
             └─2017 /usr/local/bin/node_exporter --collector.logind

Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=time
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=timex
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=udp_queues
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=username
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=vmstat
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=watchdog
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=xfs
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.915Z caller=node_exporter.go:118 level=info collector=zfs
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.916Z caller=tls_config.go:313 level=info msg="Listening on" address=[::]:9100
Dec 15 12:34:14 ip-172-31-30-123 node_exporter[2017]: ts=2024-12-15T12:34:14.916Z caller=tls_config.go:316 level=info msg="TLS is disabled." http2=false ad[...]
```

- Copy the publicip and search along with the port “9100”.



- Edit the Prometheus.yml file by adding node exporter port script.

```
ubuntu@ip-172-31-22-16:~/Networ...  ubuntu@ip-172-31-30-123:/et... + -
```

```
global
  scrape_interval: 15s # Set the scrape interval to every 15 seconds. Default is every 1 minute
  evaluation_interval: 15s # Evaluate rules every 15 seconds. The default is every 1 minute
  # scrape_timeout is set to the global default (10s).

# Alertmanager configuration
alerting
  alertmanagers:
    - static_configs:
      - targets:
        - alertmanager:9093

# Load rules once and periodically evaluate them according to the global 'evaluation_interval'.
rule_files:
  - "first_rules.yml"
  - "second_rules.yml"

# A scrape configuration containing exactly one endpoint to scrape.
# Here it's Prometheus itself.
scrape_configs:
  # The job name is added as a label 'job=<job_name>' to any timeseries scraped from this config.
  - job_name: "prometheus"
    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.

    static_configs:
      - targets: ["localhost:9090"]

  - job_name: 'node_exporter'
    # metrics_path defaults to '/metrics'
    # scheme defaults to 'http'.
    static_configs:
      - targets: ['localhost:9100']

  - job_name: 'jenkins'
    metrics_path: '/prometheus'
    # scheme defaults to 'http'.
    static_configs:
      - targets: ['192.168.265.176:8080']
```

"prometheus.yml" 41L, 1250B

```
ubuntu@ip-172-31-30-123:~$ cd /etc/prometheus
ubuntu@ip-172-31-30-123:/etc/prometheus$ ls
prometheus.yaml  prometheus
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
"prometheus.yaml" 41L, 1257B written
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check /etc/prometheus/prometheus.yaml
promtool: error: expected command but got "/etc/prometheus/prometheus.yaml", try --help
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: yaml: line 29: did not find expected '-' indicator
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://84.159.255.176:8080" is not a valid hostname
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
41L, 1257B written
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://84.159.255.176:8080" is not a valid hostname
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
SUCCESS: /etc/prometheus/prometheus.yaml is valid prometheus config file syntax
ubuntu@ip-172-31-30-123:/etc/prometheus$ |
```

```
ubuntu@ip-172-31-22-16:~$ cd /etc/prometheus
ubuntu@ip-172-31-30-123:/etc/prometheus$ ls
prometheus.yaml  prometheus
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
"prometheus.yaml" 41L, 1257B written
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check /etc/prometheus/prometheus.yaml
promtool: error: expected command but got "/etc/prometheus/prometheus.yaml", try --help
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: yaml: line 29: did not find expected '-' indicator
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://84.159.255.176:8080" is not a valid hostname
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
41L, 1257B written
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://84.159.255.176:8080" is not a valid hostname
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
41L, 1257B written
ubuntu@ip-172-31-30-123:/etc/prometheus$ promtool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
SUCCESS: /etc/prometheus/prometheus.yaml is valid prometheus config file syntax
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ curl -X POST http://54.146.258.91:9090/-reload
curl: (5) Could not resolve proxy: POST
ubuntu@ip-172-31-30-123:/etc/prometheus$ curl -X POST http://54.146.258.91:9090/-reload
ubuntu@ip-172-31-30-123:/etc/prometheus$ |
```

- Go to the Prometheus application page and select the status>targets.

The screenshot shows the Prometheus application interface. The top navigation bar includes links for Instances | EC2, Stopping Docker, Netflix #12, Netflix, vinay182206/mr, Netflix, Prometheus Tim, Node Exporter, and a plus sign for adding new panels. The main menu has options like Prometheus, Alerts, Graph, Status (with a dropdown menu showing Runtime & Build Information, TSDB Status, Command-Line Flags, Configuration, Rules, Targets, and Service Discovery), and Help. Below the menu, there's a search bar and a panel switch between Table and Graph. The status bar at the bottom shows system information like temperature (23°C), battery level (Haze), and system time (18:28, 15-12-2024).

**Targets**

jenkins (1/1 up) <small>1 invoker</small>					
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://54.159.255.176:8080/prometheus	UP	instance="54.159.255.176:8080", job="jenkins"	819.000ms ago	9.206ms	

node_exporter (1/1 up) <small>1 invoker</small>					
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9100/metrics	UP	instance="localhost:9100", job="node exporter"	7.236s ago	13.539ms	

prometheus (1/1 up) <small>1 invoker</small>					
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090", job="prometheus"	10.244s ago	5.367ms	

- Update it.

```

ubuntu@ip-172-31-22-16 ~ % ubuntu@ip-172-31-30-123: /etc/prometheus % + -
protoool: error: expected command but got "/etc/prometheus/prometheus.yaml", try --help
ubuntu@ip-172-31-30-123:/etc/prometheus$ protool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: yaml: line 29: did not find expected '-' indicator

ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ protool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://54.159.255.176:8080/:8080" is not a valid hostname

ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ protool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://54.159.255.176:8080" is not a valid hostname

ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ protool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: "http://54.159.255.176:8080" is not a valid hostname

ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ protool check config /etc/prometheus/prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
SUCCESS: /etc/prometheus/prometheus.yaml is valid prometheus config file syntax

ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo vi prometheus.yaml
ubuntu@ip-172-31-30-123:/etc/prometheus$ curl -X POST http://54.146.258.91:9090/-/reload
curl: (5) Could not resolve proxy: POST
ubuntu@ip-172-31-30-123:/etc/prometheus$ curl -X POST http://54.146.258.91:9090/-/reload
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo apt-get update -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease [128 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease [127 kB]
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Fetched 384 kB in 0s (957 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-30-123:/etc/prometheus$ 
```

The screenshot shows a Windows desktop environment with a terminal window open. The terminal window displays the output of running 'protool check config' on the Prometheus configuration file, which fails due to invalid hostnames. Below the terminal, the Windows taskbar is visible with various icons and system status indicators.

- Install the grafana.

```

ubuntu@ip-172-31-22-16 ~ % ubuntu@ip-172-31-30-123: /etc/prometheus % + -
Get:4 http://security.ubuntu.com/ubuntu jammy-security InRelease [129 kB]
Fetched 384 kB in 0s (957 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-30-123:/etc/prometheus$ cd
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo apt-get update -y
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
ubuntu@ip-172-31-30-123:/etc/prometheus$ sudo apt-get install -y apt-transport-https software-properties-common
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.22.9).
software-properties-common set to manually installed.
The following NEW packages will be installed:
  apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 37 not upgraded.
Need to get 1510 B of archives.
After this operation, 178 kB of additional disk space will be used.
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/universe amd64 apt-transport-https all 2.4.13 [1510 B]
Fetched 1510 B in 0s (100 kB/s)
Selecting previously unselected package apt-transport-https.
(Reading database ... 65783 files and directories currently installed.)
Preparing to unpack .../apt-transport-https_2.4.13_all.deb ...
Unpacking apt-transport-https (2.4.13) ...
Setting up apt-transport-https (2.4.13) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-30-123:~$ 
```

The screenshot shows a Windows desktop environment with a terminal window displaying the output of the 'apt-get update' command. It shows the download of the 'apt-transport-https' package and its dependencies. Below the terminal, the Windows taskbar is visible with various icons and system status indicators.

```
ubuntu@ip-172-31-22-16:~$ apt update
(Reading database ... 65783 files and directories currently installed.)
Preparation to unpack .../apt-transport-https_2.4.13_all.deb ...
Unpacking apt-transport-https (2.4.13) ...
Setting up apt-transport-https (2.4.13) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-30-123:~$ sudo apt-get install -y apt-transport-https software-properties-common wget
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.22.9).
wget is already the newest version (1.21.2-2ubuntul.1).
wget set to manually installed.
apt-transport-https is already the newest version (2.4.13).
0 upgraded, 0 newly installed, 0 to remove and 37 not upgraded.
ubuntu@ip-172-31-30-123:~$ sudo mkdir -p /etc/apt/keyrings/
wget -q -O https://apt.grafana.com/gpg.key | gpg --dearmor | sudo tee /etc/apt/keyrings/grafana.gpg > /dev/null
ubuntu@ip-172-31-30-123:~$ echo "deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://apt.grafana.com stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list
deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://apt.grafana.com stable main
ubuntu@ip-172-31-30-123:~$ # Updates the list of available packages
sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 https://apt.grafana.com stable InRelease [7661 B]
Hit:5 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:6 https://apt.grafana.com stable/main amd64 Packages [328 kB]
Fetched 335 kB in 1s (634 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-30-123:~|
```

```
ubuntu@ip-172-31-22-16:~$ apt update
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-30-123:~$ sudo apt-get install -y apt-transport-https software-properties-common wget
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
software-properties-common is already the newest version (0.99.22.9).
wget is already the newest version (1.21.2-2ubuntul.1).
wget set to manually installed.
apt-transport-https is already the newest version (2.4.13).
0 upgraded, 0 newly installed, 0 to remove and 37 not upgraded.
ubuntu@ip-172-31-30-123:~$ sudo mkdir -p /etc/apt/keyrings/
wget -q -O https://apt.grafana.com/gpg.key | gpg --dearmor | sudo tee /etc/apt/keyrings/grafana.gpg > /dev/null
ubuntu@ip-172-31-30-123:~$ echo "deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://apt.grafana.com stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list
deb [signed-by=/etc/apt/keyrings/grafana.gpg] https://apt.grafana.com stable main
ubuntu@ip-172-31-30-123:~$ # Updates the list of available packages
sudo apt-get update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Get:4 https://apt.grafana.com stable InRelease [7661 B]
Hit:5 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:6 https://apt.grafana.com stable/main amd64 Packages [328 kB]
Fetched 335 kB in 1s (634 kB/s)
Reading package lists... Done
ubuntu@ip-172-31-30-123:~$ # Installs the latest OSS release:
sudo apt-get install grafana
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
  musl
The following NEW packages will be installed:
  grafana musl
0 upgraded, 2 newly installed, 0 to remove and 37 not upgraded.
Need to get 127 MB of archives.
After this operation, 471 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/universe amd64 musl amd64 1.2.2-4 [407 kB]
Get:2 https://apt.grafana.com stable/main amd64 grafana amd64 11.4.0 [127 MB]
98% [2 grafana 127 MB/127 MB 100%]
```

```
ubuntu@ip-172-31-22-16:~/N...  ubuntu@ip-172-31-30-123:~ + - x
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-30-123:~$ sudo apt-get install grafana-enterprise
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following packages will be REMOVED:
  grafana
The following NEW packages will be installed:
  grafana-enterprise
0 upgraded, 1 newly installed, 1 to remove and 37 not upgraded.
Need to get 133 MB of archives.
After this operation, 20.4 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 https://apt.grafana.com/stable/main amd64 grafana-enterprise amd64 11.4.0 [133 MB]
Fetched 133 MB in 6s (21.7 MB/s)
(Reading database ... 75858 files and directories currently installed.)
Removing grafana (11.4.0) ...
Stopping and disabling grafana-server service...
Synchronizing state of grafana-server.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install disable grafana-server
Selecting previously unselected package grafana-enterprise.
(Reading database ... 65895 files and directories currently installed.)
Preparing to unpack .../grafana-enterprise_11.4.0_amd64.deb ...
Unpacking grafana-enterprise (11.4.0) ...
Setting up grafana-enterprise (11.4.0) ...
### NOT starting on installation, please execute the following statements to configure grafana to start automatically using systemd
sudo /bin/systemctl daemon-reload
sudo /bin/systemctl enable grafana-server
### You can start grafana-server by executing
sudo /bin/systemctl start grafana-server
Scanning processes...
```

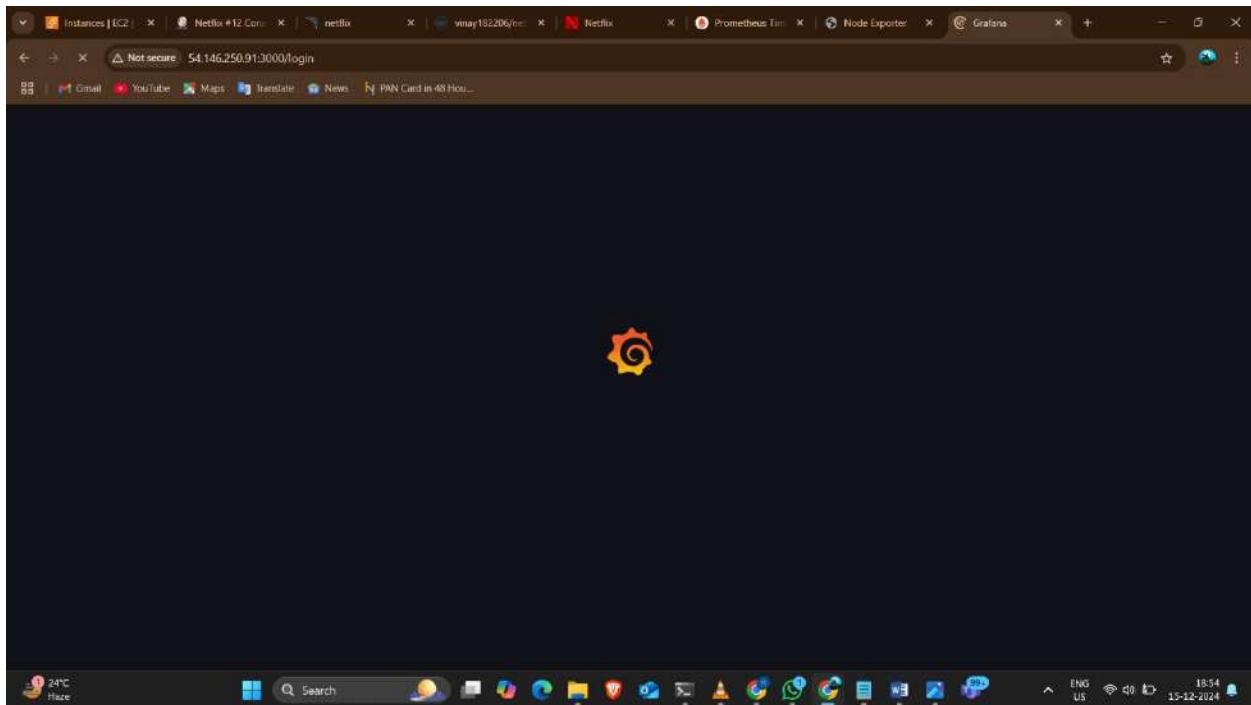
- Start the grafana and enable it.
- Check the status.

```
ubuntu@ip-172-31-22-16:~/N...  ubuntu@ip-172-31-30-123:~ + - x
Restarting grafana-server service... OK
Scanning processes...
Scanning linux images...
Running kernel seems to be up-to-date.
No services need to be restarted.
No containers need to be restarted.
No user sessions are running outdated binaries.

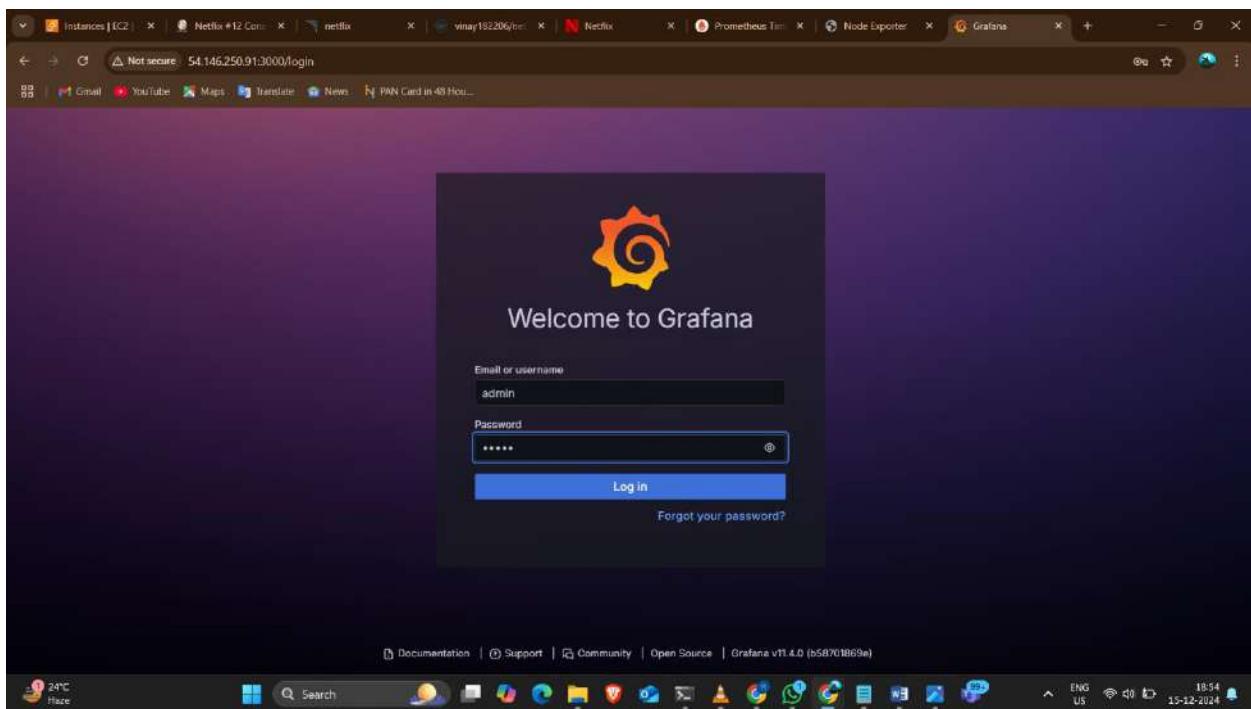
No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-30-123:~$ sudo systemctl start grafana-server
sudo systemctl enable grafana-server
Synchronizing state of grafana-server.service with SysV service script with /lib/systemd/systemd-sysv-install.
Executing: /lib/systemd/systemd-sysv-install enable grafana-server
Created symlink /etc/systemd/system/multi-user.target.wants/grafana-server.service → /lib/systemd/system/grafana-server.service.
ubuntu@ip-172-31-30-123:~$ sudo systemctl status grafana-server
● grafana-server.service - Grafana instance
   Loaded: loaded (/lib/systemd/system/grafana-server.service; enabled; vendor preset: enabled)
   Active: active (running) since Sun 2024-12-15 13:20:01 UTC; 17s ago
     Docs: http://docs.grafana.org
 Main PID: 4722 (grafana)
   Tasks: 12 (limit: 4676)
    Memory: 53.6M
      CPU: 793ms
     CGroup: /system.slice/grafana-server.service
             └─4722 /usr/share/grafana/bin/grafana server --config=/etc/grafana/grafana.ini --pidfile=/run/grafana/grafana-server.pid --packaging=deb cfg:d

Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=grafanaStorageLogger t=2024-12-15T13:20:02.021445717Z level=info msg="Storage starting"
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=http_server t=2024-12-15T13:20:02.025961219Z level=info msg="HTTP Server Listen" address=[::]:3000 p>
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=ngalert_multilogger t=2024-12-15T13:20:02.025965377Z level=info msg="Starting MultiOrg Ale>
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=ngalert_scheduler t=2024-12-15T13:20:02.034738661Z level=info msg="Starting scheduler" tickInterval=>
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=ticker t=2024-12-15T13:20:02.03504012Z level=info msg="starting first_tick=2024-12-15T13:20:18Z"
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=plugins_update_checker t=2024-12-15T13:20:02.171128122Z level=info msg="Update check succeeded" dura>
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=grafana_update_checker t=2024-12-15T13:20:02.183259575Z level=info msg="Update check succeeded" dura>
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=grafana_apiserver t=2024-12-15T13:20:02.379411262Z level=info msg="Adding GroupVersion playlist.graf>
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=grafana_apiserver t=2024-12-15T13:20:02.380459389Z level=info msg="Adding GroupVersion featuretoggle">
Dec 15 13:20:02 ip-172-31-30-123 grafana[4722]: logger=grafana_apiserver t=2024-12-15T13:20:02.381784362Z level=info msg="Adding GroupVersion iam.grafana.ap>
[lines 1-21/21 (END)]
```

- Copy the public ip search in google along with the port number “3000”.
- Here the grafana web page.



- Login with admin details.

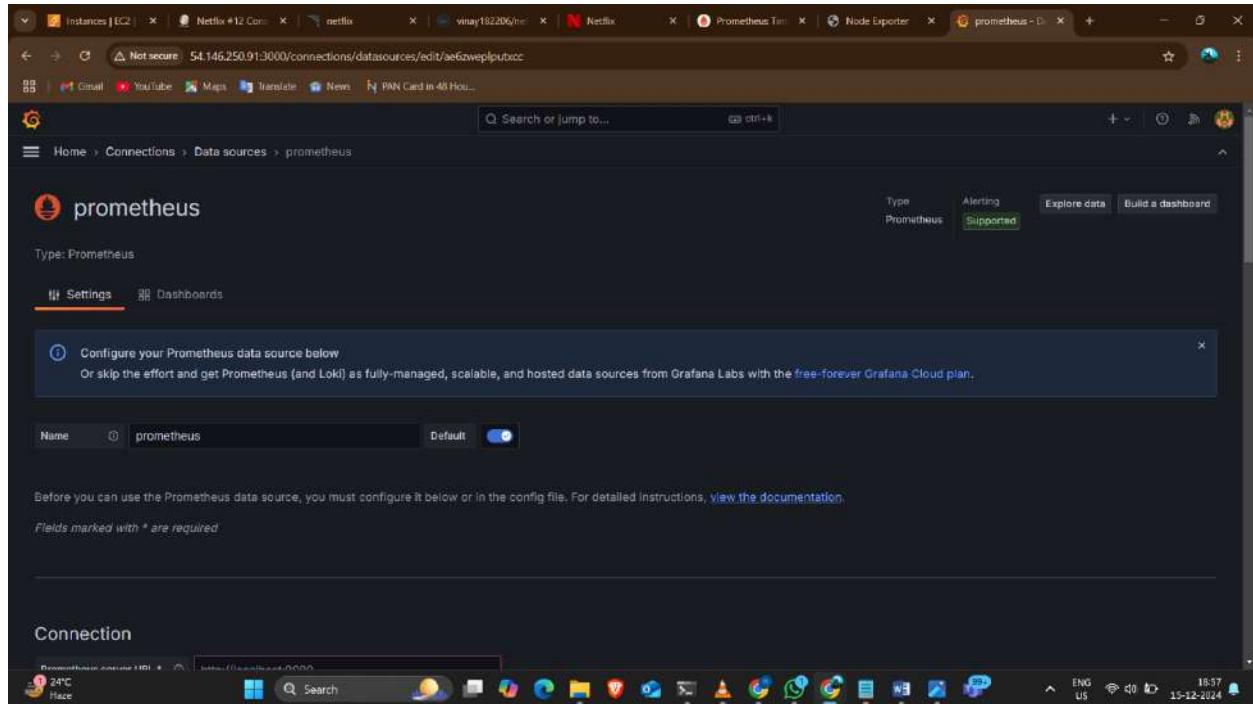


- Here the grafana official page.
- Go to the dashboards.

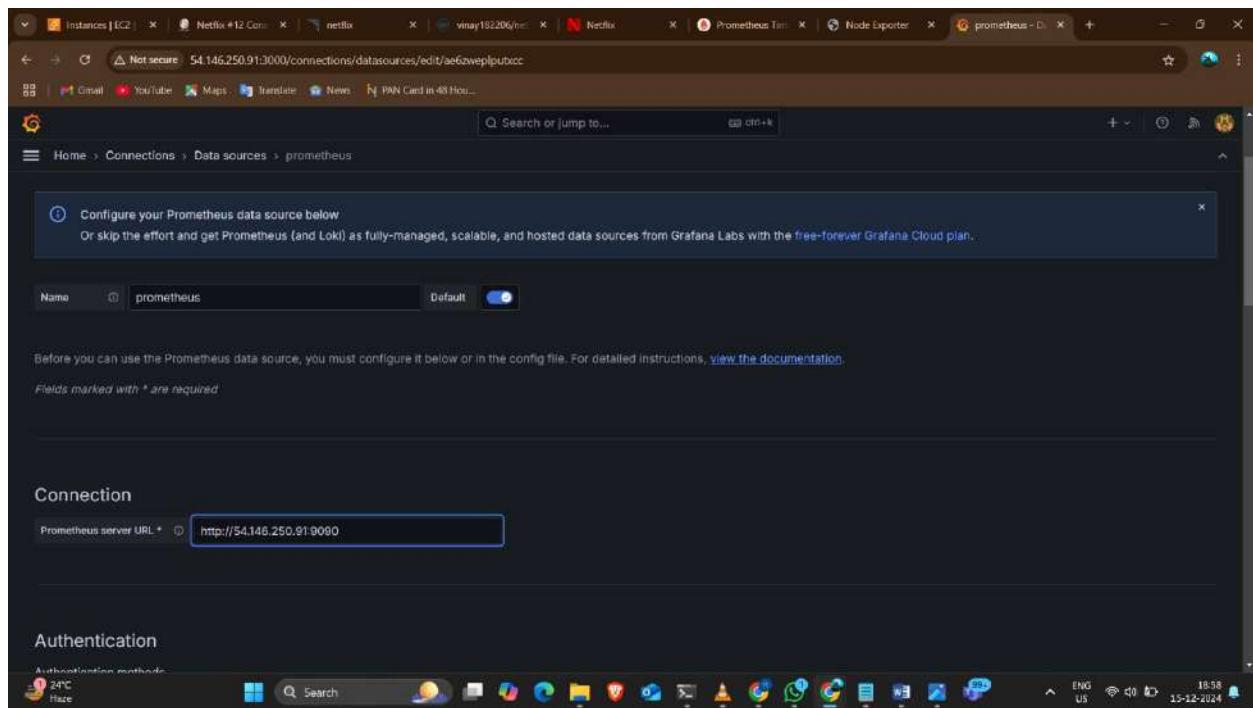
The screenshot shows the Grafana homepage. The URL in the address bar is [Not secure 54.146.250.91:3000/?orgId=1&from=now-6h&to=now&tz=browser">54.146.250.91:3000/?orgId=1&from=now-6h&to=now&tz=browser](https://grafana.com/). The page features a dark header with the Grafana logo and navigation links like Home, Bookmarks, Starred, Dashboards, Explore, Alerting, Connections, and Administration. The main content area has a "Welcome to Grafana" title and a "Basic" section with a "TUTORIAL" card about "DATA SOURCE AND DASHBOARDS" and "Grafana fundamentals". There are also "DATA SOURCES" and "DASHBOARDS" cards. Below the main content are sections for "Dashboards", "Starred dashboards", and "Recently viewed dashboards". A footer banner at the bottom right says "Grafana Labs in 2024". The system tray at the bottom shows a weather icon (24°C Haze), a search bar, and various application icons.

- Create a data source for promethues.

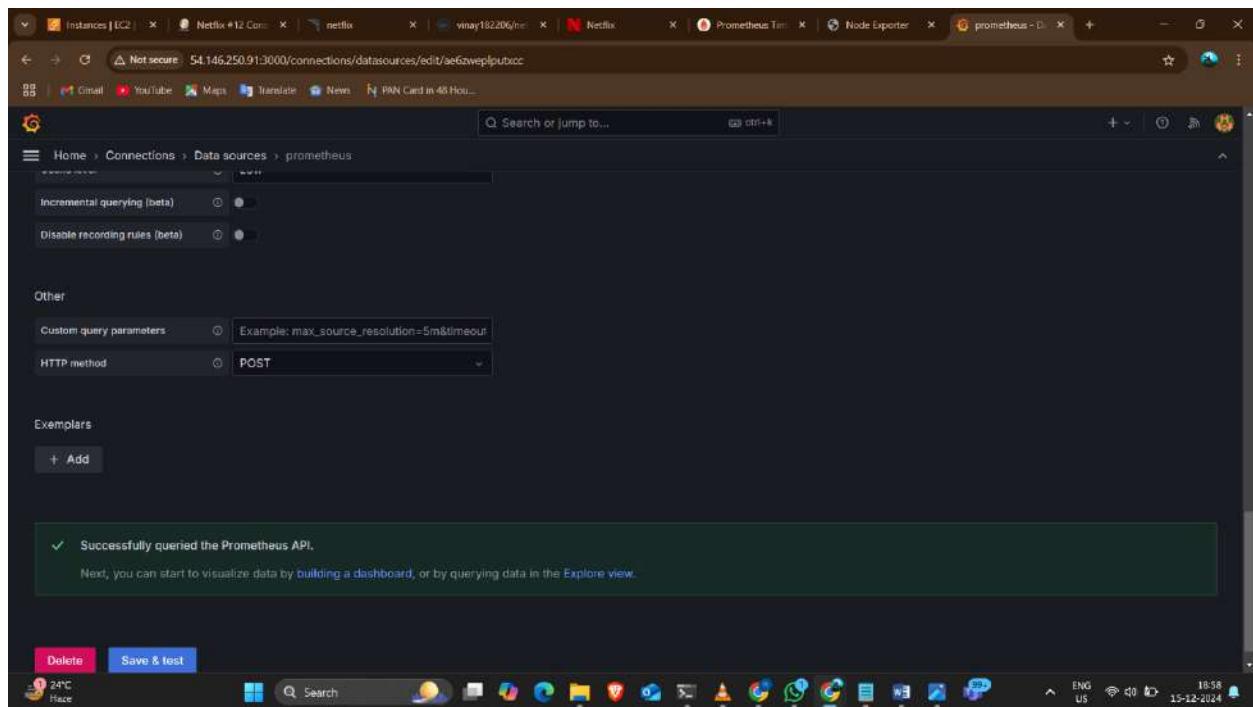
The screenshot shows the "Add data source" configuration page in Grafana. The URL in the address bar is [54.146.250.91:3000/connections/datasources/new](https://grafana.com/connections/datasources/new). The page has a header "Add data source" and a sub-header "Choose a data source type". It includes a search bar "Filter by name or type" and a list of "Time series databases" with four options: Prometheus, Graphite, InfluxDB, and OpenTSDB. Each option has a small icon, a name, a description, and a "Learn more" button. The system tray at the bottom shows a weather icon (24°C Haze), a search bar, and various application icons.



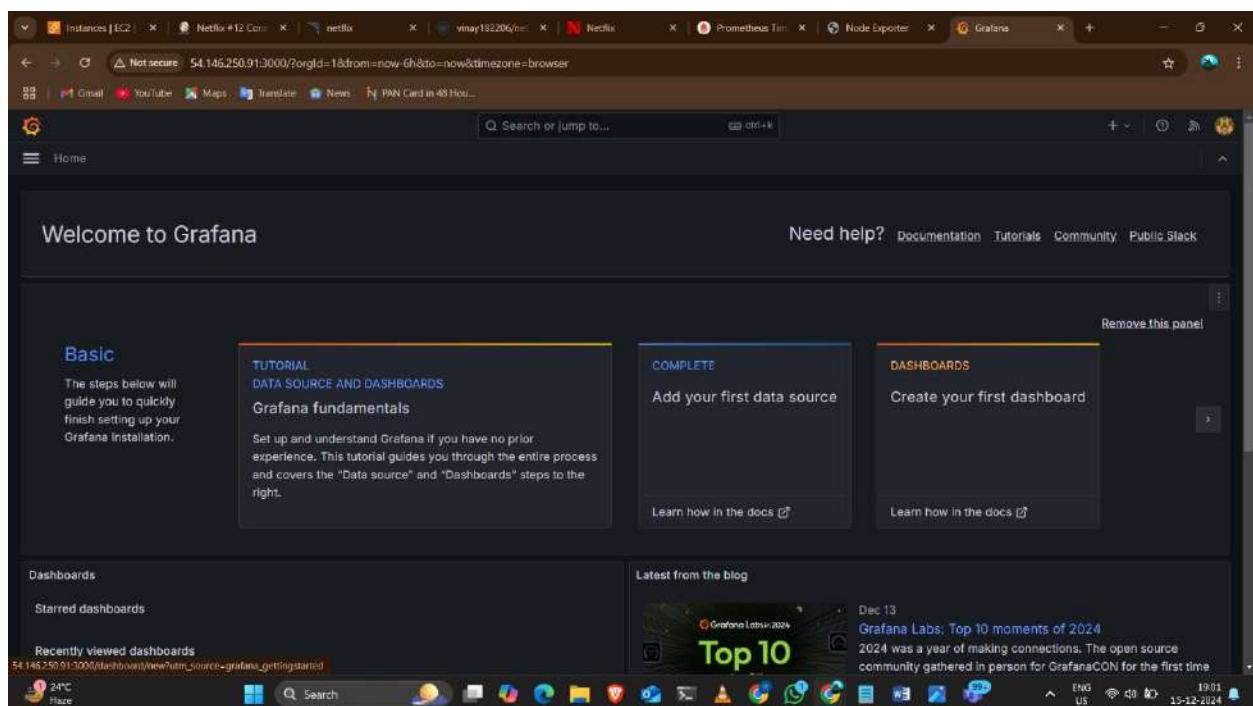
- Provide the promethues running ip.

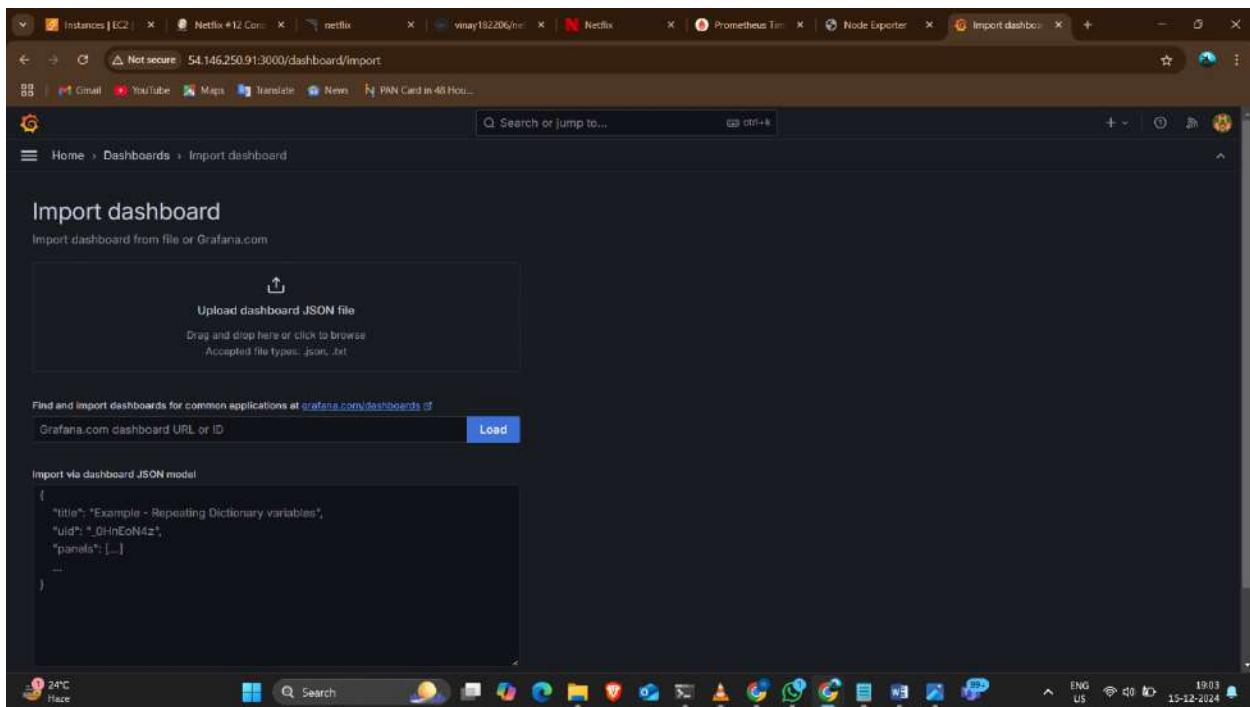
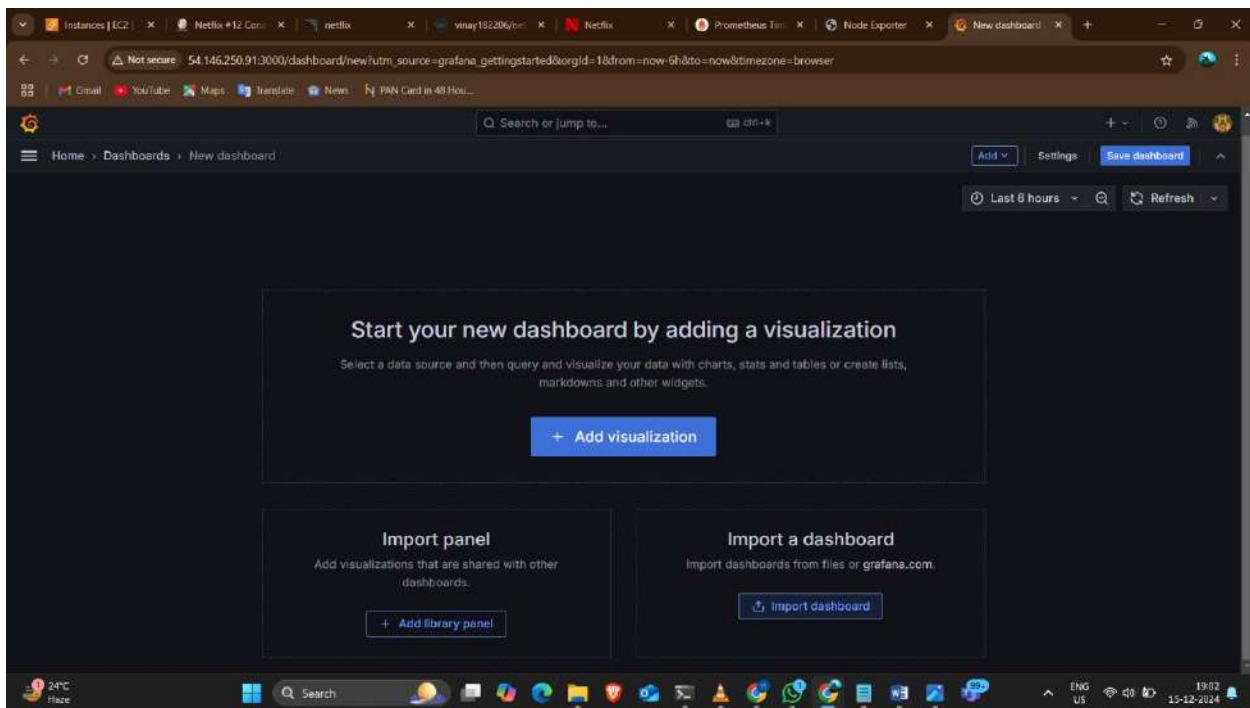


- Save and test.



- Again create the dashboard for Jenkins.





- Give the load number as “9964”.

Not secure 54.146.250.91:3000/dashboard/import

Import dashboard from file or Grafana.com

Import dashboard

Import dashboard from file or Grafana.com

Upload dashboard JSON file

Drag and drop here or click to browse

Accepted file types: json, txt

Find and import dashboards for common applications at [grafana.com/dashboards/](https://grafana.com/dashboards/)

9964

Load

Import via dashboard JSON model

```
{
  "title": "Example - Repeating Dictionary Variables",
  "uid": "0HlnEdN4z",
  "panels": [...]
}
```

Load Cancel

grafana.com/grafana/dashboards/1860-node-exporter-full/

Grafana Labs Products Open Source Solutions Learn Docs Company Contact us Sign in

Nearly all default values exported by Prometheus node exporter graphed.

Only requires the default job\_name: node, add as many targets as you need in /etc/prometheus/prometheus.yml.

```
- job_name: node
  static_configs:
    - targets: ['localhost:9100']
```

Copy

Recommended for prometheus-node-exporter the arguments '-collector.systemd --collector.processes' because the graph uses some of their metrics.

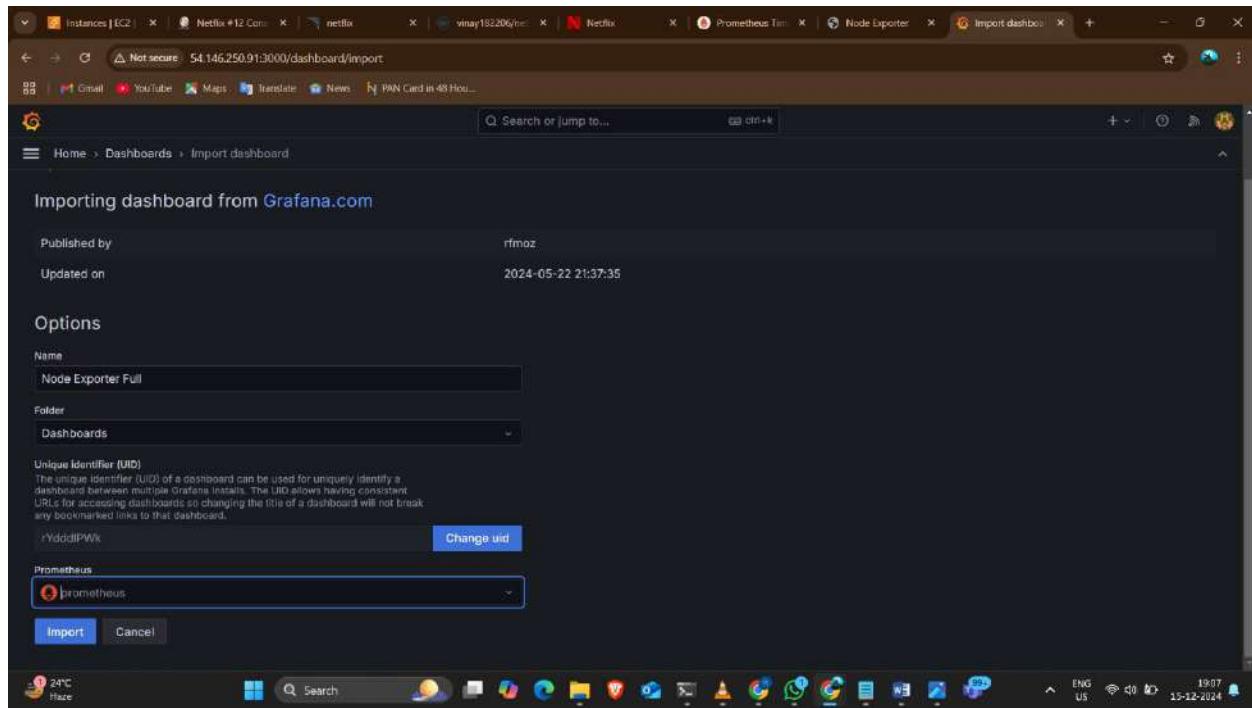
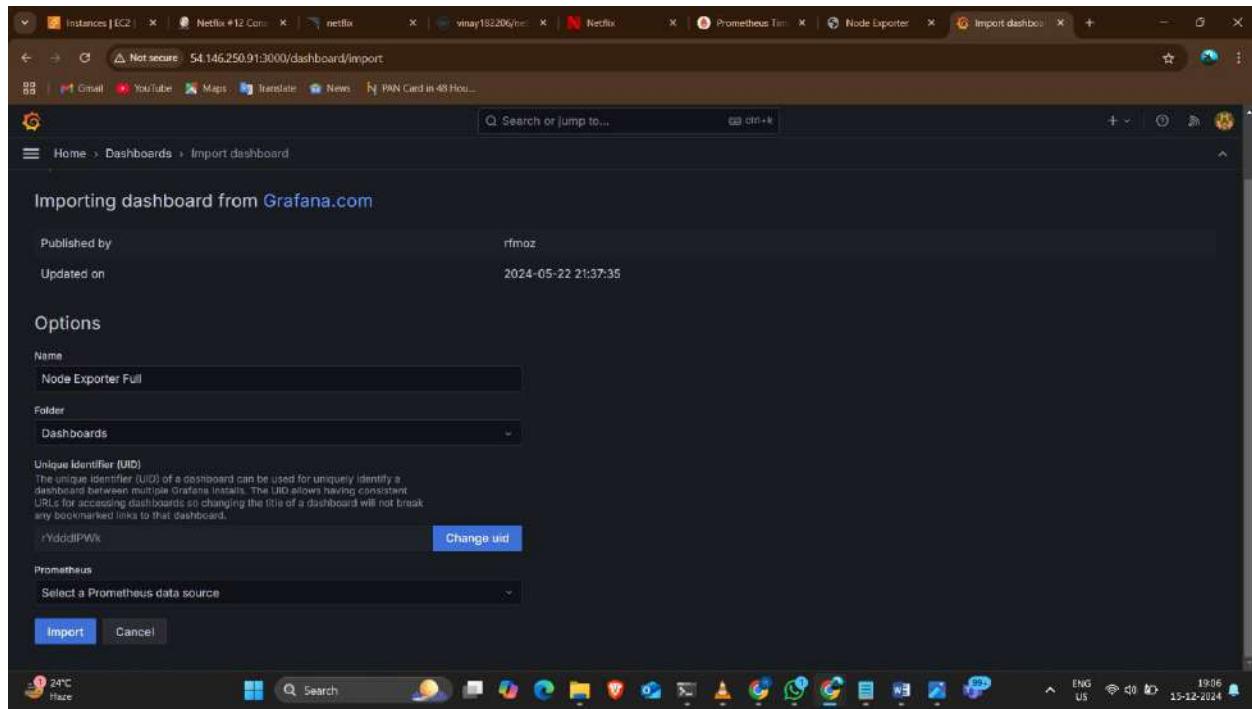
Since revision 16, for prometheus-node-exporter v0.18 or newer. Since revision 12, for prometheus-node-exporter v0.16 or newer.

Available on github: <https://github.com/rfmoz/grafana-dashboards.git>

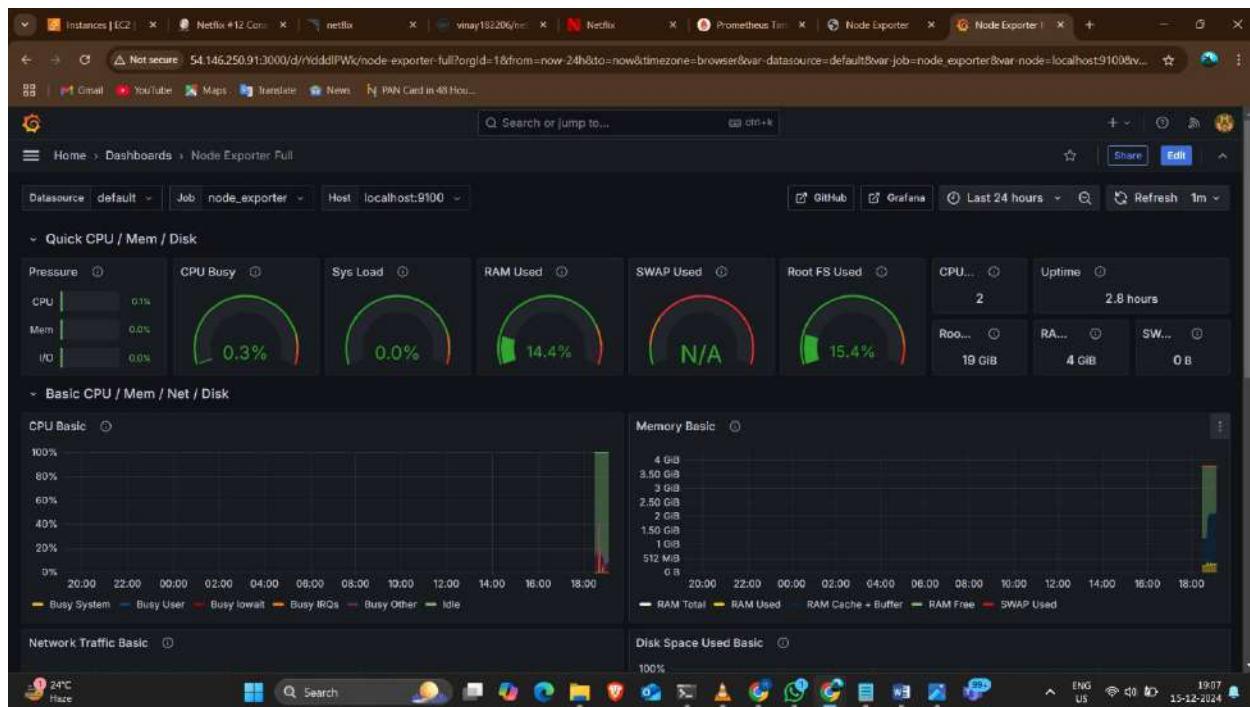
**Revisions**

Revision	Description	Created
37		2024-05-22T16:07:35

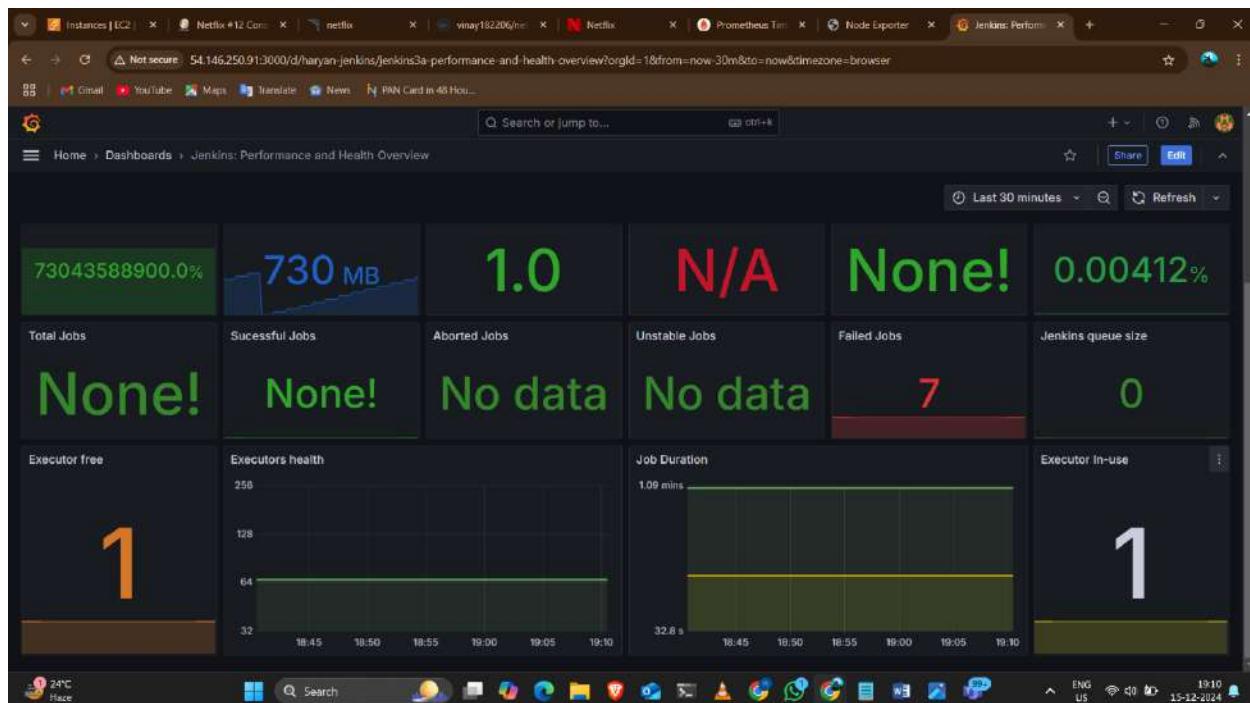
ID: 1860  
Datasource: Prometheus  
Dependencies: Bar gauge 5.0.0 Gauge 5.0.0  
Grafana 9.4.3 Stat 5.0.0  
Time series 5.0.0



- Observe the results.

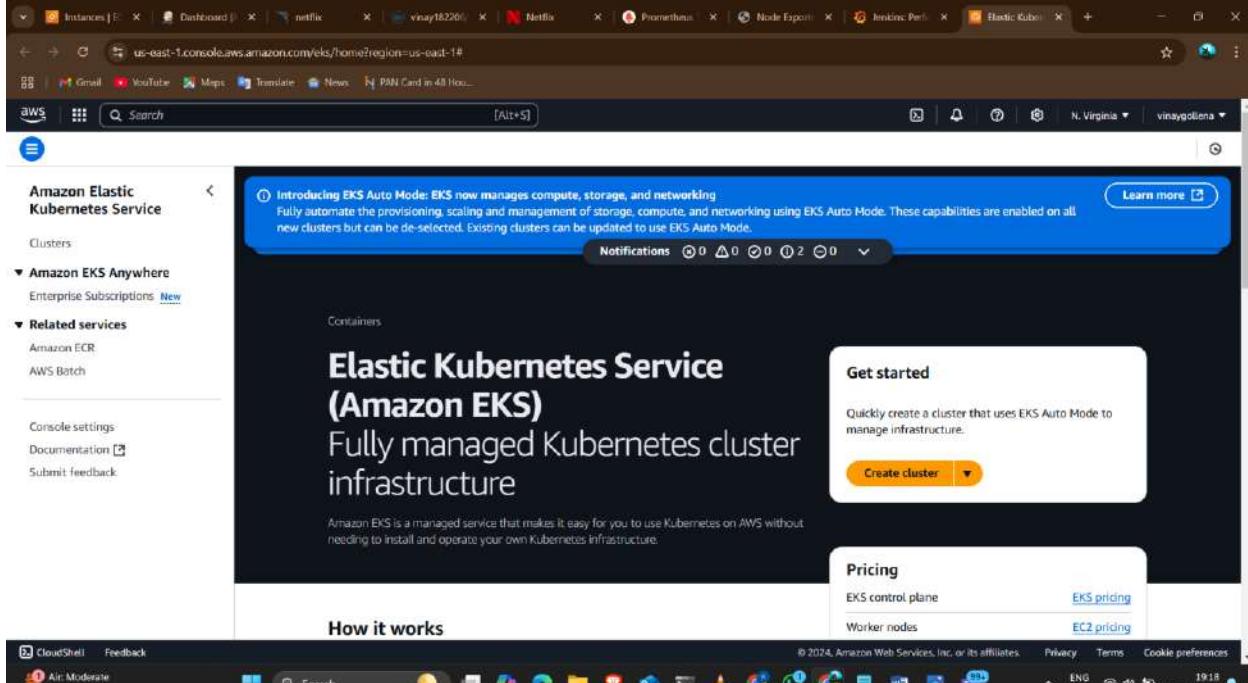


- Here the Jenkins reports we can observe the Jenkins reports here.

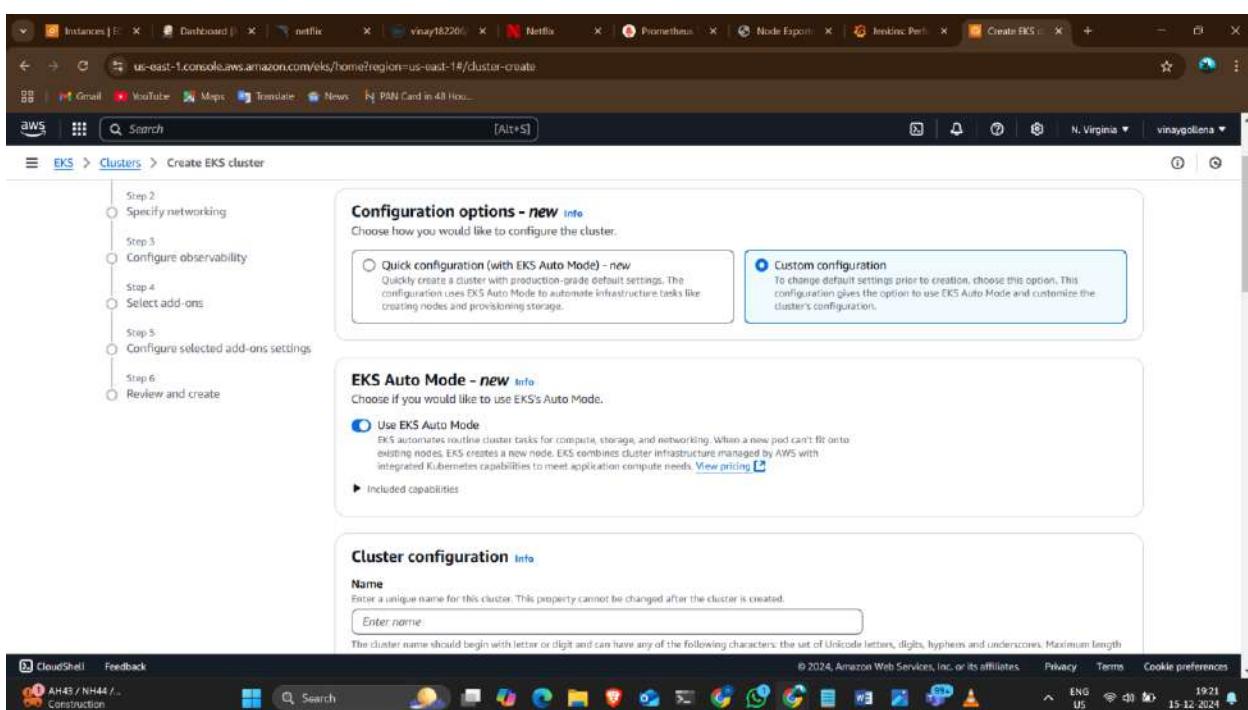


## Phase -5 Deploy Netflix clone with EKS→ArgoCD

- Now create eks cluster manually.



The screenshot shows the AWS EKS home page. A prominent blue banner at the top left reads "Introducing EKS Auto Mode: EKS now manages compute, storage, and networking". Below the banner, there's a "Get started" button. On the left sidebar, under "Clusters", there are sections for "Amazon EKS Anywhere" and "Related services" (Amazon ECR, AWS Batch). Under "Console settings", there are links for "Documentation" and "Submit feedback". The main content area features the title "Elastic Kubernetes Service (Amazon EKS)" and the subtitle "Fully managed Kubernetes cluster infrastructure". It also includes a section titled "How it works" and a "Pricing" table comparing EKS control plane and Worker nodes costs.

The screenshot shows the "Create EKS cluster" wizard, Step 2: Configuration options. It has two main sections: "Configuration options - new" and "EKS Auto Mode - new". In the "Configuration options" section, there are two radio button options: "Quick configuration (with EKS Auto Mode) - new" (selected) and "Custom configuration". The "Custom configuration" option is described as allowing users to change default settings prior to creation. In the "EKS Auto Mode" section, there is also a selected radio button for "Use EKS Auto Mode", which is described as automating routine cluster tasks like compute, storage, and networking. The "Cluster configuration" section at the bottom allows users to enter a cluster name.

The screenshot shows the 'Create EKS cluster' wizard on the AWS EKS service. The current step is 'Step 2: Configuration options'. It provides two main configuration paths:

- Quick configuration (with EKS Auto Mode) - new**: This option allows for a quick cluster creation with production-grade default settings, utilizing EKS Auto Mode for automation.
- Custom configuration**: This option allows changing default settings prior to creation, providing the option to use EKS Auto Mode and customize the cluster's configuration.

Below these options, there is a section titled 'EKS Auto Mode - new' which describes how EKS Auto Mode automates routine cluster tasks for compute, storage, and networking.

**Cluster configuration** section:

- Name**: A text input field where the user can enter a unique name for the cluster. A note specifies that the name cannot be changed after creation and must begin with a letter or digit.

At the bottom of the screen, the AWS navigation bar and system status bar are visible.

- Create role for cluster.

The screenshot shows the 'Create role' wizard on the AWS IAM service. The current step is 'Step 1: Select trusted entity'.

The 'Trusted entity type' section contains five options:

- AWS service**: Allows AWS services like EC2, Lambda, or others to perform actions in this account.
- AWS account**: Allows entities in other AWS accounts belonging to you or a 3rd party to perform actions in this account.
- Web identity**: Allows users federated by the specified external web identity provider to assume this role to perform actions in this account.
- SAML 2.0 federation**: Allows users federated with SAML 2.0 from a corporate directory to perform actions in this account.
- Custom trust policy**: Creates a custom trust policy to enable others to perform actions in this account.

The 'Use case' section allows selecting a service or use case for the role.

At the bottom right, there are 'Cancel' and 'Next Step' buttons. The AWS navigation bar and system status bar are also present at the bottom.

SAML 2.0 federation  
Allow users federated with SAML 2.0 from a corporate directory to perform actions in this account.

Custom trust policy  
Create a custom trust policy to enable others to perform actions in this account.

**Use case**  
Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

**Service or use case**  
EKS

Choose a use case for the specified service.

**Use case**

- EKS - Service  
Allows EKS to manage clusters on your behalf.
- EKS - Cluster  
Allows the cluster Kubernetes control plane to manage AWS resources on your behalf.
- EKS - Nodegroup  
Allows EKS to manage nodegroups on your behalf.
- EKS - Fargate pod  
Allows access to other AWS service resources that are required to run Amazon EKS pods on AWS Fargate.
- EKS - Fargate profile  
Allows EKS to run Fargate tasks.
- EKS - Connector  
Allows access to other AWS service resources that are required to connect to external clusters.

Step 1  
Select trusted entity

Step 2  
Add permissions

Step 3  
Name, review, and create

**Name, review, and create**

**Role details**

**Role name**  
Enter a meaningful name to identify this role.  
Netflix

Maximum 64 characters. Use alphanumeric and '+-, @-, \_' characters.

**Description**  
Add a short explanation for this role.  
Allows the cluster Kubernetes control plane to manage AWS resources on your behalf.

Maximum 1000 characters. Use letters (A-Z and a-z), numbers (0-9), tabs, new lines, or any of the following characters: \_+=. @~^|{}!\$%^&`~-"

**Step 1: Select trusted entities**

**Trust policy**

