

A DevOps Implementation for Scalable Food Delivery Platform

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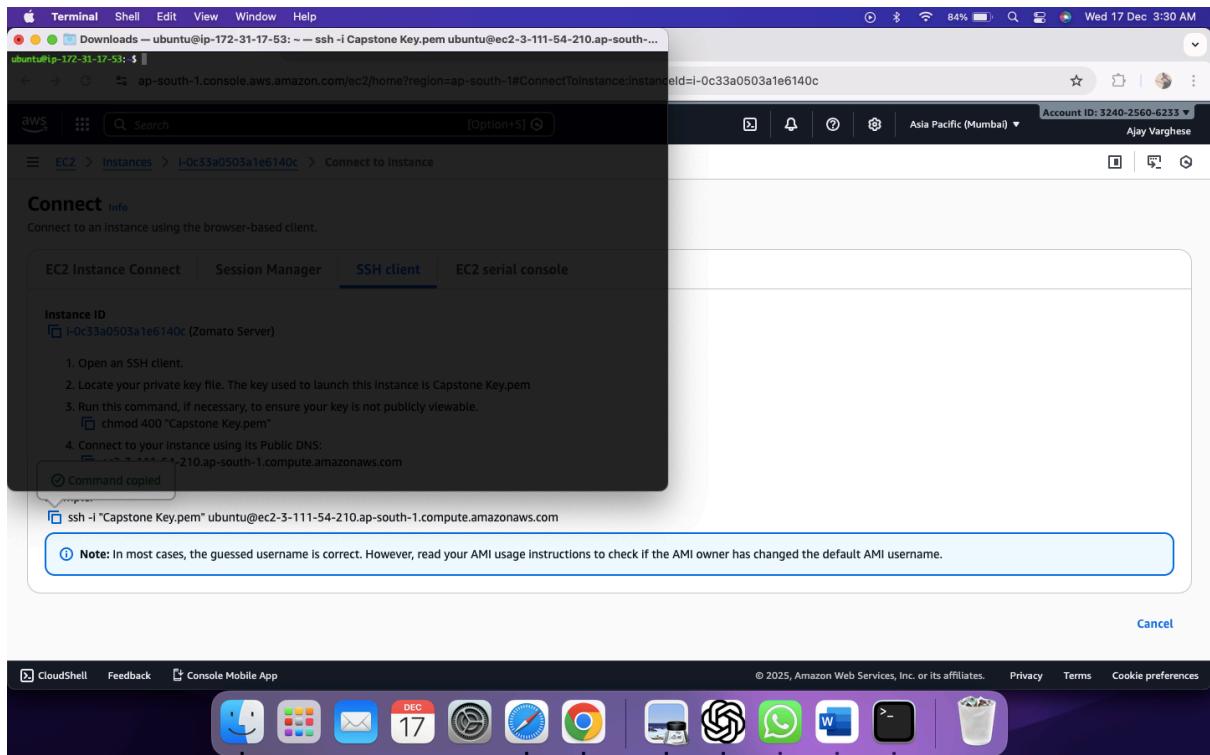
Capstone -3

Step 1: Launch an Instance

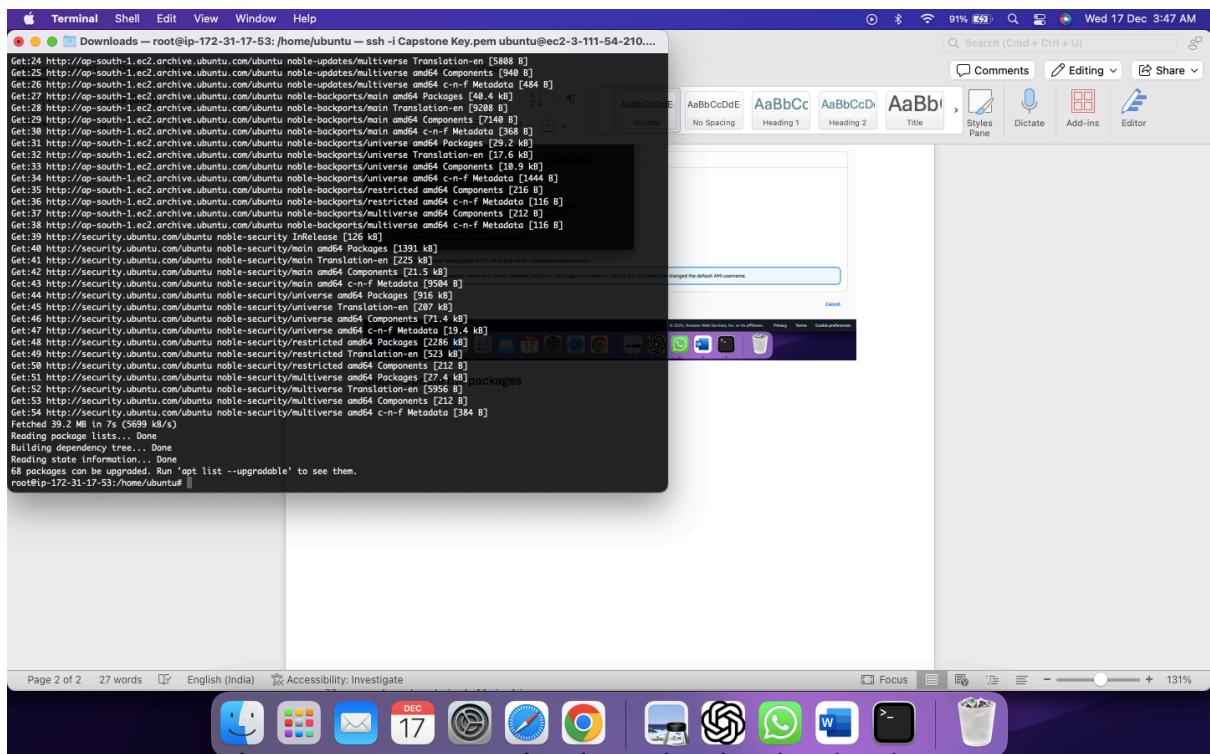
The screenshot shows the AWS EC2 console with the "Launch an instance" wizard open. The current step is "Application and OS Images (Amazon Machine Image)". The "Quick Start" tab is selected. A search bar at the top right allows searching for specific AMIs. Below it, a grid of icons represents different operating systems: Amazon Linux, macOS, Ubuntu, Windows, Red Hat, SUSE Linux, and Debian. An "AWS" icon is also present. To the right of the grid, there is a button labeled "Browse more AMIs" which includes a note about including AMIs from AWS Marketplace and the Community. Below the grid, a specific AMI is highlighted: "Ubuntu Server 24.04 LTS (HVM), SSD Volume Type". It shows the AMI ID (ami-02b8269d5e85954ef), architecture (64-bit (x86)), and other details like ENA enabled and root device type (ebs). A "Free tier eligible" badge is visible. On the right side of the wizard, a "Summary" section shows "Number of instances" set to 1. Other configuration options include "Virtual server type" (m7i-flex.large), "Firewall (security group)" (New security group), and "Storage (volumes)" (1 volume(s) - 30 GiB). At the bottom are "Cancel", "Launch Instance" (in orange), and "Preview code" buttons.

The screenshot shows the AWS EC2 console with the "Launch an instance" wizard open. The current step is "Instance type". The "m7i-flex.large" instance type is selected, showing its details: Family: m7i-flex, 2 vCPU, 8 GiB Memory, Current generation: true, On-Demand SUSE base pricing: 0.15705 USD per Hour, On-Demand RHEL base pricing: 0.12955 USD per Hour, On-Demand Ubuntu Pro base pricing: 0.10425 USD per Hour, On-Demand Linux base pricing: 0.10075 USD per Hour, and On-Demand Windows base pricing: 0.18815 USD per Hour. A note at the bottom states "Additional costs apply for AMIs with pre-installed software". The "Free tier eligible" badge is visible. On the right side of the wizard, the "Summary" section shows "Number of instances" set to 1. Other configuration options include "Virtual server type" (m7i-flex.large), "Firewall (security group)" (New security group), and "Storage (volumes)" (1 volume(s) - 30 GiB). At the bottom are "Cancel", "Launch Instance" (in orange), and "Preview code" buttons.

Step 2: SSH into EC2 Terminal



Step3: Update the packages



Step 4: Install AWS CLI

The screenshot shows a macOS terminal window with several tabs open. The active tab displays the command `apt install unzip -y` being run on an Ubuntu system. The output shows the download and installation of the `unzip` package. Below this, a GitHub repository page for a project named "DevOps-Project-Zomato-Kastro" is visible, showing the code for a Lambda function. The code includes AWS CLI setup, Jenkins configuration, and Java dependencies. A progress bar at the bottom indicates the deployment process is at 80% completion.

```
root@ip-172-31-17-53:~/home/ubuntu -- ssh -i Capstone.Key.pem ubuntu@ec2-3-111-54-210...
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
Suggested packages:
  zip
The following NEW packages will be installed:
  unzip
0 upgraded, 1 newly installed, 0 to remove and 68 not upgraded.
Need to get 174 kB of archives.
After this operation, 384 kB of additional disk space will be used.
Get:1 http://ppa.south1.ec2.archive.ubuntu.com/ubuntu noble-updates/main amd64 unzip amd64 6.0-2ubuntu4.1 [174 kB]
Selecting previously unselected package unzip.
Preparing to unpack .../unzip_6.0-2ubuntu4.1_amd64.deb ...
Unpacking unzip (6.0-2ubuntu4.1) ...
Setting up unzip (6.0-2ubuntu4.1) ...
Processing triggers for man-db (2.12.0-4build2) ...
[ 2 / 2 ] SRC
  gitignore
  DevOps Project - Zomato - Kastro...
  Dockerfile
  README.md
  jenkinsfile
  package-lock.json
Progress: [##.....] 80%
```

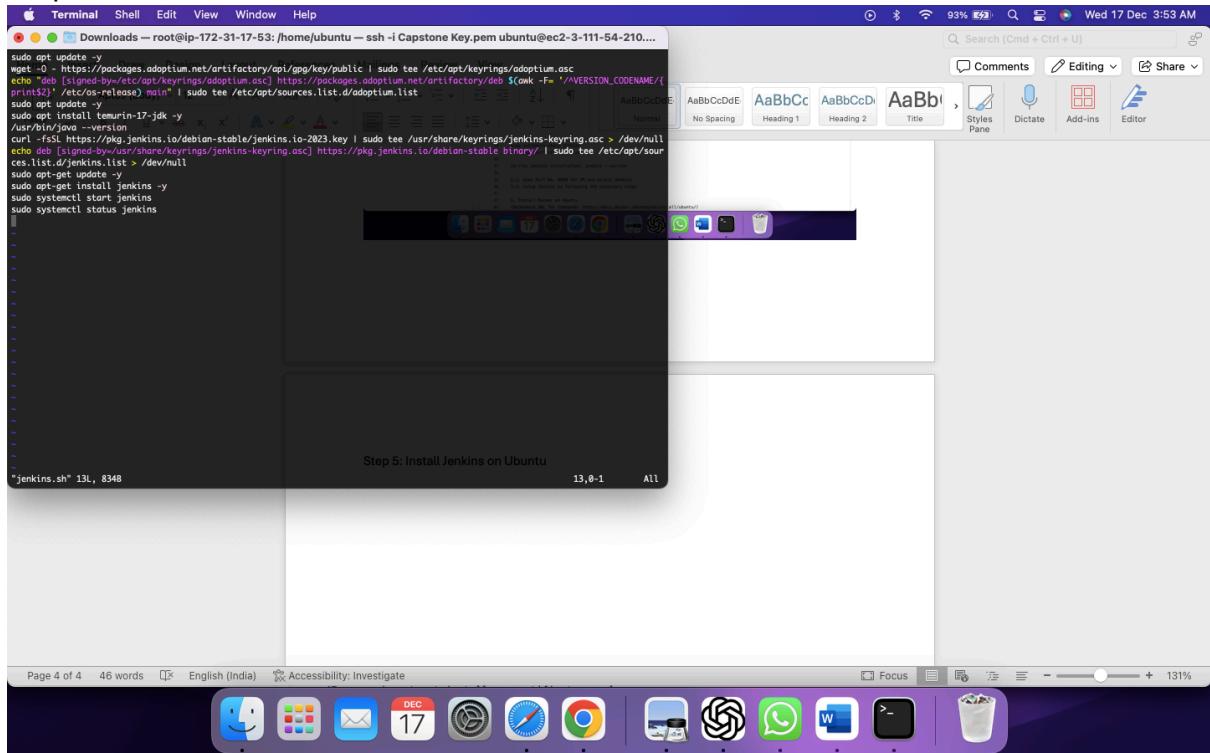
```
curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"
unzip awscliv2.zip
sudo ./aws/install
# Install Jenkins on Ubuntu
(Reference URL for commands: https://www.jenkins.io/doc/book/installing/linux/#debianubuntu)
#!/bin/bash
sudo apt update -y
wget -O - https://packages.adoptium.net/artifactory/api/gpg/key/public | sudo tee /etc/apt/keyrings/adoptium.asc
echo "deb [signed-by=/etc/apt/keyrings/adoptium.asc] https://packages.adoptium.net/artifactory/deb $(awk -F= '/^VERSION_CODENAME/{print$2}') main" | sudo tee /etc/apt/sources.list.d/adoptium.list
sudo apt update -y
sudo apt install temurin-17-jdk -y
/usr/bin/java --version
curl -fsL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee /usr/share/keyrings/jenkins-keyring.asc > /dev/null
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
sudo apt-get update -y
```

```
curl "https://awscli.amazonaws.com/awscli-exe-linux-x86_64.zip" -o "awscliv2.zip"  
unzip awscliv2.zip  
sudo ./aws/install
```

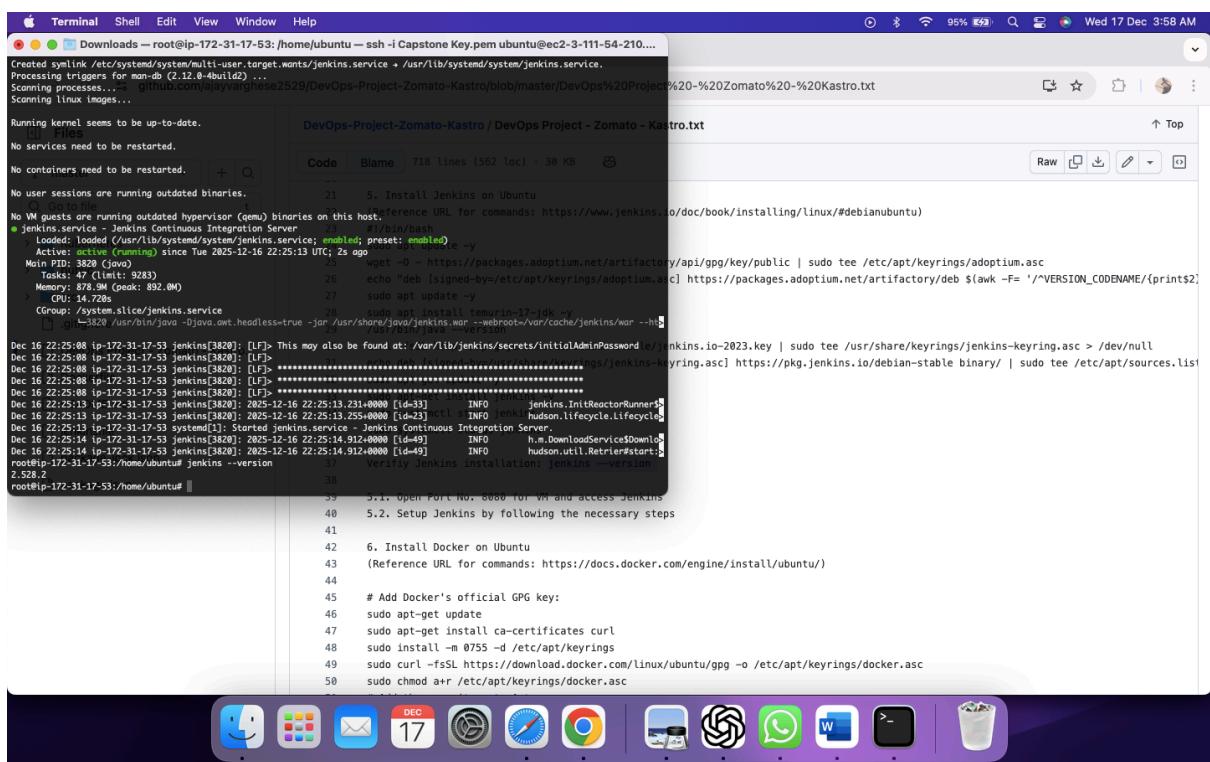
```
Terminal Shell Edit View Window Help
Downloads - root@ip-172-31-17-53: /home/ubuntu -- ssh -i Capstone.Key.pem ubuntu@ec2-3-111-54-210...
creating: aws/dist/awscli/customizations/wizard/lams/
creating: aws/dist/awscli/customizations/wizard/wizards/
inflating: aws/dist/awscli/customizations/wizard/wizards/configure/_main.yml Tomato-Kastro/blob/master/DevOps%20Project%20-%20Zomato%20-%20Kastro.txt
inflating: aws/dist/awscli/customizations/wizard/wizards/lam/iam-role.yml
inflating: aws/dist/awscli/customizations/wizard/wizards/lam/iam-role-arn.yml
inflating: aws/dist/awscli/customizations/wizard/wizards/events/new-rule.yml
inflating: aws/dist/awscli/customizations/wizard/wizards/dynamodb/new-table.yml
inflating: aws/dist/awscli/customizations/ss0/index.html
inflating: aws/dist/awscli/topics/config-vars.rst
inflating: aws/dist/awscli/topics/db/rds.rst
inflating: aws/dist/awscli/topics/db/redshift.rst
inflating: aws/dist/awscli/topics/db-expressions.rst
inflating: aws/dist/awscli/topics/return-codes.rst
inflating: aws/dist/awscli/topics/topic-caps.json
15 4. Install AWS CLI
creating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/METADATA
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/top_level.txt
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/INSTALLER
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/WHEEL
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/LICENSE
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/licenses/AUTHORS.rst
inflating: aws/dist/prompt_toolkit-3.0.51.dist-info/REQUESTED
inflating: aws/dist/wheel-0.45.1.dist-info/RECORD
22 [Reference URL for commands: https://www.jenkins.io/doc/book/installing/linux/#debianubuntu)
inflating: aws/dist/wheel-0.45.1.dist-info/LICENSE.txt
23 #!/bin/bash
inflating: aws/dist/wheel-0.45.1.dist-info/INSTALLER
inflating: aws/dist/wheel-0.45.1.dist-info/entry_points.txt
24 sudo apt update -y
inflating: aws/dist/wheel-0.45.1.dist-info/dependency_links.json
25 wget -O - https://packages.adoptium.net/artifactory/api/gpg/key/public | sudo tee /etc/apt/keyrings/adoptium.asc
inflating: aws/dist/wheel-0.45.1.dist-info/dependency_links.json
26 echo "deb [signed-by=/etc/apt/keyrings/adoptium.asc] https://packages.adoptium.net/artifactory/deb $ (awk -F '/^VERSION_CODENAME/{print$2}' /etc/os-release) main" | sudo tee /etc/apt/sources.list.d/adoptium.list
root@ip-172-31-17-53:/home/ubuntu# sudo ./aws/install
Install Jenkins on Ubuntu
You can now run: /usr/local/bin/aws --version
root@ip-172-31-17-53:/home/ubuntu# ls
28 sudo apt update -y
29 /usr/bin/java --version
root@ip-172-31-17-53:/home/ubuntu# curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee /usr/share/keyrings/jenkins-keyring.asc > /dev/null
The 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
30
31 sudo apt-get update -y
32 sudo apt-get install jenkins -y
33 sudo systemctl start jenkins
34 sudo systemctl status jenkins
35
36
37 Verify Jenkins installation: jenkins --version
38
39 5.1. Open Port No. 8080 for VM and access Jenkins
40 5.2. Setup Jenkins by following the necessary steps
41
42 6. Install Docker on Ubuntu
43 (Reference URL for commands: https://docs.docker.com/engine/install/ubuntu/)

Raw     
```