```
1: {
2:   "Version": "2012-10-17",
3:   "Statement": [
4:     {
5:       "Effect": "Allow",
6:       "Action": "sts:AssumeRole"
7:     }
8:   ]
9: }
```

The screenshot shows the AWS IAM Roles page. A green banner at the top indicates that a role named 'Netflix' has been created. The main table lists four roles:

Role name	Trusted entities	Last activity
masters.vinaycluster.local	AWS Service: ec2	38 days ago
Netflix	AWS Service: eks	-
nodes.vinaycluster.local	AWS Service: ec2	54 days ago

Below the table, there are sections for 'Access AWS from your non AWS workloads' and 'X.509 Standard'. A tooltip for 'Temporary credentials' is visible, showing options for English (United States) and English (India). The status bar at the bottom right shows the date as 15-12-2024.

- Add role to it.

The screenshot shows the AWS EKS Cluster Configuration page. The 'Name' field is set to 'Netflix'. The 'Cluster IAM role' dropdown is set to 'Netflix'. Two warning messages are displayed:

- Cluster role missing recommended managed policies**: The cluster role must have the following managed policies or equivalent permissions to use EKS Auto Mode.
  - AmazonEKSBlockStoragePolicy
  - AmazonEKSComputePolicy
  - AmazonEKSLoadBalancingPolicy
  - AmazonEKSNetworkingPolicy
- Cluster role trust policy missing required actions**: The cluster role must have the following actions specified in the trust policy to use EKS Auto Mode.

The status bar at the bottom right shows the date as 15-12-2024.

Screenshot of the AWS EKS Cluster creation page:

The page shows a warning message: "Cluster role trust policy missing required actions. The cluster role must have the following actions specified in the trust policy to use EKS Auto Mode: sts:TagSession".

**Kubernetes version settings**

Kubernetes version: 1.29

**Upgrade policy**

Standard (selected): This option supports the Kubernetes version for 14 months after the release date. There is no additional cost. When standard support ends, your cluster will be auto-upgraded to the next version.

Extended: This option supports the Kubernetes version for 26 months after the release date. The extended support period has an additional hourly cost that begins after the standard support period ends. When extended support ends, your cluster will be auto-upgraded to the next version.

**Auto Mode Compute - new**

Configure node management for your EKS cluster. EKS offers four compute options: EKS Auto Mode, EC2 Managed Node Groups, Fargate, and hybrid.

CloudShell Feedback Search [Alt+S] © 2024, Amazon Web Services, Inc. or its affiliates. Privacy Terms Cookie preferences ENG IN 2045 15-12-2024

Screenshot of the AWS IAM Role creation page:

The page shows a service or use case selection dropdown set to "EKS".

**Choose a use case for the specified service.**

**Use case**

**EKS - Service**: Allows EKS to manage clusters on your behalf.

**EKS - Cluster**: Allows the cluster Kubernetes control plane to manage AWS resources on your behalf.

**EKS - Nodegroup**: Allows EKS to manage nodegroups on your behalf.

**EKS - Fargate pod**: Allows access to other AWS service resources that are required to run Amazon EKS pods on AWS Fargate.

**EKS - Fargate profile**: Allows EKS to run Fargate tasks.

**EKS - Connector**: Allows access to other AWS service resources that are required to connect to external clusters.

**EKS Local - Outpost**: Allows Amazon EKS Local to call AWS services on your behalf.

**EKS - Pod Identity**: Allows pods running in Amazon EKS cluster to access AWS resources.

**EKS - Auto Cluster**: Allows access to other AWS service resources that are required to operate Auto Mode clusters managed by EKS.

**EKS - Auto Node**: Allows EKS nodes to connect to EKS Auto Mode clusters and to pull container images from ECR.

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Screenshot of the AWS IAM 'Create role' wizard, Step 2: Add permissions.

**Add permissions**

Permissions policies (5)

Policy name	Type
AmazonEKSBlockStoragePolicy	AWS managed
AmazonEKSClusterPolicy	AWS managed
AmazonEKSComputePolicy	AWS managed
AmazonEKSLoadBalancingPolicy	AWS managed
AmazonEKSNetworkingPolicy	AWS managed

Set permissions boundary - optional

Cancel Previous Next

Screenshot of the AWS EKS 'Create EKS cluster' wizard, Step 1: Auto Mode Compute - new.

**Auto Mode Compute - new**

Built-in node pools - optional

Choose node pool(s): general-purpose system

Node IAM role: eks-autonode

Create recommended role

**Cluster access**

Bootstrap cluster administrator access: Allow cluster administrator access

Cluster authentication mode: EKS API

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- Select EKS API and ConfigMap.

The screenshot shows the 'Create EKS cluster' wizard on the AWS console. The current step is 'Step 1: Cluster access'. The 'Cluster access' section is expanded, showing two options for bootstrap cluster administrator access: 'Allow cluster administrator access' (selected) and 'Disallow cluster administrator access'. The 'Cluster authentication mode' section is also expanded, showing two options: 'EKS API' (unchecked) and 'EKS API and ConfigMap' (selected). The 'Secrets encryption' and 'ARC Zonal shift' sections are partially visible below.

- Select the vpc and subnets in that deselect the subnet-1e.

The screenshot shows the 'Create EKS cluster' wizard on the AWS console, currently at 'Step 2: Specify networking'. The 'Networking' section is expanded, showing the 'VPC' field set to 'vpc-023875e26f8c7b0cb | Default'. The 'Subnets' section shows a list of subnets selected for the cluster: 'subnet-0bb45835ee4b71d6a' (us-east-1a), 'subnet-0deec553580536bde' (us-east-1e), 'subnet-068b42fe28edf9c' (us-east-1b), 'subnet-05189e934e1ed5a9a' (us-east-1f), 'subnet-0f5a2985f6b18a87' (us-east-1a), and 'subnet-0602192ea208a0209' (us-east-1r). The 'Security groups' section is partially visible below. The navigation sidebar on the left lists steps: Step 2 (selected), Step 3, Step 4, Step 5, and Step 6.

- Add security group.

**Subnets** Info

Choose the subnets in your VPC where the control plane may place elastic network interfaces (ENIs) to facilitate communication with your cluster. To create a new subnet, go to the corresponding page in the [VPC console](#).

Select subnets

Clear selected subnets

subnet-0bb45835ee4b71d6a  
us-east-1d 172.31.80.0/20 Type: Public

subnet-0decf553580536bde  
us-east-1e 172.31.48.0/20 Type: Public

subnet-068b42fe28edff9c  
us-east-1b 172.31.32.0/20 Type: Public

subnet-05189e934e16d5a9a  
us-east-1f 172.31.64.0/20 Type: Public

subnet-0f5a2985f6b18da87  
us-east-1a 172.31.16.0/20 Type: Public

subnet-0602192ea2d8a0209  
us-east-1c 172.31.0.0/20 Type: Public

**Security groups** Info

Choose the security groups to apply to the EKS-managed Elastic Network Interfaces that are created in your control plane subnets. To create a new security group, go to the corresponding page in the [VPC console](#).

Select security groups

Clear selected security groups

sg-0c5126d7efb888c68 | launch-wizard-4  
launch-wizard-4 created 2024-12-14T16:50:28.810Z

**Choose cluster IP address family** Info

Specify the IP address type for pods and services in your cluster:

IPv4

IPv6

IPv4

IPv6

**Configure Kubernetes service IP address block** Info

Specify the range from which cluster services will receive IP addresses.

**Configure remote networks to enable hybrid nodes - new** Info

EKS Hybrid Nodes enables you to use on-premises and edge infrastructure as nodes in EKS clusters.

Specify the CIDR blocks for your on-premises environments that you will use for hybrid nodes.

**Cluster endpoint access** Info

Configure access to the Kubernetes API server endpoint.

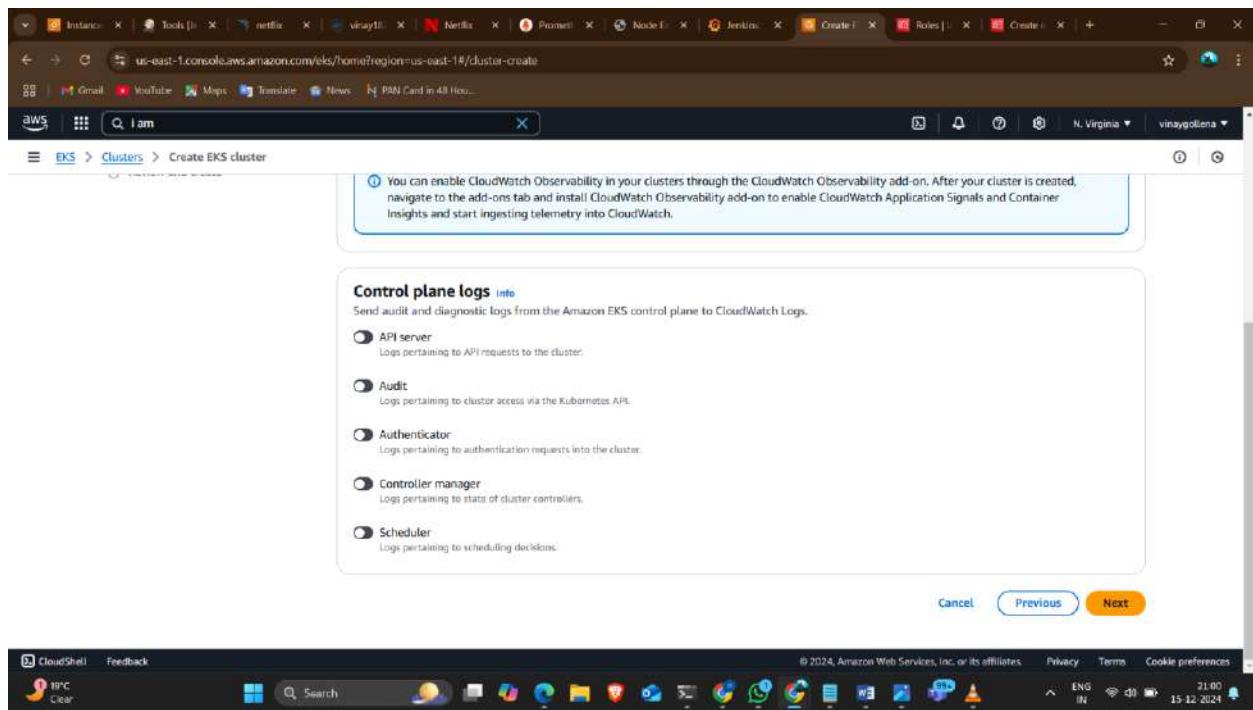
Public  
The cluster endpoint is accessible from outside of your VPC. Worker node traffic will leave your VPC to connect to the endpoint.

Public and private  
The cluster endpoint is accessible from outside of your VPC. Worker node traffic to the endpoint will stay within your VPC.

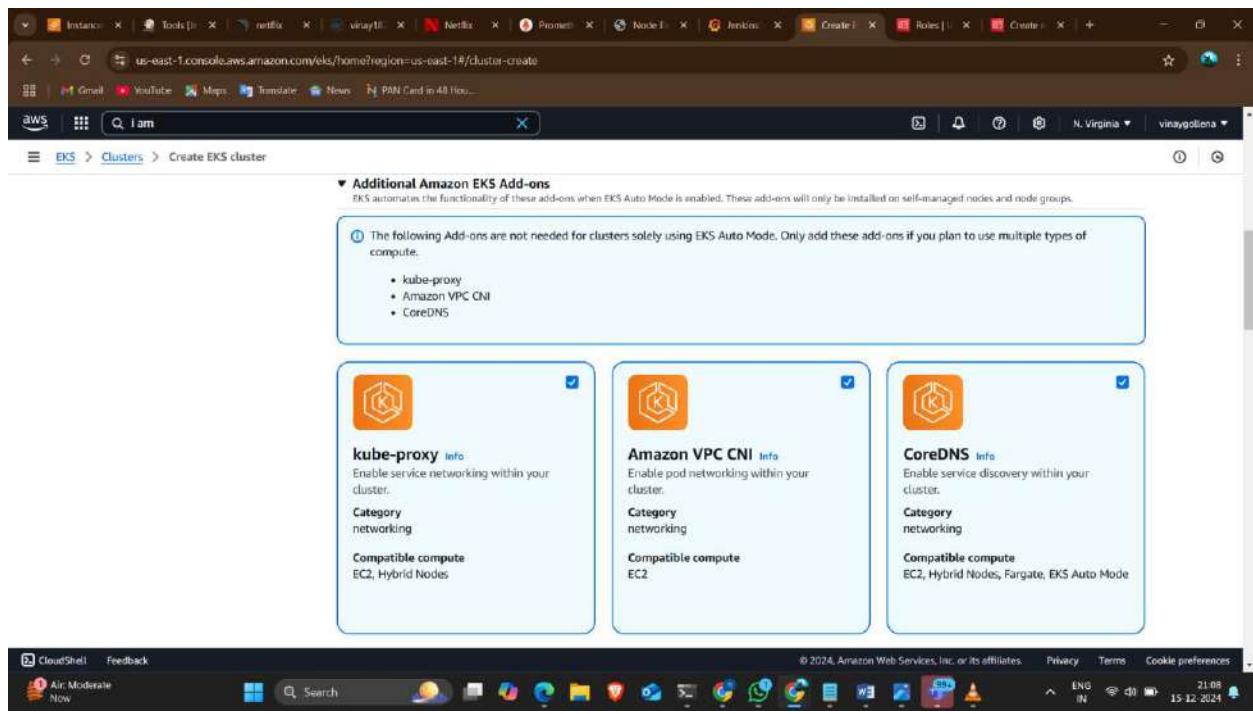
Private  
The cluster endpoint is only accessible through your VPC. Worker node traffic to the endpoint will stay within your VPC.

► Advanced settings

Cancel Previous Next



- Select the additional amazon eks add-ons and in that select below ones.



The screenshot shows the 'Create EKS cluster' page in the AWS console. Under the 'Upgrade policy' section, there are two options: 'Standard' (selected) and 'Extended'. Both options provide a brief description of their support periods.

**Standard**: This option supports the Kubernetes version for 14 months after the release date. There is no additional cost. When standard support ends, your cluster will be auto-upgraded to the next version.

**Extended**: This option supports the Kubernetes version for 36 months after the release date. The extended support period has an additional hourly cost that begins after the standard support period ends. When extended support ends, your cluster will be auto-upgraded to the next version.

**Auto Mode Compute - new**: Configures node management for the EKS cluster. It offers four compute options: EKS Auto Mode, EC2 Managed Node Groups, Fargate, and hybrid nodes. Node groups, Fargate profiles, and hybrid nodes are configured after cluster creation. You can also create self-managed nodes.

**Built-in node pools - optional**: EKS Auto Mode uses node pools to create nodes for pods. The node IAM role will be associated with built-in node pools. Use the Kubernetes API after cluster creation to create your own node pools.

**Node IAM role**: Nodes need an EC2 instance IAM Role to launch and register with a cluster. To create a new custom role, follow the instructions in the Amazon EKS User Guide. A dropdown menu shows 'AmazonEKSAutoNodeRole-1'.

**Cluster access**: Shows the AWS CloudShell icon, Feedback link, Watchlist, Ideas link, Search bar, and various AWS service icons. The status bar at the bottom right shows the date as 15-12-2024 and time as 21:10.

- Click on create.

The screenshot shows the 'Create EKS cluster' page with the 'Selected add-ons version (4)' section expanded. It lists four add-ons with their respective versions:

Add-on name	Version
coredns	v1.11.3-eksbuild.1
eks-pod-identity-agent	v1.3.4-eksbuild.1
kube-proxy	v1.31.2-eksbuild.3
vpc-cni	v1.19.0-eksbuild.1

The 'EKS Pod Identity (1)' section shows one entry:

Add-on name	IAM role	Service account
vpc-cni	Not set	aws-node

At the bottom right, there are 'Cancel', 'Previous', and 'Create' buttons. The status bar at the bottom right shows the date as 15-12-2024 and time as 21:13.

- The cluster is creating.

The screenshot shows the AWS EKS Cluster Overview page for a cluster named Netflix. The left sidebar includes sections for Amazon EKS Anywhere, Related services (Amazon ECR, AWS Batch), and navigation links (CloudShell, Feedback). The main content area displays cluster details: Status (Creating), Kubernetes version (1.31), Support period (Standard support until November 26, 2025), and Provider (EKS). Below this, there are tabs for Overview, Resources, Compute, Networking, Add-ons, Access, Observability, Update history, and Tags. The Compute tab is selected. A notification at the top indicates that add-ons (kube-proxy, vpc-cni, coredns, eks-pod-identity-agent) have been successfully added to the cluster. The bottom of the screen shows the Windows taskbar with various pinned icons.

- The cluster has been created.

The screenshot shows the AWS EKS Cluster Overview page for the same Netflix cluster. The left sidebar remains the same. The main content area now shows the cluster is Active. The Compute tab is selected, displaying the Nodes section which shows 0 nodes. A message states "No Nodes" and "This cluster does not have any Nodes, or you don't have permission to view them." The bottom of the screen shows the Windows taskbar.

- Create the node group.

**Configure node group** Info

A node group is a group of EC2 instances that supply compute capacity to your Amazon EKS cluster. You can add multiple node groups to your cluster.

**Node group configuration**

These properties cannot be changed after the node group is created.

**Name**  
Assign a unique name for this node group.

The node group name should begin with letter or digit and can have any of the following characters: the set of Unicode letters, digits, hyphens and underscores. Maximum length of 65.

**Node IAM role** Info  
Select the IAM role that will be used by the nodes. To create a new role, go to the [IAM console](#).

ⓘ The selected role must not be used by a self-managed node group as this could lead to a service interruption upon managed node group deletion.

[Learn more](#)

**Launch template** Info

**Use case**

Allow an AWS service like EC2, Lambda, or others to perform actions in this account.

**Service or use case**

Choose a use case for the specified service.

**Use case**

**EC2**  
Allows EC2 Instances to call AWS services on your behalf.

**EC2 Role for AWS Systems Manager**  
Allows EC2 Instances to call AWS services like CloudWatch and Systems Manager on your behalf.

**EC2 Spot Fleet Role**  
Allows EC2 Spot Fleet to request and terminate Spot Instances on your behalf.

**EC2 - Spot Fleet Auto Scaling**  
Allows Auto Scaling to access and update EC2 spot fleets on your behalf.

**EC2 - Spot Fleet Tagging**  
Allows EC2 to launch spot instances and attach tags to the launched instances on your behalf.

**EC2 - Spot Instances**  
Allows EC2 Spot Instances to launch and manage spot instances on your behalf.

**EC2 - Spot Fleet**  
Allows EC2 Spot Fleet to launch and manage spot fleet instances on your behalf.

**EC2 - Scheduled Instances**  
Allows EC2 Scheduled Instances to manage instances on your behalf.

**Next Step**

Screenshot of the AWS IAM 'Create role' wizard, Step 2: Add permissions.

**Permissions policy summary**

Policy name	Type	Attached as
AmazonEC2ContainerRegistryReadOnly	AWS managed	Permissions policy
AmazonEKS_CNI_Policy	AWS managed	Permissions policy
AmazonEKSWorkerNodePolicy	AWS managed	Permissions policy

**Step 3: Add tags**

Add tags - optional Info  
Tags are key-value pairs that you can add to AWS resources to help identify, organize, or search for resources.  
No tags associated with the resource.

Add new tag You can add up to 50 more tags.

Cancel Previous Create role

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Screenshot of the AWS EKS 'Add node group' wizard, Step 2: Set compute and scaling configuration.

**Set compute and scaling configuration**

**Node group compute configuration**  
These properties cannot be changed after the node group is created.

**AMI type** Info  
Select the EKS-optimized Amazon Machine Image for nodes.  
Amazon Linux 2 (AL2\_x86\_64)

**Capacity type**  
Select the capacity purchase option for this node group.  
On-Demand

**Instance types** Info  
Select instance types you prefer for this node group.  
Enter an instance type  
t3.medium  
vCPU: 2 vCPUs | Memory: 4 GiB | Network: Up to 5 Gigabit | Max ENI: 3 | Max IP: 18

**Disk size**  
Select the size of the attached EBS volume for each node.  
20 GiB

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Instances | netflix | viny1822 | Netflix | Prometheus | Node Exporter | Jenkins: N | Add node | Roles (1) | Netflix Configuration | +

us-east-1.console.aws.amazon.com/eks/home?region=us-east-1&cluster=Netflix/add-node-group

aws | I am | Gmail | YouTube | Maps | Translate | News | PAN Card in 48 Hrs...

EKS > Clusters > Netflix > Node groups > Add node group

### Node group scaling configuration

**Desired size**  
Set the desired number of nodes that the group should launch with initially.  
 nodes  
Desired node size must be greater than or equal to 0.

**Minimum size**  
Set the minimum number of nodes that the group can scale in to.  
 nodes  
Minimum node size must be greater than or equal to 0.

**Maximum size**  
Set the maximum number of nodes that the group can scale out to.  
 nodes  
Maximum node size must be greater than or equal to 1 and cannot be lower than the minimum size.

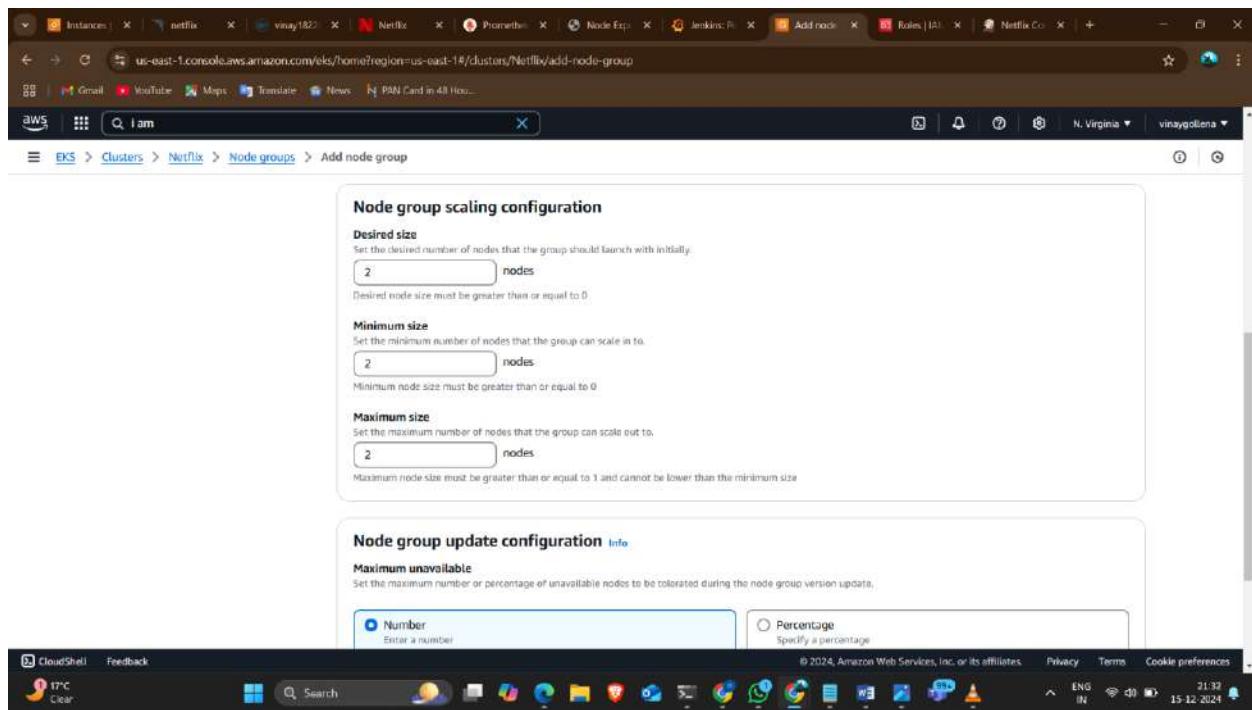
### Node group update configuration Info

**Maximum unavailable**  
Set the maximum number or percentage of unavailable nodes to be tolerated during the node group version update.

Number  
Enter a number

Percentage  
Specify a percentage

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Instances | netflix | viny1822 | Netflix | Prometheus | Node Exporter | Jenkins: N | Add node | Roles (1) | Netflix Configuration | +

us-east-1.console.aws.amazon.com/eks/home?region=us-east-1&cluster=Netflix/add-node-group

aws | I am | Gmail | YouTube | Maps | Translate | News | PAN Card in 48 Hrs...

EKS > Clusters > Netflix > Node groups > Add node group

nodes  
Minimum node size must be greater than or equal to 0.

**Maximum size**  
Set the maximum number of nodes that the group can scale out to.  
 nodes  
Maximum node size must be greater than or equal to 1 and cannot be lower than the minimum size.

### Node group update configuration Info

**Maximum unavailable**  
Set the maximum number or percentage of unavailable nodes to be tolerated during the node group version update.

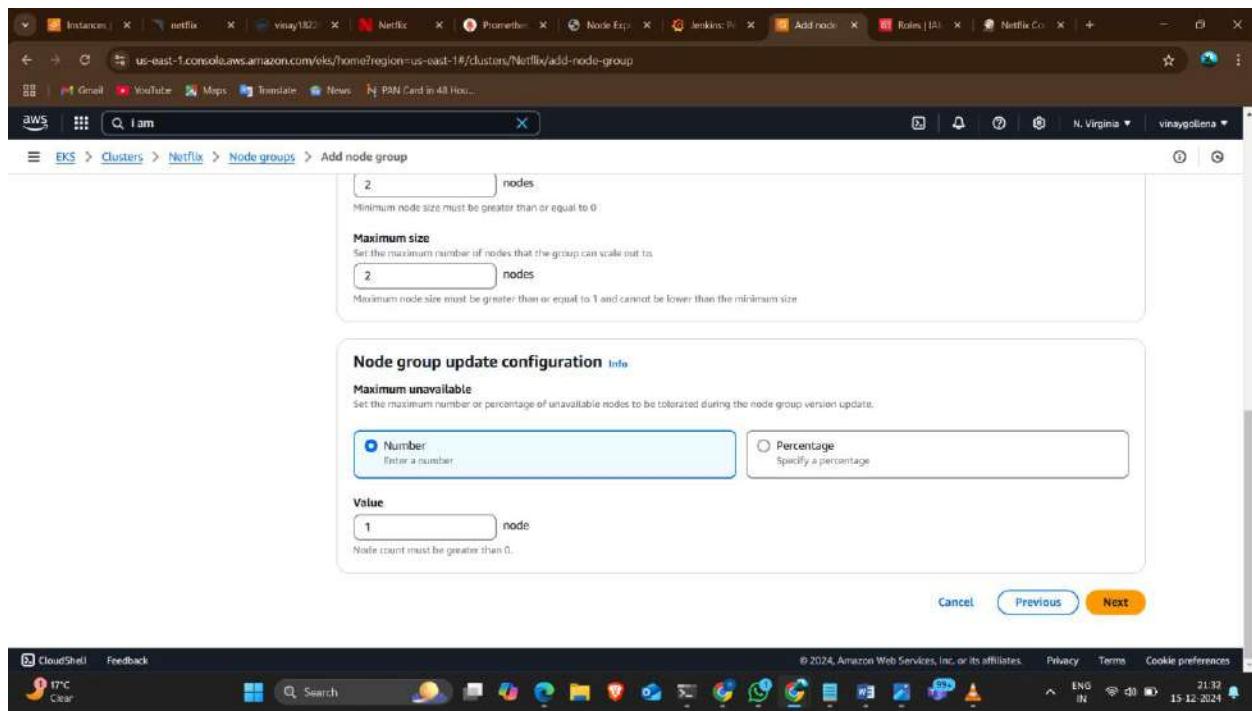
Number  
Enter a number

Percentage  
Specify a percentage

**Value**  
 node  
Node count must be greater than 0.

Cancel Previous Next

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**Specify networking**

**Node group network configuration**

These properties cannot be changed after the node group is created.

**Subnets** [Info](#)

Select the subnets in your VPC where your nodes will run. To create a new subnet, go to the corresponding page in the VPC console.

**Select subnets**

**Clear selected subnets**

subnet-0bb45835e4b71d6a (us-east-1a) 172.31.8.0/20

subnet-068b42fe28edf9c (us-east-1b) 172.31.32.0/20

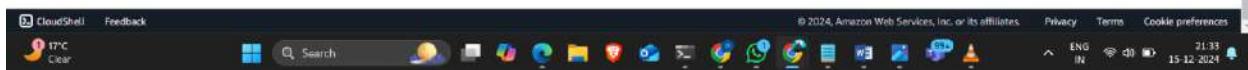
subnet-05189e934e16d5a9a (us-east-1c) 172.31.64.0/20

subnet-0f5a2985f6b18da87 (us-east-1d) 172.31.16.0/20

subnet-0602192ea2d8a0209 (us-east-1e) 172.31.0.0/20

**Configure remote access to nodes** [Info](#)

**Cancel** **Previous** **Next**



- Node group has been created.

**Amazon Elastic Kubernetes Service**

**Clusters**

**Amazon EKS Anywhere**

Enterprise Subscriptions [New](#)

**Related services**

Amazon ECR

AWS Batch

Console settings

Documentation [Open](#)

Submit feedback

**Built-in node pools (2)** [Info](#)

The node pools listed are created and managed by AWS. You can create new node pools using the Kubernetes API. You only need node pools if your cluster uses EKS Auto Mode. Self-created node pools can be viewed in [resources](#).

Node pool name	Node class	Node IAM role	Status
general-purpose	default	autonode-net	Not ready
system	default	autonode-net	Not ready

**Node groups (1)** [Info](#)

Node groups implement basic compute scaling through EC2 Auto Scaling groups.

Group name	Desired size	AMI release version	Launch template	Status
node-group-vin	2	1.31.3-20241205	-	Active

**Fargate profiles (0)** [Info](#)

Profile name	Namespaces	Status
No Fargate profiles		

**CloudShell** **Feedback**

**CloudShell** **Feedback**

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Amazon Elastic Kubernetes Service

Kubernetes version: 1.51

AMI type: AL2\_x86\_64

Status: Active

AMI release version: 1.31.3-20241205

Instance types: t3.medium

Disk size: 20 GiB

**Details** Nodes Health issues Kubernetes labels Update config Kubernetes taints Update history Tags

**Details**

Node group ARN: arn:aws:eks:us-east-1:85172562597:nodegroup/Netflix/node-group-vin/4:09e773-cd5a-6680-7acf-cb77b9b94b78

Autoscaling group name: eks-node-group-vin-40x9e773-cd5a-6680-7acf-cb77b9b94b78

Capacity type: On-Demand

Desired size: 2 nodes

Minimum size: 2 nodes

Maximum size: 2 nodes

Subnets:

- subnet-0bb45835ee4b71d6a
- subnet-060b42fe28efdf9c
- subnet-05189e934e16d5a9a
- subnet-0f5a2985f6fb18da87
- subnet-0602192ea2d8a0209

Configure remote access to nodes: off

Created: 7 hours ago

Node IAM role ARN: arn:aws:iam::851725625974:role/node-vin

View in IAM

- After cluster has created than 2 instances were created.

Last updated about 6 hours ago

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
eks	i-0cb35505ef05ce09	Stopped	t2.medium	-	View alarms +	us-east-1a	-
Netflix	i-09a7ea3458b67519e	Stopped	t2.large	-	View alarms +	us-east-1a	ec2-54-1
eks	i-03b4a9e5f146bd0b16	Stopped	t2.large	-	View alarms +	us-east-1a	-
eks-net	i-0fd6605fb85cd9fc3	Running	t2.large	2/2 checks passed	View alarms +	us-east-1a	ec2-54-1
	i-0577193f91e1fdf8b	Running	t3.medium	3/3 checks passed	View alarms +	us-east-1f	ec2-3-23
	i-07ea61af3a1801255	Running	t3.medium	3/3 checks passed	View alarms +	us-east-1c	ec2-3-23

**Instances (1/6) Info**

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

**Instance summary**

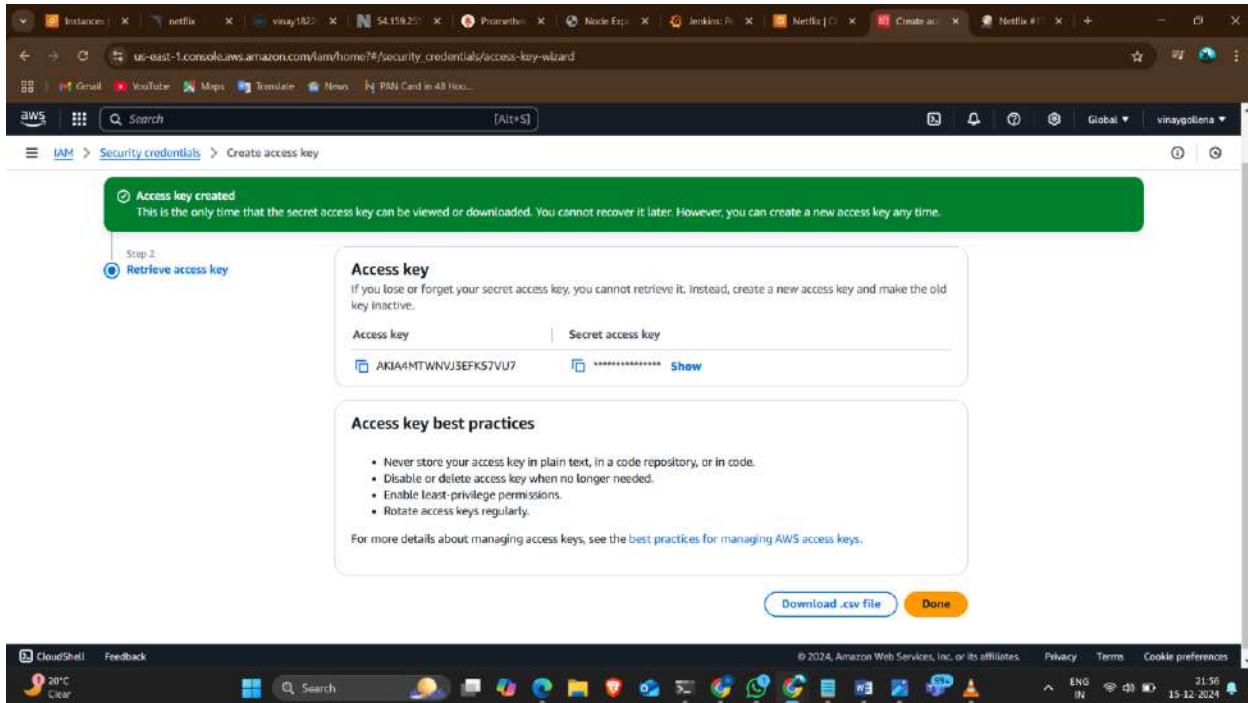
Instance ID: i-07ea61af3a1801255

Public IPv4 address copied: 3.237.255.19 | open address

Private IPv4 addresses:

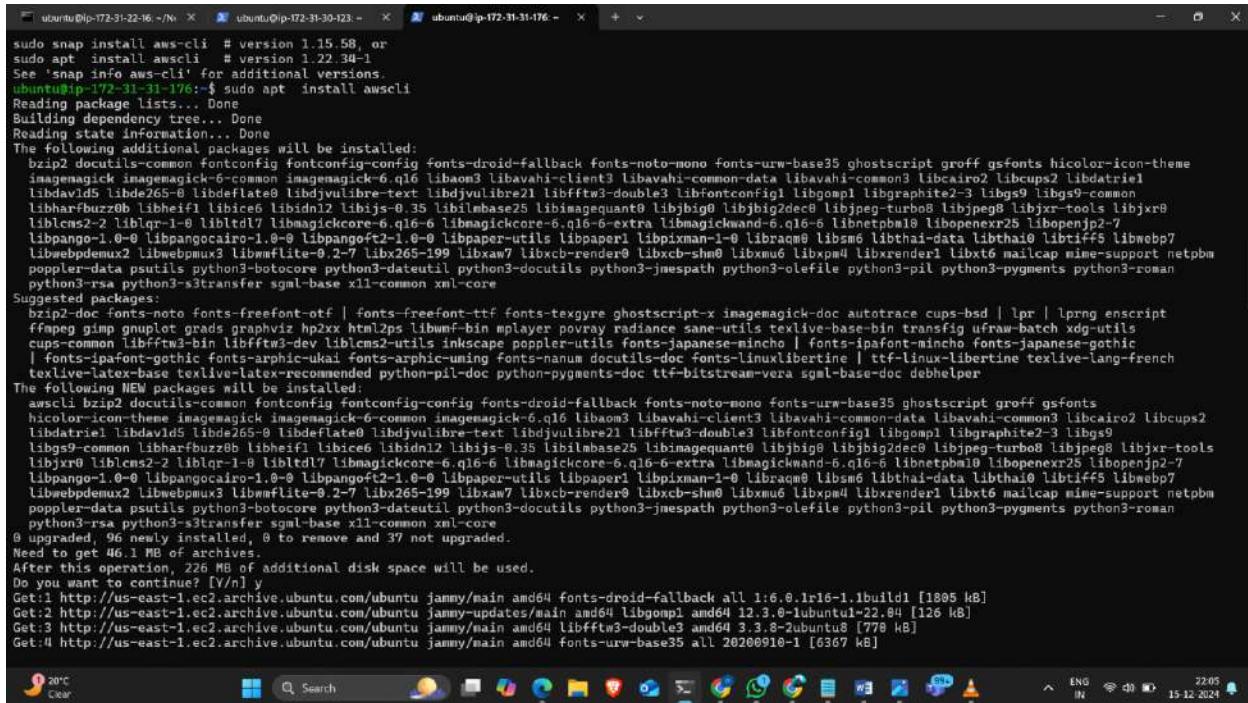
- 172.31.10.113
- 172.31.12.139

- Create the access key and secret key and store them.



- Take any instance and connect to the terminal.
  - Check the aws version.

- Install thw aws cli.

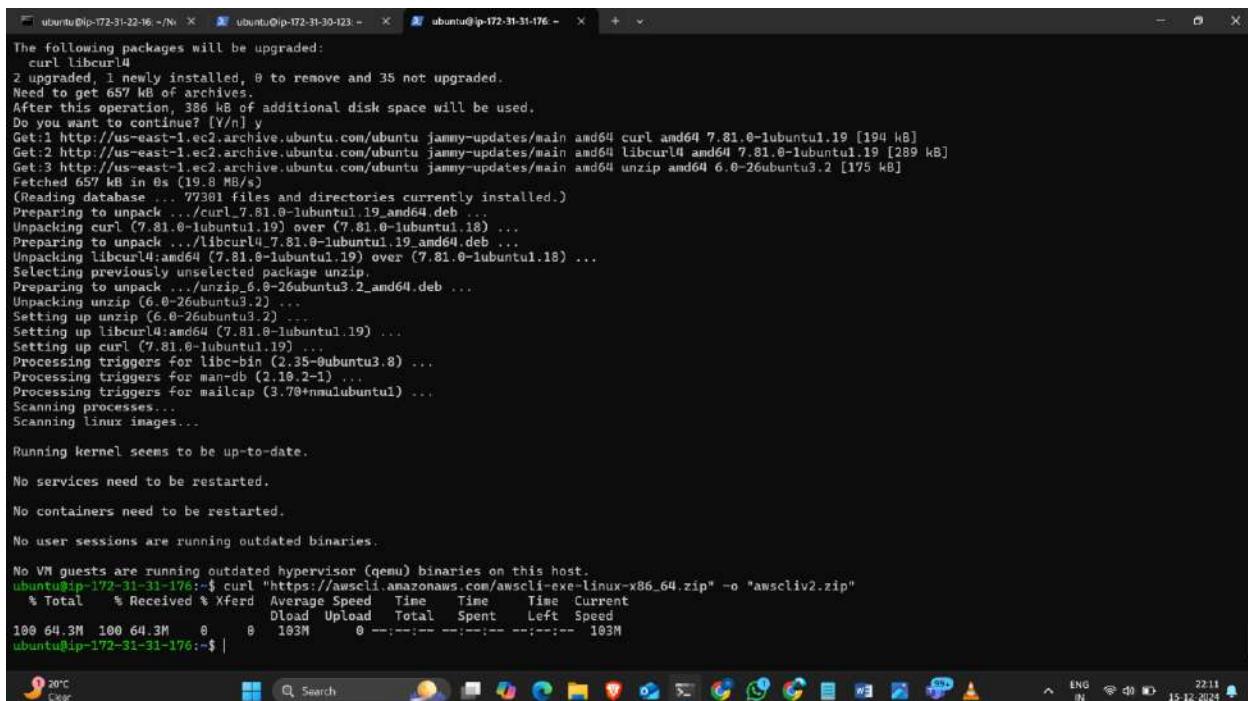


```

ubuntu@ip-172-31-22-16:~$ sudo snap install awscli # version 1.15.58, or
sudo apt install awscli # version 1.22.34-1
See 'snap info awscli' for additional versions.
ubuntu@ip-172-31-31-176:~$ sudo apt install awscli
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following additional packages will be installed:
bz2-docutils-common fontconfig fontconfig-config fonts-droid-fallback fonts-noto-mono fonts-urw-base35 ghostscript groff gsfonts hicolor-icon-theme
imagemagick imagemagick-6-common imagemagick6-q16 libbaom3 libavahi-client3 libavahi-common3 libcairo2 libcurl2 libdatriel
libdavids libde265 libdeflate2 libdjvuibre-text libdjvuibre21 libfftw3-double3 libfontconfig libgomp1 libgraphite2-3 libgs9 libgs9-common
libharfbuzz0b libheif libice6 libidn12 libjbig0 libjbig2dec0 libjpeg-turbo8 libjpeg8 libjxr-tools libjxr8
liblcms2-2 liblqr-1-0 libltdl7 libmagickcore-6.q16-6 libmagickwand-6.q16-6 libnetpbm10 libopenexr25 libopenjp2-7
libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpaper-utils libpaper1 libpixman-1-0 libraqm0 libthai-data libthai0 libtiff5 libwebp7
libwebpdmux2 libwebpnuu3 libwmflite-0.2-7 libx265-199 libxaw7 libxcb-render0 libxcb-shm0 libxml2 libxpm4 libxrender1 libxt6 mailcap mime-support netpbm
poppler-data putils python3-botocore python3-dateutil python3-docutils python3-jmespath python3-olefile python3-pil python3-pygments python3-roman
python3-rsa python3-s3transfer sgml-base x11-common xml-core
Suggested packages:
bz2-doc fonts-noto-fonts-freefont-otf | fonts-freefont-ttf fonts-tegyre ghostscript-x imagemagick-doc autotrace cups-bsd | lpr | lpng enscript
ffmpeg gimp gnuplot grads graphviz hp2xx html2ps libumf-bin mplayer povray radiance sane-utils texlive-base-bin transfig ufraw-batch xdg-utils
cups-common libfftw3-bin libfftw3-dev liblcms2-utils inscape poppler-utils fonts-japanese-mincho fonts-ipafont-mincho fonts-japanese-gothic
| fonts-ipafont-gothic fonts-aphic-ukai fonts-aphic-uning fonts-nanum docutils-doc fonts-linuxlibertine | ttf-linux-libertine texlive-latex-base
texlive-latex-recommended python3-pil-doc python3-pygments-doc ttf-bitstream-vera sgml-base-doc debhelper
The following NEW packages will be installed:
awscli bz2-docutils-common fontconfig fontconfig-config fonts-droid-fallback fonts-noto-mono fonts-urw-base35 ghostscript groff gsfonts
hicolor-icon-theme imagemagick imagemagick-6-common imagemagick6-q16 libbaom3 libavahi-client3 libavahi-common3 libcairo2 libcurl2
libdatriel libde265 libdeflate0 libdjvuibre-text libdjvuibre21 libfftw3-double3 libfontconfig libgomp1 libgraphite2-3 libgs9
libgs9-common libharfbuzz0b libheif libice6 libidn12 libjbig0 libjbig2dec0 libjpeg-turbo8 libjpeg8 libjxr-tools libjxr8
liblqr-1-0 libltdl7 libmagickcore-6.q16-6 libmagickwand-6.q16-6 libnetpbm10 libopenexr25 libopenjp2-7
libpango-1.0-0 libpangocairo-1.0-0 libpangoft2-1.0-0 libpaper-utils libpaper1 libpixman-1-0 libraqm0 libthai-data libthai0 libtiff5 libwebp7
libwebpdmux2 libwebpnuu3 libwmflite-0.2-7 libx265-199 libxaw7 libxcb-render0 libxcb-shm0 libxml2 libxpm4 libxrender1 libxt6 mailcap mime-support netpbm
poppler-data putils python3-botocore python3-dateutil python3-docutils python3-jmespath python3-olefile python3-pil python3-pygments python3-roman
python3-rsa python3-s3transfer sgml-base x11-common xml-core
0 upgraded, 0 newly installed, 0 to remove and 37 not upgraded.
Need to get 46.1 MB of archives.
After this operation, 226 MB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 fonts-droid-fallback all 1:6.0.1r16-1.1build1 [1805 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libgomp1 amd64 12.3.0-1ubuntu1-22.04 [126 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libfftw3-double3 amd64 3.3.8-2ubuntu8 [778 kB]
Get:4 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 fonts-urw-base35 all 20200910-1 [6367 kB]

```

- Update the aws cli.