Step 5: Install Jenkins on Ubuntu



```
sudo apt update -y
wget -O https://packages.adoptium.net/artifactory/api/gpg/key/public | sudo tee /etc/apt/keyrings/adoptium.asc
echo "deb [signed-by=/etc/apt/keyrings/adoptium.asc] https://packages.adoptium.net/artifactory/deb $CmK -F= '/^VERSION_CODENAME/(print$2)/' /etc/os-release" | sudo tee /etc/apt/sources.list.d/adoptium.list
sudo apt update -y
sudo apt install temurin-17-jdk -y
curl -f https://pkg.jenkins.io/debian-stable/jenkins.io-2023.key | sudo tee /usr/share/keyrings/jenkins-keyring.gpg > /dev/null
echo "deb [signed-by=/usr/share/keyrings/jenkins-keyring.gpg] https://pkg.jenkins.io/debian-stable binary/" | sudo tee /etc/apt/sources.list.d/jenkins.list > /dev/null
sudo apt-get update -y
sudo apt-get install jenkins -y
sudo systemctl start jenkins
sudo systemctl status jenkins
```



```
Created symlink /etc/systemctl/system/multi-user.target.wants/jenkins.service → /usr/lib/systemd/system/jenkins.service.
Processing triggers for man-db (2.12.0-4build2) ...
Scanning processes... + GitHub.com/ajayvargi2829/DevOps-Project-Zomato-Kastro/blob/master/DevOps%20Project%20-%20Zomato%20-%20Kastro.txt
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.
● jenkins.service - Jenkins Continuous Integration Server
  Loaded: loaded (/usr/lib/systemd/system/jenkins.service; enabled; preset: enabled)
  Active: active (running) since Tue 2025-12-16 22:25:13 UTC; 2s ago
    Main PID: 3822 (java)
   Tasks: 47 (limit: 9283)
      Memory: 878.9M (peak: 892.0M)
     CPU: 14.728s
    CGroup: /system.slice/jenkins.service
           └─3822 /usr/bin/java -Djava.awt.headless=true -jar /usr/share/java/jenkins.war --webroot=/var/cache/jenkins/war --httpPort=8080

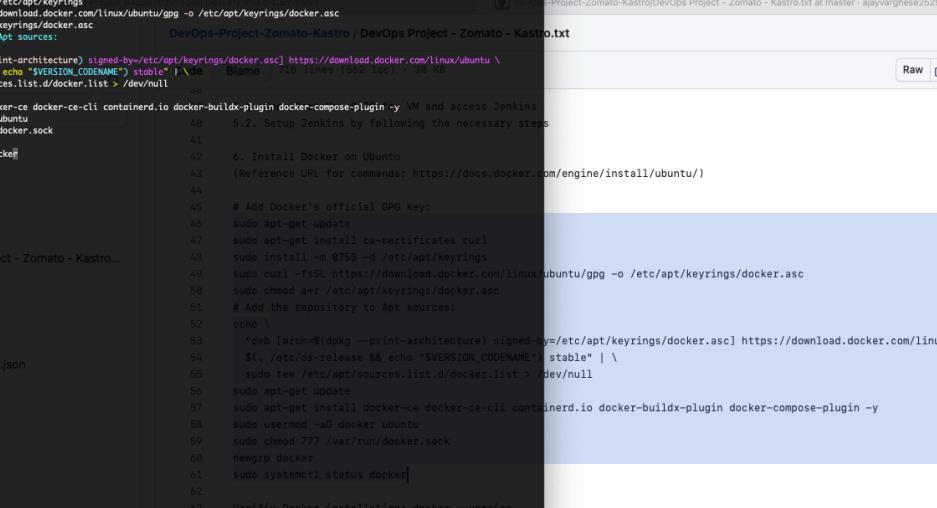
Dec 16 22:25:09 ip-172-31-17-53 jenkins[3820]: [L7P] This may also be found at: /var/lib/jenkins/secrets/initialAdminPassword
Dec 16 22:25:09 ip-172-31-17-53 jenkins[3820]: [L7P] -----
Dec 16 22:25:09 ip-172-31-17-53 jenkins[3820]: [L7P] **** Jenkins Configuration as of Dec 16, 2025 at 10:25:09 PM UTC ****
Dec 16 22:25:09 ip-172-31-17-53 jenkins[3820]: [L7P] **** http://ip-172-31-17-53:8080 ****
Dec 16 22:25:09 ip-172-31-17-53 jenkins[3820]: [L7P] ****
Dec 16 22:25:13 ip-172-31-17-53 jenkins[3820]: 2025-12-16 22:25:13.231+0000 [id=33] INFO jenkins.InitReactorRunner$
Dec 16 22:25:13 ip-172-31-17-53 jenkins[3820]: 2025-12-16 22:25:13.254+0000 [id=23] INFO jenkins.lifecycle.Lifecycle
Dec 16 22:25:14 ip-172-31-17-53 jenkins[3820]: 2025-12-16 22:25:14.912+0000 [id=49] INFO H.m.DownloadService$downloa
Dec 16 22:25:14 ip-172-31-17-53 jenkins[3820]: 2025-12-16 22:25:14.912+0000 [id=49] INFO hudson.util.Reactor$com
root@ip-172-31-17-53:/home/ubuntu# jenkins --version
2.528.2
root@ip-172-31-17-53:/home/ubuntu# [L7P]
3.1. Open Port No. 8080 for VM and access Jenkins
40 5.2. Setup Jenkins by following the necessary steps
41
42 6. Install Docker on Ubuntu
43 (Reference URL for commands: https://docs.docker.com/engine/install/ubuntu/)
44
45 # Add Docker's official GPG key:
46 sudo apt-get update
47 sudo apt-get install ca-certificates curl
48 sudo install -m 0755 -d /etc/apt/keyrings
49 sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
50 sudo chmod a+r /etc/apt/keyrings/docker.asc
```

Step 5.1: Open Port No. 8080 for VM and access Jenkins

The screenshot shows the AWS CloudShell interface. At the top, there's a navigation bar with tabs like 'CloudShell', 'Feedback', and 'Console Mobile App'. Below the navigation bar is a toolbar with various icons for file operations, search, and settings. The main area displays the Jenkins dashboard with the title 'Welcome to Jenkins!' and instructions for starting a build project. At the bottom, there's a dark footer bar with several application icons.

The screenshot shows the Jenkins dashboard. The top navigation bar includes 'File', 'Edit', 'View', 'History', 'Bookmarks', 'Profiles', 'Tab', 'Window', and 'Help' tabs. The main content area displays the Jenkins interface with sections for 'Welcome to Jenkins!', 'Start building your software project', and 'Set up a distributed build'. At the bottom, there's a dark footer bar with several application icons.

Step 6: Install Docker on ubuntu



The screenshot shows a macOS terminal window with several tabs open. The active tab displays a series of command-line instructions for installing Docker on an Ubuntu system. The commands include:

```
sudo apt-get update
sudo apt-get install ca-certificates curl
sudo install -m 0755 -d /etc/apt/keyrings
sudo curl -fsSL https://download.docker.com/linux/ubuntu/gpg -o /etc/apt/keyrings/docker.asc
sudo chmod 044 -r /etc/apt/keyrings/docker.asc
# Add the repository to Apt sources:
echo \"
deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
$C_ /etc/os-release && echo \"$VERSION_CODENAME\" stable\" | \|
sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin -y
VM and access Jenkins
sudo usermod -aG docker ubuntu
sudo chmod 777 /var/run/docker.sock
newgrp docker
sudo systemctl status docker
# public
src
.gitignore
DevOps Project - Zomato - Kastro...
Dockerfile
README.md
jenkinsfile
package-lock.json
package.json
```

Below the terminal window, the status bar shows the file "docker.sh" with 16L and 767B, and the current date and time as "Wed 17 Dec 4:17 AM".

Step 7: Install Trivy on Ubuntu

```

Terminal Shell Edit View Window Help
Downloads — ubuntu@ip-172-31-17-53: ~ -- ssh -i Capstone.Key.pem ubuntu@ec2-3-109-98-50.ap-south-1...
sudo apt-get install wget apt-transport-https gnupg
wget -qO - https://aquasecurity.github.io/trivy-repo/deb/public.key | gpg --dearmor | sudo tee /usr/share/keyrings/trivy.gpg > /dev/null
echo "deb [signed-by=/usr/share/keyrings/trivy.gpg] https://aquasecurity.github.io/trivy-repo/deb generic main" | sudo tee -a /etc/apt/sources.list.d/trivy.list
sudo apt-get update
sudo apt-get install trivy

```

The code editor shows the Dockerfile with the Trivy installation step highlighted:

```

# Add the repository to Apt sources:
echo 'deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.asc] https://download.docker.com/linux/ubuntu \
$ . /etc/os-release && echo "$VERSION_CODENAME" | \ 
$ sudo tee /etc/apt/sources.list.d/docker.list > /dev/null
sudo apt-get update
sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin -y
sudo usermod -aG docker ubuntu
sudo chmod 777 /var/run/docker.sock
newgrp docker
sudo systemctl status docker

Verify Docker installation: docker --version

7. Install Trivy on Ubuntu
(Reference URL for commands: https://aquasecurity.github.io/trivy/v0.55/getting-started/installation/)

8. Install Docker Scout
Make sure to Login to DockerHub account in browser
<Follow the process as explained in the video>

9. Install SonarQube using Docker
$ docker run -d --name sonar -p 9000:9000 sonarqube:lbs-community
$ docker ps (You can see SonarQube container)

```

```

Terminal Shell Edit View Window Help
Downloads — ubuntu@ip-172-31-17-53: ~ -- ssh -i Capstone.Key.pem ubuntu@ec2-3-109-98-50.ap-south-1...
No containers need to be restarted.

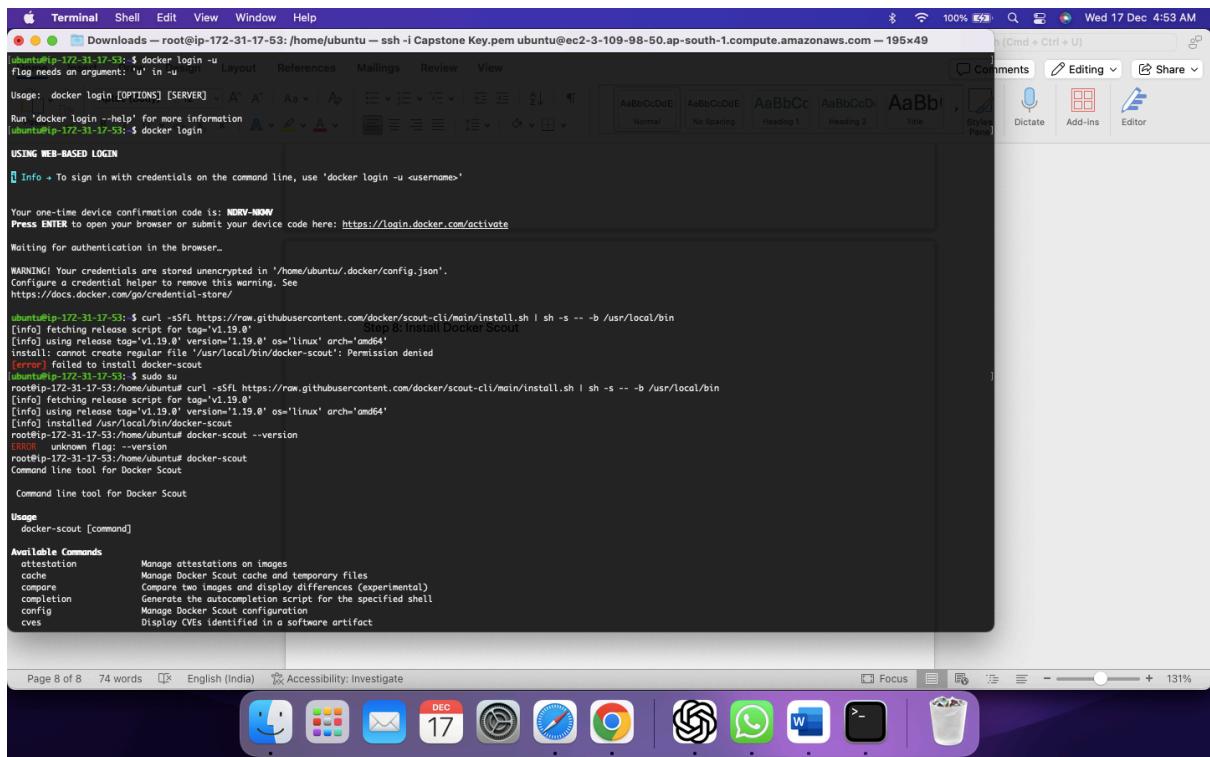
No user sessions are running outdated binaries.

deb [signed-by=/usr/share/keyrings/trivy.gpg] https://aquasecurity.github.io/trivy-repo/deb generic main
Hit:1 http://op-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
Hit:2 http://op-south-1.ec2.archive.ubuntu.com/ubuntu focal-updates InRelease
Hit:3 http://op-south-1.ec2.archive.ubuntu.com/ubuntu focal-backports InRelease
Hit:4 https://download.docker.com/linux/ubuntu noble InRelease
Ign:5 https://pkg.jenkins.io/debian-stable binary/ InRelease
Hit:6 https://pkg.jenkins.io/debian-stable binary/ Release
Get:7 https://security.ubuntu.com/ubuntu focal-security InRelease [3063 B]
Hit:8 https://security.ubuntu.com/ubuntu focal-security InRelease
Get:9 https://packages.adoptium.net/artifactory/deb noble InRelease [7501 B]
Get:10 https://aquasecurity.github.io/trivy-repo/deb generic/main amd64 Packages [369 B]
Get:11 https://aquasecurity.github.io/trivy-repo/deb generic/main amd64 Packages [369 B]
$ sudo apt-get update
$ sudo apt-get install docker-ce docker-ce-cli containerd.io docker-buildx-plugin docker-compose-plugin -y
$ docker run -d --name sonar -p 9000:9000 sonarqube:lbs-community
$ docker ps (You can see SonarQube container)

10. Installation of Plugins in Jenkins

```

Step 8: Install Docker Scout



A screenshot of a Mac OS X desktop environment. In the foreground, a terminal window is open with the title bar showing "Terminal" and the command line "ubuntu@ip-172-31-17-53: ~". The terminal displays a series of commands being run to install Docker Scout. The logs indicate that the user is attempting to run the script as root, which fails due to permission denied. It also shows the user switching to a regular user account and running the command again, successfully installing the Docker Scout command-line interface. The terminal window has a dark theme with light-colored text. The desktop background is a purple gradient. A dock at the bottom contains various application icons.

```
ubuntu@ip-172-31-17-53: ~$ docker login -u in -u
flag needs an argument: 'u' in -u
Run 'docker login --help' for more information
ubuntu@ip-172-31-17-53: ~$ docker login

USING WEB-BASED LOGIN

Info → To sign in with credentials on the command line, use 'docker login -u <username>'

Your one-time device confirmation code is: NORV-NOW
Press ENTER to open your browser or submit your device code here: https://login.docker.com/activate
Waiting for authentication in the browser...

WARNING! Your credentials are stored unencrypted in '/home/ubuntu/.docker/config.json'.
Configure a credential helper to remove this warning. See
https://docs.docker.com/guide/credential-store/

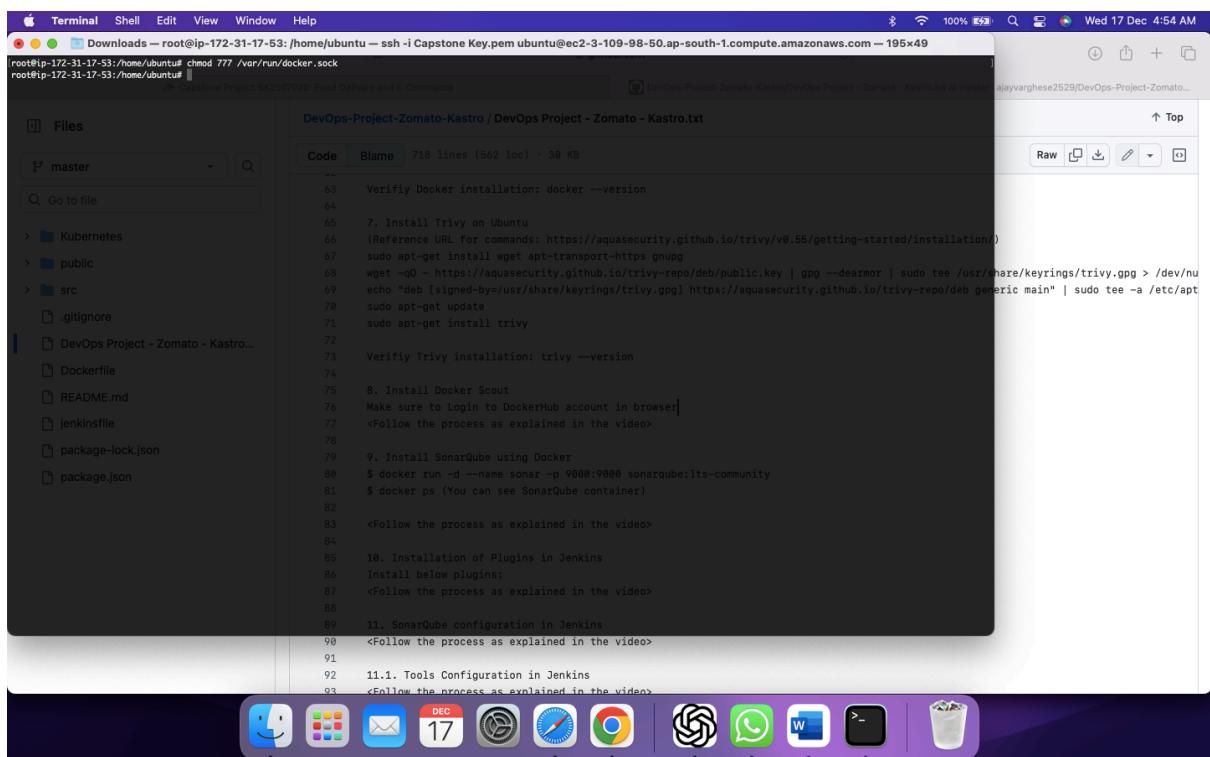
ubuntu@ip-172-31-17-53: ~$ curl -sSf https://raw.githubusercontent.com/docker/scout-cli/main/install.sh | sh -s -- -b /usr/local/bin
[Info] Fetching release script for tag=v1.19.0
[Info] Using release tag=v1.19.0 os=linux arch=amd64
install: cannot create regular file '/usr/local/bin/docker-scout': Permission denied
[error] Failed to install docker-scout
ubuntu@ip-172-31-17-53: ~$ sudo su
root@ip-172-31-17-53:~/home/ubuntu# curl -sSf https://raw.githubusercontent.com/docker/scout-cli/main/install.sh | sh -s -- -b /usr/local/bin
[Info] Fetching release script for tag=v1.19.0
[Info] Using release tag=v1.19.0 os=linux arch=amd64
[Info] Installed /usr/local/bin/docker-scout
root@ip-172-31-17-53:~/home/ubuntu# docker-scout --version
ERROR unknown flag: --version
root@ip-172-31-17-53:~/home/ubuntu# docker-scout
Command line tool for Docker Scout

Command line tool for Docker Scout

Usage
  docker-scout [command]

Available Commands
  attestation      Manage attestations on images
  cache           Manage Docker Scout cache and temporary files
  compare         Compare two images and display differences (experimental)
  completion     Generate the autocompletion script for the specified shell
  config          Manage Docker Scout configuration
  cves            Display CVEs identified in a software artifact

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```



A screenshot of a Mac OS X desktop environment. In the foreground, a terminal window is open with the title bar showing "Terminal" and the command line "root@ip-172-31-17-53: ~". The terminal displays a large text file, "DevOps-Project-Zomato-Kastro / DevOps Project - Zomato - Kastro.txt", which contains a step-by-step guide for setting up Docker Scout. The file includes commands like "Verify Docker installation: docker --version", "Install Trivy on Ubuntu", "Install Docker Scout", and "Install SonarQube using Docker". The text is in a monospaced font. The desktop background is a purple gradient. A dock at the bottom contains various application icons.

```
root@ip-172-31-17-53: ~$ chmod 777 /var/run/docker.sock
root@ip-172-31-17-53: ~$ ./script.sh
Verify Docker installation: docker --version
7. Install Trivy on Ubuntu
(Reference URL for commands: https://aquasecurity.github.io/trivy/v0.55/getting-started/installation/)
sudo apt-get install wget apt-transport-https gnupg
wget -qO - https://aquasecurity.github.io/trivy-repo/deb/public.key | gpg --dearmor | sudo tee /usr/share/keyrings/trivy.gpg > /dev/null
echo "deb [signed-by=/usr/share/keyrings/trivy.gpg] https://aquasecurity.github.io/trivy-repo/deb generic main" | sudo tee -a /etc/apt/sources.list.d/trivy.list
sudo apt-get update
sudo apt-get install trivy
Verify Trivy installation: trivy --version
8. Install Docker Scout
Make sure to Login to DockerHub account in browser
<Follow the process as explained in the video>
9. Install SonarQube using Docker
$ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
$ docker ps (You can see SonarQube container)
<Follow the process as explained in the video>
10. Installation of Plugins in Jenkins
Install below plugins:
<Follow the process as explained in the video>
11. SonarQube configuration in Jenkins
<Follow the process as explained in the video>
11.1. Tools Configuration in Jenkins
<Follow the process as explained in the video>
```

Step 9: Install SonarQube using Docker

```
○ Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-53:/home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com — 195x49
root@ip-172-31-17-53:~/.home/ubuntu chmod 777 /var/run/docker.sock
root@ip-172-31-17-53:~/.home/ubuntu $ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
$: command not found
root@ip-172-31-17-53:~/.home/ubuntu $ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
$: command not found
root@ip-172-31-17-53:~/.home/ubuntu docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
Unable to find image 'sonarqube:lts-community' locally
Docker is pulling the image from 'library/sonarqube'
4f447354816d: Pull complete
e2408b9e652f: Pull complete
f3929c9e938: Pull complete
e92395024: Pull complete
e5c1f02824: Pull complete
c7ed1f61e07: Pull complete
ce2bd68e4fc: Download complete
600f318784dc: Download complete
Digest: sha256:f709975ab31d2d88fc3a02d73631ee011acf8c2804582c17c5345df9d5
Status: Downloaded newer image for sonarqube:lts-community
root@ip-172-31-17-53:~/.home/ubuntu ||| .gitignore
  □ DevOps Project - Zomato - Kastro...
  □ Dockerfile
  □ README.md
  □ jenkinsfile
  □ package-lock.json
  □ package.json

Code Blame 718 lines (562 loc) • 30 KB
64
65   7. Install Trivy on Ubuntu
66   (Reference URL for commands: https://aquasecurity.github.io/trivy/v0.55/getting-started/installation/)
67   sudo apt-get install wget apt-transport-https gnupg
68   wget -O - https://aquasecurity.github.io/trivy-repo/deb/public.key | gpg --dearmor | sudo tee /usr/share/keyrings/trivy.gpg > /dev/null
69   echo "deb [signed-by=/usr/share/keyrings/trivy.gpg] https://aquasecurity.github.io/trivy-repo/deb generic main" | sudo tee -a /etc/apt/sources.list.d/trivy.list
70   sudo apt-get update
71   sudo apt-get install trivy
72
73 Verify Trivy installation: trivy --version
74
75 8. Install Docker Scout
76 Make sure to Login to Dockerhub account in browser
77 <Follow the process as explained in the video>
78
79 9. Install SonarQube using Docker
80 $ docker run -d --name sonar -p 9000:9000 sonarqube:lts-community
81 $ docker ps (You can see SonarQube container)
82
83 <Follow the process as explained in the video>
84
85 10. Installation of Plugins in Jenkins
86 Install below plugins:
87 <Follow the process as explained in the video>
88
89 11. SonarQube configuration in Jenkins
90 <Follow the process as explained in the video>
91
92 11.1. Tools Configuration in Jenkins
93 <Follow the process as explained in the video>
94
```

Downloads — root@ip-172-31-17-53:~/home/ubuntu - ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com — 195x49

```
root@ip-172-31-17-53:~/home/ubuntu chmod 777 /var/run/docker.sock
root@ip-172-31-17-53:~/home/ubuntu$ docker run -d --name sonar -p 9000:9000 sonarqube:ltsc-community
$: command not found
root@ip-172-31-17-53:~/home/ubuntu$ docker run -d --name sonar -p 9000:9000 sonarqube:ltsc-community
$: command not found
root@ip-172-31-17-53:~/home/ubuntu$ docker run -d --name sonar -p 9000:9000 sonarqube:ltsc-community
Unde to find Image 'sonarqube:ltsc-community' locally
Error: failed to get image manifest for repository "sonarqube:ltsc-community"
Pulling from library/sonarqube
444fb7000000: Pull complete
5df735f419d: Pull complete
6d698d907669: Pull complete
e2468b9e652f: Pull complete
f3929ce9e9f8: Pull complete
ab27e3d98dd0: Pull complete
e63a2a2a2a2a: Pull complete
c20d1f61a807: Pull complete
ce20d588a4fc: Download complete
600f318704dc: Download complete
Digest: sha256:f709975db31d2d08f5da3ee011afc8cf288450882c17c55d45df9d5
Status: Downloaded newer Image for sonarqube:ltsc-community
b86ac0ff688172815814e03f02e1cd118122e0fd720112cf0e0793d8b33
root@ip-172-31-17-53:~/home/ubuntu$ docker images
Step 9: Install SonarQube using Docker
```

IMAGE	ID	DISK USAGE	CONTENT SIZE	EXTRA
sonarqube:ltsc-community	F709975db31d	1.02GB	398MB	U