```

ubuntu@ip-172-31-22-16:~$ sudo apt update
The following packages will be upgraded:
curl libcurl4
2 upgraded, 0 newly installed, 0 to remove and 35 not upgraded.
Need to get 657 kB of archives.
After this operation, 386 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 curl amd64 7.81.0-1ubuntu1.19 [194 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 libcurl4 amd64 7.81.0-1ubuntu1.19 [289 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates/main amd64 unzip amd64 6.0-26ubuntu3.2 [175 kB]
Fetched 657 kB in 0s (19.8 MB/s)
(Reading database ... 77381 files and directories currently installed.)
Preparing to unpack .../curl_7.81.0-1ubuntu1.19_amd64.deb ...
Unpacking curl (7.81.0-1ubuntu1.19) over (7.81.0-1ubuntu1.18) ...
Preparing to unpack .../libcurl4_7.81.0-1ubuntu1.19_amd64.deb ...
Unpacking libcurl4:amd64 (7.81.0-1ubuntu1.19) over (7.81.0-1ubuntu1.18) ...
Selecting previously unselected package unzip.
Preparing to unpack .../unzip_6.0-26ubuntu3.2_amd64.deb ...
Unpacking unzip (6.0-26ubuntu3.2) ...
Setting up unzip (6.0-26ubuntu3.2) ...
Setting up curl4:amd64 (7.81.0-1ubuntu1.19) ...
Setting up curl (7.81.0-1ubuntu1.19) ...
Processing triggers for libc-bin (2.35.2-0ubuntu3.8) ...
Processing triggers for man-db (3.0.2-1ubuntu1) ...
Processing triggers for mailcap (3.70+nmu1ubuntu1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

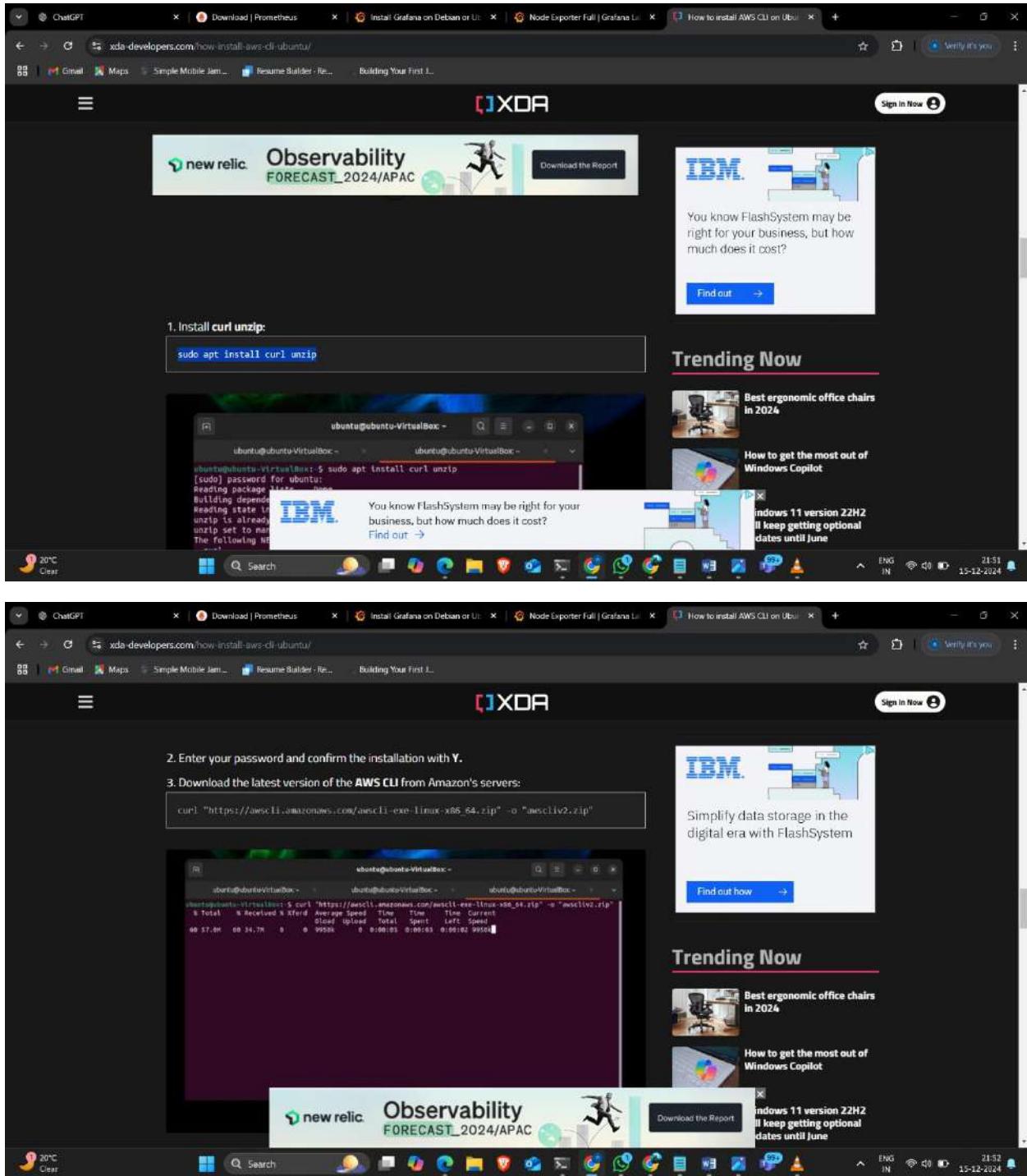
No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-31-176:~$ curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"
% Total    % Received % Xferd  Average Speed   Time   Time  Current
          Dload  Upload Total   Spent   Left Speed
100 64.3M  100 64.3M    0     0  183M      0 --:--:--:--:--:-- 183M
ubuntu@ip-172-31-31-176:~$ 

```



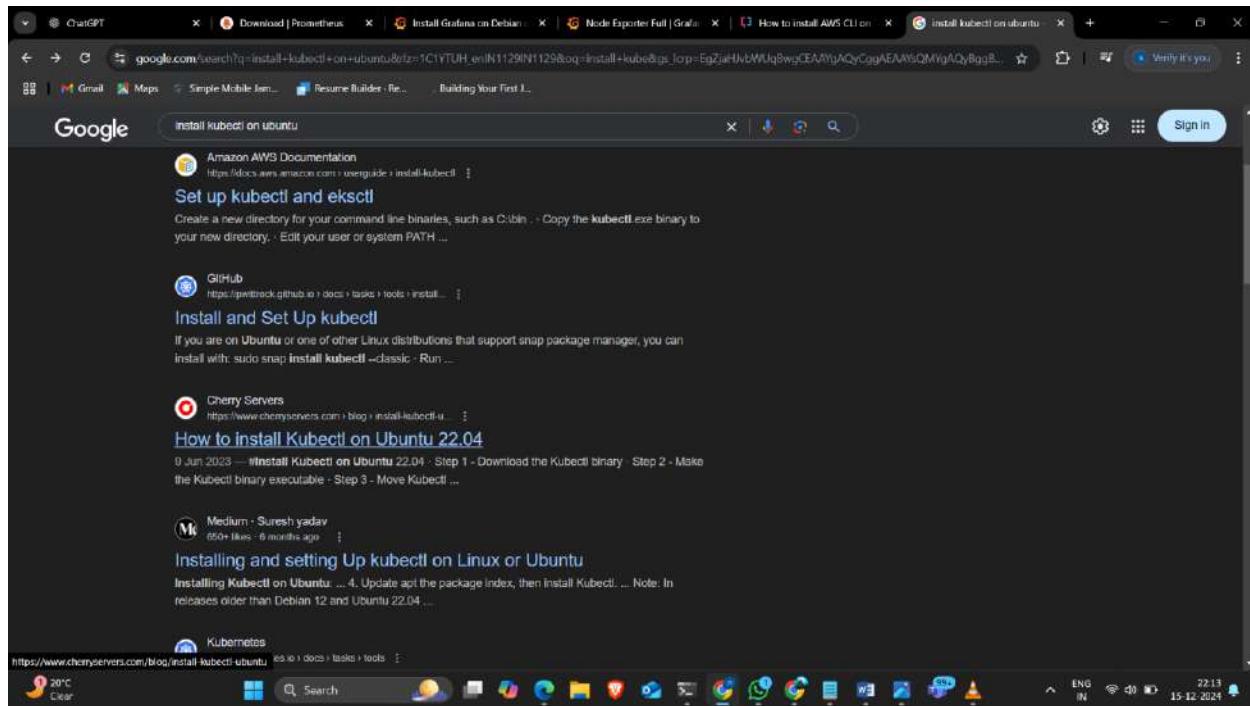
- Download the packages.
- It will download in zip format.
- Then unzip it.

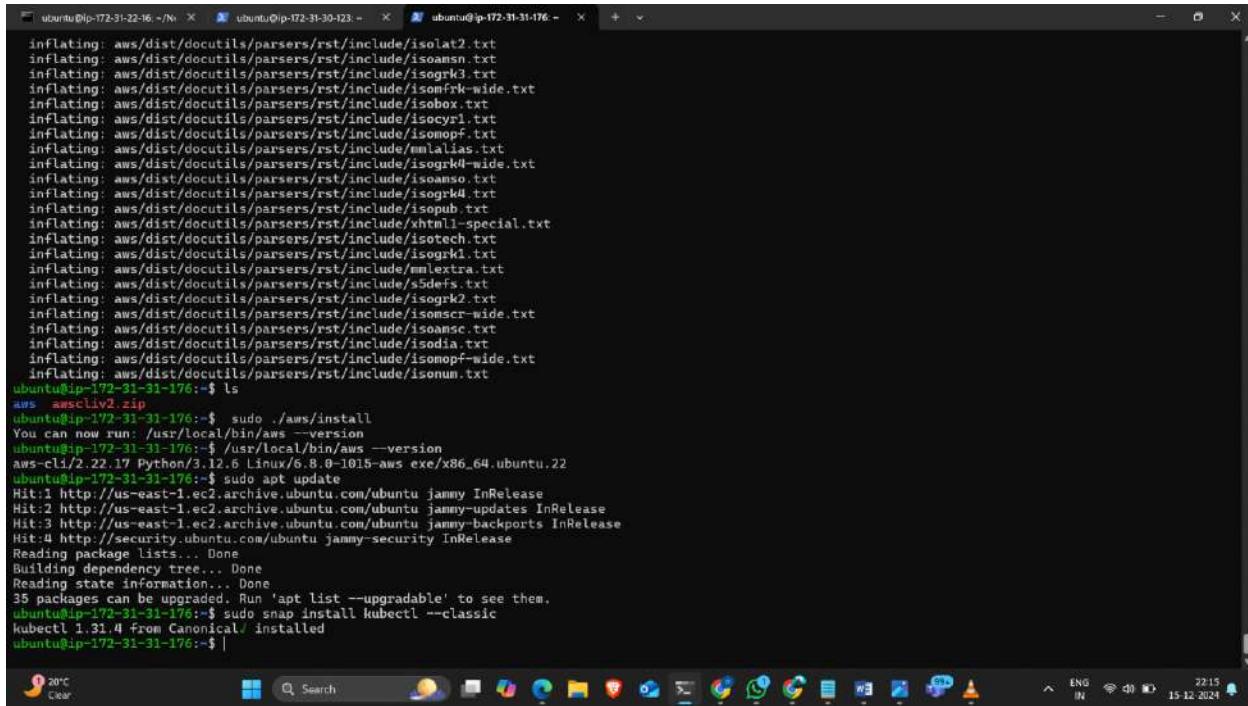
```

ubuntu@ip-172-31-22-16:~/N... X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ X + +
inflating: aws/dist/docutils/parsers/rst/include/README.txt
inflating: aws/dist/docutils/parsers/rst/include/xhtml-symbol.txt
inflating: aws/dist/docutils/parsers/rst/include/mmlextra-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsb.txt
inflating: aws/dist/docutils/parsers/rst/include/isocyr2.txt
inflating: aws/dist/docutils/parsers/rst/include/xhtml-latin1.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsr.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamrk.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsr.txt
inflating: aws/dist/docutils/parsers/rst/include/isoams4.txt
inflating: aws/dist/docutils/parsers/rst/include/isolat1.txt
inflating: aws/dist/docutils/parsers/rst/include/isolat2.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsn.txt
inflating: aws/dist/docutils/parsers/rst/include/isogr3.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamrk-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isobox.txt
inflating: aws/dist/docutils/parsers/rst/include/isocyr1.txt
inflating: aws/dist/docutils/parsers/rst/include/isomopf.txt
inflating: aws/dist/docutils/parsers/rst/include/mmalias.txt
inflating: aws/dist/docutils/parsers/rst/include/isogr4-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsn.txt
inflating: aws/dist/docutils/parsers/rst/include/isogr4.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamrk.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamrk-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/xhtml-special.txt
inflating: aws/dist/docutils/parsers/rst/include/isotech.txt
inflating: aws/dist/docutils/parsers/rst/include/isogr4l.txt
inflating: aws/dist/docutils/parsers/rst/include/mmextra.txt
inflating: aws/dist/docutils/parsers/rst/include/s5def5.txt
inflating: aws/dist/docutils/parsers/rst/include/isogr2.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsr-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsc.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamrk-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsn.txt
ubuntu@ip-172-31-31-176:~$ ls
aws awscli v2.zip
ubuntu@ip-172-31-31-176:~$ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
ubuntu@ip-172-31-31-176:~$ /usr/local/bin/aws --version
aws-cli/2.22.17 Python/3.12.6 Linux/6.8.0-1015-aws exe/x86_64.ubuntu.22
ubuntu@ip-172-31-31-176:~$ |

```

- Install kubectl.



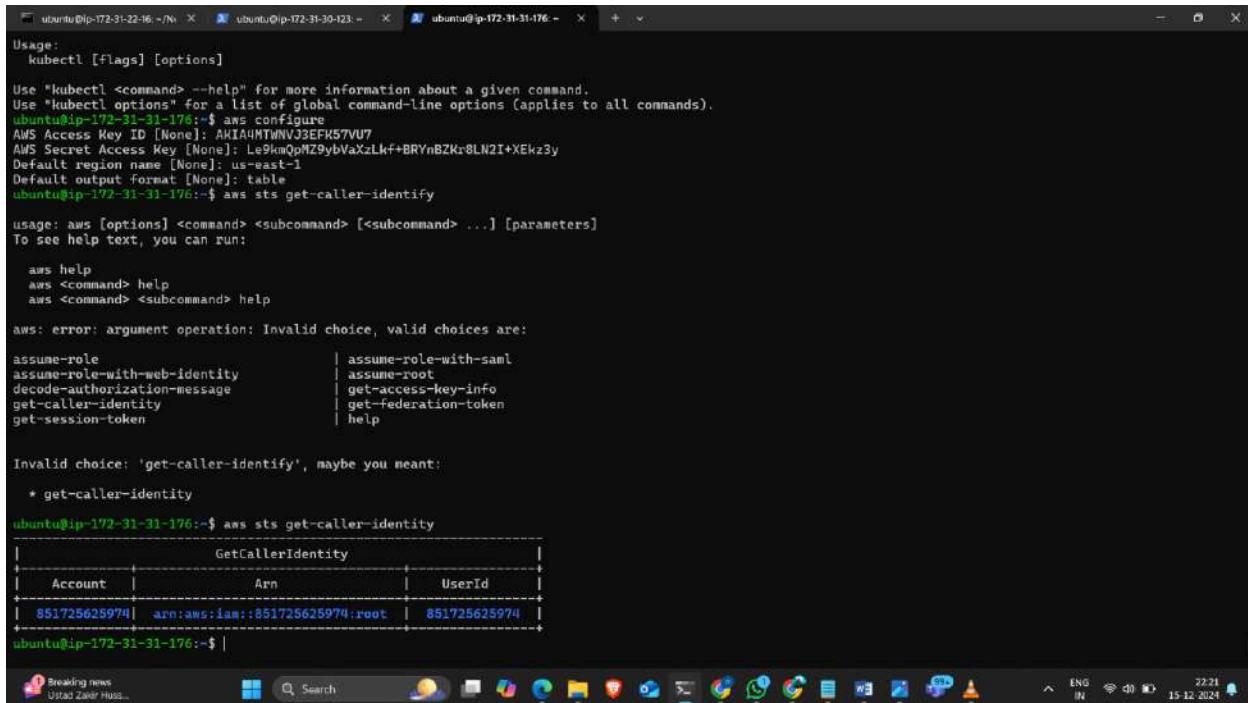


```

ubuntu@ip-172-31-22-16:~/N~ x  ubuntu@ip-172-31-30-123:~ x  ubuntu@ip-172-31-31-176:~ x + ~
inflating: aws/dist/docutils/parsers/rst/include/isolat2.txt
inflating: aws/dist/docutils/parsers/rst/include/isoamsn.txt
inflating: aws/dist/docutils/parsers/rst/include/isogrk3.txt
inflating: aws/dist/docutils/parsers/rst/include/isomfr-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isobox.txt
inflating: aws/dist/docutils/parsers/rst/include/isocyr1.txt
inflating: aws/dist/docutils/parsers/rst/include/isomopf.txt
inflating: aws/dist/docutils/parsers/rst/include/wmalias.txt
inflating: aws/dist/docutils/parsers/rst/include/isogrkl-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isoanso.txt
inflating: aws/dist/docutils/parsers/rst/include/isogrkl4.txt
inflating: aws/dist/docutils/parsers/rst/include/isopub.txt
inflating: aws/dist/docutils/parsers/rst/include/xhtml-special.txt
inflating: aws/dist/docutils/parsers/rst/include/isotech.txt
inflating: aws/dist/docutils/parsers/rst/include/isogk1.txt
inflating: aws/dist/docutils/parsers/rst/include/mmextra.txt
inflating: aws/dist/docutils/parsers/rst/include/s5defs.txt
inflating: aws/dist/docutils/parsers/rst/include/isogrkl2.txt
inflating: aws/dist/docutils/parsers/rst/include/isomscr-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isoansc.txt
inflating: aws/dist/docutils/parsers/rst/include/isodia.txt
inflating: aws/dist/docutils/parsers/rst/include/isomopf-wide.txt
inflating: aws/dist/docutils/parsers/rst/include/isonum.txt
ubuntu@ip-172-31-31-176:~$ ls
aws  awscli2.zip
ubuntu@ip-172-31-31-176:~$ sudo ./aws/install
You can now run: /usr/local/bin/aws --version
ubuntu@ip-172-31-31-176:~$ /usr/local/bin/aws --version
aws-cli/2.21.17 Python/3.12.6 Linux/6.8.0-1015-aws exe/x86_64.ubuntu.22
ubuntu@ip-172-31-31-176:~$ sudo apt update
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
35 packages can be upgraded. Run 'apt list --upgradable' to see them.
ubuntu@ip-172-31-31-176:~$ sudo snap install kubectl --classic
kubectl 1.31.4 from Canonical/ installed
ubuntu@ip-172-31-31-176:~|

```

- Than configure aws.



```

ubuntu@ip-172-31-22-16:~/N~ x  ubuntu@ip-172-31-30-123:~ x  ubuntu@ip-172-31-31-176:~ x + ~
Usage:
  kubectl [flags] [options]

Use "kubectl <command> --help" for more information about a given command.
Use "kubectl options" for a list of global command-line options (applies to all commands).
ubuntu@ip-172-31-31-176:~$ aws configure
AWS Access Key ID [None]: AKIAUHMTWNVJ3EFPK57VU7
AWS Secret Access Key [None]: Le9kmQphZ9ybVaxzLkf+BRYnBZk=8LN2I+XEkz3y
Default region name [None]: us-east-1
Default output format [None]: table
ubuntu@ip-172-31-31-176:~$ aws sts get-caller-identity
usage: aws [options] <command> <subcommand> [<subcommand> ...] [parameters]
To see help text, you can run:

  aws help
  aws <command> help
  aws <command> <subcommand> help

aws: error: argument operation: Invalid choice, valid choices are:

assume-role          | assume-role-with-saml
assume-role-with-web-identity | assume-root
decode-authorization-message | get-access-key-info
get-caller-identity   | get-federation-token
get-session-token     | help

Invalid choice: 'get-caller-identity', maybe you meant:

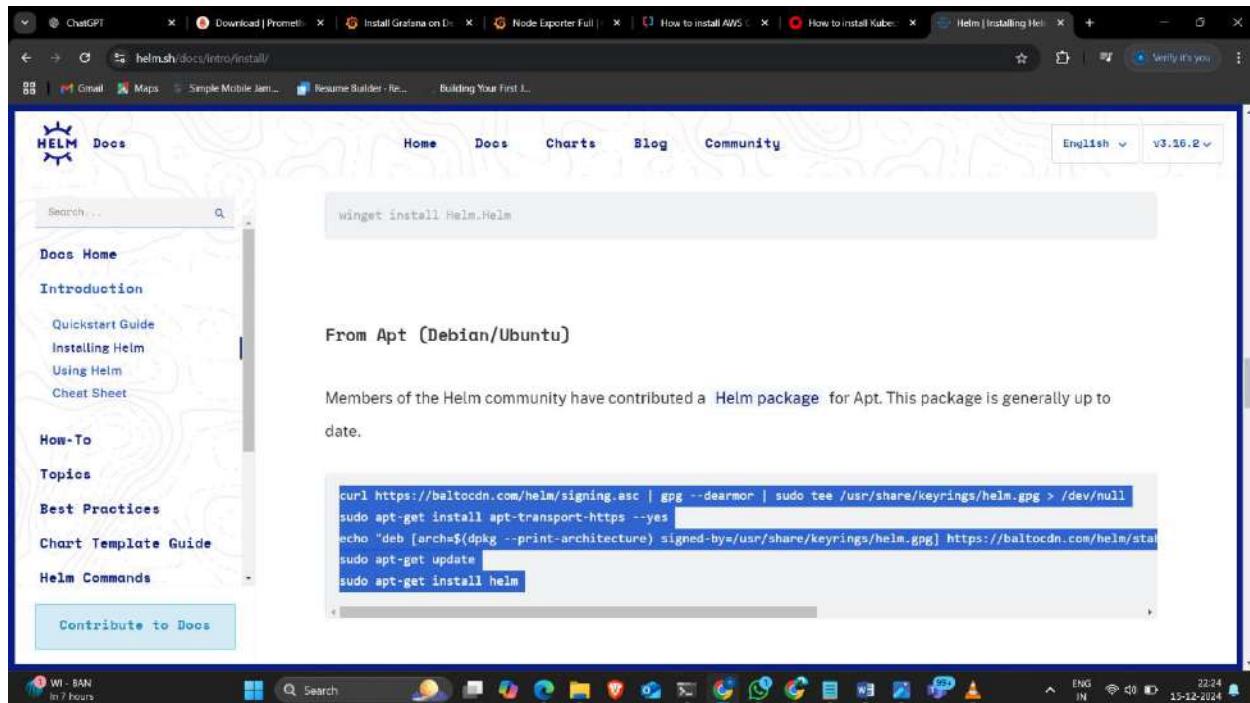
* get-caller-identity

ubuntu@ip-172-31-31-176:~$ aws sts get-caller-identity
+-----+-----+-----+
| Account | Arn      | UserId      |
+-----+-----+-----+
| 851725625974 | arn:aws:iam::851725625974:root | 851725625974 |
+-----+-----+-----+
ubuntu@ip-172-31-31-176:~|

```

- Helm is a package manager for Kubernetes applications that's used with Argo CD, a continuous delivery (CD) tool for Kubernetes.

- Go to google and browse to install helm.
- Copy the commands.



- Paste in the terminal and execute.