```
root@ip-172-31-17-53:~/home/ubuntu$ docker ps
CONTAINER ID IMAGE COMMAND CREATED STATUS PORTS NAMES
b86ac0ff688172815814e03f02e1cd118122e0fd720112cf0e0793d8b33
sonarqube:ltsc-community "/opt/sonarqube/dock_"
root@ip-172-31-17-53:~/home/ubuntu$
```

Giving port access for the sonarqube

Inbound rules [Info](#)

Security group rule ID	Type Info	Protocol Info	Port range Info	Source Info	Description - optional Info
sgr-06d03bb37a02d4a91	Custom TCP	TCP	8080	Custom	<input type="text"/> 0.0.0.0/0 Delete
sgr-0944588546082974c	SSH	TCP	22	Custom	<input type="text"/> 0.0.0.0/0 Delete
sgr-0f5ce9bf24e1d6b66	Custom TCP	TCP	9000	Custom	<input type="text"/> 0.0.0.0/0 Delete

[Add rule](#)

⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

[Cancel](#) [Preview changes](#) [Save rules](#)

How do you want to create your project?

You're running a version of SonarQube that is no longer active. Please upgrade to an active version immediately. [Learn More](#)

sonarqube Projects Issues Rules Quality Profiles Quality Gates Administration

Search for projects... [A](#)

From Azure DevOps From Bitbucket Server From Bitbucket Cloud From GitHub From GitLab

Set up global configuration Set up global configuration Set up global configuration Set up global configuration Set up global configuration

Are you just testing or have an advanced use-case? Create a project manually.

<> Manually

Step 10: Installation of Plugins in Jenkins

The screenshot shows a Mac OS X desktop with a Chrome browser window open. The address bar indicates the URL is 3.109.98.50:8080/manage/pluginManager/updates/. The browser tabs include 'ModifyInboundSecurityGroup', 'Download progress - Plugins', 'Repositories | ajayvarghese2...', and 'How do you want to create yo...'. The main content area is titled 'Jenkins / Manage Jenkins / Plugins'. On the left, there's a sidebar with links: 'Updates', 'Available plugins', 'Installed plugins', 'Advanced settings', and 'Download progress' (which is selected). The main list shows various Jenkins plugins with their status: Pipeline: Stage View (Success), Eclipse Temurin installer (Success), SonarQube Scanner (Success), Cloud Statistics (Success), Authentication Tokens API (Success), Docker Commons (Success), Apache HttpComponents Client 5.x API (Success), Commons Compress API (Success), Docker API (Success), Docker (Success), Docker Commons (Success), Docker Pipeline (Success), Docker API (Success), Dev Tools Symbols API (Success), Javadoc (Success), JSch dependency (Success), Maven Integration (Success), docker-build-step (Success), Email Extension Template (Success), OWASP Dependency-Check (Success), Config File Provider (Success), and NodeJS (Success). At the bottom of the browser window, there's a toolbar with various icons.

Step 11: SonarQube configuration in Jenkins

The screenshot shows a Mac OS X desktop with a Chrome browser window open. The address bar indicates the URL is 3.109.98.50:9000/admin/users. The browser tabs include 'Connect to instance | EC2 | a...', 'Manage Jenkins - Jenkins', 'Repositories | ajayvarghese2...', and 'Users - Administration'. The main content area is titled 'sonarqube' and shows navigation links: Projects, Issues, Rules, Quality Profiles, Quality Gates, and Administration (which is selected). A search bar at the top right says 'Search for projects...'. Below the navigation, there's a section titled 'Tokens of Administrator' with a sub-section 'Generate Tokens'. It has fields for 'Name' (Enter Token Name) and 'Expires in' (30 days). A message says 'New token "token" has been created. Make sure you copy it now, you won't be able to see it again!' with a 'Copy' button and a copied token ID 'squ_322a2de47c8b2803ec569733987f2829d30a676'. Below this is a table of tokens:

Name	Type	Project	Last use	Created	Expiration
token	User		Never	December 17, 2025	January 16, 2026

At the bottom, 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.' The footer of the page includes the text 'SonarQube™ technology is powered by SonarSource SA Community Edition - v9.9.8 (build 100196) NO LONGER ACTIVE - GPL v3 - Documentation - Plugins - Web API'.

Chrome File Edit View History Bookmarks Profiles Tab Window Help

Connect to instance | EC2 | [New credentials - Jenkins](#) | [Repositories | ajayvarghese21](#) | [Users - Administration](#)

Not Secure 3.109.98.50:8080/manage/credentials/store/system/domain/_/newCredentials

Jenkins | Manage Jenkins | Credentials | System | Global credentials (unrestrict...)

New credentials

Kind: Secret text

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

Secret:

ID: Sonar-token

Description: Sonar-token

Create



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Connect to instance | EC2 | [System » Global credentials](#) | [Repositories | ajayvarghese21](#) | [Users - Administration](#)

Not Secure 3.109.98.50:8080/manage/credentials/store/system/domain/_/

Jenkins | Manage Jenkins | Credentials | System | Global credentials (unrestrict...)

Global credentials (unrestricted)

Add Credentials

Credentials that should be available irrespective of domain specification to requirements matching.

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

Icon: S M L

REST API Jenkins 2.528.2



Step 11.1: Tools Configuration in Jenkins

The screenshot shows the Jenkins 'Tools' configuration page for JDK installations. A new entry named 'jdk17' is being added. The 'Install automatically' checkbox is checked, and the 'Install from adoptium.net' option is selected. The version dropdown is set to 'jdk-17.0.8.1+1'. There are 'Save' and 'Apply' buttons at the bottom.

The screenshot shows the Jenkins 'Tools' configuration page for SonarQube Scanner installations. A new entry named 'sonar-scanner' is being added. The 'Install automatically' checkbox is checked, and the 'Install from Maven Central' option is selected. The version dropdown is set to 'SonarQube Scanner 8.0.1.6346'. There are 'Save' and 'Apply' buttons at the bottom.

Chrome File Edit View History Bookmarks Profiles Tab Window Help

Not Secure 3.109.98.50:8080/manage/configureTools/

Jenkins / Manage Jenkins / Tools

+ Add NodeJS

NodeJS

Name: node23

Install automatically ?

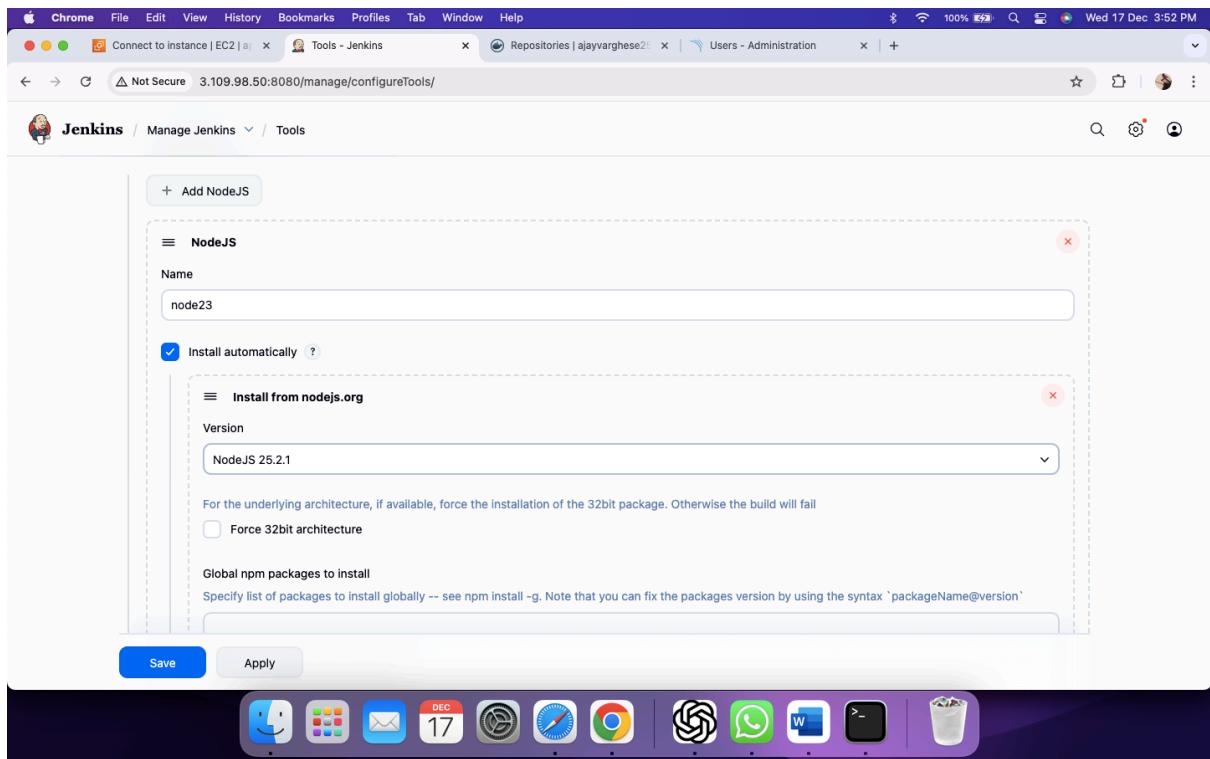
Install from nodejs.org

Version: NodeJS 25.2.1

For the underlying architecture, if available, force the installation of the 32bit package. Otherwise the build will fail
 Force 32bit architecture

Global npm packages to install
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'

Save Apply



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Not Secure 3.109.98.50:8080/manage/configureTools/

Jenkins / Manage Jenkins / Tools

Dependency-Check installations ^ Edited

+ Add Dependency-Check

Dependency-Check

Name: DP-Check

Install automatically ?

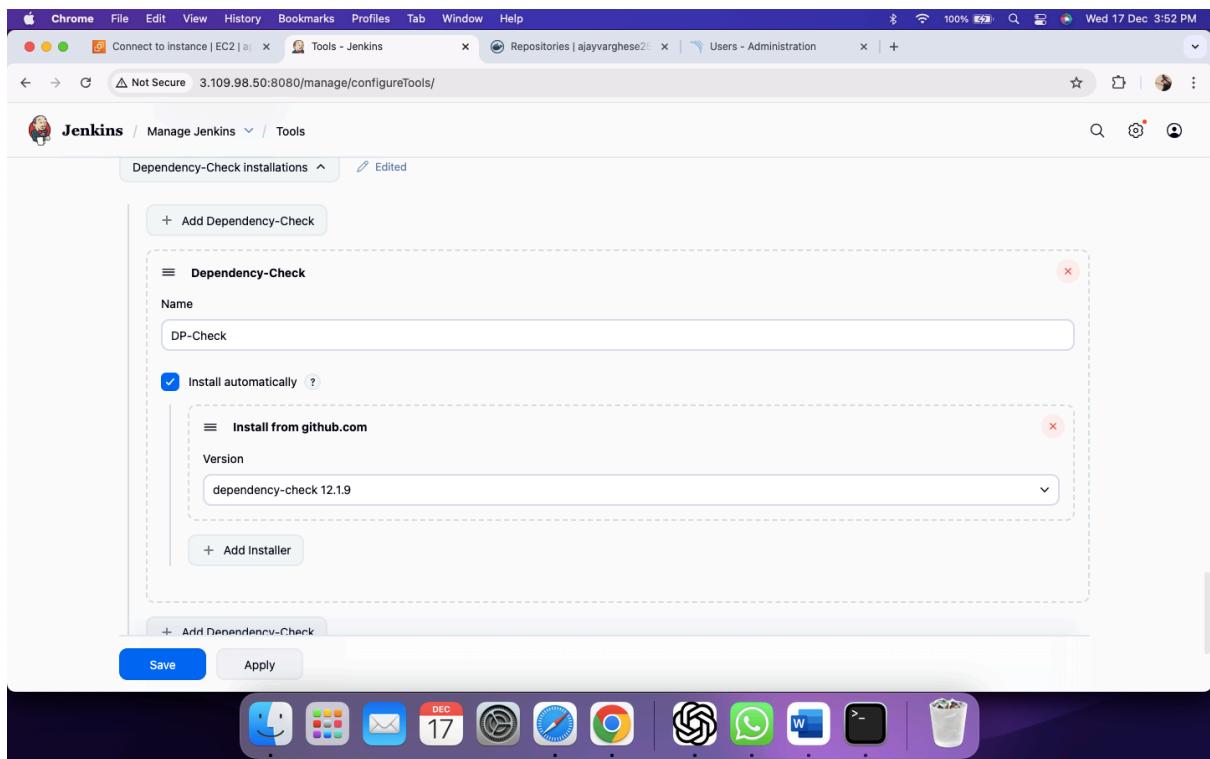
Install from github.com

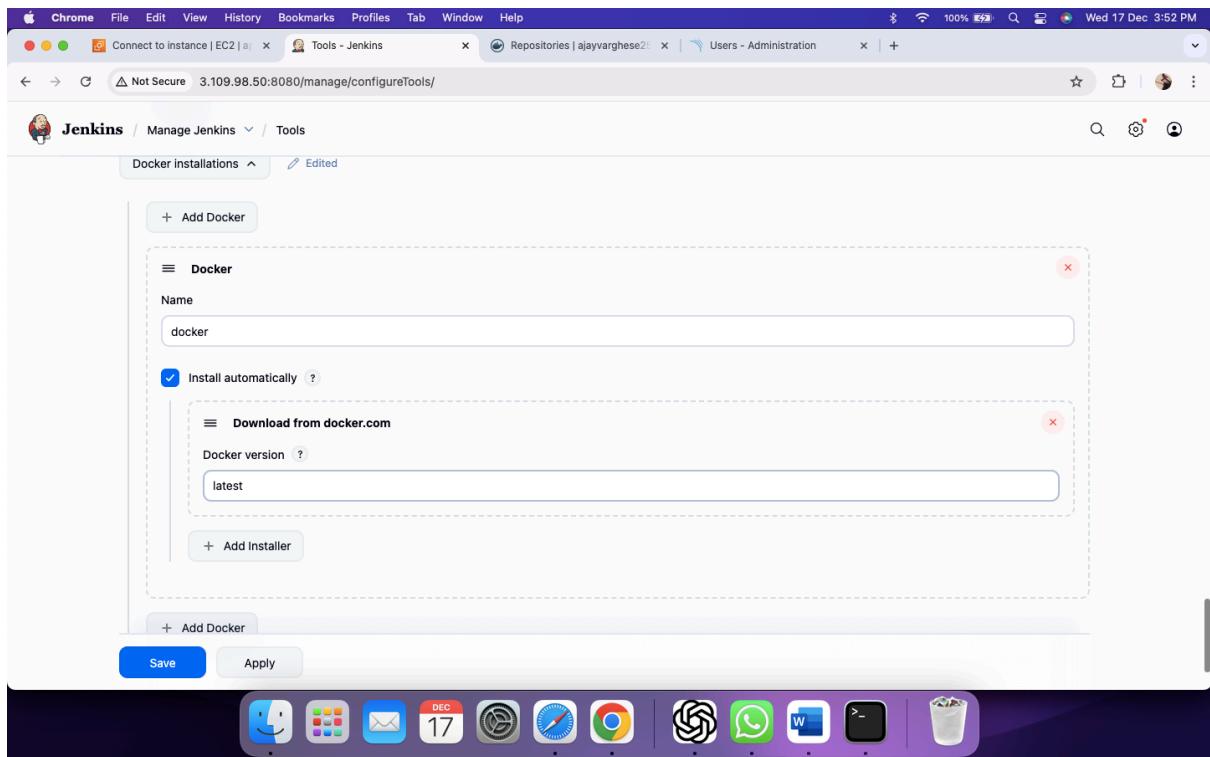
Version: dependency-check 12.1.9

+ Add Installer

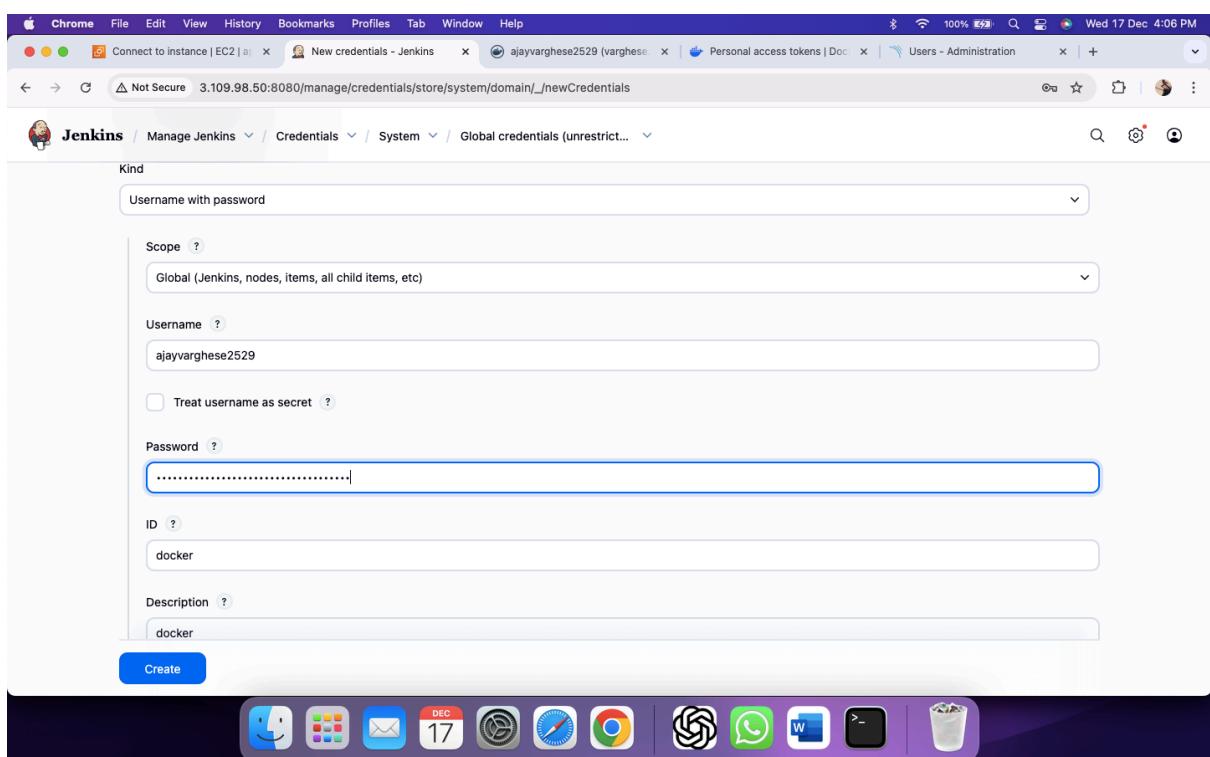
+ Add Dependency-Check

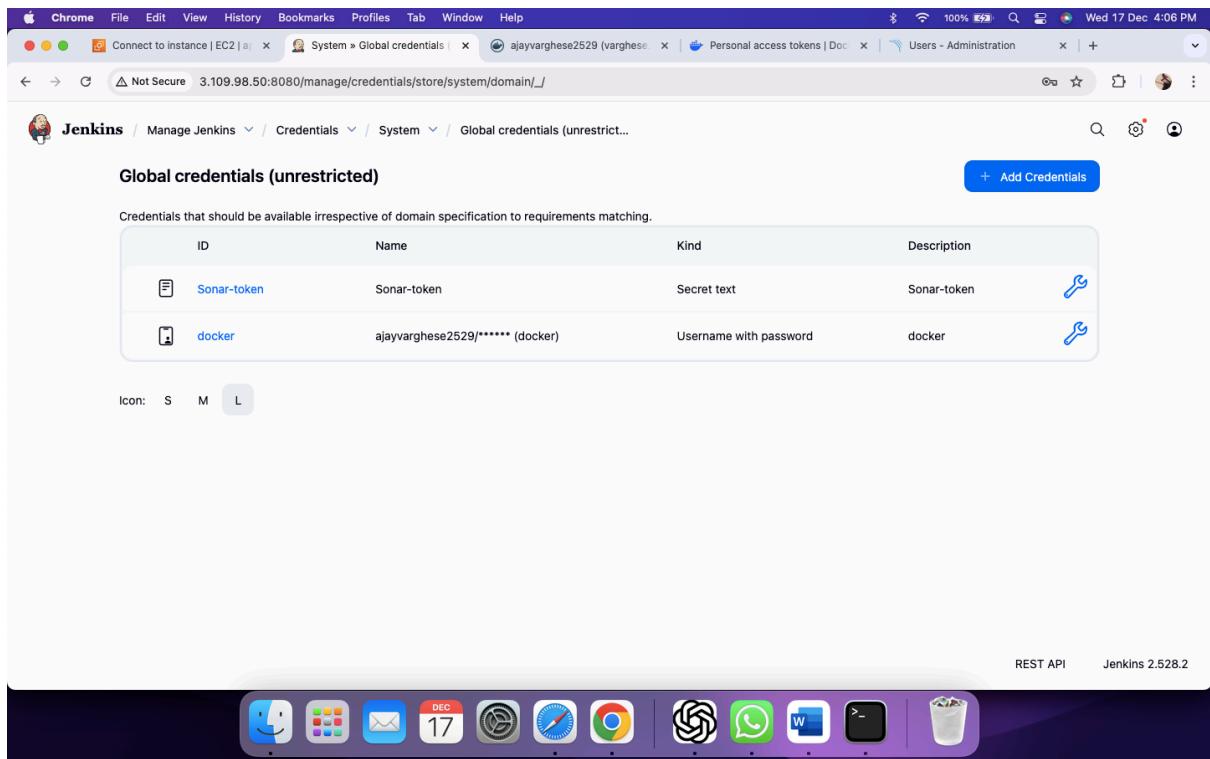
Save Apply





Step 11.2 : Configure Docker Hub in Jenkins



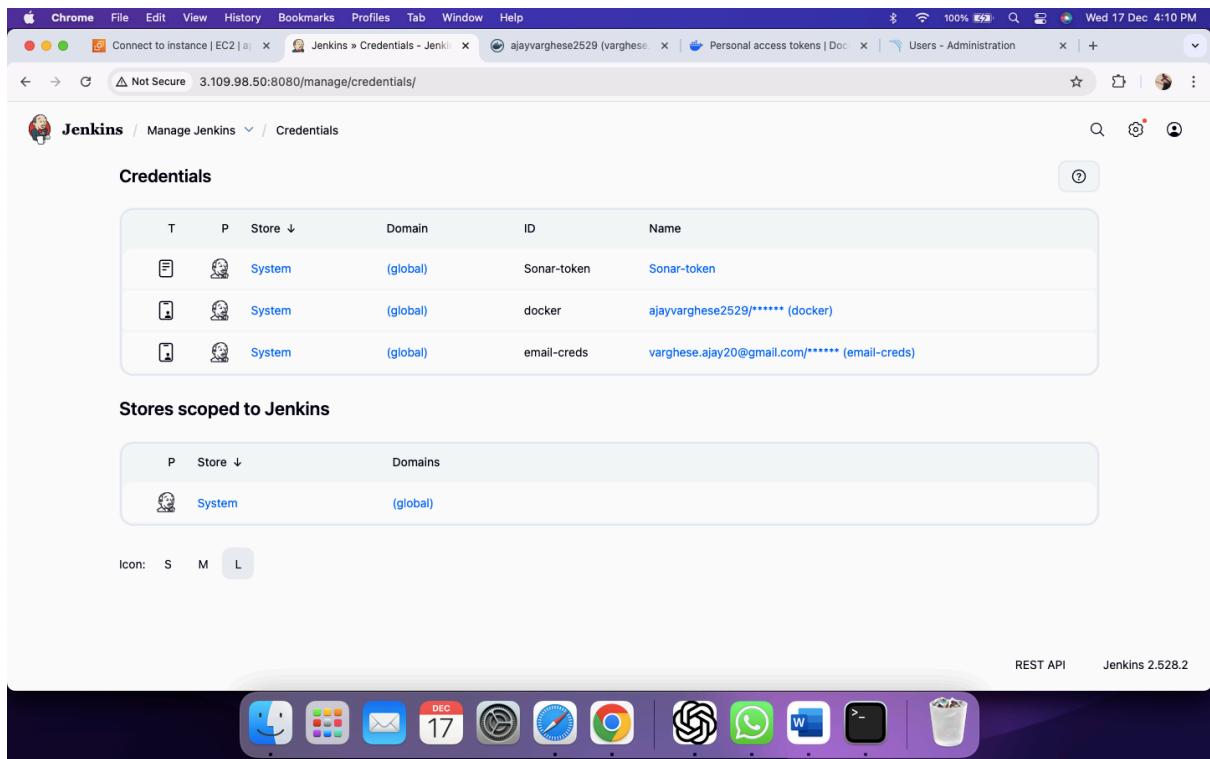


The screenshot shows the Jenkins Global credentials page. At the top, there are several tabs: Connect to instance | EC2, System » Global credentials (selected), ajayvarghese2529 (varghese), Personal access tokens, and Users - Administration. The main content area is titled "Global credentials (unrestricted)". It displays a table of credentials:

ID	Name	Kind	Description
Sonar-token	Sonar-token	Secret text	Sonar-token
docker	ajayvarghese2529/******** (docker)	Username with password	docker

Below the table, there are icons for sorting by ID (S), Name (M), and Last modified (L). On the right side of the table, there are edit and delete icons for each row. A blue button at the top right says "+ Add Credentials".

Step 11.3 Configuration of Email notification in Jenkins



The screenshot shows the Jenkins Credentials page. At the top, there are several tabs: Connect to instance | EC2, Jenkins » Credentials (selected), ajayvarghese2529 (varghese), Personal access tokens, and Users - Administration. The main content area is titled "Credentials". It displays a table of credentials:

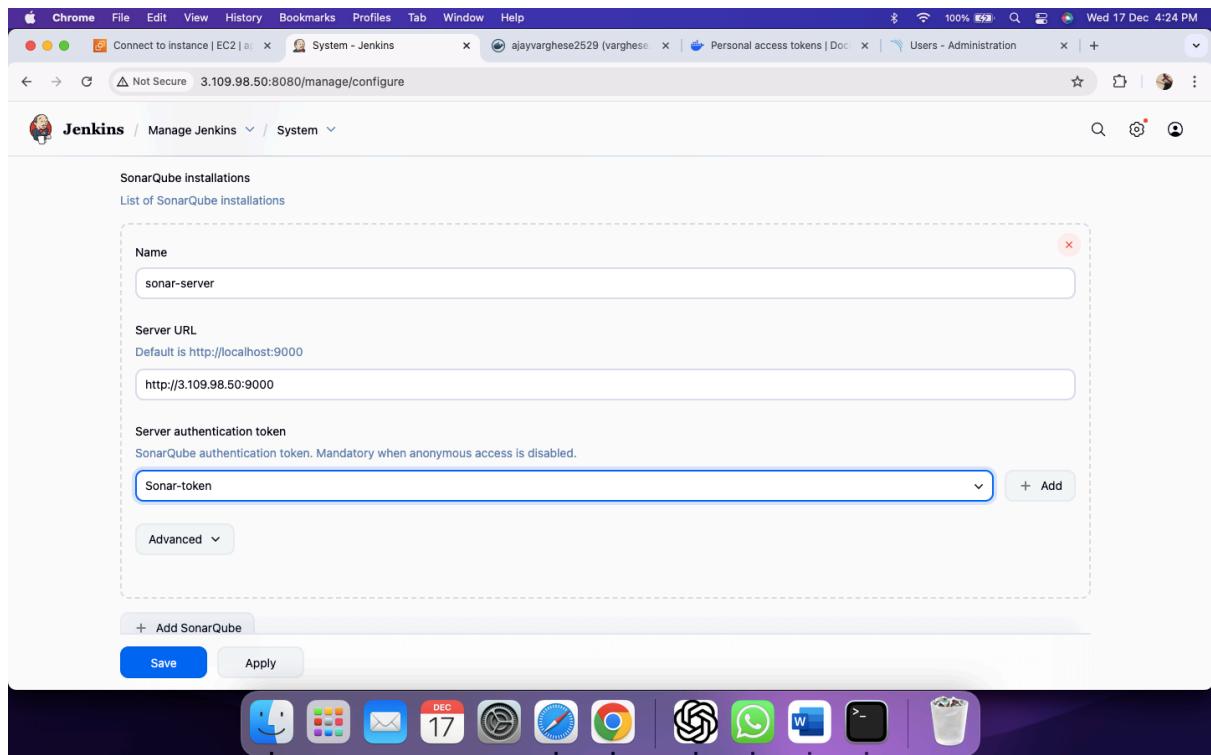
T	P	Store ↓	Domain	ID	Name
		System	(global)	Sonar-token	Sonar-token
		System	(global)	docker	ajayvarghese2529/******** (docker)
		System	(global)	email-creds	varghese.ajay20@gmail.com/******** (email-creds)

Below the table, there is a section titled "Stores scoped to Jenkins" with a table:

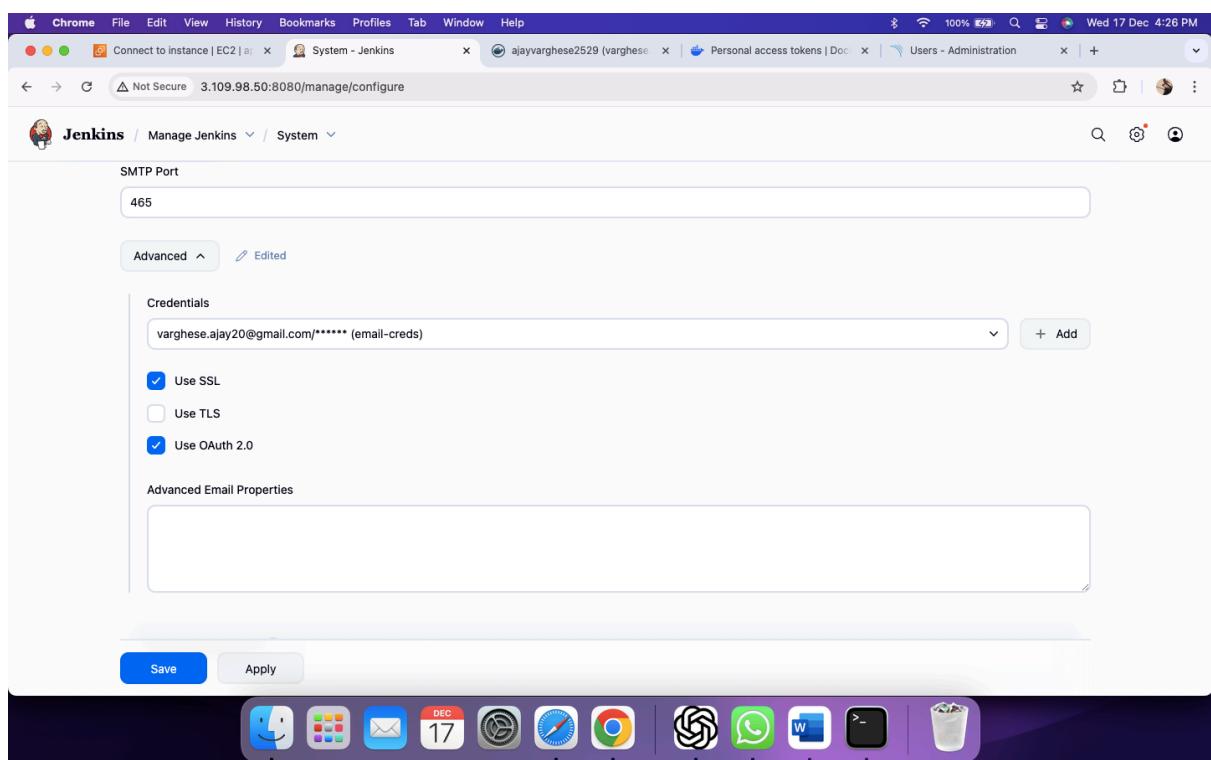
P	Store ↓	Domains
	System	(global)

At the bottom, there are icons for sorting by ID (S), Name (M), and Last modified (L). A blue button at the top right says "+ Add Credentials".

Step 12: System Configuration in Jenkins



The screenshot shows the Jenkins System configuration page under the 'SonarQube installations' section. A new installation is being added with the name 'sonar-server'. The 'Server URL' is set to 'http://3.109.98.50:9000'. The 'Server authentication token' dropdown contains 'Sonar-token'. There is an 'Advanced' button with a dropdown menu. At the bottom are 'Save' and 'Apply' buttons.



The screenshot shows the Jenkins System configuration page under the 'SMTP Port' section. The 'SMTP Port' field is set to '465'. Under 'Advanced Email Properties', there is a checkbox for 'Use SSL' which is checked. Other options like 'Use TLS' and 'Use OAuth 2.0' are also present. At the bottom are 'Save' and 'Apply' buttons.

Wednesday Dec 17 4:29 PM

Not Secure 3.109.98.50:8080/manage/configure

Jenkins / Manage Jenkins / System

E-mail Notification

SMTP server: smtp.gmail.com

Default user e-mail suffix:

Advanced ▾ Edited

Use SMTP Authentication ?

User Name: varghese.ajay20@gmail.com

⚠️ For security when using authentication it is recommended to enable either TLS or SSL.

Password:
 Use SSL ?

Save Apply



Wednesday Dec 17 4:30 PM

Not Secure 3.109.98.50:8080/manage/configure

Jenkins / Manage Jenkins / System

Password:

Use SSL ?
 Use TLS

SMTP Port: 465

Reply-To Address: varghese.ajay20@gmail.com

Charset: UTF-8

Test configuration by sending test e-mail

Test e-mail recipient: varghese.ajay20@gmail.com

Save Apply



Step 13: Create webhook in SonarQube

The screenshot shows the SonarQube Administration interface. At the top, there is a banner stating "You're running a version of SonarQube that is no longer active. Please upgrade to an active version immediately." Below this, the "Administration" section is visible, with the "Configuration" tab selected. Under "General Settings", the "Webhooks" option is highlighted. A search bar for users is present. The main area displays a table of users:

SCM Accounts	Last connection	Groups	Tokens
sonar-administrators sonar-users	< 1 hour ago	1	

At the bottom of the page, a yellow box contains a warning: "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." The footer includes the message "SonarQube™ technology is powered by SonarSource SA" and links for "Community Edition - v9.9.8 (build 100196) NO LONGER ACTIVE - GPL v3 - Documentation - Plugins - Web API".

The screenshot shows the "Create Webhook" dialog box in the SonarQube Administration interface. The dialog has the following fields:

- Name ***: jenkins
- URL ***: <http://3.109.98.50:8080/sonarqube-webhook/>
- Secret**: (empty field)

Below the form, a yellow box contains a warning: "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." The footer includes the message "SonarQube™ technology is powered by SonarSource SA" and links for "Community Edition - v9.9.8 (build 100196) NO LONGER ACTIVE - GPL v3 - Documentation - Plugins - Web API".

You're running a version of SonarQube that is no longer active. Please upgrade to an active version immediately. [Learn More](#)

sonarqube Projects Issues Rules Quality Profiles Quality Gates Administration

Search for projects... A

Administration

Configuration Security Projects System Marketplace

Webhooks

Webhooks are used to notify external services when a project analysis is done. An HTTP POST request including a JSON payload is sent to each of the provided URLs. Learn more in the [Webhooks documentation](#).

Create

Name	URL	Has secret?	Last delivery	Actions
jenkins	http://3.109.98.50:8080/sonarqube-webhook/	No	Never	Edit

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.

SonarQube™ technology is powered by SonarSource SA
Community Edition - v9.9.8 (build 100196) [NO LONGER ACTIVE](#) - [LGPL v3](#) - [Community](#) - [Documentation](#) - [Plugins](#) - [Web API](#)

Step 14: Create Jenkins Pipeline

Console home | Console x Dashboard - Jenkins x ajayvarghese2529 (var... x Personal access tokens x Webhooks - Administrat... x DevOps-Project-Zomat... x +

Wednesday, December 17, 2019

+ New Item Build History

Welcome to Jenkins!

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

Start building your software project

Create a job +

Set up a distributed build

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

REST API Jenkins 2.528.2

Chrome File Edit View History Bookmarks Profiles Tab Window Help

Console home | Jenkins | New Item - Jenkins | ajayvarghese2529 (var... | Personal access tokens | Webhooks - Administra... | DevOps-Project-Zomato | Wed 17 Dec 5:47 PM

Not Secure 3.109.98.50:8080/view/all/newJob

Jenkins / All / New Item

Zomato-Project Ajay

Select an item type

- Freestyle project**
Classic, general-purpose job type that checks out from up to one SCM, executes build steps serially, followed by post-build steps like archiving artifacts and sending email notifications.
- Maven project**
Build a maven project. Jenkins takes advantage of your POM files and drastically reduces the configuration.
- Pipeline**
Orchestrates long-running activities that can span multiple build agents. Suitable for building pipelines (formerly known as workflows) and/or organizing complex activities that do not easily fit in free-style job type.
- Multi-configuration project**
Suitable for projects that need a large number of different configurations, such as testing on multiple environments, platform-specific builds, etc.
- Folder**
Creates a container that stores nested items in it. Useful for grouping things together. Unlike view, which is just a filter, a folder creates a separate namespace, so you can have multiple things of the same name as long as they are in different folders.

OK



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Console home | Jenkins | Zomato-Project Ajay | ajayvarghese2529 (var... | Personal access tokens | Webhooks - Administra... | DevOps-Project-Zomato | Wed 17 Dec 5:48 PM

Not Secure 3.109.98.50:8080/job/Zomato-Project%20Ajay/configure

Jenkins / Zomato-Project Ajay / Configuration

Configure

Pipeline

Define your Pipeline using Groovy directly or pull it from source control.

General

Triggers

Pipeline

Advanced

Definition

Pipeline script

Script

```
75      }
76  }
77  }
78  stage ("Deploy to Container") {
79    steps {
80      sh 'docker run -d --name zomato -p 3000:3000 ajayvarghese2529/zomato:latest'
81    }
82  }
83  }
84  post {
85    always {
86      emailext attachLog: true,
87      subject: "${currentBuild.result}",
88      body: """
89        <html>
```

try sample Pipeline...

Save Apply



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Console home | Zomato-Project Ajay | Pipeline Syntax: master | ajayvarghese2529 | Personal access tokens | Webhooks - Admin | ajayvarghese2529 | Wed 17 Dec 5:52 PM

Not Secure 3.109.98.50:8080/job/Zomato-Project%20Ajay/pipeline-syntax/

Jenkins / Zomato-Project Ajay / Pipeline Syntax

master

Credentials ?

- none -

+ Add

Include in polling? ?

Include in changelog? ?

Generate Pipeline Script

```
git 'git@github.com:ajayvarghese2529/DevOps-Project-Zomato-Kastro.git'
```

Global Variables

There are many features of the Pipeline that are not steps. These are often exposed via global variables, which are not supported by the snippet generator. See the [Global Variables Reference](#) for details.



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Dashboard | EC2 | #12 - Zomato-Project Ajay | ajayvarghese2529 | Repositories | ajay | Projects | ajayvarghese2529 | React App | Wed 17 Dec 7:47 PM

Not Secure 3.109.98.50:8080/job/Zomato-Project%20Ajay/12/pipeline-overview/?selected-node=119

Jenkins / Zomato-Project Ajay / #12 / Pipeline Overview

! #12

Manually run by Ajay Varghese Started 3 min 31 sec ago Queued 1 ms Took 2 min 39 sec

Rerun

Graph

```
graph LR; Start((Start)) --> ToolInstall[Tool Install]; ToolInstall --> CleanWorkspace[Clean Workspace]; CleanWorkspace --> GitCheckout[Git Checkout]; GitCheckout --> SonarQubeAnalysis[SonarQube Analysis]; SonarQubeAnalysis --> CodeQualityGate[Code Quality Gate]; CodeQualityGate --> InstallNPM[Install NPM...]; InstallNPM --> OWASPFS[OWASP FS Scan]; OWASPFS --> TrivyFileScan[Trivy File Scan]; TrivyFileScan --> BuildDockerImage[Build Docker Image];
```

Search

Build Docker Image

1m 41s Started 6m 34s ago Jenkins

Tool Install 0.16s
Clean Workspace 0.31s
Git Checkout 1.8s
SonarQube Analysis 13s
Code Quality Gate 2.5s

Use a tool from a predefined Tool Installation jdk17
Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step.
Use a tool from a predefined Tool Installation node23
Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step.
docker build -t zomato



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Not Secure 3.109.98.50:8080/job/Zomato-Project%20Ajay/12/pipeline-overview/?selected-node=119

Jenkins / Zomato-Project Ajay #12 Pipeline Overview

! #12

Manually run by Ajay Varghese Started 3 min 31 sec ago Queued 1 ms Took 2 min 39 sec

Graph

Code Quality Gate (14s) Install NPM... OWASP FS Scan Trivy File Scan Build Docker Image Tag & Push to... Docker Scout Image Deploy to Container Post Actions End

Build Docker Image 1m 41s Started 6m 34s ago Jenkins

Tool Install 0.16s Clean Workspace 0.31s Git Checkout 1.8s SonarQube Analysis 13s Code Quality Gate 2.5s

Use a tool from a predefined Tool Installation jdk17 35ms

Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step. 39ms

Use a tool from a predefined Tool Installation node23 36ms

Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step. 1m 41s

3.109.98.50:8080/job/Zomato-Project Ajay/12/pipeline-overview/?selected-node=119

Terminal Shell Edit View Window Help

Not Secured 3.109.98 Disk Usage Content Size Extra 0 Ajay/12/pipeline-overview/?selected-node=119

IMAGE	ID	DISK USAGE	CONTENT SIZE	EXTRA
ajayvarghese2529/zomato:latest	f77ae3e491a	1.68GB	249MB	U
sonarqube:lts-community	f77ae3e491d	1.02GB	359MB	U
zomato:lts-test	f77ae3e491e	1.68GB	249MB	U

root@ip-172-31-17-53:/home/ubuntu# docker ps

CONTAINER ID	IMAGE	COMMAND	CREATED	STATUS	PORTS	NAMES
e277b2151ebf	ajayvarghese2529/zomato:latest	"docker-entrypoint.s..."	6 minutes ago	Up 6 minutes	0.0.0.0:3000->3000/tcp, [::]:3000->3000/tcp	zomato
b86ca0ff2688	sonarqube:lts-community	"./opt/sonarqube/docker..."	15 hours ago	Up 2 hours	0.0.0.0:9000->9000/tcp, [::]:9000->9000/tcp	sonar

Manually run by Ajay Varghese Started 3 min 31 sec ago Queued 1 ms Took 2 min 39 sec

Graph

Code Quality Gate Install NPM... OWASP FS Scan Trivy File Scan Build Docker Image Tag & Push to... Docker Scout Image Deploy to Container Post Actions End

Build Docker Image 1m 41s Started 6m 34s ago Jenkins

Tool Install 0.16s Clean Workspace 0.31s Git Checkout 1.8s SonarQube Analysis 13s Code Quality Gate 2.5s

Use a tool from a predefined Tool Installation jdk17 35ms

Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step. 39ms

Use a tool from a predefined Tool Installation node23 36ms

Fetches the environment variables for a given tool in a list of 'FOO=bar' strings suitable for the withEnv step. 1m 41s

Downloads — root@ip-172-31-17-53: /home/ubuntu# ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com - 195x49

Troubleshooting & Modifications Performed

During the CI/CD pipeline implementation, multiple issues were identified and resolved to ensure successful end-to-end execution.

1. Docker Registry Push Failure

The pipeline initially failed during the Docker image push stage due to a missing Docker registry URL.

This was resolved by explicitly specifying the DockerHub registry URL in the withDockerRegistry block, allowing secure authentication using Jenkins credentials.

2. Pipeline Compilation Errors

Minor Groovy syntax and configuration issues were corrected to ensure the Jenkinsfile compiled successfully before execution.

3. Docker Scout Scan Failures

Docker Scout security scans were causing the pipeline to fail due to reported vulnerabilities.

The stage was modified to allow the scan to run in informational mode without blocking the pipeline, ensuring delivery continuity while still demonstrating image security scanning.

4. End-to-End Pipeline Validation

After fixes, the pipeline successfully completed all major stages including code analysis, security scans, Docker image build, push to DockerHub, deployment, and email notification.

OWASP Dependency Check – Explanation

The OWASP Dependency Check scan reports vulnerabilities originating from third-party and upstream open-source libraries used by the application. Node.js applications, such findings are common and expected. The scan was intentionally configured to mark the build as **UNSTABLE** instead of **FAILED** to ensure that:

- Security scanning is demonstrated and reports are generated
- Application delivery is not blocked by vulnerabilities outside direct developer control
- The pipeline completes end-to-end, aligning with real-world CI/CD practices

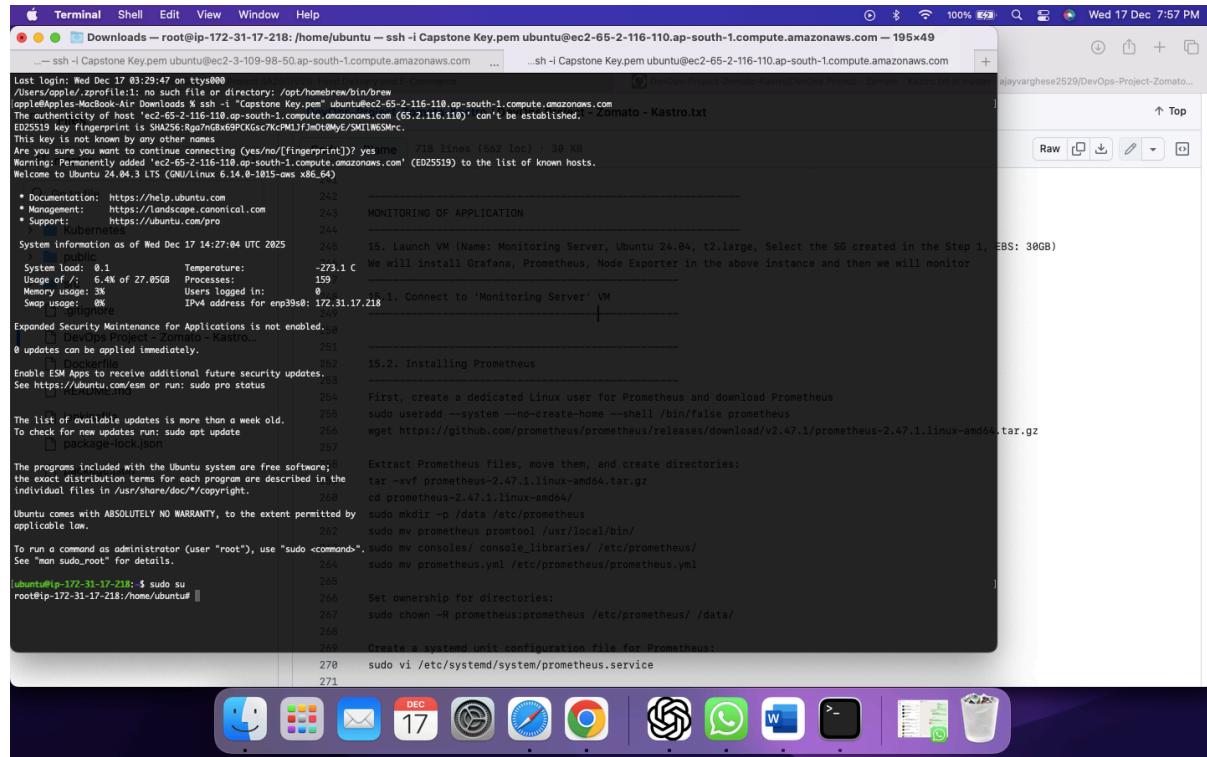
This approach reflects industry standards, where identified vulnerabilities are reviewed, prioritized, and addressed separately without stopping the CI/CD pipeline.



MONITORING OF APPLICATION

Step 15: Launch VM

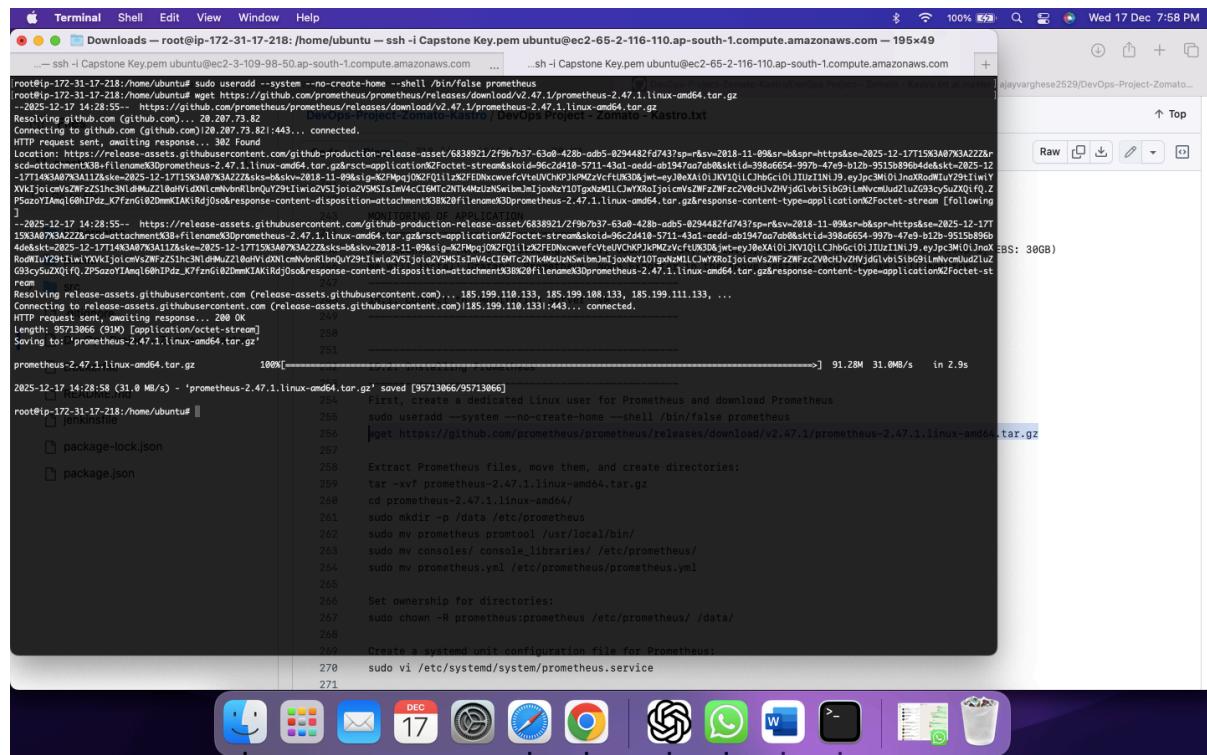
Step 15.1: Connect to 'Monitoring Server' VM