```
ubuntu@ip-172-31-22-16:~$ aws sts get-caller-identity
|          GetCallerIdentity          |
|+-----+-----+-----+
| Account | Arn   | UserId  |
|+-----+-----+-----+
| 851725625974 | arn:aws:iam::851725625974:root | 851725625974 |
ubuntu@ip-172-31-31-176:~$ aws eks --region us-east-1 update-kubeconfig --name Netflix
Could not connect to the endpoint URL: "https://eks.us-east-1.amazonaws.com/clusters/Netflix"
ubuntu@ip-172-31-31-176:~$ aws eks --region us-east-1 update-kubeconfig --name Netflix
Added new context arn:aws:eks:us-east-1:851725625974:cluster/Netflix to /home/ubuntu/.kube/config
ubuntu@ip-172-31-31-176:~$ curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null
sudo apt-get install apt-transport-https --yes
echo "deb [arch=$(dpkg --print-architecture) signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list
sudo apt-get update
sudo apt-get install helm
  % Total    % Received % Xferd  Average Speed   Time   Time     Current
  100  1699  100  1699    0      0  9168      0 --:--:-- --:--:--  9183
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 35 not upgraded.
Need to get 1510 B of archives.
After this operation, 198 kB of additional disk space will be used.
```

```

ubuntu@ip-172-31-22-16:~/N~ X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ + ~
No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
deb [arch=amd64 signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main
Hit:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy InRelease
Hit:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-updates InRelease
Hit:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy-backports InRelease
Hit:4 http://security.ubuntu.com/ubuntu jammy-security InRelease
Get:5 https://baltocdn.com/helm/stable/debian all InRelease [7652 B]
Get:6 https://baltocdn.com/helm/stable/debian all/main amd64 Packages [4552 B]
Fetched 12.2 kB in 1s (23.9 kB/s)
Reading package lists... Done
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
The following NEW packages will be installed:
  helm
0 upgraded, 1 newly installed, 0 to remove and 35 not upgraded.
Need to get 17.3 MB of archives.
After this operation, 57.2 MB of additional disk space will be used.
Get:1 https://baltocdn.com/helm/stable/debian all/main amd64 helm amd64 3.16.3-1 [17.3 MB]
Fetched 17.3 MB in 11s (1562 kB/s)
Selecting previously unselected package helm.
(Reading database ... 77323 files and directories currently installed.)
Preparing to unpack .../helm_3.16.3-1_amd64.deb ...
Unpacking helm (3.16.3-1) ...
Setting up helm (3.16.3-1) ...
Processing triggers for man-db (2.10.2-1) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-31-176:~$ |
```

Air Moderate Now Search

```

ubuntu@ip-172-31-22-16:~/N~ X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ + ~
list releases
package package a chart directory into a chart archive
plugin install, list, or uninstall Helm plugins
pull download a chart from a repository and (optionally) unpack it in local directory
push push a chart to remote
registry login to or logout from a registry
repo add, list, remove, update, and index chart repositories
rollback roll back a release to a previous revision
search search for a keyword in charts
show show information of a chart
status display the status of the named release
template locally render templates
test run tests for a release
uninstall uninstall a release
upgrade upgrade a release
verify verify that a chart at the given path has been signed and is valid
version print the client version information

Flags:
  --burst-limit int          client-side default throttling limit (default 100)
  --debug                     enable verbose output
  -h, --help                  help for helm
  --kube-apiserver string    the address and the port for the Kubernetes API server
  --kube-as-group stringArray group to impersonate for the operation, this flag can be repeated to specify multiple groups.
  --kube-as-user string      username to impersonate for the operation
  --kube-ca-file string      the certificate authority file for the Kubernetes API server connection
  --kube-context string       name of the kubeconfig context to use
  --kube-insecure-skip-tls-verify if true, the Kubernetes API server's certificate will not be checked for validity. This will make your HTTPS connections insecure
  --kube-tls-server-name string server name to use for Kubernetes API server certificate validation. If it is not provided, the hostname used to connect to the server is used
  --kube-token string         bearer token used for authentication
  --kubeconfig string         path to the kubeconfig file
  -n, --namespace string     namespace scope for this request
  --qps float32               queries per second used when communicating with the Kubernetes API; not including bursting
  --registry-config string   path to the registry config file (default "/home/ubuntu/.config/helm/registry/config.json")
  --repository-cache string  path to the directory containing cached repository indexes (default "/home/ubuntu/.cache/helm/repository")
  --repository-config string path to the file containing repository names and URLs (default "/home/ubuntu/.config/helm/repositories.yaml")

Use "helm [command] --help" for more information about a command.
ubuntu@ip-172-31-31-176:~$ |
```

Air Moderate Now Search

- Search for the Prometheus community helm chart.

The screenshot shows a browser window with two main sections. The top section displays Google search results for "prometheus community helm chart". The results include links to GitHub repositories such as "Values.yaml", "Kube Prometheus Stack", "Prometheus", "Kube-prometheus-stack", and "Helm Kube Prometheus Stack". The bottom section shows the GitHub repository page for "prometheus-community/helm-charts". The page includes sections for README, Code of conduct, Apache-2.0 license, Security, Usage, Contributing, License (Apache 2.0 License), and Helm charts build status. On the right side of the GitHub page, there is a sidebar with metrics like "+ 41 packages", "Contributors: 1,446", and a Languages chart showing Mustache (47.0%), Smarty (26.5%), Python (21.2%), and Shell (5.3%).

github.com/prometheus-community/helm-charts

**Usage**

Helm must be installed to use the charts. Please refer to Helm's [documentation](#) to get started.

Once Helm is set up properly, add the repository as follows:

```
helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
```

You can then run `helm search repo prometheus-community` to see the charts.

**Contributing**

The source code of all Prometheus community Helm charts can be found on Github: <https://github.com/prometheus-community/helm-charts/>

We'd love to have you contribute! Please refer to our [contribution guidelines](#) for details.

**License**

Apache 2.0 License

### Helm charts build status

```

  plugin      install, list, or uninstall Helm plugins
  pull       download a chart from a repository and (optionally) unpack it in local directory
  push       push a chart to remote
  registry   login to or logout from a registry
  repo       add, list, remove, update, and index chart repositories
  rollback   roll back a release to a previous revision
  search    search for a keyword in charts
  show      show information of a chart
  status    display the status of the named release
  template  locally render templates
  test      run tests for a release
  uninstall  uninstall a release
  upgrade   upgrade a release
  verify    verify that a chart at the given path has been signed and is valid
  version   print the client version information

Flags:
  --burst-limit int          client-side default throttling limit (default 100)
  --debug                   enable verbose output
  -h, --help                 help for helm
  --kube-apiserver string   the address and the port for the Kubernetes API server
  --kube-as-group stringArray group to impersonate for the operation, this flag can be repeated to specify multiple groups.
  --kube-as-user string     username to impersonate for the operation
  --kube-ca-file string     the certificate authority file for the Kubernetes API server connection
  --kube-context string     name of the kubeconfig context to use
  --kube-insecure-skip-tls-verify if true, the Kubernetes API server's certificate will not be checked for validity. This will make your HTTPS connections insecure
  --kube-tls-server-name string server name to use for Kubernetes API server certificate validation. If it is not provided, the hostname used to contact the server is used
  --kube-token string        bearer token used for authentication
  --kubeconfig string        path to the kubeconfig file
  -n, --namespace string    namespace scope for this request
  --qps float32              queries per second used when communicating with the Kubernetes API, not including bursting
  --registry-config string  path to the registry config file (default "/home/ubuntu/.config/helm/registry/config.json")
  --repository-cache string path to the directory containing cached repository indexes (default "/home/ubuntu/.cache/helm/repository")
  --repository-config string path to the file containing repository names and URLs (default "/home/ubuntu/.config/helm/repositories.yaml")

Use "helm [command] --help" for more information about a command.
ubuntu@ip-172-31-31-176:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
ubuntu@ip-172-31-31-176:~$
```

```

ubuntu@ip-172-31-22-16:~/N... X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ X + +
push      push a chart to remote
registry   login to or logout from a registry
repo       add, list, remove, update, and index chart repositories
rollback   roll back a release to a previous revision
search     search for a keyword in charts
show       show information of a chart
status     display the status of the named release
template   locally render templates
test       run tests for a release
uninstall  uninstall a release
upgrade   upgrade a release
verify    verify that a chart at the given path has been signed and is valid
version   print the client version information

Flags:
--burst-limit int          client-side default throttling limit (default 100)
--debug                   enable verbose output
-h, --help                 help for helm
--kube-apiserver string    the address and the port for the Kubernetes API server
--kube-as-group stringArray group to impersonate for the operation, this flag can be repeated to specify multiple groups.
--kube-as-user string      username to impersonate for the operation
--kube-ca-file string      the certificate authority file for the Kubernetes API server connection
--kube-context string      name of the kubeconfig context to use
--kube-insecure-skip-tls-verify if true, the Kubernetes API server's certificate will not be checked for validity. This will make your HTTPS connect
ions insecure
--kube-tls-server-name string server name to use for Kubernetes API server certificate validation. If it is not provided, the hostname used to con
tact the server is used
--kube-token string         bearer token used for authentication
--kubeconfig string         path to the kubeconfig file
-n, --namespace string     namespace scope for this request
--qps float32               queries per second used when communicating with the Kubernetes API, not including bursting
--registry-config string   path to the registry config file (default "/home/ubuntu/.config/helm/registry/config.json")
--repository-cache string  path to the directory containing cached repository indexes (default "/home/ubuntu/.cache/helm/repository")
--repository-config string path to the file containing repository names and URLs (default "/home/ubuntu/.config/helm/repositories.yaml")

Use "helm [command] --help" for more information about a command.
ubuntu@ip-172-31-31-176:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
ubuntu@ip-172-31-31-176:~$ kubectl create namespace prometheus-node-exporter
namespace/prometheus-node-exporter created
ubuntu@ip-172-31-31-176:~$ |

```

- Create the namespace for the Prometheus node exporter.

```

ubuntu@ip-172-31-22-16:~/N... X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ X + +
Flags:
--burst-limit int          client-side default throttling limit (default 100)
--debug                   enable verbose output
-h, --help                 help for helm
--kube-apiserver string    the address and the port for the Kubernetes API server
--kube-as-group stringArray group to impersonate for the operation, this flag can be repeated to specify multiple groups.
--kube-as-user string      username to impersonate for the operation
--kube-ca-file string      the certificate authority file for the Kubernetes API server connection
--kube-context string      name of the kubeconfig context to use
--kube-insecure-skip-tls-verify if true, the Kubernetes API server's certificate will not be checked for validity. This will make your HTTPS connect
ions insecure
--kube-tls-server-name string server name to use for Kubernetes API server certificate validation. If it is not provided, the hostname used to con
tact the server is used
--kube-token string         bearer token used for authentication
--kubeconfig string         path to the kubeconfig file
-n, --namespace string     namespace scope for this request
--qps float32               queries per second used when communicating with the Kubernetes API, not including bursting
--registry-config string   path to the registry config file (default "/home/ubuntu/.config/helm/registry/config.json")
--repository-cache string  path to the directory containing cached repository indexes (default "/home/ubuntu/.cache/helm/repository")
--repository-config string path to the file containing repository names and URLs (default "/home/ubuntu/.config/helm/repositories.yaml")

Use "helm [command] --help" for more information about a command.
ubuntu@ip-172-31-31-176:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
ubuntu@ip-172-31-31-176:~$ kubectl create namespace prometheus-node-exporter
namespace/prometheus-node-exporter created
ubuntu@ip-172-31-31-176:~$ helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
NAME: prometheus-node-exporter
LAST DEPLOYED: Sun Dec 15 17:00:58 2024
NAMESPACE: prometheus-node-exporter
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
I. Get the application URL by running these commands:
  export POD_NAME=$(kubectl get pods --namespace prometheus-node-exporter -l "app.kubernetes.io/name=prometheus-node-exporter,app.kubernetes.io/instance=pro
metheus-node-exporter" -o jsonpath='{.items[0].metadata.name}')
  echo "Visit http://127.0.0.1:9100 to use your application"
  kubectl port-forward --namespace prometheus-node-exporter $POD_NAME 9100
ubuntu@ip-172-31-31-176:~$ |

```

```

ubuntu@ip-172-31-22-16:~/N... X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ X + +
Flags:
  --burst-limit int          client-side default throttling limit (default 100)
  --debug                   enable verbose output
  -h, --help                  help for helm
  --kube-apiserver string    the address and the port for the Kubernetes API server
  --kube-as-group stringArray group to impersonate for the operation, this flag can be repeated to specify multiple groups.
  --kube-as-user string      username to impersonate for the operation
  --kube-ca-file string       the certificate authority file for the Kubernetes API server connection
  --kube-context string       name of the kubeconfig context to use
  --kube-insecure-skip-tls-verify if true, the Kubernetes API server's certificate will not be checked for validity. This will make your HTTPS connections insecure
  --kube-tls-server-name string server name to use for Kubernetes API server certificate validation. If it is not provided, the hostname used to connect to the server is used
  --kube-token string         bearer token used for authentication
  --kubeconfig string         path to the kubeconfig file
  -n, --namespace string      namespace scope for this request
  --qps float32               queries per second used when communicating with the Kubernetes API, not including bursting
  --registry-config string    path to the registry config file (default "/home/ubuntu/.config/helm/registry/config.json")
  --repository-cache string   path to the directory containing cached repository indexes (default "/home/ubuntu/.cache/helm/repository")
  --repository-config string  path to the file containing repository names and URLs (default "/home/ubuntu/.config/helm/repositories.yaml")

Use "helm [command] --help" for more information about a command.
ubuntu@ip-172-31-31-176:~$ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
ubuntu@ip-172-31-31-176:~$ kubectl create namespace prometheus-node-exporter
namespace/prometheus-node-exporter created
ubuntu@ip-172-31-31-176:~$ helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
NAME: prometheus-node-exporter
LAST DEPLOYED: Sun Dec 15 17:00:58 2024
NAMESPACE: prometheus-node-exporter
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
1. Get the application URL by running these commands:
  export POD_NAME=$(kubectl get pods --namespace prometheus-node-exporter -l "app.kubernetes.io/name=prometheus-node-exporter,app.kubernetes.io/instance=... prometheus-node-exporter" -o jsonpath='{.items[0].metadata.name}')
  echo "Visit http://127.0.0.1:9100 to use your application"
  kubectl port-forward --namespace prometheus-node-exporter $POD_NAME 9100
ubuntu@ip-172-31-31-176:~| 

```

- Install the argocd using helm.

Google search results for "install argo using helm":

- Argo CD**  
https://argo-cd.readthedocs.io/en/stable/operator-manual/
- Installation - Argo CD - Declarative GitOps CD for Kubernetes**  
The Argo CD can be installed using Helm. The Helm chart is currently community maintained and available at [argo-helm/charts/argo-cd](#). Supported versions: For ...  
Multi-Tenant - Core - Kustomize
- Setting up Argo CD with Helm**  
27 Oct 2023 — In this blog post we're going to setup Argo CD on a Kubernetes cluster. We'll install it with Helm, create an application to use the app-of-apps pattern.
- Installing Argo CD using helm**  
In this blog, we will cover the steps to install Argo CD using Helm, a package manager for Kubernetes.
- How to Deploy Argo CD on Kubernetes [Beginners Guide]**  
25 Apr 2024 — ArgoCD Setup Using Official Helm Chart · Step 1: Add argo cd repo · Step 2:

The screenshot shows a web browser window with multiple tabs open, including "ChatGPT", "Download", "Install Grafana", "Node Exporter", "How to install", "How to install", "Helm | Install", "GitHub - proj", and "Setting up Argo CD". The main content area displays instructions for setting up Argo CD with Helm. It includes code snippets for adding the Argo CD repository and updating dependencies:

```
$ helm repo add argo-cd https://argoproj.github.io/argo-helm
$ helm dep update charts/argo-cd/
```

This will create the `Chart.lock` and `charts/argo-cd-<version>.tgz` files. The `.tgz` file is only required for the initial installation from our local machine. To avoid accidentally committing it, we can add it to the `gitignore` file:

```
$ echo "charts/**/charts" >> .gitignore
```

Our custom chart is ready and can be pushed to our public Git repository:

```
$ git add charts/argo-cd
$ git commit -m 'add argo-cd chart'
$ git push
```

The next step is to install our chart.

## Installing our Helm chart

We have to do the initial installation manually from our local machine, later we set up Argo CD to manage itself (meaning that Argo CD will automatically detect any changes to the helm chart and synchronize it);

The screenshot shows a terminal window on an Ubuntu system (version 22.04 LTS) with a root prompt. The user is installing a Helm chart for Prometheus. The terminal output shows the following steps:

```
Flags:
  --burst-limit int          client-side default throttling limit (default 100)
  --debug                   enable verbose output
  -h, --help                 help for helm
  --kube-apiserver string   the address and the port for the Kubernetes API server
  --kube-as-group string[]  group to impersonate for the operation, this flag can be repeated to specify multiple groups.
  --kube-as-user string     username to impersonate for the operation
  --kube-ca-file string     the certificate authority file for the Kubernetes API server connection
  --kube-context string     name of the kubeconfig context to use
  --kube-insecure-skip-tls-verify
    if true, the Kubernetes API server's certificate will not be checked for validity. This will make your HTTPS connection
    insecure
  --kube-tls-server-name string
    tact the server is used
  --kube-token string        bearer token used for authentication
  --kubeconfig string        path to the kubeconfig file
  -n, --namespace string    namespace scope for this request
  --qps float32              queries per second used when communicating with the Kubernetes API, not including bursting
  --registry-config string  path to the registry config file (default "/home/ubuntu/.config/helm/registry/config.json")
  --repository-cache string  path to the directory containing cached repository indexes (default "/home/ubuntu/.cache/helm/repository")
  --repository-config string
    path to the file containing repository names and URLs (default "/home/ubuntu/.config/helm/repositories.yaml")

Use "helm [command] --help" for more information about a command.
ubuntu@ip-172-31-22-16:~/N... $ helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
"prometheus-community" has been added to your repositories
ubuntu@ip-172-31-31-176:~$ kubectl create namespace prometheus-node-exporter
namespace/prometheus-node-exporter created
ubuntu@ip-172-31-31-176:~$ helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
NAME: prometheus-node-exporter
LAST DEPLOYED: Sun Dec 15 17:00:58 2024
NAMESPACE: prometheus-node-exporter
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
1. Get the application URL by running these commands:
  export POD_NAME=$(kubectl get pods --namespace prometheus-node-exporter -l "app.kubernetes.io/name=prometheus-node-exporter,app.kubernetes.io/instance=... prometheus-node-exporter" -o jsonpath='{.items[0].metadata.name}')
  echo "Visit http://127.0.0.1:9100 to use your application"
  kubectl port-forward --namespace prometheus-node-exporter $POD_NAME 9108
ubuntu@ip-172-31-31-176:~$ helm repo add argo-cd https://argoproj.github.io/argo-helm
$ helm dep update charts/argo-cd/
```



```

ubuntu@ip-172-31-22-16:~/N~ X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ X + ~
"argo-cd" has been added to your repositories
Error: could not find charts/argo-cd: stat charts/argo-cd: no such file or directory
ubuntu@ip-172-31-31-176:~$ helm repo add argo-cd https://argoproj.github.io/argo-helm
"argo-cd" already exists with the same configuration, skipping
ubuntu@ip-172-31-31-176:~$ helm dep update charts/argo-cd/
Error: could not find charts/argo-cd: stat charts/argo-cd: no such file or directory
ubuntu@ip-172-31-31-176:~$ helm repo update
Hang tight while we grab the latest from your chart repositories...
...Successfully got an update from the "argo-cd" chart repository
...Successfully got an update from the "prometheus-community" chart repository
Update Complete: *Happy Helm-ing!*8
ubuntu@ip-172-31-31-176:~$ kubectl create namespace argocd
namespace/argocd created
ubuntu@ip-172-31-31-176:~$ helm install argocd argo-cd/argo-cd -n argocd
NAME: argocd
LAST DEPLOYED: Sun Dec 15 17:11:26 2024
NAMESPACE: argocd
STATUS: deployed
REVISION: 1
TEST SUITE: None
NOTES:
In order to access the server UI you have the following options:

1. kubectl port-forward service/argocd-server -n argocd 8080:443
and then open the browser on http://localhost:8080 and accept the certificate

2. enable ingress in the values file 'server.ingress.enabled' and either
- Add the annotation for ssl passthrough: https://argo-cd.readthedocs.io/en/stable/operator-manual/ingress/#option-1-ssl-passthrough
- Set the 'config.params."server.insecure"' in the values file and terminate SSL at your ingress: https://argo-cd.readthedocs.io/en/stable/operator-manual/ingress/#option-2-multiple-ingress-objects-and-hosts

After reaching the UI the first time you can login with username: admin and the random password generated during the installation. You can find the password by running:
kubectl -n argocd get secret argocd-initial-admin-secret -o jsonpath=".data.password" | base64 -d
(You should delete the initial secret afterwards as suggested by the Getting Started Guide: https://argo-cd.readthedocs.io/en/stable/getting_started/#4-logging-using-the-cli)
ubuntu@ip-172-31-31-176:~$ 

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ubuntu@ip-172-31-22-16:~/N~ X ubuntu@ip-172-31-30-123:~ X ubuntu@ip-172-31-31-176:~ X + ~
(You should delete the initial secret afterwards as suggested by the Getting Started Guide: https://argo-cd.readthedocs.io/en/stable/getting_started/#4-logging-using-the-cli)
ubuntu@ip-172-31-31-176:~$ kubectl get all -n argocd
error: you must specify only one resource
ubuntu@ip-172-31-31-176:~$ kubectl get all -n argocd
NAME READY STATUS RESTARTS AGE
pod/argocd-application-controller-0 1/1 Running 0 100s
pod/argocd-applicationset-controller-65f874574b-q7fql 1/1 Running 0 100s
pod/argocd-dex-server-557cf46859-trpmq 1/1 Running 0 100s
pod/argocd-notifications-controller-66bd5bdb76-42xpj 1/1 Running 0 99s
pod/argocd-redis-64987658bf-psl4c 1/1 Running 0 100s
pod/argocd-repo-server-76dcfb4c-19tmb 1/1 Running 0 100s
pod/argocd-server-748dd69b68-r9gqt 1/1 Running 0 100s
NAME TYPE CLUSTER-IP EXTERNAL-IP PORT(S) AGE
service/argocd-applicationset-controller ClusterIP 10.100.231.93 <none> 7000/TCP 101s
service/argocd-dex-server ClusterIP 10.100.153.250 <none> 5556/TCP,5559/TCP 101s
service/argocd-redis ClusterIP 10.100.238.41 <none> 6379/TCP 101s
service/argocd-repo-server ClusterIP 10.100.14.200 <none> 8081/TCP 101s
service/argocd-server ClusterIP 10.100.188.113 <none> 80/TCP,443/TCP 101s
NAME READY UP-TO-DATE AVAILABLE AGE
deployment.apps/argocd-applicationset-controller 1/1 1 1 100s
deployment.apps/argocd-dex-server 1/1 1 1 100s
deployment.apps/argocd-notifications-controller 1/1 1 1 100s
deployment.apps/argocd-redis 1/1 1 1 101s
deployment.apps/argocd-repo-server 1/1 1 1 100s
deployment.apps/argocd-server 1/1 1 1 100s
NAME DESIRED CURRENT READY AGE
replicaset.apps/argocd-applicationset-controller-65f874574b 1 1 1 100s
replicaset.apps/argocd-dex-server-557cf46859 1 1 1 100s
replicaset.apps/argocd-notifications-controller-66bd5bdb76 1 1 1 100s
replicaset.apps/argocd-redis-64987658bf 1 1 1 100s
replicaset.apps/argocd-repo-server-76dcfb4c 1 1 1 100s
replicaset.apps/argocd-server-748dd69b68 1 1 1 100s
NAME READY AGE
statefulset.apps/argocd-application-controller 1/1 100s
ubuntu@ip-172-31-31-176:~$ 

```

```

ubuntu@ip-172-31-31-176:~$ kubectl get all -n argo
error: you must specify only one resource
ubuntu@ip-172-31-31-176:~$ kubectl get all -n argo
NAME                                         READY   STATUS    RESTARTS   AGE
pod/argo-application-controller-0           1/1    Running   0          100s
pod/argo-applicationset-controller-65f874574b-q7fq1 1/1    Running   0          100s
pod/argo-dex-server-557cf46859-trpmg        1/1    Running   0          100s
pod/argo-notifications-controller-66bd5bdb76-42xpj 1/1    Running   0          99s
pod/argo-redis-64987658bf-psl4c            1/1    Running   0          100s
pod/argo-repo-server-76dcfb4bc-l9tmb       1/1    Running   0          100s
pod/argo-server-748dd69b68-r9gqt          1/1    Running   0          100s

NAME                           TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
service/argo-applicationset-controller   ClusterIP  10.100.231.93 <none>        7080/TCP        101s
service/argo-dex-server                 ClusterIP  10.100.153.250 <none>        5556/TCP,5557/TCP 101s
service/argo-redis                     ClusterIP  10.100.238.41 <none>        6379/TCP        101s
service/argo-repo-server                ClusterIP  10.100.14.200 <none>        8081/TCP        101s
service/argo-server                    ClusterIP  10.100.188.113 <none>        80/TCP,443/TCP  101s

NAME                                         READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/argo-applicationset-controller 1/1     1           1           100s
deployment.apps/argo-dex-server                1/1     1           1           100s
deployment.apps/argo-notifications-controller 1/1     1           1           100s
deployment.apps/argo-redis                   1/1     1           1           101s
deployment.apps/argo-repo-server              1/1     1           1           100s
deployment.apps/argo-server                  1/1     1           1           100s

NAME                                         DESIRED  CURRENT   READY   AGE
replicaset.apps/argo-applicationset-controller-65f874574b 1      1      1      100s
replicaset.apps/argo-dex-server-557cf46859         1      1      1      100s
replicaset.apps/argo-notifications-controller-66bd5bdb76 1      1      1      100s
replicaset.apps/argo-redis-64987658bf             1      1      1      100s
replicaset.apps/argo-repo-server-76dcfb4bc        1      1      1      100s
replicaset.apps/argo-server-748dd69b68            1      1      1      100s

NAME                                         READY   AGE
statefulset.apps/argo-application-controller    1/1    100s
ubuntu@ip-172-31-31-176:~$ export ARGOCD_SERVER='kubectl get svc argo-server -n argo -o json | jq --raw-output ".status.loadbalancer.ingress[0].hostname"
'
ubuntu@ip-172-31-31-176:~$ echo $ARGOCD_SERVER
kubectl get svc argo-server -n argo -o json | jq --raw-output .status.loadbalancer.ingress[0].hostname
ubuntu@ip-172-31-31-176:~$ |

ubuntu@ip-172-31-31-176:~$ kubectl get svc argo-server -n argo -o json | jq --raw-output .status.loadbalancer.ingress[0].hostname
ubuntu@ip-172-31-31-176:~$ kubectl get svc argo-server -n argo -o json | jq --raw-output .status.loadbalancer.ingress[0].hostname
Command 'jq' not found, but can be installed:
sudo snap install jq # version 1.5+dfsg-1, or
sudo apt install jq # version 1.6-2.lubuntu3
See 'snap info jq' for additional versions.
ubuntu@ip-172-31-31-176:~$ kubectl get all -n argo
NAME                                         READY   STATUS    RESTARTS   AGE
pod/argo-application-controller-0           1/1    Running   0          23m
pod/argo-applicationset-controller-65f874574b-q7fq1 1/1    Running   0          23m
pod/argo-dex-server-557cf46859-trpmg        1/1    Running   0          23m
pod/argo-notifications-controller-66bd5bdb76-42xpj 1/1    Running   0          23m
pod/argo-redis-64987658bf-psl4c            1/1    Running   0          23m
pod/argo-repo-server-76dcfb4bc-l9tmb       1/1    Running   0          23m
pod/argo-server-748dd69b68-r9gqt          1/1    Running   0          23m

NAME                           TYPE        CLUSTER-IP   EXTERNAL-IP   PORT(S)          AGE
service/argo-applicationset-controller   ClusterIP  10.100.231.93 <none>        7080/TCP        23m
service/argo-dex-server                 ClusterIP  10.100.153.250 <none>        5556/TCP,5557/TCP 23m
service/argo-redis                     ClusterIP  10.100.238.41 <none>        6379/TCP        23m
service/argo-repo-server                ClusterIP  10.100.14.200 <none>        8081/TCP        23m
service/argo-server                    ClusterIP  10.100.188.113 <none>        80/TCP,443/TCP  23m

NAME                                         READY   UP-TO-DATE   AVAILABLE   AGE
deployment.apps/argo-applicationset-controller 1/1     1           1           23m
deployment.apps/argo-dex-server                1/1     1           1           23m
deployment.apps/argo-notifications-controller 1/1     1           1           23m
deployment.apps/argo-redis                   1/1     1           1           23m
deployment.apps/argo-repo-server              1/1     1           1           23m
deployment.apps/argo-server                  1/1     1           1           23m

NAME                                         DESIRED  CURRENT   READY   AGE
replicaset.apps/argo-applicationset-controller-65f874574b 1      1      1      23m
replicaset.apps/argo-dex-server-557cf46859         1      1      1      23m
replicaset.apps/argo-notifications-controller-66bd5bdb76 1      1      1      23m
replicaset.apps/argo-redis-64987658bf             1      1      1      23m
replicaset.apps/argo-repo-server-76dcfb4bc        1      1      1      23m
replicaset.apps/argo-server-748dd69b68            1      1      1      23m

NAME                                         READY   AGE
statefulset.apps/argo-application-controller    1/1    23m

```

```

ubuntu@ip-172-31-22-16:~$ sudo apt update
0 upgraded, 3 newly installed, 0 to remove and 35 not upgraded.
Need to get 357 kB of archives.
After this operation, 1087 kB of additional disk space will be used.
Do you want to continue? [Y/n] y
Get:1 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libonig5 amd64 6.9.7.1-2build1 [172 kB]
Get:2 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 libjq1 amd64 1.6-2.1ubuntu3 [133 kB]
Get:3 http://us-east-1.ec2.archive.ubuntu.com/ubuntu jammy/main amd64 jq amd64 1.6-2.1ubuntu3 [52.5 kB]
Fetched 357 kB in 0s (12.9 MB/s)
Selecting previously unselected package libonig5:amd64.
(Reading database ... 77329 files and directories currently installed.)
Preparing to unpack .../libonig5_6.9.7.1-2build1_amd64.deb ...
Unpacking libonig5:amd64 (6.9.7.1-2build1) ...
Selecting previously unselected package libjq1:amd64.
Preparing to unpack .../libjq1_1.6-2.1ubuntu3_amd64.deb ...
Unpacking libjq1:amd64 (1.6-2.1ubuntu3) ...
Selecting previously unselected package jq.
Preparing to unpack .../jq_1.6-2.1ubuntu3_amd64.deb ...
Unpacking jq (1.6-2.1ubuntu3) ...
Setting up libonig5:amd64 (6.9.7.1-2build1) ...
Setting up libjq1:amd64 (1.6-2.1ubuntu3) ...
Setting up jq (1.6-2.1ubuntu3) ...
Processing triggers for man-db (2.10.2-1) ...
Processing triggers for libc-bin (2.35-0ubuntu3.8) ...
Scanning processes...
Scanning linux images...