```
Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-218: /home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com - 195x49
... ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com + DevOps-Project-Zomato-Kastro/DevOps-Project-Zomato...
Last Login: Wed Dec 17 09:29:47 on ttv000
User@apple-zprofile: no such file or directory: /opt/homebrew/bin/znew
appleApples-MacBook-Air:Downloads % ssh -i "Capstone Key.pem" ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com
The authenticity of host 'ec2-65-2-116-110.ap-south-1.compute.amazonaws.com (65.2.116.110)' can't be established. Zomato - Kastro [X]
ED25519 key fingerprint is SHA256:Rp7nG8k69PCKGsc7KPM1JfM0WmE8M1lNSMrc.
This key is not known by any other names
Are you sure you want to continue connecting (yes/no)? yes
Warning: Permanently added 'ec2-65-2-116-110.ap-south-1.compute.amazonaws.com' (ED25519) to the list of known hosts.
Welcome to Ubuntu 24.04 LTS (GNU/Linux 6.4.8-1615-oms x86_64)

 * Documentation: https://help.ubuntu.com
 * Management: https://landscape.canonical.com
 * Support: https://ubuntu.com/pro
245
System information as of Wed Dec 17 14:28:04 UTC 2025
246
System load: 0.1 Temperature: -273.1 C
Usage of /: 6.4% of 27.05GB Processes: 159
Memory usage: 8K Users logged in: 0
Swap usage: 8K IP4 address for enp3s0: 172.31.17.218
247
Expanded Security Maintenance For Application is not enabled.
248
[ ] DevOps Project - Zomato - Kastro...
249 0 updates can be applied immediately.
250
Enable ESM Apps to receive additional future security updates.
251 See https://ubuntu.com/esm or run: sudo pro status
252
The list of available updates is more than a week old.
253 To check for new updates run: sudo apt update
254
[ ] package-lock.json
255
The programs included with the Ubuntu system are free software; they
the exact distribution terms for each program are described in the
individual files in /usr/share/doc/<copyright>.
256
Ubuntu comes with ABSOLUTELY NO WARRANTY, to the extent permitted by
applicable law.
257
To run a command as administrator (user "root"), use "sudo <command>".
See "man sudo_root" for details.
258
[ubuntu@ip-172-31-17-218: ~]$ sudo su
root@ip-172-31-17-218: /home/ubuntu #
```

Step 15.2: Installing Prometheus



```
Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-218: /home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com - 195x49
... ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com + DevOps-Project-Zomato...
root@ip-172-31-17-218: /home/ubuntu # sudo useradd --system --no-create-home --shell /bin/false prometheus
root@ip-172-31-17-218: /home/ubuntu # wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
--2025-12-17 14:28:55. -> https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95713866 (91M) [application/octet-stream]
Saving to: 'prometheus-2.47.1.linux-amd64.tar.gz'
[  0%] 000[  0%] 100[  0%] 200[  0%] 300[  0%] 400[  0%] 500[  0%] 600[  0%] 700[  0%] 800[  0%] 900[  0%] 1000[  0%] 2.9s
2025-12-17 14:28:55. -> https://releases.githubusercontent.com/giHubProduction/release-asset/6383021/2fb7b7c62e0-428-ndb-8234426f7473?Expires=2018-11-09&Signature=4tppwAs-e2825-12-271536792342228-ekd9p1en3k3bf1ew3k3sets.ashx&Expires=2025-12-17T1536073842278ksk=2825-12-17T1536073842278ksk=&Key-Pair-Id=394d654-997c-47e9-b12b-9515b9644444&Http-Method=GET&Signature=K2PfO11z2kZFDencxvfcYvtehVChKPjKpM2zVfLn3D8x7w=ey+0x1010JXkV1lCChkGc10JJIUz1N19_exyJpcSM01nRoxRd0uIwY2ht1iWYXW1joiwcvNzfZz5Inh3NldMa2z1QdViXN1cmVbrRlnuVz9t1wia2vMS1sIm4c16Mt2Nt4M2tNswimh3mIjoxhY10pxpM1C1wvRojojicmv2zNfZfc2Vwch1v2vNjg1vb1StbG1lmVcmdu2luzG93cySuZQifQ_ZPSz0zY1Amg16h1Pdz_K7fzn102dmmIAK1Rdjoj0s0rresponse-content-disposition=attachment;filename=30prometheus-2.47.1.linux-amd64.tar.gz&response-content-type=application/xZFOctet-stream (Following
[  0%] 000[  0%] 100[  0%] 200[  0%] 300[  0%] 400[  0%] 500[  0%] 600[  0%] 700[  0%] 800[  0%] 900[  0%] 1000[  0%] 2.9s
2025-12-17 14:28:58 (31.0 MB/s) - 'prometheus-2.47.1.linux-amd64.tar.gz' saved [05713866/95713866]

root@ip-172-31-17-218: /home/ubuntu # sudo useradd --system --no-create-home --shell /bin/false prometheus
root@ip-172-31-17-218: /home/ubuntu # wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
--2025-12-17 14:28:58. -> https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95713866 (91M) [application/octet-stream]
Saving to: 'prometheus-2.47.1.linux-amd64.tar.gz'
[  0%] 000[  0%] 100[  0%] 200[  0%] 300[  0%] 400[  0%] 500[  0%] 600[  0%] 700[  0%] 800[  0%] 900[  0%] 1000[  0%] 2.9s
2025-12-17 14:28:58 (31.0 MB/s) - 'prometheus-2.47.1.linux-amd64.tar.gz' saved [05713866/95713866]

root@ip-172-31-17-218: /home/ubuntu # sudo useradd --system --no-create-home --shell /bin/false prometheus
root@ip-172-31-17-218: /home/ubuntu # wget https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
--2025-12-17 14:28:58. -> https://github.com/prometheus/prometheus/releases/download/v2.47.1/prometheus-2.47.1.linux-amd64.tar.gz
Resolving github.com (github.com)... 20.207.73.82
Connecting to github.com (github.com)|20.207.73.82|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95713866 (91M) [application/octet-stream]
Saving to: 'prometheus-2.47.1.linux-amd64.tar.gz'
[  0%] 000[  0%] 100[  0%] 200[  0%] 300[  0%] 400[  0%] 500[  0%] 600[  0%] 700[  0%] 800[  0%] 900[  0%] 1000[  0%] 2.9s
2025-12-17 14:28:58 (31.0 MB/s) - 'prometheus-2.47.1.linux-amd64.tar.gz' saved [05713866/95713866]
```

```
Terminal Shell Edit View Window Help
Downloads -- root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 - ssh -i Capstone.Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com ... .sh -i Capstone.Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com +
Connecting to release-assets.githubusercontent.com (release-assets.githubusercontent.com)|185.199.110.133|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 95713066 (93M) [application/octet-stream]
Saving to: 'prometheus-2.47.1.linux-amd64.tar.gz'

prometheus-2.47.1.linux-amd64.tar.gz      100%[=====]   91.28M  31.0MB/s  in 2.9s

2025-12-17 14:28:58 (31.0 MB/s) - 'prometheus-2.47.1.linux-amd64.tar.gz' saved [95713066/95713066]

root@ip-172-31-17-218:~/home/ubuntu ls
prometheus-2.47.1.linux-amd64.tar.gz          277
prometheus-2.47.1.linux-amd64.tar.gz          278  StartIntervalSec=500
prometheus-2.47.1.linux-amd64.tar.gz          279  StartLimitBurst=5
prometheus-2.47.1.linux-amd64.tar.gz          280
prometheus-2.47.1.linux-amd64.tar.gz          281  [Service]
prometheus-2.47.1.linux-amd64.tar.gz          282  User=prometheus
prometheus-2.47.1.linux-amd64.tar.gz          283  Group=prometheus
prometheus-2.47.1.linux-amd64.tar.gz          284  Type=simple
prometheus-2.47.1.linux-amd64.tar.gz          285  Restart=on-failure
prometheus-2.47.1.linux-amd64.tar.gz          286  RestartSec=5s
prometheus-2.47.1.linux-amd64.tar.gz          287  ExecStart=/usr/local/bin/prometheus \
prometheus-2.47.1.linux-amd64.tar.gz          288  --config.file=/etc/prometheus/prometheus.yml \
prometheus-2.47.1.linux-amd64.tar.gz          289  --storage.tdb.path=/data \
prometheus-2.47.1.linux-amd64.tar.gz          290  --web.console.templates=/etc/prometheus/consoles \
prometheus-2.47.1.linux-amd64.tar.gz          291  --web.console.libraries=/etc/prometheus/console_libraries \
root@ip-172-31-17-218:~/home/ubuntu cd prometheus-2.47.1.linux-amd64/
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 sudo mkdir -p /data/etc/prometheus
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 sudo mv prometheus protomool /usr/local/bin/
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 sudo mv console_libraries /etc/prometheus/
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 sudo mv prometheus.yml /etc/prometheus/prometheus.yml
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 ls -la
total 24
drwxr-xr-x  2 1001 127 4096 Dec 17 14:38 .
drwxr-xr-x  5 1001 127 4096 Dec 17 14:38 ..
-rw-r--r--  1 1001 127 3773 Oct 4 2023 LICENSE
-rw-r--r--  1 1001 127 3773 Oct 4 2023 NOTICE
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 sudo chown -R prometheus:prometheus /etc/prometheus/. /data/. up under which Prometheus will run.
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 ls -la
EtcStart is where you specify the Prometheus binary path, the location of the configuration file (prometheus.yml), the storage direct
total 24
drwxr-xr-x  2 1001 127 4096 Dec 17 14:38 .
drwxr-xr-x  5 1001 127 4096 Dec 17 14:38 ..
-rw-r--r--  1 1001 127 11357 Oct 4 2023 LICENSE
-rw-r--r--  1 1001 127 3773 Oct 4 2023 NOTICE
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 sudo vi /etc/systemd/system/prometheus.service
root@ip-172-31-17-218:~/home/ubuntu/prometheus-2.47.1.linux-amd64 [
365  Enable and start Prometheus;
366  sudo systemctl enable prometheus
367  sudo systemctl start prometheus

Raw Download Edit Open in new tab
Top
```

```

Downloads — root@ip-172-31-17-218:/home/ubuntu/prometheus-2.47.1.linux-amd64 — ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com ...
... ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com ... + https://www.prometheus.io/docs/prometheus/latest/getting_started/installation_and_deployment/
prometheus-2.47.1.linux-amd64/protocol
prometheus-2.47.1.linux-amd64/console_libraries/
prometheus-2.47.1.linux-amd64/console_libraries/prom.lib
prometheus-2.47.1.linux-amd64/console_libraries/menu.lib
DevOps-Project-Zomato-Kastro / DevOps Project - Zomato - Kastro.txt
prometheus-2.47.1.linux-amd64/prometheus
root@ip-172-31-17-218:/home/ubuntu/ prometheus-2.47.1.linux-amd64% sudo ./prometheus
root@ip-172-31-17-218:/home/ubuntu/ prometheus-2.47.1.linux-amd64% ls -l
total 24
drwxr-xr-x 2 1001 127 4096 Dec 17 14:38 .
drwxr-x--- 5 ubuntu ubuntu 4096 Dec 17 14:29 ..
-rw-r--r-- 1 1001 127 11357 Oct 4 2023 LICENSE
-rw-r--r-- 1 1001 127 3773 Oct 4 2023 NOTICE
-rw-r--r-- 1 1001 127 308 Dec 17 14:38 prometheus.service
Explanation of the key elements in the above prometheus.service file:
root@ip-172-31-17-218:/home/ubuntu/ prometheus-2.47.1.linux-amd64% sudo chown -R prometheus:prometheus /etc/prometheus /data/
root@ip-172-31-17-218:/home/ubuntu/ prometheus-2.47.1.linux-amd64% ls -l
total 24
drwxr-xr-x 2 1001 127 4096 Dec 17 14:38 .
drwxr-x--- 5 ubuntu ubuntu 4096 Dec 17 14:29 ..
-rw-r--r-- 1 1001 127 11357 Oct 4 2023 LICENSE
-rw-r--r-- 1 1001 127 3773 Oct 4 2023 NOTICE
-rw-r--r-- 1 1001 127 308 Dec 17 14:38 prometheus.service
ExecStart is where you specify the Prometheus binary path, the location of the configuration file (prometheus.yml), the storage direct
web.listen-address configures Prometheus to listen on all network interfaces on port 9090.
web.enable-lifecycle allows for management of Prometheus through API calls.
[Install]
ExecStart=/etc/systemd/system/prometheus.service
root@ip-172-31-17-218:/home/ubuntu/ prometheus-2.47.1.linux-amd64% sudo systemctl start prometheus
root@ip-172-31-17-218:/home/ubuntu/ prometheus-2.47.1.linux-amd64% sudo systemctl status prometheus
● prometheus.service - Prometheus
  Loaded: loaded (/etc/systemd/system/prometheus.service; enabled; preset: enabled)
  Active: active (running) since Wed 2025-12-17 14:33:59 UTC; 155 ago
    Main PID: 14941 (prometheus)
      Tasks: 8 (limit: 19283)
        Memory: 18.7M (peak: 18.9M)
        CPU: 50ms
      CGroup: /system.slice/prometheus.service
           └─ 14941 /usr/local/bin/prometheus --config.File=/etc/prometheus/prometheus.yml --storage.tsdb.path=/data --web.console.templates=/etc/prometheus/console_libraries --web.console.libraries=/etc/prometheus/console_libraries
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.986Z caller=hedgo.go:681 level=info component=tsdb msg="On-disk memory mappable chunks replay completed" duration=1.493us
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.986Z caller=hedgo.go:689 level=info component=tsdb msg="Replaying WAL, this may take a while"
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.986Z caller=hedgo.go:768 level=info component=tsdb msg="WAL segment loaded" segment=0 maxSegment=0
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.986Z caller=hedgo.go:797 level=info component=tsdb msg="WAL replay completed" checkpointDuration=13.876us wal_replayDuration=13.876us
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.987Z caller=main.go:1044 level=info msg="TSDB started"
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.987Z caller=main.go:1229 level=info msg="Loading configuration file" filename="/etc/prometheus/prometheus.yml"
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.987Z caller=main.go:1266 level=info msg="Completed loading of configuration file" filename="/etc/prometheus/prometheus.yml"
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.987Z caller=main.go:1009 level=info msg="Server is ready to receive web requests."
Dec 17 14:33:59 ip-172-31-17-218 prometheus[14941]: ts=2025-12-17T14:33:59.987Z caller=manager.go:1009 level=info component="rule manager" msg="Starting rule manager..."
[lines 1-28/20 (END)]
321
322
323 cd

```

Access Prometheus

Inbound rules	Info				
Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-081920bdda9845d90	SSH	TCP	22	Custom	<input type="text"/> 0.0.0.0/0 <button>Delete</button>
sgr-07a9919bbf8dce36	Custom TCP	TCP	9090	Custom	<input type="text"/> 0.0.0.0/0 <button>Delete</button>

Add rule

⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only.

Cancel Preview changes Save rules

Prometheus

Graph

No data queried yet

Add Panel

Check –

Targets

Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090", job="prometheus"	1.104s ago	3.172ms	

Step 15.3. Installing Node Exporter

Step 15.4: Configure Prometheus Plugin Integration

Terminal Shell Edit View Window Help

Downloads — root@ip-172-31-17-218: /etc/prometheus — ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com — 195x49

```
root@ip-172-31-17-218:~# cd /etc/prometheus
root@ip-172-31-17-218:/etc/prometheus# ls -l
total 12
drwxr-xr-x 2 prometheus prometheus 4096 Oct 4 2023 console_libraries
drwxr-xr-x 2 prometheus prometheus 4096 Oct 4 2023 DevOps Project - Zomato - Kastro
drwxr-xr-x 2 prometheus prometheus 934 Oct 4 2023 prometheus.yaml
root@ip-172-31-17-218:/etc/prometheus# sudo vi prometheus.yaml
root@ip-172-31-17-218:/etc/prometheus# sudo vi prometheus.yaml
root@ip-172-31-17-218:/etc/prometheus# sudo vi prometheus.yaml
root@ip-172-31-17-218:/etc/prometheus# sudo vi prometheus.yaml
Checking /etc/prometheus/prometheus.yaml
Integrate Jenkins with Prometheus to monitor the CI/CD pipeline.
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: <65.2.116.110/>:9100" is not a valid hostname
Checking /etc/prometheus/prometheus.yaml
Integrate Jenkins with Prometheus to monitor the CI/CD pipeline.
FAILED: parsing YAML file /etc/prometheus/prometheus.yaml: <65.2.116.110/>:9100" is not a valid hostname
Checking /etc/prometheus/prometheus.yaml
Integrate Jenkins with Prometheus to scrape metrics from Node Exporter and Jenkins, you need to modify the prometheus.yaml file.
SUCCESS: /etc/prometheus/prometheus.yaml is valid prometheus config file syntax
Prometheus Configuration:
root@ip-172-31-17-218:/etc/prometheus# cat prometheus.yaml
379     The path of prometheus.yaml is: cd /etc/prometheus/ ----> ls -l ----> You can see the "prometheus.yaml" file ----> sudo vi prometheus.yaml
380
381         - job_name: 'node_exporter'
382             static_configs:
383                 - targets: ['<MonitoringVMip>:9100']
384
385             - job_name: 'jenkins'
386                 metrics_path: '/prometheus'
387                 static_configs:
388                     - targets: ['<your-jenkins-ip>:<your-jenkins-port>']
389
390             In the above, replace <your-jenkins-ip> and <your-jenkins-port> with the appropriate IPs ----> esc ----> :wq
391
392             Check the validity of the configuration file:
393             promtool check config /etc/prometheus/prometheus.yaml
394
395             You should see "SUCCESS" when you run the above command, it means every configuration made so far is good.
396
397             Reload the Prometheus configuration without restarting:
398             curl -X POST http://localhost:9090/-/reload
399
400             Access Prometheus in browser (if already opened, just reload the page):
401             http://<your-prometheus-ip>:9090/targets
402
403             Open Port number 9100 for Monitoring VM
```

A screenshot of a Mac desktop environment. At the top, there's a menu bar with Apple, Terminal, Shell, Edit, View, Window, Help. Below the menu bar is a toolbar with icons for Downloads, Capstone Key.pem, and a file named Step 15.4: Configure Prometheus Plugin Integration. The main window shows a terminal session with the command `ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com` and its output. To the right of the terminal is a Microsoft Word document titled "Step 15.4: Configure Prometheus Plugin Integration". The Word document contains configuration code for Prometheus, including sections for global config, alerting, and scrape_configs. The status bar at the bottom indicates "37,20 All".