Running kernel seems to be up-to-date.

No services need to be restarted.

No containers need to be restarted.

No user sessions are running outdated binaries.

No VM guests are running outdated hypervisor (qemu) binaries on this host.
ubuntu@ip-172-31-31-176:~$ kubectl get svc argoctl-server -n argoctl -o json | jq -r '.status.loadBalancer.ingress[0].hostname'
null
ubuntu@ip-172-31-31-176:~$ |
```

Haze ENG IN 23:06 15-12-2024

```

ubuntu@ip-172-31-22-16:~$ kubectl get pods --all-namespaces -w
39m Normal Created pod/argoctl-applicationset-controller-65f874574b-q7fq1 Created container applicationset-controller
39m Normal Started pod/argoctl-repo-server-76dcfb4c-l9tmb Started container copyutil
39m Normal Started pod/argoctl-applicationset-controller-65f874574b-q7fq1 Started container applicationset-controller
39m Normal Started pod/argoctl-server-748dd69b68-r9gqt Started container server
39m Normal Pulled pod/argoctl-applicationset-controller-65f874574b-q7fq1 Container image "quay.io/argoproj/argoctl:v2.1
3.2" already present on machine
39m Normal Started pod/argoctl-dex-server-557cf46859-trpmg Started container copyutil
39m Normal Created pod/argoctl-server-748dd69b68-r9gqt Created container server
39m Normal Pulled pod/argoctl-server-748dd69b68-r9gqt Container image "quay.io/argoproj/argoctl:v2.1
3.2" already present on machine
39m Normal Pulled pod/argoctl-repo-server-76dcfb4c-l9tmb Container image "quay.io/argoproj/argoctl:v2.1
3.2" already present on machine
39m Normal Created pod/argoctl-repo-server-76dcfb4c-l9tmb Created container copyutil
39m Normal Created pod/argoctl-dex-server-557cf46859-trpmg Created container copyutil
39m Normal Created pod/argoctl-redis-64987658bf-psl4c Created container redis
39m Normal Started pod/argoctl-redis-64987658bf-psl4c Started container redis
39m Normal Pulled pod/argoctl-redis-64987658bf-psl4c Successfully pulled image "public.ecr.aws/doc
ker/library/redis:7.4.1-alpine" in 2.972s (2.972s including waiting). Image size: 19463286 bytes.
39m Normal Pulled pod/argoctl-repo-server-76dcfb4c-l9tmb Container image "quay.io/argoproj/argoctl:v2.1
3.2" already present on machine
39m Normal Started pod/argoctl-repo-server-76dcfb4c-l9tmb Started container repo-server
39m Normal Created pod/argoctl-repo-server-76dcfb4c-l9tmb Created container repo-server
39m Normal Pulling pod/argoctl-dex-server-557cf46859-trpmg Pulling image "ghcr.io/dexidp/dex:v2.41.1"
39m Normal Pulled pod/argoctl-dex-server-557cf46859-trpmg Successfully pulled image "ghcr.io/dexidp/dex
:v2.41.1" in 2.177s (2.178s including waiting). Image size: 38264991 bytes.
39m Normal Created pod/argoctl-dex-server-557cf46859-trpmg Created container dex-server
39m Normal Started pod/argoctl-dex-server-557cf46859-trpmg Started container dex-server
39m Normal Started pod/argoctl-application-controller-0 Started container application-controller
39m Normal Created pod/argoctl-application-controller-0 Created container application-controller
39m Normal Pulled pod/argoctl-application-controller-0 Successfully pulled image "quay.io/argoproj/j
rgoctl:v2.13.2" in 8.569s (8.569s including waiting). Image size: 180011034 bytes.
ubuntu@ip-172-31-31-176:~$ kubectl patch svc argoctl-server -n argoctl -p '{"spec": {"type": "LoadBalancer"}}'
service/argoctl-server patched
ubuntu@ip-172-31-31-176:~$ export ARGOCD_SERVER=$(kubectl get svc argoctl-server -n argoctl -o json | jq -r '.status.loadBalancer.ingress[0].hostn
ame')
ubuntu@ip-172-31-31-176:~$ echo $ARGOCD_SERVER
a0e8bf41fa866497f8966775527fe950-1505493445.us-east-1.elb.amazonaws.com
ubuntu@ip-172-31-31-176:~$ |
```

Haze ENG IN 23:22 15-12-2024

```
ubuntu@ip-172-31-31-176:~$ export ARGOCD_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq -r '.status.loadBalancer.ingress[0].hostname')
ubuntu@ip-172-31-31-176:~$ echo $ARGOCD_SERVER
null
ubuntu@ip-172-31-31-176:~$ kubectl get svc argo-cd-server -n argo-cd
NAME           TYPE      CLUSTER-IP   EXTERNAL-IP   PORT(S)        AGE
argo-cd-server  ClusterIP  10.100.188.113  <none>        80/TCP,443/TCP  38m
ubuntu@ip-172-31-31-176:~$ kubectl describe svc argo-cd-server -n argo-cd
Name:           argo-cd-server
Namespace:      argo-cd
Labels:         app.kubernetes.io/component=server
                app.kubernetes.io/instance=argo-cd
                app.kubernetes.io/managed-by=Helm
                app.kubernetes.io/name=argo-cd-server
                app.kubernetes.io/part-of=argo-cd
                app.kubernetes.io/version=v2.13.2
                helm.sh/chart=argo-cd-7.7.10
Annotations:    meta.helm.sh/release-name: argo-cd
                meta.helm.sh/release-version: argo-cd
Selector:       app.kubernetes.io/name=argo-cd-server
Type:          ClusterIP
IP Family Policy:  SingleStack
IP Families:   IPv4
IP:            10.100.188.113
IPs:           10.100.188.113
Port:          http  80/TCP
TargetPort:    8080/TCP
Endpoints:    172.31.87.18:8080
Port:          https 443/TCP
TargetPort:    8088/TCP
Endpoints:    172.31.87.18:8080
Session Affinity: None
Internal Traffic Policy: Cluster
Events:        <none>
ubuntu@ip-172-31-31-176:~$ kubectl get events --sort-by=.metadata.creationTimestamp
LAST SEEN   TYPE    REASON          OBJECT
39m        Normal   SuccessfulCreate  job/argo-cd-redis-secret-init
39m        Normal   Scheduled        pod/argo-cd-redis-secret-init-xgtdg
MESSAGE
Created pod: argo-cd-redis-secret-init-xgtdg
Successfully assigned argo-cd/argo-cd-redis-secret-init-xgtdg
```

- After executing the argocd commands than we will get an loadbalancer arn.
  - Copy that and paste it in google browser and browse it.

```
ubuntu@ip-172-31-29-108:~$ kubectl get svc argoecd-server -n argoecd -o jsonpath='{.spec.type}'  
ubuntu@ip-172-31-29-108:~$ kubectl patch svc argoecd-server -n argoecd -p '{"spec": {"type": "LoadBalancer"}}'  
service/argoecd-server patched  
ubuntu@ip-172-31-29-108:~$ export ARGOCD_SERVER=$(kubectl get svc argoecd-server -n argoecd -o json | jq -r '.status.loadBalancer.ingress[0].hostname')  
ubuntu@ip-172-31-29-108:~$ echo $ARGOCD_SERVER  
af5fb194ff8f4883f61128c7b978e2c3-1427179277.us-east-1.elb.amazonaws.com  
ubuntu@ip-172-31-29-108:~$ |
```

```
ubuntu@ip-172-31-29-108: ~ + >
ubuntu@ip-172-31-29-108:~$ history
1 sudo apt-get update
2 sudo apt install awscli
3 sudo apt install curl unzip
4 ls
5 unzip awscliv2.zip
6 /usr/local/bin/aws --version
7 /usr/local/bin/aws
8 /usr/local/bin/aws --version
9 curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"
10 unzip awscliv2.zip
11 unzip -a awscliv2.zip
12 sudo ./aws/install
13 /usr/local/bin/aws --version
14 sudo apt update
15 sudo snap install kubectl --classic
16 kubectl
17 aws configure
18 aws sts get-caller-identity
19 curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null
20 sudo apt-get install apt-transport-https --yes
21 echo "[deb [arch=$(dpkg --print-architecture)] signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list
22 sudo apt-get update
23 sudo apt-get install helm
24 helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
25 helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
26 helm repo add argo-cd https://argoproj.github.io/argo-helm
27 helm dep update charts/argo-cd/
28 ls charts/argo-cd
29 mkdir -p charts/argo-cd
30 helm repo add argo-cd https://argoproj.github.io/argo-helm
31 helm dep update charts/argo-cd/
32 curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null
33 sudo apt-get install apt-transport-https --yes
34 echo "[deb [arch=$(dpkg --print-architecture)] signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list
35 sudo apt-get update
36 sudo apt-get install helm
37 helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
38 helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
tc@apt/sources.list.d/helm-stable-debian.list
```

```
ubuntu@ip-172-31-29-108: ~ + >
ubuntu@ip-172-31-29-108:~$ history
30 helm repo add argo-cd https://argoproj.github.io/argo-helm
31 helm dep update charts/argo-cd/
32 curl https://baltocdn.com/helm/signing.asc | gpg --dearmor | sudo tee /usr/share/keyrings/helm.gpg > /dev/null
33 sudo apt-get install apt-transport-https --yes
34 echo "[deb [arch=$(dpkg --print-architecture)] signed-by=/usr/share/keyrings/helm.gpg] https://baltocdn.com/helm/stable/debian/ all main" | sudo tee /etc/apt/sources.list.d/helm-stable-debian.list
35 sudo apt-get update
36 sudo apt-get install helm
37 helm repo add prometheus-community https://prometheus-community.github.io/helm-charts
38 helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
39 kubectl create namespace prometheus-node-exporter
40 helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter
41 helm install prometheus-node-exporter prometheus-community/prometheus-node-exporter --namespace prometheus-node-exporter --create-namespace
42 helm repo add argo-cd https://argoproj.github.io/argo-helm
43 helm dep update charts/argo-cd/
44 helm repo update
45 helm install argo-cd charts/argo-cd/
46 kubectl create namespace argo-cd
47 helm install argo-cd charts/argo-cd/
48 helm install argo-cd argo-cd/argo-cd
49 kubectl get all -n argo-cd
50 kubectl get all -n argo-cd
51 export ARGODC_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
52 echo $ARGODC_SERVER
53 export ARGODC_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
54 sudo apt install jq
55 echo $ARGODC_SERVER
56 export ARGODC_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
57 echo $ARGODC_SERVER
58 export ARGODC_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
59 echo $ARGODC_SERVER
60 kubectl get all -n argo-cd
61 sudo apt install jq
62 kubectl get svc argo-cd-server -n argo-cd -o json | jq -r '.status.loadBalancer.ingress[0].hostname'
63 export ARGODC_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
64 export ARGODC_SERVER=$(kubectl get svc argo-cd-server -n argo-cd -o json | jq -r '.status.loadBalancer.ingress[0].hostname')
65 echo $ARGODC_SERVER
66 kubectl get svc argo-cd-server -n argo-cd
67 kubectl describe svc argo-cd-server -n argo-cd
68 kubectl get svc argo-cd-server -n argo-cd -o jsonpath='{.spec.type}'
69 kubectl patch svc argo-cd-server -n argo-cd -p '{"spec": {"type": "LoadBalancer"}}'
```

```

50 kubectl get all -n argoocd
51 export ARGOCD_SERVER=$(kubectl get svc argoocd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
52 echo $ARGOCD_SERVER
53 export ARGOCD_SERVER=$($kubectl get svc argoocd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
54 sudo apt install jq
55 echo $ARGOCD_SERVER
56 export ARGOCD_SERVER=$($kubectl get svc argoocd -o json | jq --raw-output '.status.loadBalancer.ingress[0].hostname')
57 echo $ARGOCD_SERVER
58 echo $ARGOCD_SERVER
59 kubectl get all -n argoocd
60 sudo apt install jq
61 kubectl get svc argoocd -o json | jq -r '.status.loadBalancer.ingress[0].hostname'
62 export ARGOCD_SERVER=$(kubectl get svc argoocd -o json | jq --raw-output.status.loadBalancer.ingress[0].hostname)
63 export ARGOCD_SERVER=$($kubectl get svc argoocd -o json | jq -r '.status.loadBalancer.ingress[0].hostname')
64 echo $ARGOCD_SERVER
65 echo $ARGOCD_SERVER
66 kubectl get svc argoocd-server -n argoocd
67 kubectl describe svc argoocd-server -n argoocd
68 kubectl get svc argoocd-server -n argoocd -o jsonpath='{.spec.type}'
69 kubectl patch svc argoocd-server -n argoocd -p '{"spec": {"type": "LoadBalancer"}}'
70 export ARGOCD_SERVER=$($kubectl get svc argoocd-server -n argoocd -o json | jq -r '.status.loadBalancer.ingress[0].hostname')
71 echo $ARGOCD_SERVER
72 export ARGO_PWD=$($kubectl -n argoocd get secret argoocd-initial-admin-secret -o jsonpath='{.data.password}' | base64 -d)
73 echo $ARGO_PWD
74 history
ubuntu@ip-172-31-29-108:~$ client_loop: send disconnect: Connection reset
C:\Users\user\Downloads>ssh -i "vinay.pem" ubuntu@ec2-54-172-171-192.compute-1.amazonaws.com
Welcome to Ubuntu 22.04.5 LTS (GNU/Linux 6.8.0-1015-aws x86_64)

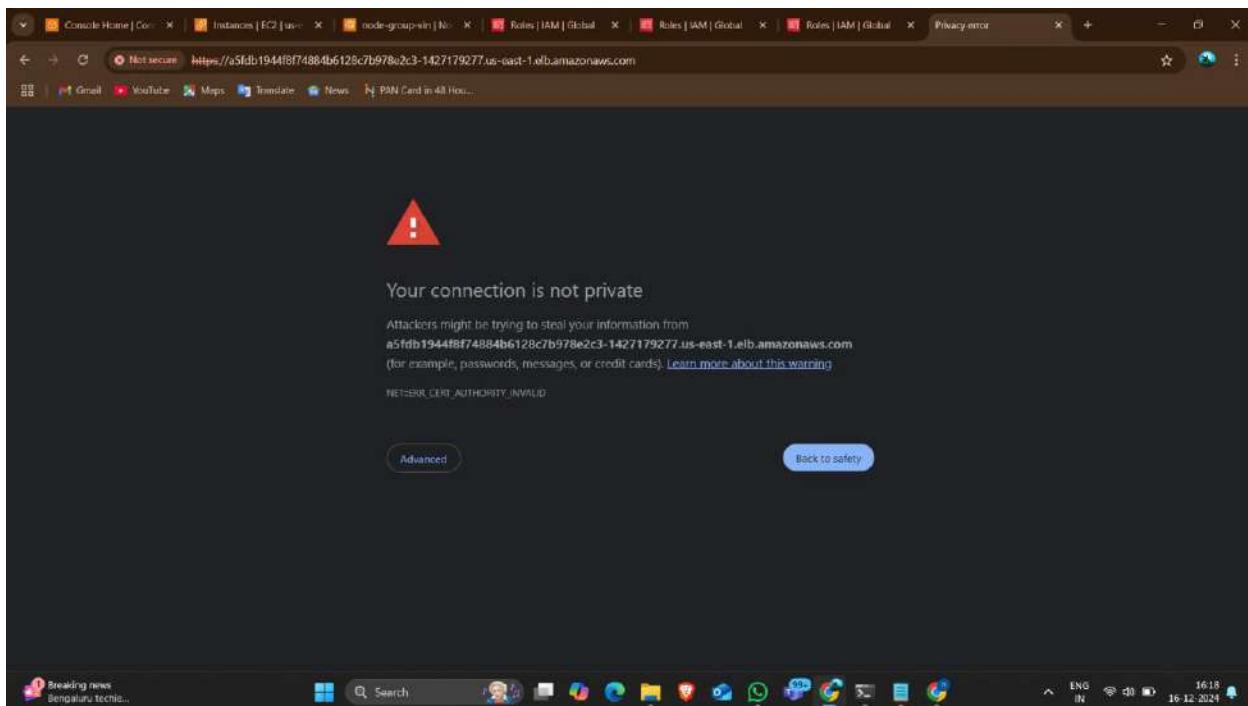
 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support:      https://ubuntu.com/pro