```
# my global config
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'.

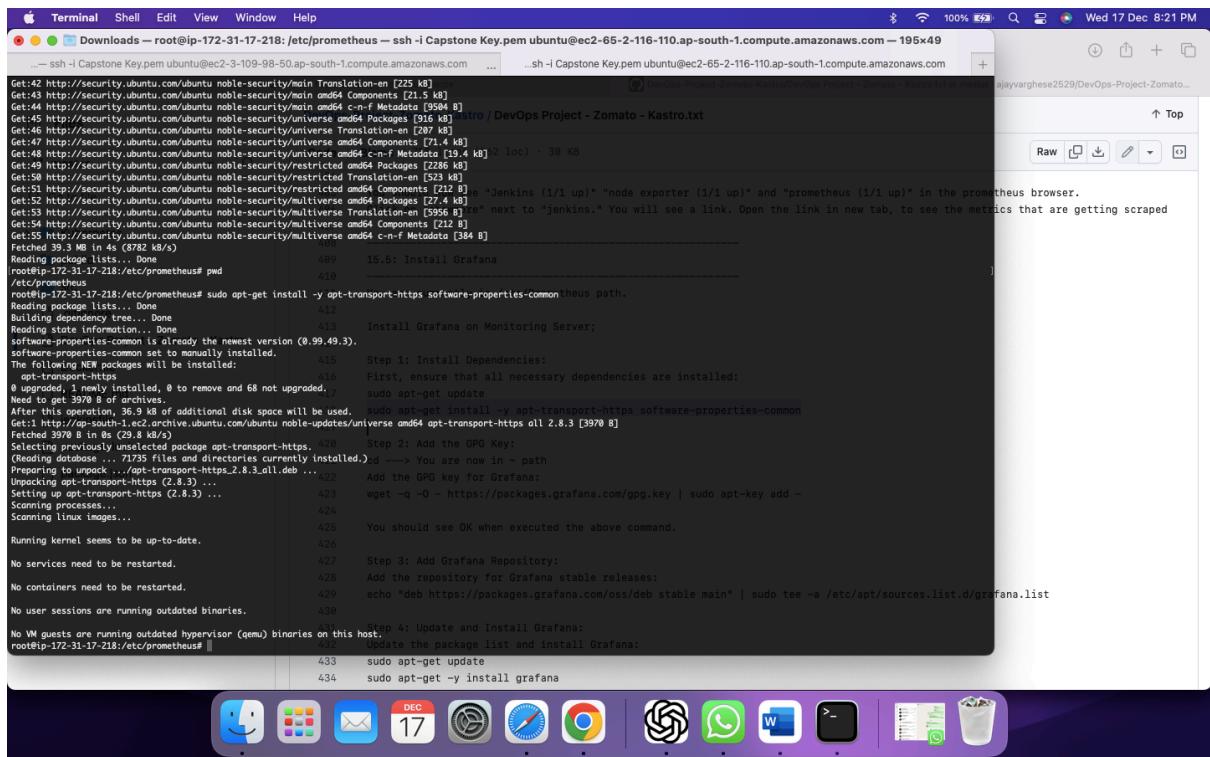
    static_configs:
      - targets: ["localhost:9090"]
      - job_name: "node_exporter"
        static_configs:
          - targets: [ "65.2.116.110:9100" ]

      - job_name: "jenkins"
        metrics_path: '/prometheus'
        static_configs:
          - targets: [ "109.98.50:8080" ]
```

A screenshot of a Mac desktop environment. At the top, there's a menu bar with Apple, Chrome, File, Edit, View, History, Bookmarks, Profiles, Tab, Window, Help. Below the menu bar is a toolbar with icons for various applications. The main window shows a browser window with the URL "65.2.116.110:9090/targets?search=". The browser title bar says "Prometheus". The page content is the "Targets" section of the Prometheus interface, showing three healthy endpoints: jenkins (1/1 up), node_exporter (1/1 up), and prometheus (1/1 up). Below this is a table with columns: Endpoint, State, Labels, Last Scrape, Scrape Duration, and Error. One row is shown for the prometheus endpoint.

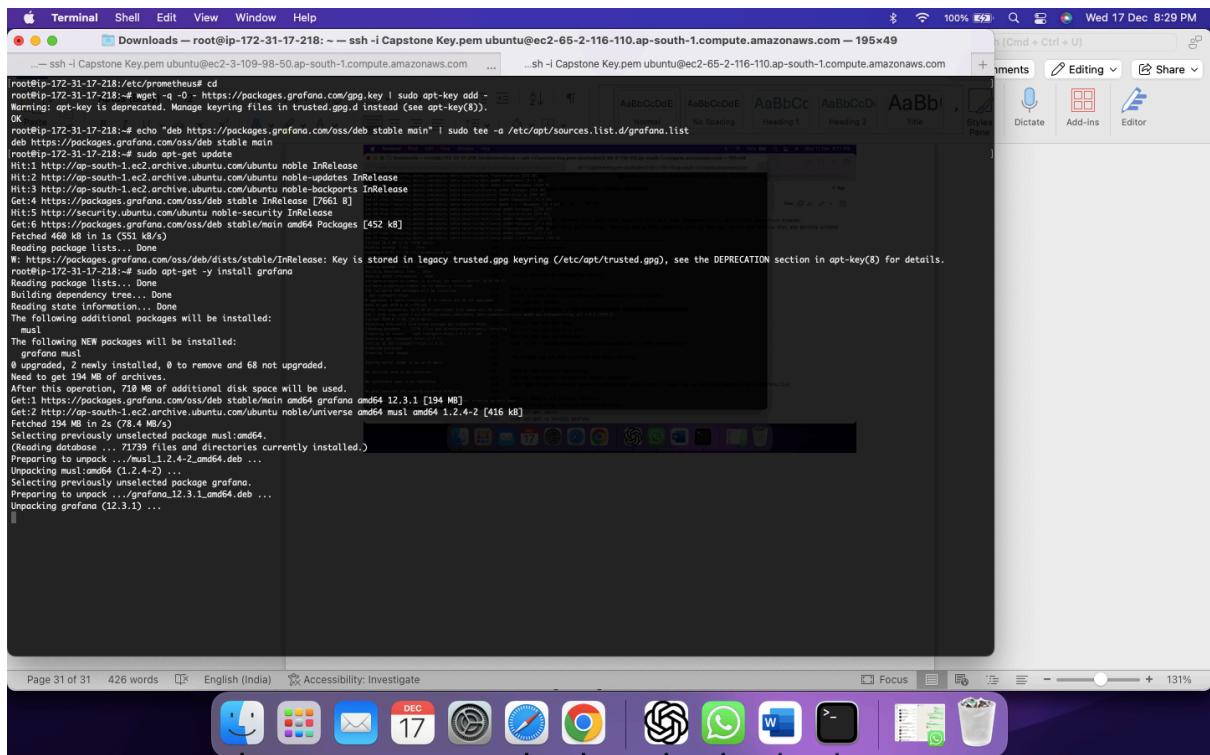
Endpoint	State	Labels	Last Scrape	Scrape Duration	Error
http://localhost:9090/metrics	UP	instance="localhost:9090" job="prometheus"	12.607s ago	3.356ms	

Step 15.5: Install Grafana



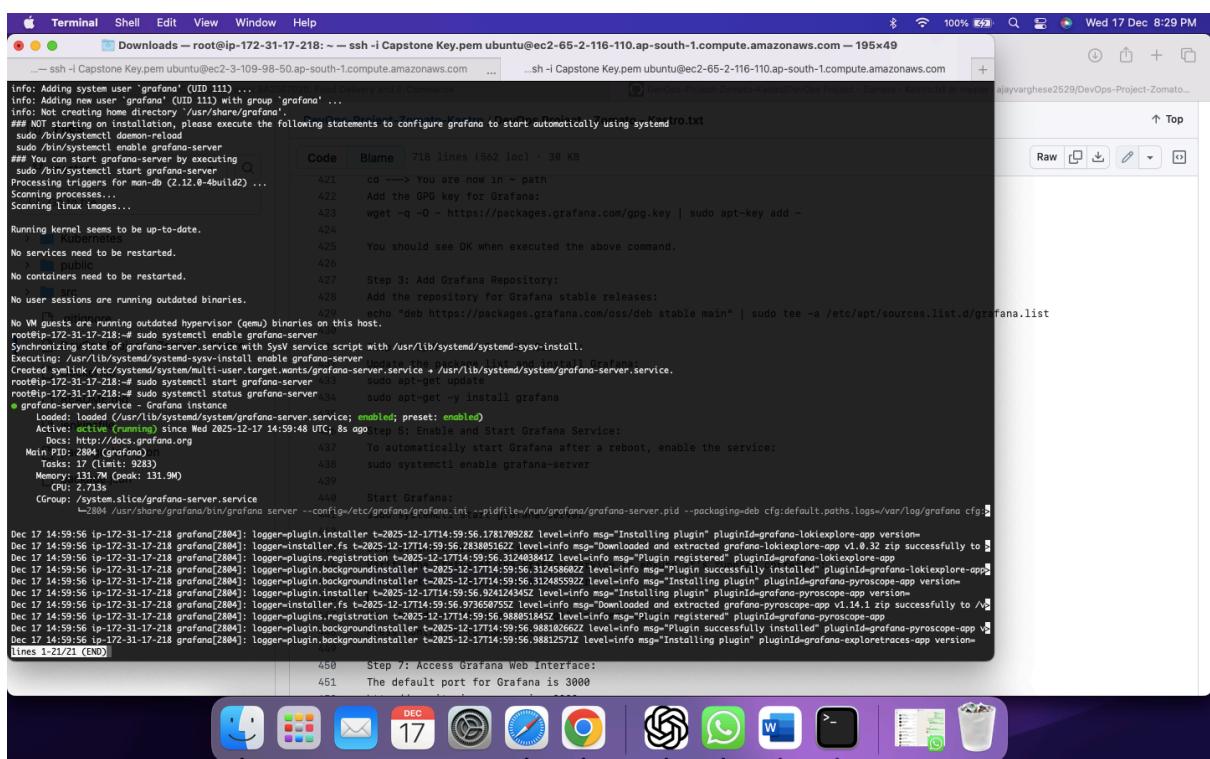
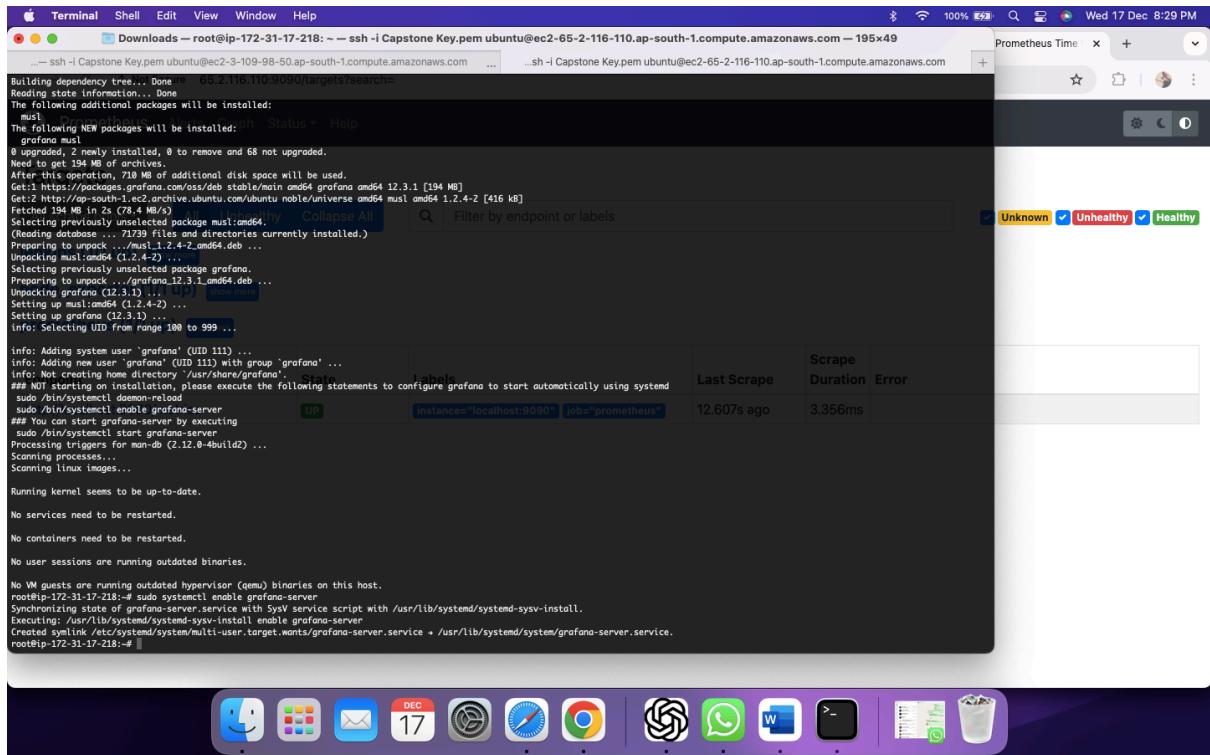
```
... ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com — 195x49
Get:42 http://security.ubuntu.com/ubuntu noble-security/main Translation-en [225 kB]
Get:43 http://security.ubuntu.com/ubuntu noble-security/main amd64 Components [21.5 kB]
Get:44 http://security.ubuntu.com/ubuntu noble-security/main amd64 c-n-f Metadata [5954 B]
Get:45 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [207 kB]
Get:46 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Components [71.4 kB]
Get:47 http://security.ubuntu.com/ubuntu noble-security/universe amd64 c-n-f Metadata [19.4 kB] + loc + 38 KB
Get:48 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 Packages [226 kB]
Get:49 http://security.ubuntu.com/ubuntu noble-security/restricted Translation-en [523 kB]
Get:50 http://security.ubuntu.com/ubuntu noble-security/restricted amd64 c-n-f Metadata [384 kB]
Get:51 http://security.ubuntu.com/ubuntu noble-security/universe Translation-en [3978 kB]
Get:52 http://security.ubuntu.com/ubuntu noble-security/universe amd64 Packages [27.4 kB]
Get:53 http://security.ubuntu.com/ubuntu noble-security/multiverse Translation-en [5956 B] + loc next to "jenkins." You will see a link. Open the link in new tab, to see the metrics that are getting scraped
Get:54 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 Components [212 kB]
Get:55 http://security.ubuntu.com/ubuntu noble-security/multiverse amd64 c-n-f Metadata [384 kB]
Fetched 39.3 MB in 4s (8782 kB/s)
Reading package lists... Done
root@ip-172-31-17-218:/etc/prometheus# pwd
/etc/prometheus
root@ip-172-31-17-218:/etc/prometheus# sudo apt-get install -y apt-transport-https software-properties-common
Reading package lists... Done
Building dependency tree...
Reading state information...
software-properties-common is already the newest version (0.99.49.3).
software-properties-common is already set to manually installed.
The following NEW packages will be installed:
  apt-transport-https
0 upgraded, 1 newly installed, 0 to remove and 68 not upgraded.
Need to get 3970 B of archives.
After this operation, 736.9 kB of additional disk space will be used.
Get:1 http://op-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates/universe amd64 apt-transport-https all 2.8.3 [3970 B]
Fetches: 3970 B in 0s (29.8 kB/s)
Selecting previous unselected package apt-transport-https.
(Reading database ... 71735 files and directories currently installed.) d ---> path
Preparing to unpack .../apt-transport-https_2.8.3_all.deb ...
Unpacking apt-transport-https (2.8.3) ...
Setting up apt-transport-https (2.8.3) ...
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.
root@ip-172-31-17-218:/etc/prometheus# 
  4: Update and Install Grafana:
Update the package list and install Grafana:
  432 sudo apt-get update
  433 sudo apt-get -y install grafana

```