System information as of Mon Dec 16 17:18:51 UTC 2024

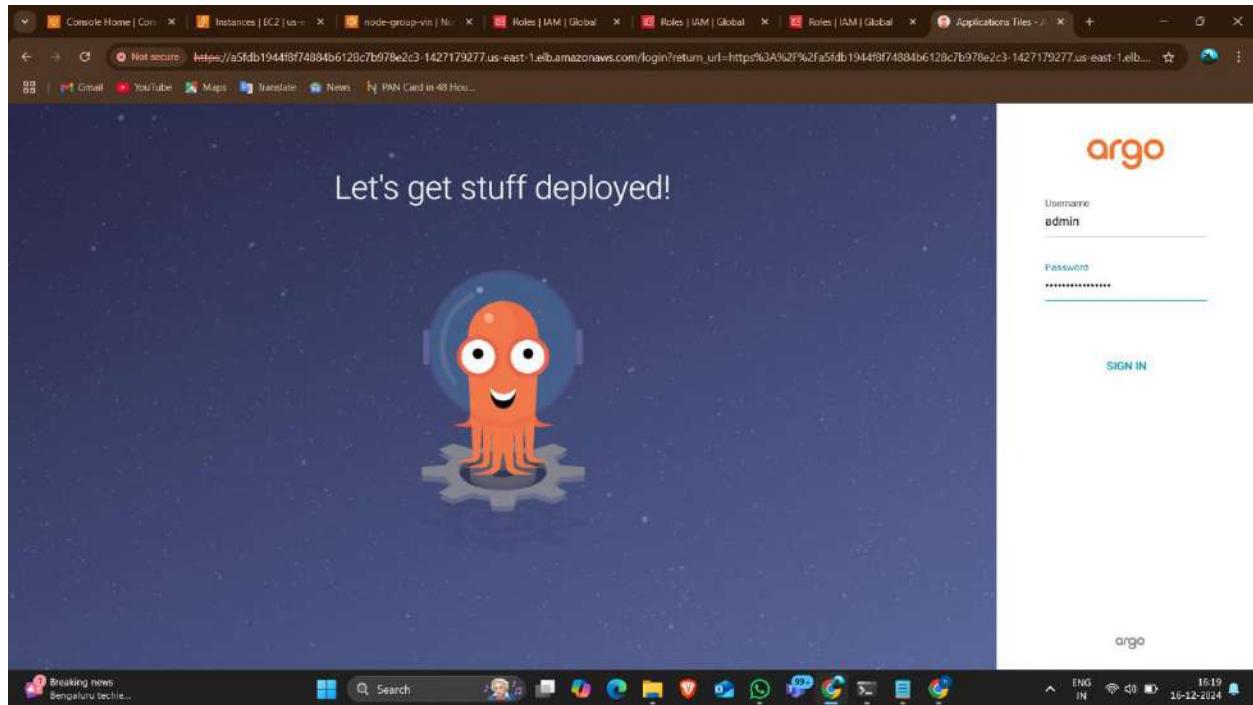
System load: 0.0          Processes:           109
Usage of /: 15.4% of 19.20GB   Users logged in:     0
Memory usage: 4%
Swap usage:  0%
IPv4 address for eth0: 172.31.29.108

```

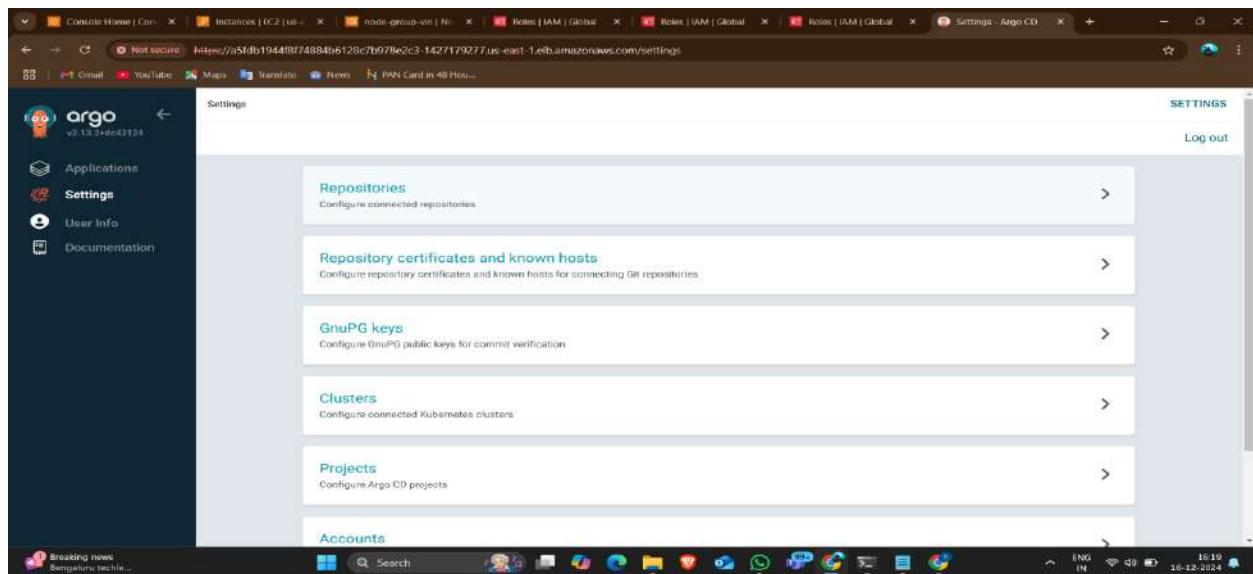
- We will get this page.
- Click advanced and a link will be provided than click that link to open argoocd page.



- This is the argoCD login page.
- Username “admin” password
- For password we need to run a command in terminal.
- “`export ARGO_PWD=$(kubectl -n argoCD get secret argoCD-initial-admin-secret -o jsonpath='{.data.password}' | base64 -d)`”
- “`echo $ARGO_PWD`”



- This is the official web page of argoCD.



- Go to settings, provide the required details.

The screenshot shows two consecutive screenshots of the Argo UI interface, likely from a browser window.

**Screenshot 1 (Top):** A modal dialog titled "CONNECT" is open. It asks "Choose your connection method:" with "VIA HTTPS" selected. Below this, under "CONNECT REPO USING HTTPS", the "Type" is set to "git", "Project" is "default", and the "Repository URL" is "https://github.com/Gouserabbani44/Netflix.git". There is also a field for "Username (optional)".

**Screenshot 2 (Bottom):** The main Argo UI page is shown. The left sidebar has links for "Applications", "Settings" (which is currently selected), "User Info", and "Documentation". The main area is titled "REPOSITORIES" and shows a table with one row:

Type	Name	Project	Repository	Connection Status
git		default	https://github.com/Gouserabbani44/Netflix.git	Successful

The status bar at the bottom indicates "16:20 16-12-2024".

- Go to application and fill the required details.

The screenshot shows two nearly identical screenshots of the Argo UI interface, one above the other, illustrating the process of creating a new application. Both screenshots are taken from a Windows desktop environment.

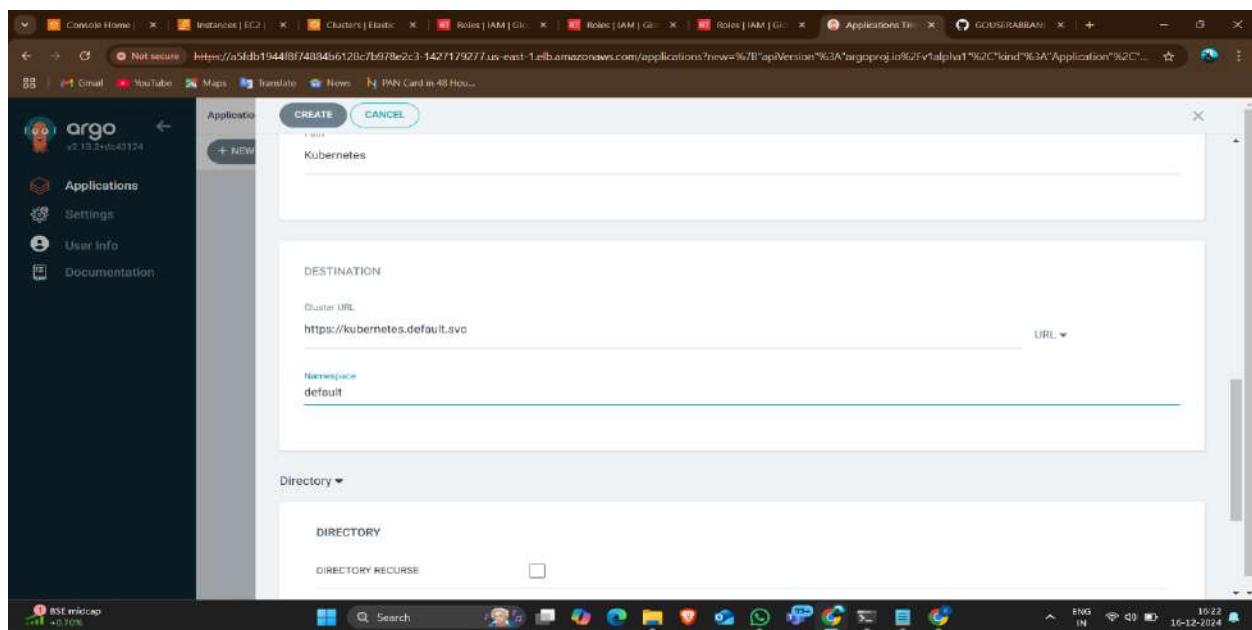
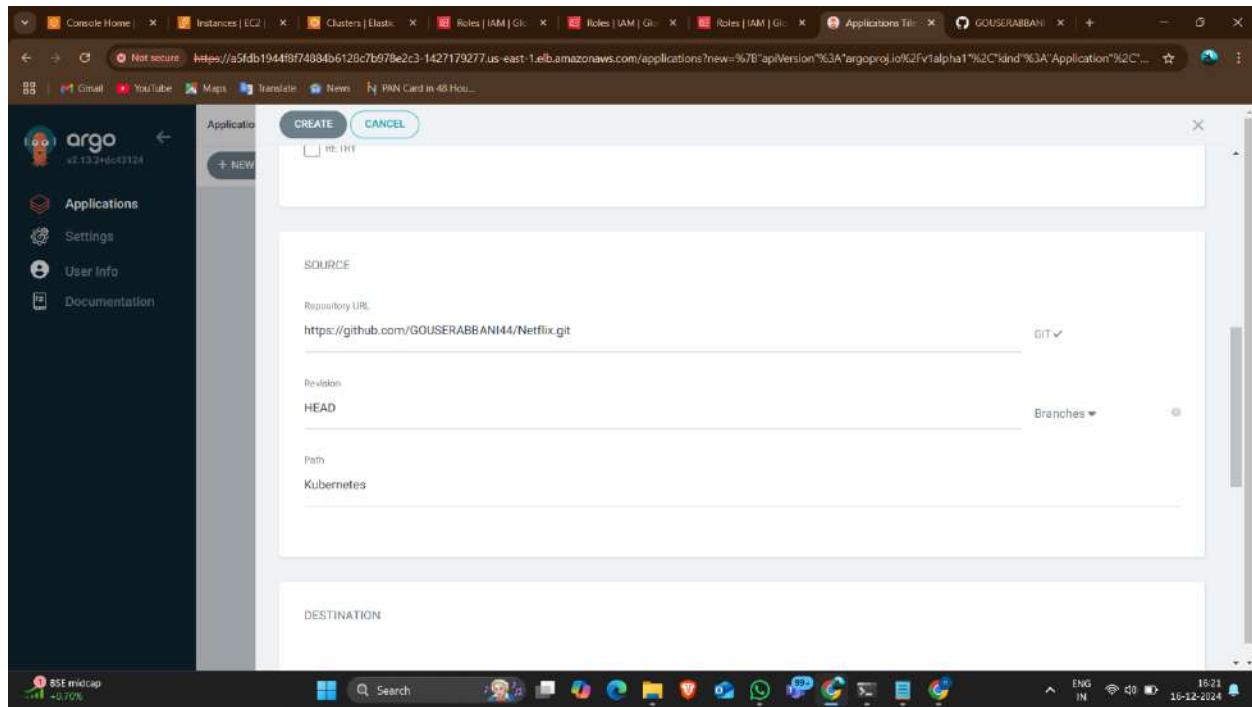
**Top Screenshot:**

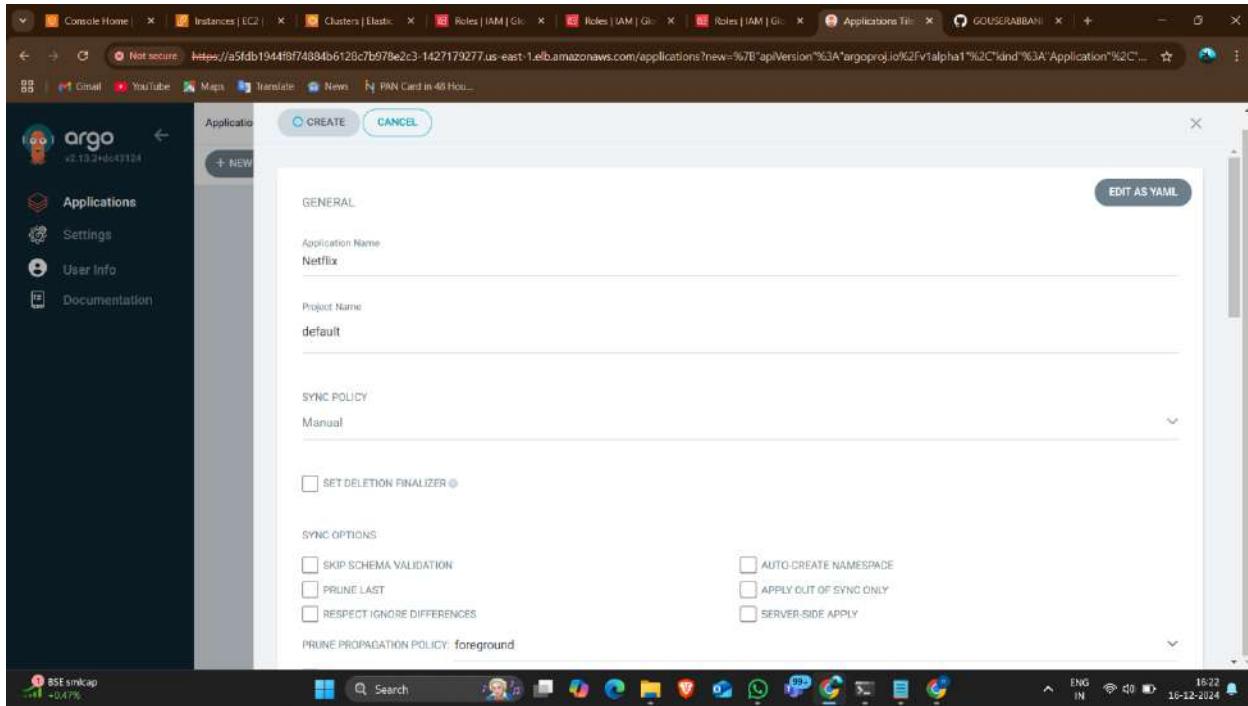
- Left Sidebar:** Shows the Argo logo and navigation links: Applications, Settings, User Info, and Documentation.
- Header:** Shows the URL <https://a5fdb1944fb74884b6128c7b978e2c3-1427179277.us-east-1.elb.amazonaws.com/applications?new=%7B%7D>.
- Form:**
  - GENERAL:** Application Name field is empty.
  - SYNC POLICY:** Set to "Manual".
  - SYNC OPTIONS:**
    - SKIP SCHEMA VALIDATION
    - PRUNE LAST
    - RESPECT IGNORE DIFFERENCES
    - AUTO-CREATE NAMESPACE
    - APPLY OUT OF SYNC ONLY
    - SERVER-SIDE APPLY
  - PRUNE PROPAGATION POLICY:** Set to "foreground".
- Buttons:** CREATE (highlighted in blue), CANCEL, and EDIT AS YAML.

**Bottom Screenshot:**

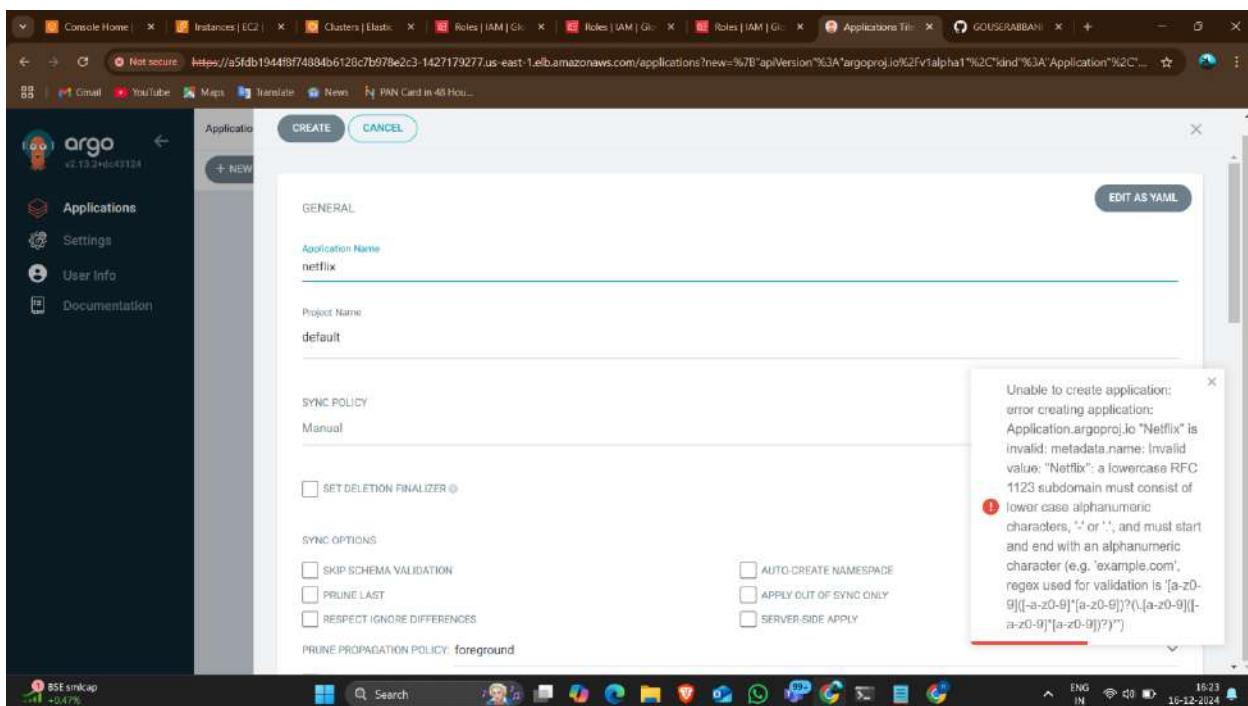
- Left Sidebar:** Same as the top screenshot.
- Header:** Shows the URL <https://a5fdb1944fb74884b6128c7b978e2c3-1427179277.us-east-1.elb.amazonaws.com/applications?new=%7B%7B%22apiVersion%22%3A%22argoproj.io/v1alpha1%22%2C%22kind%22%3A%22Application%22%2C%22metadata%22%3A%22%7B%7D%22%2C%22spec%22%3A%22%7B%7D%22%7D%7D>.
- Form:**
  - GENERAL:** Application Name field contains "Netflix".
  - SYNC POLICY:** Set to "Manual".
  - SYNC OPTIONS:**
    - SKIP SCHEMA VALIDATION
    - PRUNE LAST
    - RESPECT IGNORE DIFFERENCES
    - AUTO-CREATE NAMESPACE
    - APPLY OUT OF SYNC ONLY
    - SERVER-SIDE APPLY
  - PRUNE PROPAGATION POLICY:** Set to "foreground".
- Buttons:** CREATE (highlighted in blue), CANCEL, and EDIT AS YAML.

- Give the path clearly.





- Create.



- Here the created application.

The screenshot shows the Argo UI interface. On the left, there's a sidebar with options like 'Applications', 'Settings', 'User Info', and 'Documentation'. The main area is titled 'Applications' and shows a list of applications. One application, 'netflix', is selected and shown in a detailed modal window. The modal displays the following information:

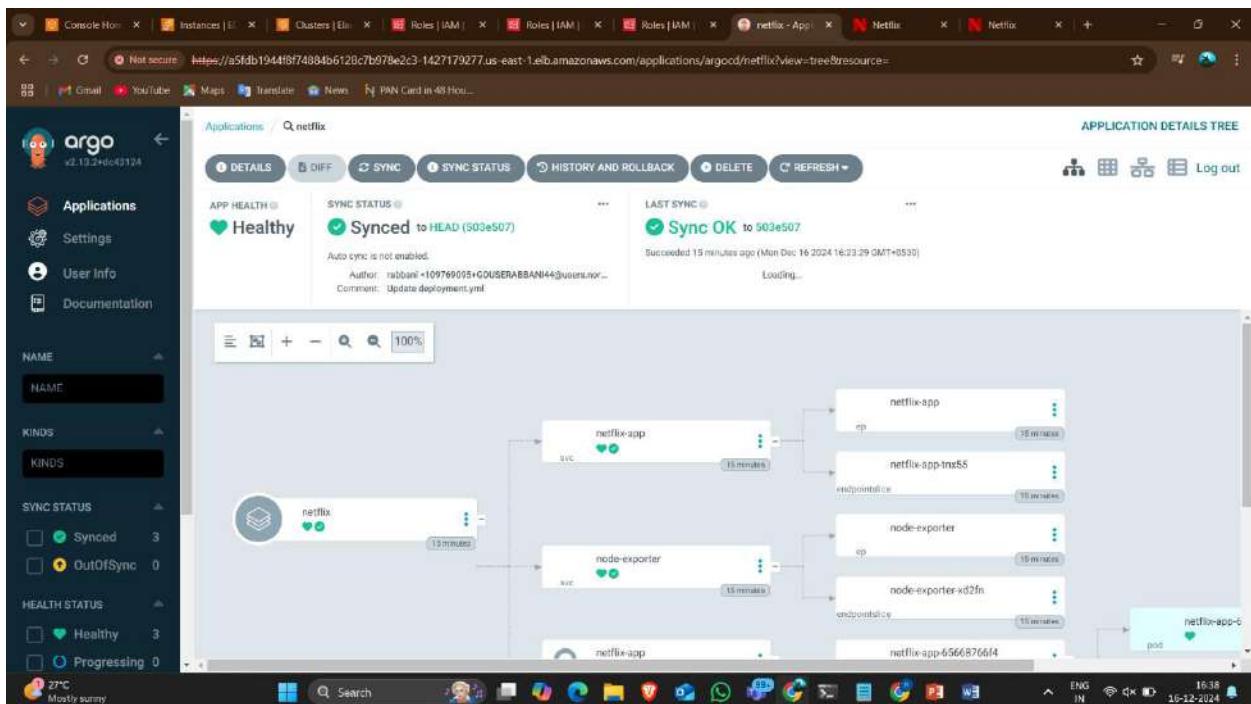
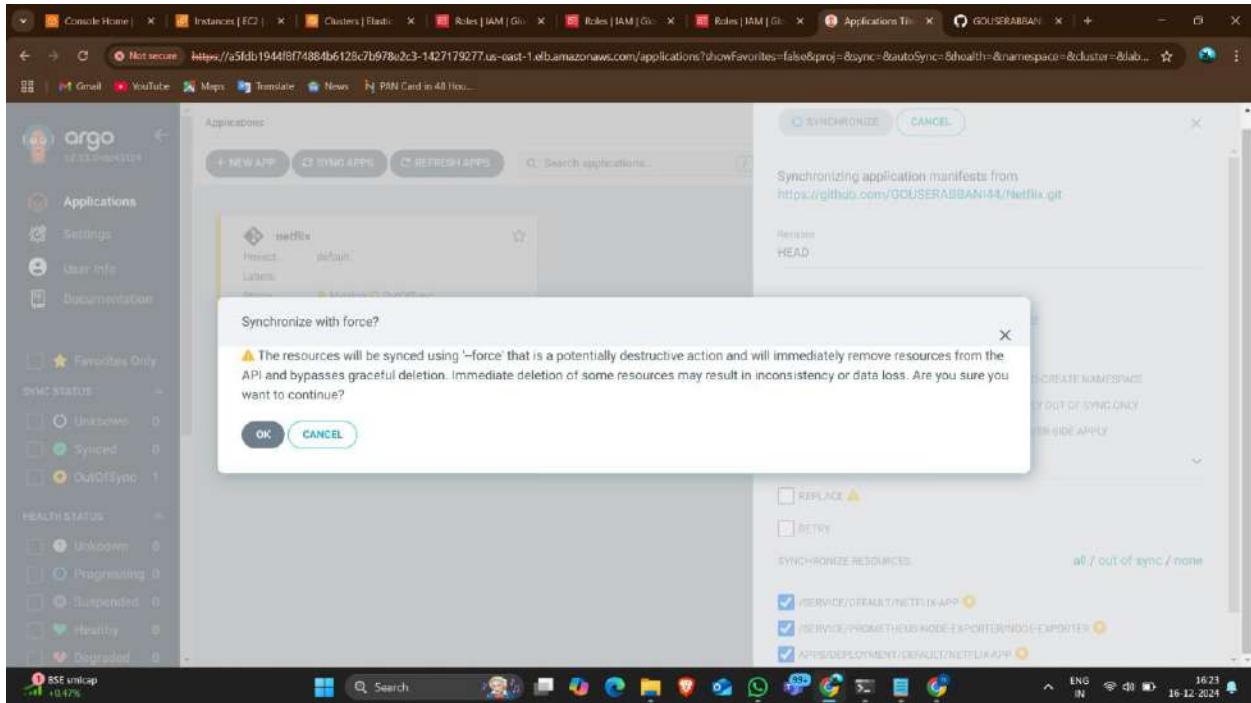
- Project:** default
- Labels:** Missing OutOfSync
- Status:** Missing
- RepoURL:** https://github.com/Gouserabbani44/...
- Target R...:** HEAD
- Path:** Kubernetes
- Destination:** in-cluster
- Namespace:** default
- Created:** 12/16/2024 16:23:04 (a few seconds a...)

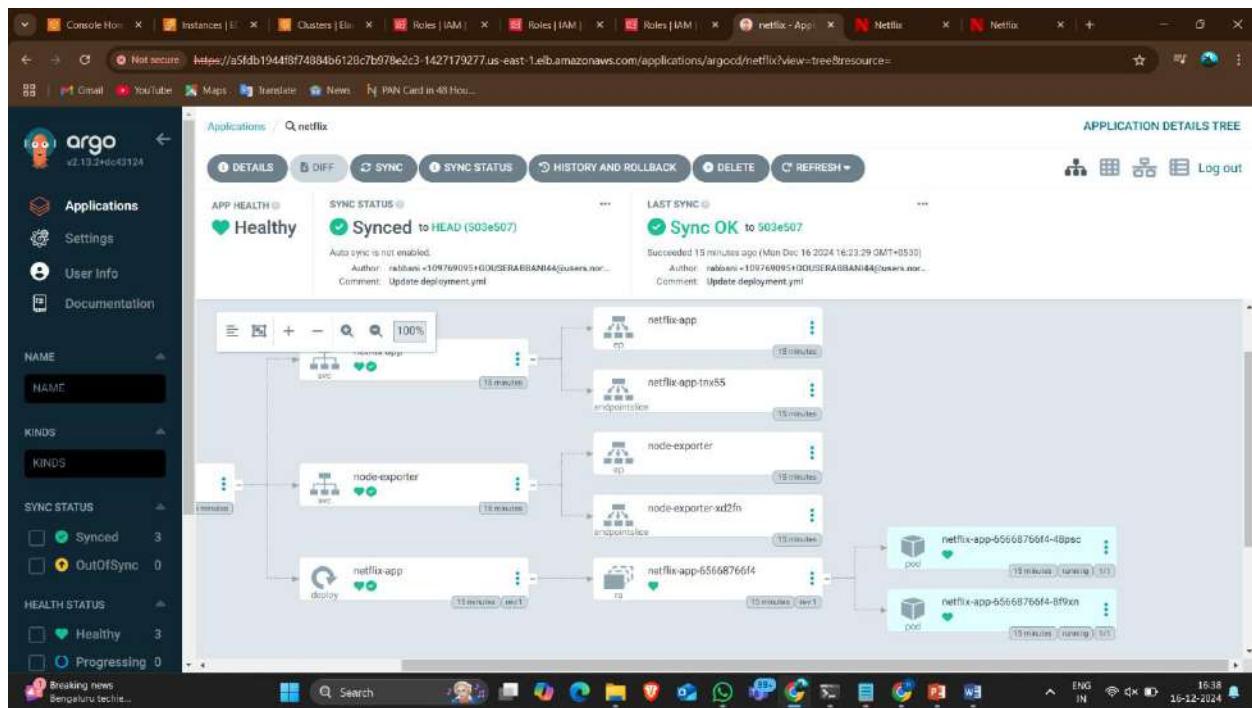
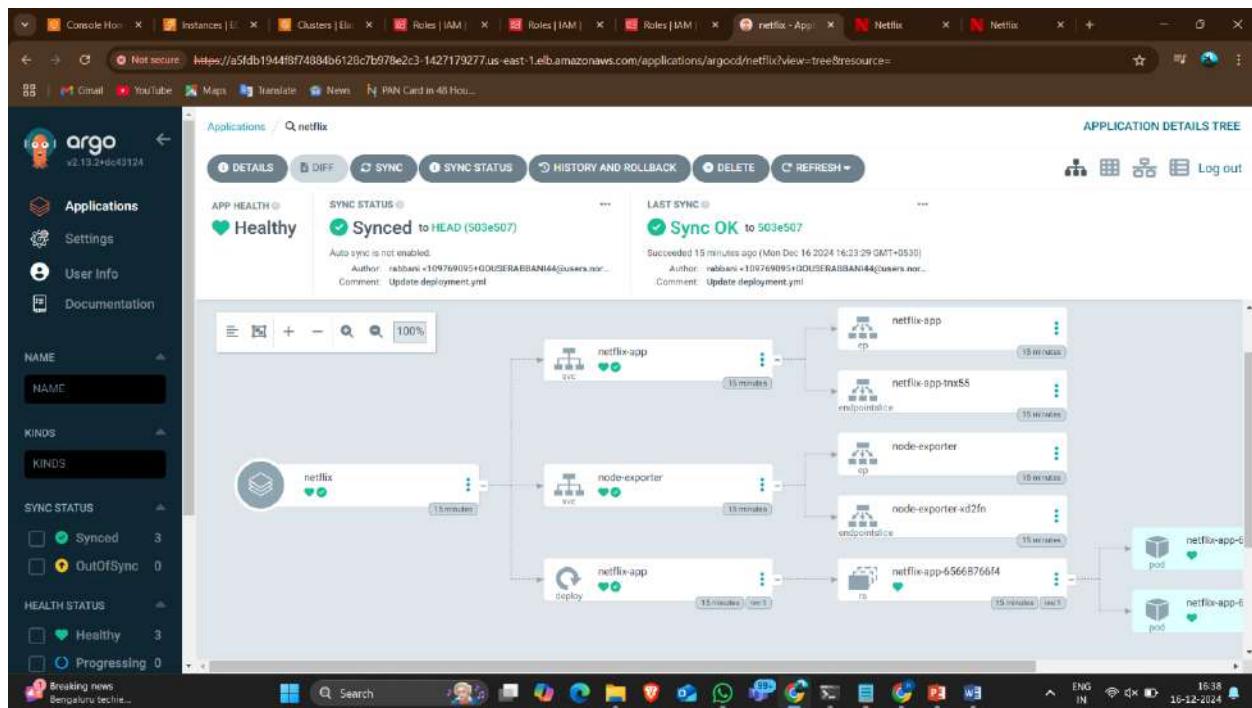
At the bottom of the modal are three buttons: SYNC, REFRESH, and DELETE.

- Sync the application.

The screenshot shows the Argo UI interface with the 'SYNC APPS' dialog open for the 'netflix' application. The dialog has two main buttons: 'SYNCHRONIZE' and 'CANCEL'. The application details are the same as in the previous screenshot. The 'SYNCHRONIZE' dialog contains the following configuration:

- Synchronizing application manifests from**: <https://github.com/Gouserabbani44/Netflix.git>
- Revision**: HEAD
- Sync Options** (checkboxes):
  - PRUNE
  - DRY RUN
  - APPLY ONLY
  - FORCE** (checked)
- Prune Propagation Policy**: foreground
- Replace**: ▲
- Retry**: ▲
- Synchronize Resources** (checkboxes):
  - /SERVICE/DEFAULT/NETFLIX-APP (checked)
  - /SERVICE/PROMETHEUS-NODE-EXPORTER/NODE-EXPORTER (checked)
  - APPS/DEPLOYMENT/DEFAULT/NETFLIX-APP (checked)





The screenshot shows the Argo UI interface. On the left, there's a sidebar with navigation links: 'Console Home', 'Instances | EC2 | us-east-1', 'node-group-vin | Node group', 'netflix - Application Details Tree', 'Billing and Cost Management', and a '+' button. Below these are sections for 'Applications', 'Settings', 'User Info', and 'Documentation'. Under 'NAME', there's a table with one row: NAME (Netflix). Under 'KINDS', there's a table with one row: KINDS (Service). Under 'SYNC STATUS', there's a table with two rows: Synced (3) and OutOfSync (0). Under 'HEALTH STATUS', there's a table with two rows: Healthy (6) and Progressing (0). The main content area has tabs for 'LIVE MANIFEST', 'DIFF', and 'DESIRED MANIFEST'. The 'LIVE MANIFEST' tab is active, showing the following YAML code:

```
apiVersion: v1
kind: Service
metadata:
  annotations:
    kubectl.kubernetes.io/last-applied-configuration: >
      {"apiVersion":"v1","kind":"Service","metadata":{"annotations":{},"labels":{"app":"netflix-app","argocd.argoproj.io/instance":"netflix"}}, "creationTimestamp":"2024-12-16T10:53:29Z"
  labels:
    app: netflix-app
    argocd.argoproj.io/instance: netflix
  name: netflix-app
  namespace: default
  resourceVersion: '21728'
  uid: e438ff21-7809-452f-9ee8-853e706b6994
spec:
  clusterIP: 10.100.157.237
  clusterIPs:
    - 10.100.157.237
  externalTrafficPolicy: cluster
  internalTrafficPolicy: cluster
  ipFamilies:
    - IPv4
  ipFamilyPolicy: singlestack
  ports:
    - nodePort: 30007
      port: 80
      protocol: TCP
      targetPort: 80
    selector:
      app: netflix-app
  sessionAffinity: None
```

This screenshot is nearly identical to the one above, showing the Argo UI interface. The main difference is in the 'LIVE MANIFEST' tab of the central panel, where the YAML code has been modified to change the port mapping:

```
apiVersion: v1
kind: Service
metadata:
  annotations:
    kubectl.kubernetes.io/last-applied-configuration: >
      {"apiVersion":"v1","kind":"Service","metadata":{"annotations":{},"labels":{"app":"netflix-app","argocd.argoproj.io/instance":"netflix"}}, "creationTimestamp":"2024-12-16T10:53:29Z"
  labels:
    app: netflix-app
    argocd.argoproj.io/instance: netflix
  name: netflix-app
  namespace: default
  spec:
    ports:
      - nodePort: 30007
        port: 80
        targetPort: 80
      selector:
        app: netflix-app
    type: NodePort
```

Instances (1/6) Info

Name	Instance ID	Instance state	Instance type	Status check	Alarm status	Availability Zone	Public IP
eks	i-0cb5505ef05ce09	Stopped	t2.medium	-	<span style="color: green;">View alarms +</span>	us-east-1a	-
Netflix	i-09a7ea3458b67519e	Stopped	t2.large	-	<span style="color: green;">View alarms +</span>	us-east-1a	ec2-54-1
eks	i-03b4a965f146bd0b16	Stopped	t2.large	-	<span style="color: green;">View alarms +</span>	us-east-1a	-
eks-net	i-0fd6605f85cd9fc3	Running	t2.large	<span style="color: green;">2/2 checks passed</span>	<span style="color: green;">View alarms +</span>	us-east-1a	ec2-54-1
	i-0577193f91e1fdf8b	Running	t3.medium	<span style="color: green;">3/3 checks passed</span>	<span style="color: green;">View alarms +</span>	us-east-1f	ec2-3-23
	<b>i-07ea61af3a1801255</b>	Running	t3.medium	<span style="color: green;">3/3 checks passed</span>	<span style="color: green;">View alarms +</span>	us-east-1c	ec2-3-23

**i-07ea61af3a1801255**

Public IPv4 address copied

Instance ID: i-07ea61af3a1801255 | [3.237.255.19 \[open address\]](#)

Private IPv4 addresses:

- 172.31.10.113
- 172.31.12.139

- Copy the pub ip and search along with port.
- This is the results.

NETFLIX

Absolution

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- Successfully hosted Netflix application.