```
... ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com — 195x49
Get:1 https://packages.grafana.com/gpg.key | sudo apt-key add -
Warning: apt-key is deprecated. Manage keyring files in trusted.gpg.d instead (see apt-key(8)).
OK
root@ip-172-31-17-218:~# echo "deb https://packages.grafana.com/oss/deb stable main" | sudo tee -a /etc/apt/sources.list.d/grafana.list
deb http://op-south-1.ec2.archive.ubuntu.com/ubuntu noble InRelease
deb http://op-south-1.ec2.archive.ubuntu.com/ubuntu noble-updates InRelease
deb http://op-south-1.ec2.archive.ubuntu.com/ubuntu noble-backports InRelease
Get:4 https://packages.grafana.com/oss/deb stable InRelease [7661 B]
Hit:5 http://security.ubuntu.com/ubuntu noble-security InRelease
Get:6 https://packages.grafana.com/oss/deb stable/main amd64 Packages [454 kB]
Fetched 468 kB in 1s (551 kB/s)
Reading package lists... Done
W: https://packages.grafana.com/oss/deb/dists/stable/InRelease: Key is stored in legacy trusted.gpg keyring (/etc/apt/trusted.gpg), see the DEPRECATION section in apt-key(8) for details.
root@ip-172-31-17-218:~# sudo apt-get -y install grafana
Reading package lists... Done
Building dependency tree...
Reading state information...
Reading state information... Done
The following additional packages will be installed:
  musl
The following NEW packages will be installed:
  grafana
0 upgraded, 2 newly installed, 0 to remove and 68 not upgraded.
Need to get 194 kB of archives.
After this operation, 710 kB of additional disk space will be used.
Get:1 https://packages.grafana.com/oss/deb/stable/main amd64 grafana amd64 1.2.3.1 [194 kB]
Get:2 http://op-south-1.ec2.archive.ubuntu.com/ubuntu noble/universe amd64 musl amd64 1.2.4-2 [416 kB]
Fetches: 194 kB in 0s (45 kB/s)
Selecting previously unselected package musl:amd64.
(Reading database ... 71739 files and directories currently installed.)
Preparing to unpack .../musl_1.2.4-2_amd64.deb ...
Unpacking musl:amd64 (1.2.4-2) ...
Selecting previously unselected package grafana.
Preparing to unpack .../grafana_1.2.3.1_amd64.deb ...
Unpacking grafana (1.2.3.1) ...

```



The screenshot shows the AWS Management Console interface for managing security group inbound rules. The URL in the address bar is `ap-south-1.console.aws.amazon.com/ec2/home?region=ap-south-1#ModifyInboundSecurityGroupRules:securityGroupId=sg-07438961798968137`. The top navigation bar includes tabs for Chrome, File, Edit, View, History, Bookmarks, Profiles, Tab, Window, Help, and several open tabs related to AWS services like ModifyInboundSecurityGroupRules, Repositories, Projects, React App, and Prometheus Time.

The main content area displays the "Inbound rules" section for a specific security group. It lists four existing rules and one new rule entry:

Security group rule ID	Type	Protocol	Port range	Source	Description - optional
sgr-081920bdda9845d90	SSH	TCP	22	Custom	0.0.0.0/0
sgr-06808aa21180ef286	Custom TCP	TCP	9100	Custom	0.0.0.0/0
sgr-07a9919bbf8dcec36	Custom TCP	TCP	9090	Custom	0.0.0.0/0
-	Custom TCP	TCP	3000	Anyw...	0.0.0.0/0

A button labeled "Add rule" is located at the bottom left of the table. A warning message at the bottom states: "⚠ Rules with source of 0.0.0.0/0 or ::/0 allow all IP addresses to access your instance. We recommend setting security group rules to allow access from known IP addresses only." Below the message are "Cancel", "Preview changes", and "Save rules" buttons.

The screenshot shows the Grafana dashboard landing page. The URL in the address bar is `65.2.116.110:3000/?orgId=1&from=now-6h&to=now&timezone=browser`. The top navigation bar includes tabs for Chrome, File, Edit, View, History, Bookmarks, Profiles, Tab, Window, Help, and several open tabs related to AWS services like Instances, Zomato, Repositories, Projects, React App, Prometheus Time, and Home - Dashboard.

The main content area features a "Welcome to Grafana" header and a "Need help?" section with links to Documentation, Tutorials, Community, and Public Slack. On the left, a sidebar menu includes Home, Bookmarks, Starred, Dashboards, Explore, Drilldown, Alerting, Connections, and Administration.

The central dashboard area contains several panels:

- Basic:** A panel with instructions for setting up Grafana.
- TUTORIAL DATA SOURCE AND DASHBOARDS:** A panel titled "Grafana fundamentals" with a description of the tutorial.
- DATA SOURCES:** A panel with the heading "Add your first data source".
- DASHBOARDS:** A panel with the heading "Create dashboards".
- Dashboards:** A panel showing "Starred dashboards" and "Recently viewed dashboards".
- Latest from the blog:** A panel featuring a post titled "CAN data analysis with Grafana Assistant".

A purple Mac OS-style dock at the bottom contains icons for various applications including Finder, Mail, Calendar, Safari, and Microsoft Word.

Chrome File Edit View History Bookmarks Profiles Tab Window Help

Instances | EC #12 - Zomato ajayvarghese2 Repositories Projects React App Prometheus prometheus

Not Secure 65.2.116.110:3000/connections/datasources/edit/cf7do5ad2rj7kb

Grafana Home Connections Data sources prometheus

Type: Prometheus

Settings Dashboards Permissions Insights Cache

Configure your Prometheus data source below
Or skip the effort and get Prometheus (and Loki) as fully-managed, scalable, and hosted data sources from Grafana Labs with the free-forever Grafana Cloud plan.

Name: prometheus Default

Before you can use the Prometheus data source, you must configure it below or in the config file. For detailed instructions, view the documentation.

Fields marked with * are required

Connection

Prometheus server URL: http://localhost:9090



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Instances | EC #12 - Zomato ajayvarghese2 Repositories Projects React App Prometheus prometheus

Not Secure 65.2.116.110:3000/connections/datasources/edit/cf7do5ad2rj7kb

Grafana Home Connections Data sources prometheus

Prometheus server URL: http://65.2.116.110:9090

Authentication

Authentication methods

Choose an authentication method to access the data source

Authentication method: No Authentication

TLS settings

Additional security measures that can be applied on top of authentication

Add self-signed certificate

TLS Client Authentication

Skip TLS certificate validation



The screenshot shows the Grafana interface with the URL `65.2.116.110:3000/connections/datasources/edit/cf7do5ad2rj7kb`. The left sidebar is open, showing the 'Connections' section with 'Data sources' selected. The main panel is titled 'Connections > Data sources > prometheus'. It contains several configuration options:

- 'Prometheus type': Choose (dropdown)
- 'Cache level': Low (dropdown)
- 'Incremental querying (beta)': Off (switch)
- 'Disable recording rules (beta)': Off (switch)
- 'Other' section:
 - 'Custom query parameters': Example: max_source_resolution=5m&tin
 - 'HTTP method': POST (dropdown)
 - 'Series limit': 40000
 - 'Use series endpoint': Off (switch)
- 'Exemplars' section with a '+ Add' button.

A success message at the bottom states: "Successfully queried the Prometheus API. Next, you can start to visualize data by building a dashboard or by querying data in the Explore view."

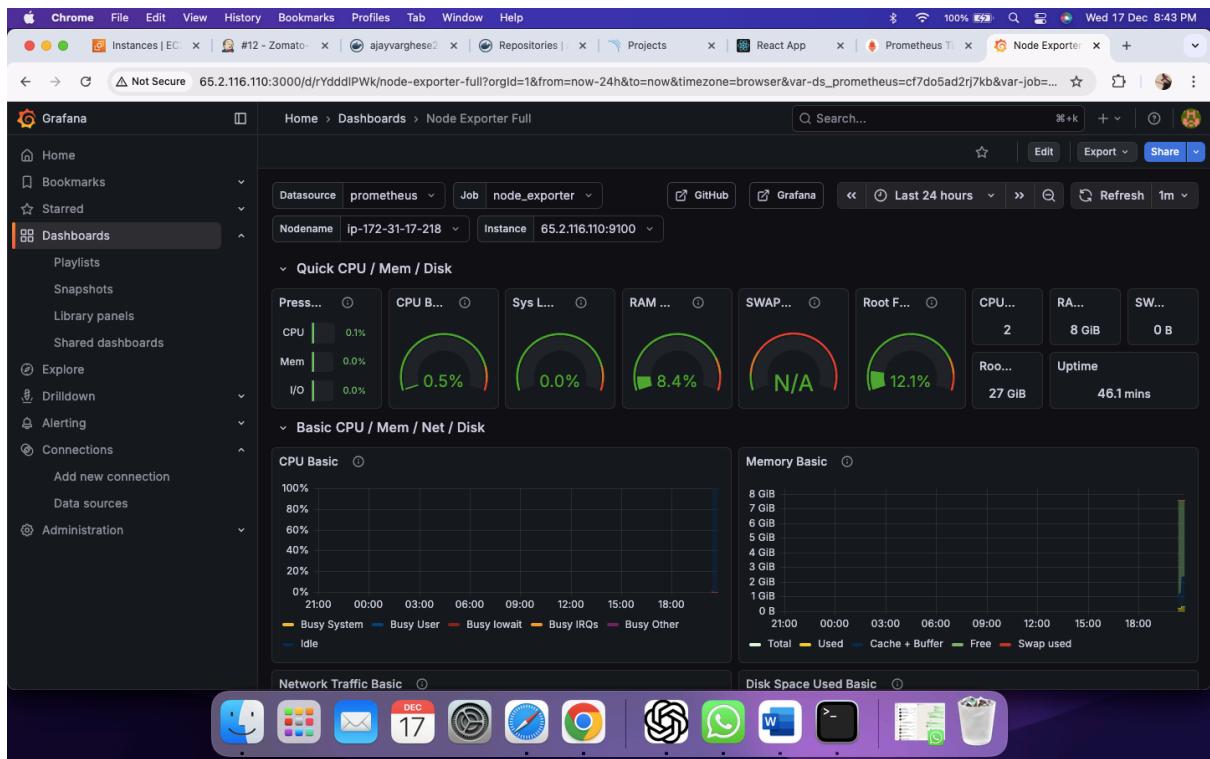
Adding Dashboards –

The screenshot shows the Grafana interface with the URL `65.2.116.110:3000/dashboard/import`. The left sidebar is open, showing the 'Dashboards' section with 'Import dashboard' selected. The main panel is titled 'Import dashboard' and includes the following sections:

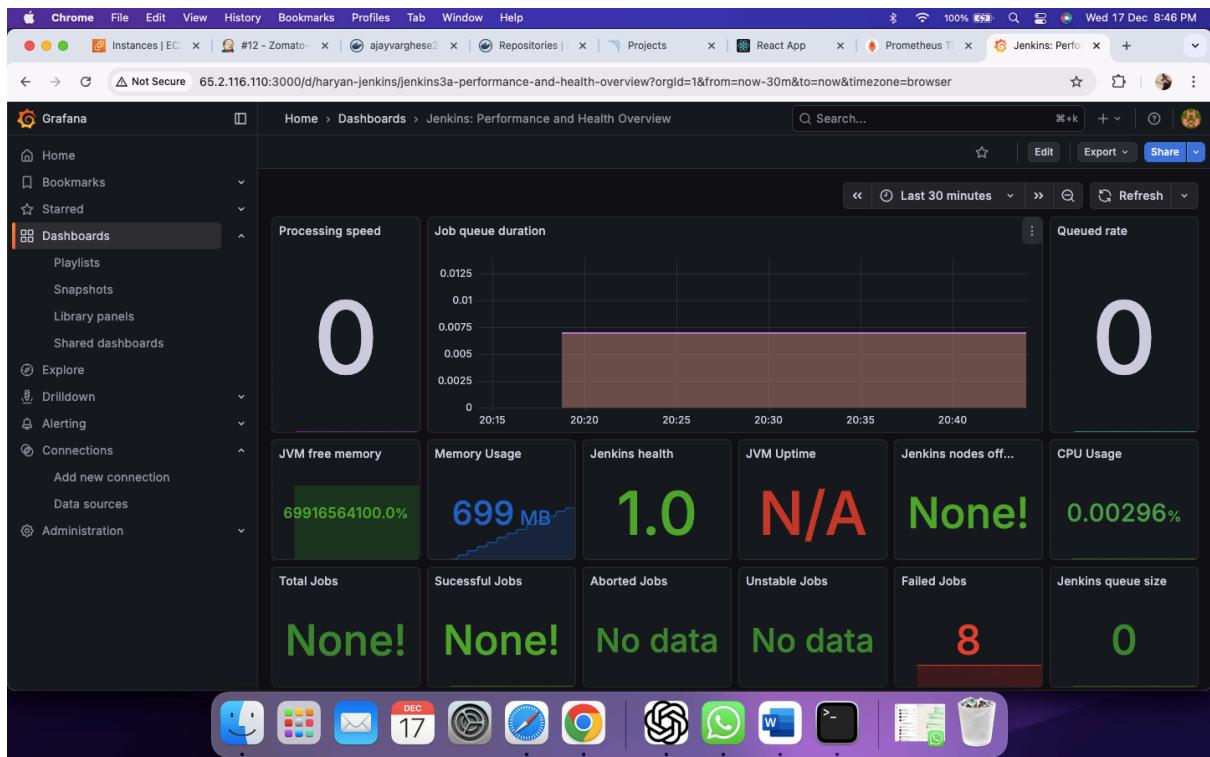
- 'Import dashboard from file or Grafana.com': A large dashed box for uploading a JSON file, with instructions: 'Upload dashboard JSON file' and 'Drag and drop here or click to browse Accepted file types: json, .txt'.
- 'Find and import dashboards for common applications at grafana.com/dashboards': A search bar with a 'Load' button.
- 'Import via dashboard JSON model': A code editor containing a JSON model for an example dashboard, starting with:

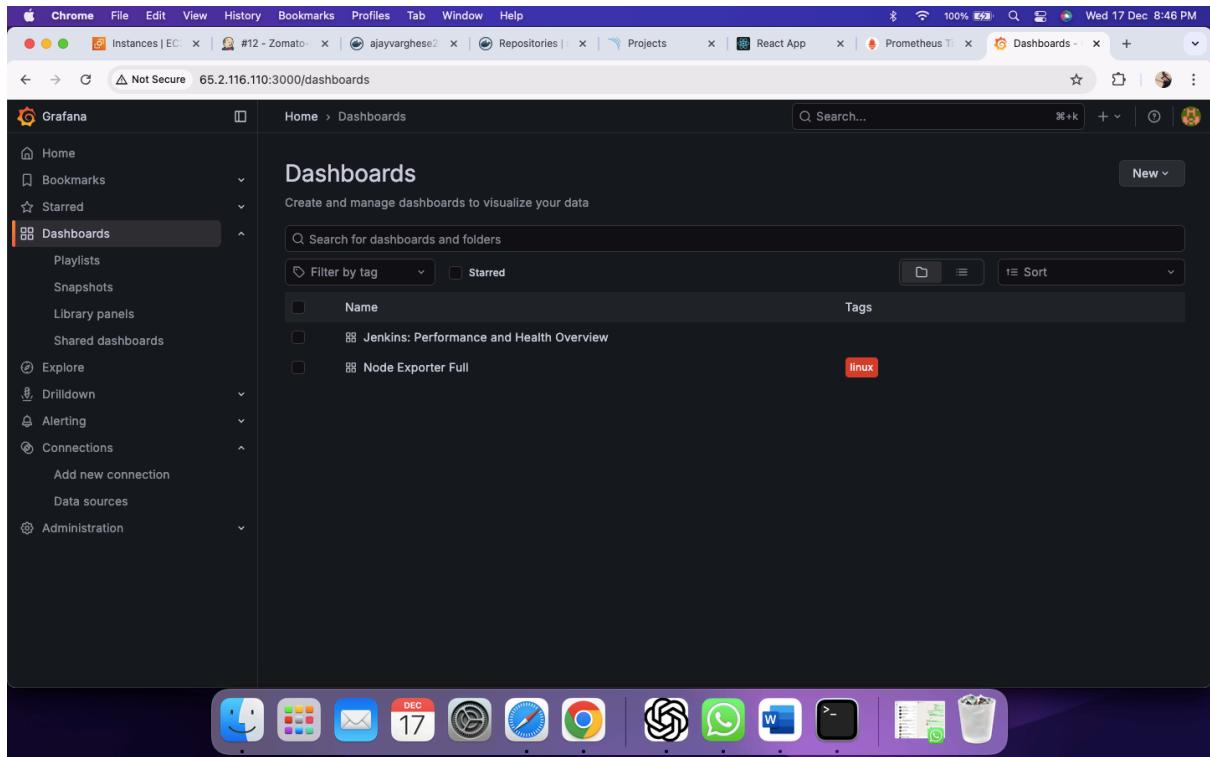
```
{  
  "title": "Example - Repeating Dictionary variables",  
  "uid": "0HnEoN4z",  
  "panels": [...]  
}
```

At the bottom right, there are buttons for 'New dashboard', 'Import dashboard' (which is highlighted), and 'New alert rule'.



Adding Jenkins Dashboard



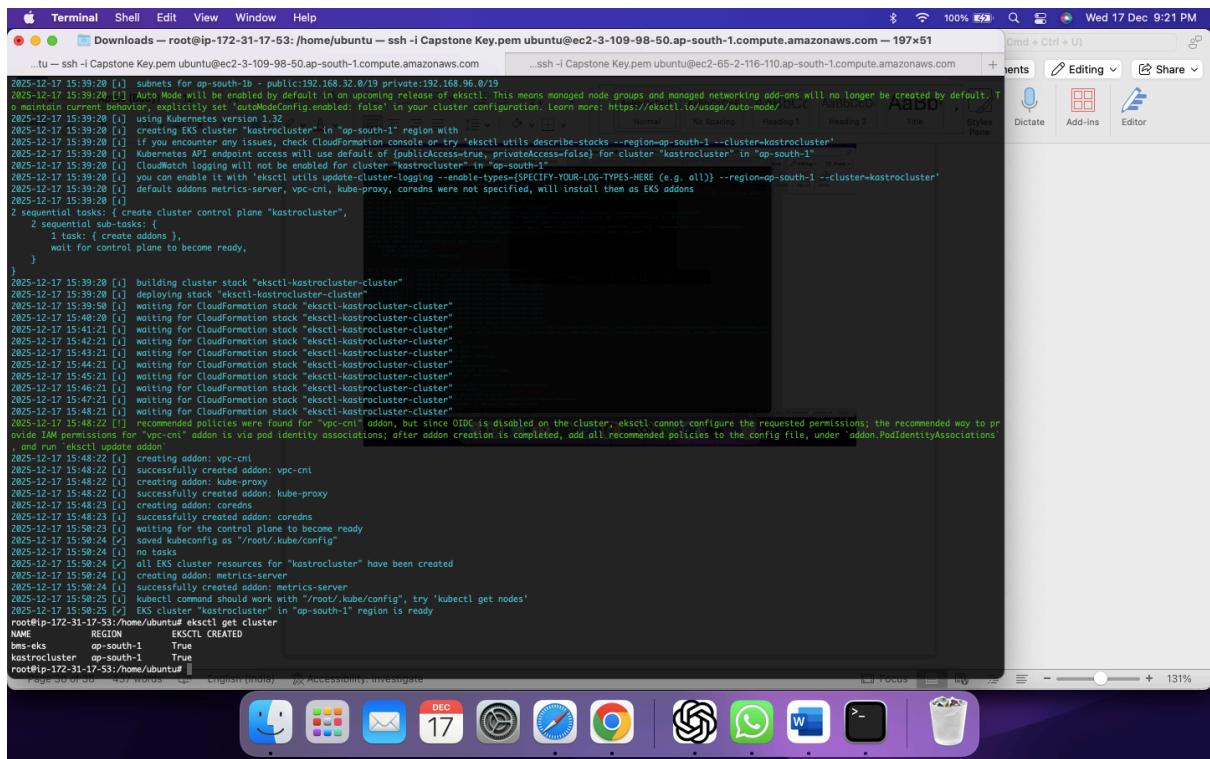


Final Step : Create EKS Cluster

```
Apple Terminal Shell Edit View Window Help
Downloads - root@ip-172-31-17-53:~/home/ubuntu - ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com - 197x51
...tu -- ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com + 197x51
AWS Access Key ID [None]: AKIAJU4LOBMVGSFJDQ5H
AWS Secret Access Key [None]: 324025606233:AKIAJU4LOBMVGSFJDQ5H
Default region [None]: ap-south-1
Default output format [None]: json
root@ip-172-31-17-53:~/home/ubuntu# aws sts get-caller-identity
{
    "UserId": "AIDAJU4LOBMVGSFJDQ5H",
    "Account": "324025606233",
    "Arn": "arn:aws:iam::324025606233:user/bms-jenkins-user"
}
root@ip-172-31-17-53:~/home/ubuntu# curl -L0 https://dl.k8s.io/release/`curl -s https://dl.k8s.io/release/stable.txt`/bin/linux/amd64/kubectl
chmod +x kubectl
mv kubectl /usr/local/bin/
% Total % Received % Xferd Average Speed Time Time Current
          0 0 0 0 0 0 --:--:-- --:--:-- --:--:-- 0
100 138 100 138 0 0 485 0 --:--:-- --:--:-- --:--:-- 485
100 57.7M 100 57.7M 0 0 137M 0 --:--:-- --:--:-- --:--:-- 137M
root@ip-172-31-17-53:~/home/ubuntu# kubectl version --client
Client Version: v1.34.3
Kustomize Version: v5.7.1
root@ip-172-31-17-53:~/home/ubuntu# curl -sLo https://github.com/weaveworks/eksctl/releases/latest/download/eksctl_Linux_amd64.tar.gz
tar -xvf eksctl_Linux_amd64.tar.gz
mv eksctl /usr/local/bin/
root@ip-172-31-17-53:~/home/ubuntu# eksctl version
0.22.0
root@ip-172-31-17-53:~/home/ubuntu# curl https://raw.githubusercontent.com/helm/helm/main/scripts/get-helm-3 | bash
% Total % Received % Xferd Average Speed Time Time Current
          0 0 0 0 0 0 --:--:-- --:--:-- --:--:-- 0
100 11929 100 11929 0 0 465K 0 --:--:-- --:--:-- 485K
Downloaded https://get.helm.sh/Helm-v3.19.4-linux-amd64.tar.gz
Verifying checksum... Done.
Preparing to install helm into /usr/local/bin
helm: install failed: /usr/local/bin/helm
root@ip-172-31-17-53:~/home/ubuntu# helm version
version.BuildInfo{Version:"v3.19.4", GitCommit:"7cfb6e486dc026202556836bb910c37d847793e", GitTreeState:"clean", GoVersion:"go1.24.11"}
root@ip-172-31-17-53:~/home/ubuntu# aws --version
aws sts get-caller-identity
eksctl version
kubectl version --client
helm version
awscli/2.32.18 Python/3.13.11 Linux/6.14.0-1018-aws exe/x86_64.glibc.2.31
{
    "UserId": "AIDAJU4LOBMVGSFJDQ5H",
    "Account": "324025606233",
    "Arn": "arn:aws:iam::324025606233:user/bms-jenkins-user"
}
0.22.0
Client Version: v1.34.3
Kustomize Version: v5.7.1
version.BuildInfo{Version:"v3.19.4", GitCommit:"7cfb6e486dc026202556836bb910c37d847793e", GitTreeState:"clean", GoVersion:"go1.24.11"} + 131%
```

```
Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-53:/home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com — 197x51
...tu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com ...ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com + 131%
root@ip-172-31-17-53:/home/ubuntu# eksctl create cluster \
--name kastrocluster \
--region ap-south-1 \
--zones ap-south-1a,ap-south-1b \
--without-nodegroup
2025-12-17 15:39:20 [x] eksctl version 0.228.0
2025-12-17 15:39:20 [x] using Kubernetes version 1.32
2025-12-17 15:39:20 [x] subnets for op-south-1a public:192.168.0.0/19 private:192.168.64.0/19
2025-12-17 15:39:20 [x] subnets for op-south-1b public:192.168.32.0/19 private:192.168.96.0/19
2025-12-17 15:39:20 [x] Auto Mode will be enabled by default in an upcoming release of eksctl. This means managed node groups and managed networking add-ons will no longer be created by default. To maintain current behavior, explicitly set `autoModeConfig.enabled: false` in your cluster configuration. Learn more: https://eksctl.io/usage/auto-mode/
2025-12-17 15:39:20 [x] using CloudFormation stack "eksctl-kastrocluster" in "op-south-1" region with
2025-12-17 15:39:20 [x] if you encounter any issues, check CloudFormation console or try `eksctl utils describe-stacks --region=ap-south-1 --cluster=kastrocluster`
2025-12-17 15:39:20 [x] Kubernetes API endpoint access will use default of {publicAccess=true, privateAccess=false} for cluster "kastrocluster" in "op-south-1"
2025-12-17 15:39:20 [x] CloudWatch logging will not be enabled for cluster "kastrocluster"
2025-12-17 15:39:20 [x] you can enable it with `eksctl utils update-cluster-logging --enable-types={SPECIFY-YOUR-LOG-TYPES-HERE (e.g. all)} --region=ap-south-1 --cluster=kastrocluster`
2025-12-17 15:39:20 [x] default addons metrics-server, vpc-cni, kube-proxy, coredns were not specified, will install them as EKS addons
2025-12-17 15:39:20 [x] 2 sequential tasks: { create cluster control plane "kastrocluster",
2025-12-17 15:39:20 [x]   2 sequential sub-tasks: {
2025-12-17 15:39:20 [x]     1 task: { create addons },
2025-12-17 15:39:20 [x]     wait for control plane to become ready,
2025-12-17 15:39:20 [x]   }
2025-12-17 15:39:20 [x] building cluster stack "eksctl-kastrocluster-cluster"
2025-12-17 15:39:20 [x] deploying stack "eksctl-kastrocluster-cluster"
2025-12-17 15:39:20 [x] Page 37 of 38 457 Words 1p English (India) gg Accessibility, Investigate + 131%
2025-12-17 15:39:20 [x] Focu
2025-12-17 15:39:20 [x] Auto Mode will be enabled by default in an upcoming release of eksctl. This means managed node groups and managed networking add-ons will no longer be created by default. To maintain current behavior, explicitly set `autoModeConfig.enabled: false` in your cluster configuration. Learn more: https://eksctl.io/usage/auto-mode/
2025-12-17 15:39:20 [x] using Kubernetes version 1.32
2025-12-17 15:39:20 [x] creating EKS cluster "kastrocluster" in "op-south-1" region with
2025-12-17 15:39:20 [x] if you encounter any issues, check CloudFormation console or try `eksctl utils describe-stacks --region=ap-south-1 --cluster=kastrocluster`
2025-12-17 15:39:20 [x] Kubernetes API endpoint access will use default of {publicAccess=true, privateAccess=false} for cluster "kastrocluster" in "op-south-1"
2025-12-17 15:39:20 [x] CloudWatch logging will not be enabled for cluster "kastrocluster" in "op-south-1"
2025-12-17 15:39:20 [x] you can enable it with `eksctl utils update-cluster-logging --enable-types={SPECIFY-YOUR-LOG-TYPES-HERE (e.g. all)} --region=ap-south-1 --cluster=kastrocluster`
2025-12-17 15:39:20 [x] default addons metrics-server, vpc-cni, kube-proxy, coredns were not specified, will install them as EKS addons
2025-12-17 15:39:20 [x] 2 sequential tasks: { create cluster control plane "kastrocluster",
2025-12-17 15:39:20 [x]   2 sequential sub-tasks: {
2025-12-17 15:39:20 [x]     1 task: { create addons },
2025-12-17 15:39:20 [x]     wait for control plane to become ready,
2025-12-17 15:39:20 [x]   }
2025-12-17 15:39:20 [x] building cluster stack "eksctl-kastrocluster-cluster"
2025-12-17 15:39:20 [x] deploying stack "eksctl-kastrocluster-cluster"
2025-12-17 15:40:20 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:41:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:42:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:43:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:44:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:45:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:46:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:47:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:21 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:22 [x] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:22 [x] successfully created stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:22 [x] all EKS cluster resources for "kastrocluster" have been created
2025-12-17 15:50:24 [x] creating addon: metrics-server
2025-12-17 15:50:24 [x] successfully created addon: metrics-server
2025-12-17 15:50:25 [x] Kubernetes command should work with '/root/.kube/config', try 'kubectl get nodes'
2025-12-17 15:50:25 [x] EKS cluster "kastrocluster" in "ap-south-1" region is ready
root@ip-172-31-17-53:/home/ubuntu#
```

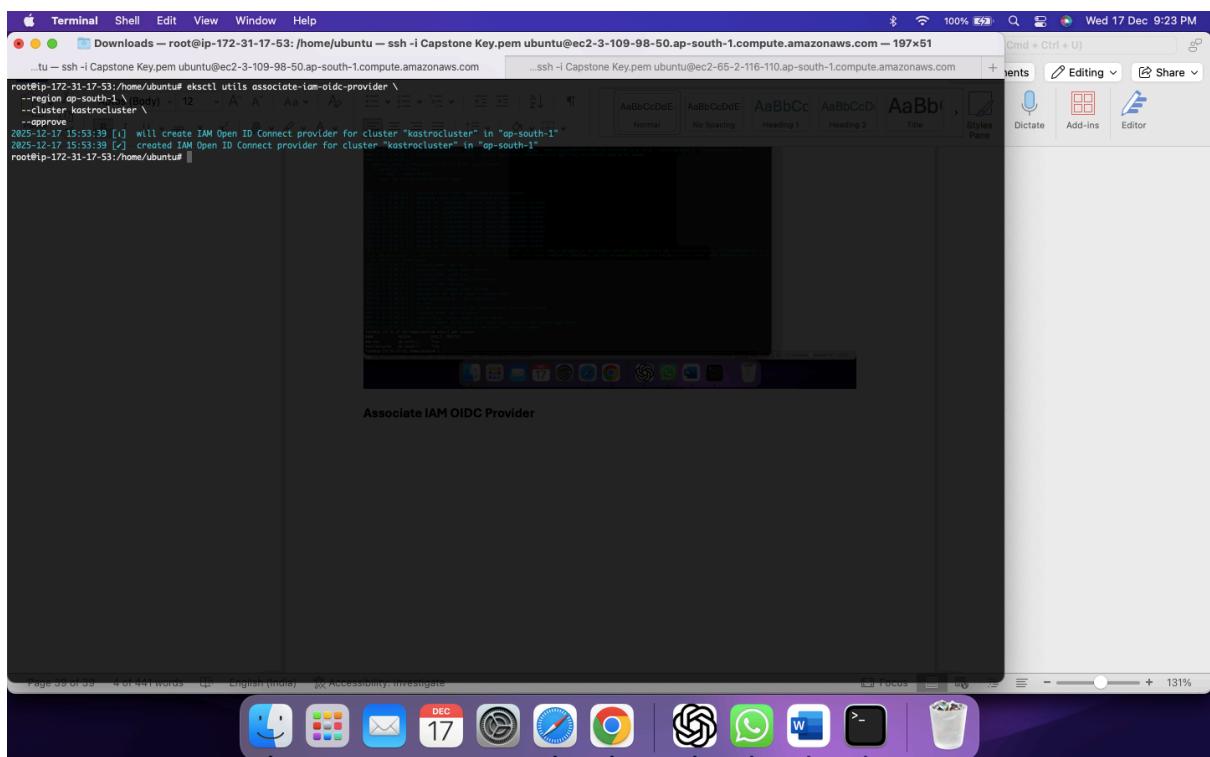
```
Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-53:/home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com — 197x51
...tu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com ...ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-110.ap-south-1.compute.amazonaws.com + 131%
root@ip-172-31-17-53:/home/ubuntu# eksctl create cluster \
--name kastrocluster \
--region ap-south-1 \
--zones ap-south-1a,ap-south-1b \
--without-nodegroup
2025-12-17 15:48:22 [x] eksctl version 0.228.0
2025-12-17 15:48:22 [x] successfully created stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:22 [x] successfully created addon: vpc-cni
2025-12-17 15:48:22 [x] successfully created addon: kube-proxy
2025-12-17 15:48:23 [x] creating addon: coredns
2025-12-17 15:48:23 [x] successfully created addon: coredns
2025-12-17 15:50:23 [x] waiting for the control plane to become ready
2025-12-17 15:50:24 [x] saved kubeconfig as "/root/.kube/config"
2025-12-17 15:50:24 [x] Focu
2025-12-17 15:50:24 [x] all EKS cluster resources for "kastrocluster" have been created
2025-12-17 15:50:24 [x] creating addon: metrics-server
2025-12-17 15:50:24 [x] successfully created addon: metrics-server
2025-12-17 15:50:25 [x] Kubernetes command should work with '/root/.kube/config', try 'kubectl get nodes'
2025-12-17 15:50:25 [x] EKS cluster "kastrocluster" in "ap-south-1" region is ready
root@ip-172-31-17-53:/home/ubuntu#
```



```
2025-12-17 15:39:20 [i] subnets for ap-south-1b public@192.168.32.8/19 private@192.168.96.0/19
2025-12-17 15:39:20 [i] Auto Mode will be enabled by default in an upcoming release of eksctl. This means managed node groups and managed networking addons will no longer be created by default. To maintain current behavior, explicitly set `autoModeConfig.enabled: false` in your cluster configuration. Learn more: https://eksctl.io/usage/auto-mode/
2025-12-17 15:39:20 [i] using Kubernetes version 1.32
2025-12-17 15:39:20 [i] creating EKS cluster "kastrocluster" in "ap-south-1" region with
2025-12-17 15:39:20 [i]   if you encounter any issues, check CloudFormation console or try `eksctl utils describe-stacks --region=ap-south-1 --cluster=kastrocluster`
2025-12-17 15:39:20 [i]   if you want to enable CloudWatch Metrics logging, set `eksctl utils update-cluster-logging --region=ap-south-1 --cluster=kastrocluster --cloudwatch-metrics-accesses=false` for cluster "kastrocluster" in "ap-south-1"
2025-12-17 15:39:20 [i] CloudWatch logging will not be enabled for cluster "kastrocluster" in "ap-south-1"
2025-12-17 15:39:20 [i] you can enable it with `eksctl utils update-cluster-logging --enable-types=[SPECIFY-YOUR-LOG-TYPES-HERE (e.g. al1)] --region=ap-south-1 --cluster=kastrocluster`
2025-12-17 15:39:20 [i] default addons metrics-server, vpc-cni, kube-proxy, coredns were not specified, will install them as EKS addons
2025-12-17 15:39:20 [i]
2 sequential tasks:
  2 sequential sub-tasks:
    1 task [ create addons ],
      wait for control plane to become ready,
    }
  }

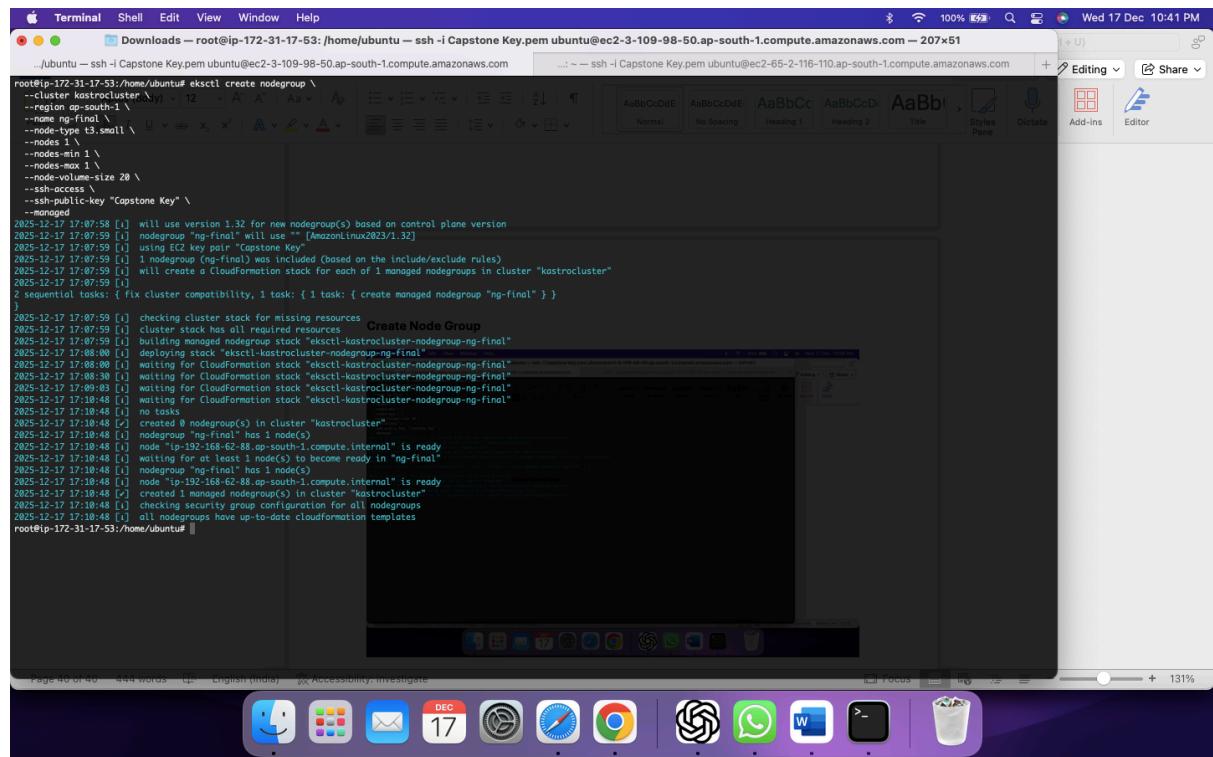
2025-12-17 15:39:20 [i] building cluster stack "eksctl-kastrocluster-cluster"
2025-12-17 15:39:20 [i] deploying stack "eksctl-kastrocluster-cluster"
2025-12-17 15:39:20 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:40:20 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:41:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:42:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:43:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:44:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:45:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:46:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:47:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:21 [i] waiting for CloudFormation stack "eksctl-kastrocluster-cluster"
2025-12-17 15:48:22 [i] recommended policies were found for "vpc-cni" addon, but since OIDC is disabled on the cluster, eksctl cannot configure the requested permissions; the recommended way to pr
2025-12-17 15:48:22 [i] ovide permissions for "vpc-cni" addon is via pod identity associations; after addon creation is completed, add all recommended policies to the config file, under "addon.PodIdentityAssociations"
2025-12-17 15:48:22 [i] and run `eksctl update addons` to apply changes
2025-12-17 15:48:22 [i] creating addon: vpc-cni
2025-12-17 15:48:22 [i] successfully created addon: vpc-cni
2025-12-17 15:48:22 [i] creating addon: kube-proxy
2025-12-17 15:48:22 [i] successfully created addon: kube-proxy
2025-12-17 15:48:23 [i] creating addon: coredns
2025-12-17 15:48:23 [i] successfully created addon: coredns
2025-12-17 15:48:23 [i] waiting for the control plane to become ready
2025-12-17 15:50:24 [x] saved kubeconfig as "/root/.kube/config"
2025-12-17 15:50:24 [i] no tasks
2025-12-17 15:50:24 [i] all EKS cluster resources for "kastrocluster" have been created
2025-12-17 15:50:24 [i] created EKS cluster resource: metrics-server
2025-12-17 15:50:24 [i] successfully created addon: metrics-server
2025-12-17 15:50:25 [i] kubectl command should work with "/root/.kube/config", try 'kubectl get nodes'
2025-12-17 15:50:25 [x] EKS cluster "kastrocluster" in "ap-south-1" region is ready
root@ip-172-31-17-53:~/.home/ubuntu$ eksctl get cluster
NAME      REGION          EKSCTL CREATED
bm-eks    ap-south-1    True
kastroCluster ap-south-1    True
root@ip-172-31-17-53:~/.home/ubuntu$
```

Associate IAM OIDC Provider



```
root@ip-172-31-17-53:~/.home/ubuntu$ eksctl utils associate-iam-oidc-provider \
--region ap-south-1 \
--cluster kastrocluster \
--approve
2025-12-17 15:53:39 [x] will create IAM Open ID Connect provider for cluster "kastrocluster" in "ap-south-1"
2025-12-17 15:53:39 [x] created IAM Open ID Connect provider for cluster "kastrocluster" in "ap-south-1"
root@ip-172-31-17-53:~/.home/ubuntu$
```

Create Node Group

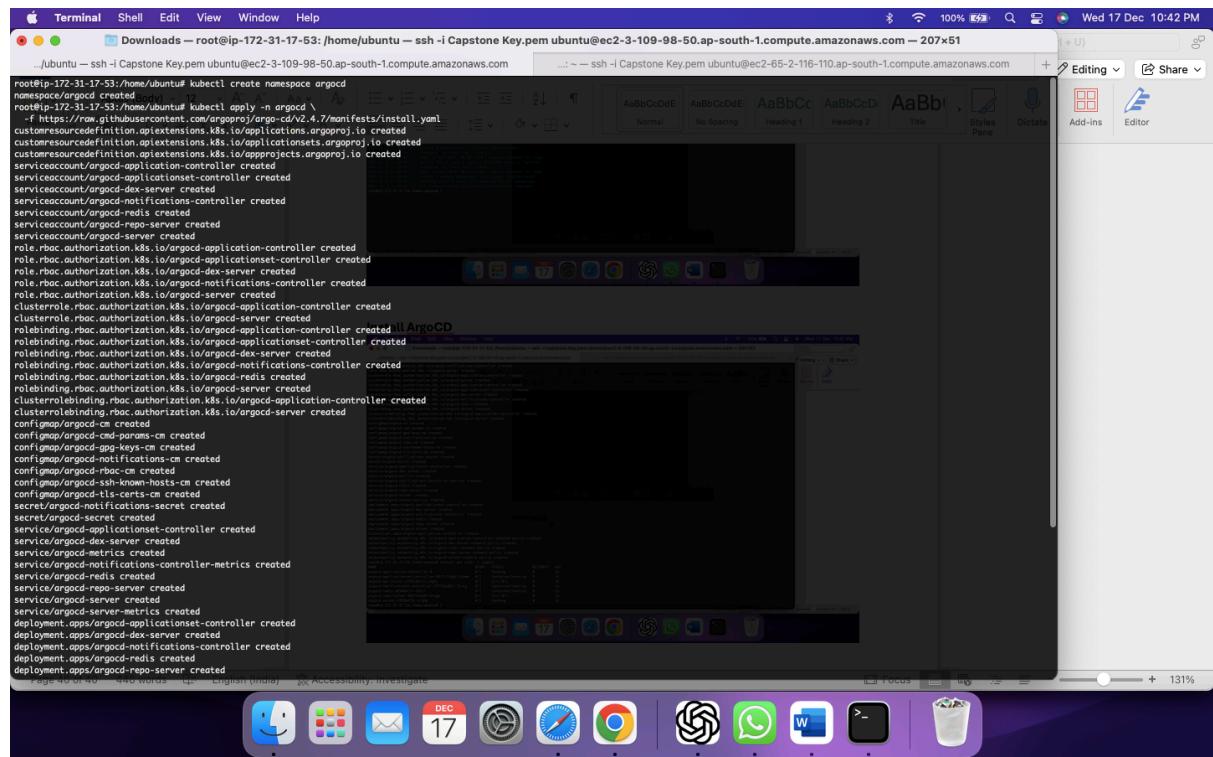


```
./eksctl create nodegroup \
--cluster kastrocluster \
--region ap-south-1 \
--name ng-final \
--node-type t3.small \
--nodes 1 \
--nodes-min 1 \
--nodes-max 1 \
--node-volume-size 20 \
--ssh-access \
--ssh-public-key "Capstone Key" \
--managed

2025-12-17 17:07:58 [x] will use version 1.32 for new nodegroup(s) based on control plane version
2025-12-17 17:07:59 [x] nodegroup "ng-final" will use "" [AmazonLinux2023.1.32]
2025-12-17 17:07:59 [x] using EC2 key pair "Capstone Key"
2025-12-17 17:07:59 [x] 1 nodegroup (ng-final) was included (based on the include/exclude rules)
2025-12-17 17:07:59 [x] I will create a CloudFormation stack for each of 1 managed nodegroups in cluster "kastrocluster"
2025-12-17 17:07:59 [x] 2 sequential tasks: { fix cluster compatibility, 1 task: { create managed nodegroup "ng-final" } }

2025-12-17 17:07:59 [x] checking cluster stack for missing resources Create Node Group
2025-12-17 17:07:59 [x] cluster stack has all required resources
2025-12-17 17:07:59 [x] building managed nodegroup stack "eksctl-kastrocluster-nodegroup-ng-final"
2025-12-17 17:08:00 [x] deploying stack "eksctl-kastrocluster-nodegroup-ng-final"
2025-12-17 17:08:00 [x] waiting for CloudFormation stack "eksctl-kastrocluster-nodegroup-ng-final"
2025-12-17 17:08:00 [x] created 0 nodegroup(s) in cluster "kastrocluster"
2025-12-17 17:08:00 [x] nodegroup "ng-final" has 1 node(s)
2025-12-17 17:08:00 [x] node "ip-192-168-62-88.ap-south-1.compute.internal" is ready
2025-12-17 17:08:00 [x] waiting for at least 1 node(s) to become ready in "ng-final"
2025-12-17 17:08:00 [x] node "ip-192-168-62-88.ap-south-1.compute.internal" has 1 node(s)
2025-12-17 17:08:00 [x] node "ip-192-168-62-88.ap-south-1.compute.internal" is ready
2025-12-17 17:08:00 [x] created 1 managed nodegroup(s) in cluster "kastrocluster"
2025-12-17 17:08:00 [x] checking security group configuration for all nodegroups
2025-12-17 17:08:00 [x] all nodegroups have up-to-date cloudformation templates
root@ip-172-31-17-53:/home/ubuntu#
```

Install ArgoCD



```
./kubectl apply -n argocd
namespace/argocd created
root@ip-172-31-17-53:/home/ubuntu# ./kubectl apply -n argocd \
-f https://raw.githubusercontent.com/argoproj/argo-cd/v2.4.7/manifests/install.yaml
customresourcedefinition.aplxextensions.k8s.io/applications.argoproj.io created
customresourcedefinition.aplxextensions.k8s.io/applicationsets.argoproj.io created
customresourcedefinition.aplxextensions.k8s.io/approjects.argoproj.io created
serviceaccount/argocd-application-controller created
serviceaccount/argocd-authentication-controller created
serviceaccount/argocd-dex-server created
serviceaccount/argocd-notifications-controller created
serviceaccount/argocd-repo-server created
serviceaccount/argocd-repo-set-controller created
role.rbac.authorization.k8s.io/argocd-application-controller created
role.rbac.authorization.k8s.io/argocd-applicationset-controller created
role.rbac.authorization.k8s.io/argocd-dex-server created
role.rbac.authorization.k8s.io/argocd-notifications-controller created
role.rbac.authorization.k8s.io/argocd-server created
clusterrolebinding.rbac.authorization.k8s.io/argocd-application-controller created
clusterrolebinding.rbac.authorization.k8s.io/argocd-authentication-controller created
rolebinding.rbac.authorization.k8s.io/argocd-dex-server created
rolebinding.rbac.authorization.k8s.io/argocd-notifications-controller created
rolebinding.rbac.authorization.k8s.io/argocd-repo-set-controller created
rolebinding.rbac.authorization.k8s.io/argocd-repo-server created
clusterrolebinding.rbac.authorization.k8s.io/argocd-server created
configmap/argocd-cm created
configmap/argocd-cmd-params-cm created
configmap/argocd-gcp-params-cm created
configmap/argocd-notifications-cm created
configmap/argocd-rbac-cm created
configmap/argocd-ssh-known-hosts-cm created
configmap/argocd-tls-certs-cm created
secret/argocd-notifications-secret created
secret/argocd-repo-secret created
service/argocd-application-controller created
service/argocd-dex-server created
service/argocd-metrics created
service/argocd-notifications-controller-metrics created
service/argocd-repo created
service/argocd-repo-rev created
service/argocd-server created
service/argocd-server-metrics created
deployment.apps/argocd-applicationset-controller created
deployment.apps/argocd-dex-server created
deployment.apps/argocd-notifications-controller created
deployment.apps/argocd-repo-redis created
deployment.apps/argocd-repo-server created
```

```
Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-53: /home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com — 207x51
... ~ ~ ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-10.ap-south-1.compute.amazonaws.com + Editing Share
... /ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com
role.rbac.authorization.k8s.io/argocd-notifications-controller created
role.rbac.authorization.k8s.io/argocd-server created
clusterrole.rbac.authorization.k8s.io/argocd-application-controller created
clusterrole.rbac.authorization.k8s.io/argocd-server created
rolebinding.rbac.authorization.k8s.io/argocd-application-controller created
rolebinding.rbac.authorization.k8s.io/argocd-applicationset-controller created
rolebinding.rbac.authorization.k8s.io/argocd-notifications-controller created
rolebinding.rbac.authorization.k8s.io/argocd-redis created
rolebinding.rbac.authorization.k8s.io/argocd-server created
clusterrolebinding.rbac.authorization.k8s.io/argocd-application-controller created
clusterrolebinding.rbac.authorization.k8s.io/argocd-server created
configmap/argocd-cmd-paasns-cm created
configmap/argocd-gpg-Keys-cm created
configmap/argocd-notifications-cm created
configmap/argocd-rbac-cm created
configmap/argocd-ssh-cm hosts-cm created
configmap/argocd-tls-certs-cm created
secret/argocd-notifications-secret created
secret/argocd-secret created
service/argocd-dex-server created
service/argocd-metrics created
service/argocd-notifications-controller-metrics created
service/argocd-redis created
service/argocd-repo-server created
service/argocd-server created
service/argocd-server-metrics created
deployment.apps/argocd-applicationset-controller created
deployment.apps/argocd-dex-server created
deployment.apps/argocd-notifications-controller created
deployment.apps/argocd-redis created
deployment.apps/argocd-repo-server created
deployment.apps/argocd-server created
statefulset.apps/argocd-application-controller created
networkpolicy.networking.k8s.io/argocd-application-controller-network-policy created
networkpolicy.networking.k8s.io/argocd-dex-server-network-policy created
networkpolicy.networking.k8s.io/argocd-redis-network-policy created
networkpolicy.networking.k8s.io/argocd-repo-server-network-policy created
networkpolicy.networking.k8s.io/argocd-server-network-policy created
root@ip-172-31-17-53:/home/ubuntu# kubectl get pods -n argocd
NAME                               READY   STATUS    RESTARTS   AGE
argocd-application-controller-0   0/1     Pending   0          2s
argocd-applicationset-controller-847c7f5d6-9cmw   0/1     ContainerCreating   0          3s
argocd-dex-server-575bc85fc-xng5l   0/1     Init:0/1   0          3s
argocd-notifications-controller-5ffff6cd8b7-z5vrg   0/1     ContainerCreating   0          2s
argocd-redis-d9d464c7c-q32ct   0/1     ContainerCreating   0          2s
argocd-repo-server-64777-hfskg   0/1     Init:0/1   0          2s
argocd-server-575bc85fc-19eqq   0/1     Pending   0          2s
root@ip-172-31-17-53:/home/ubuntu#
```

Expose ArgoCD (LoadBalancer)

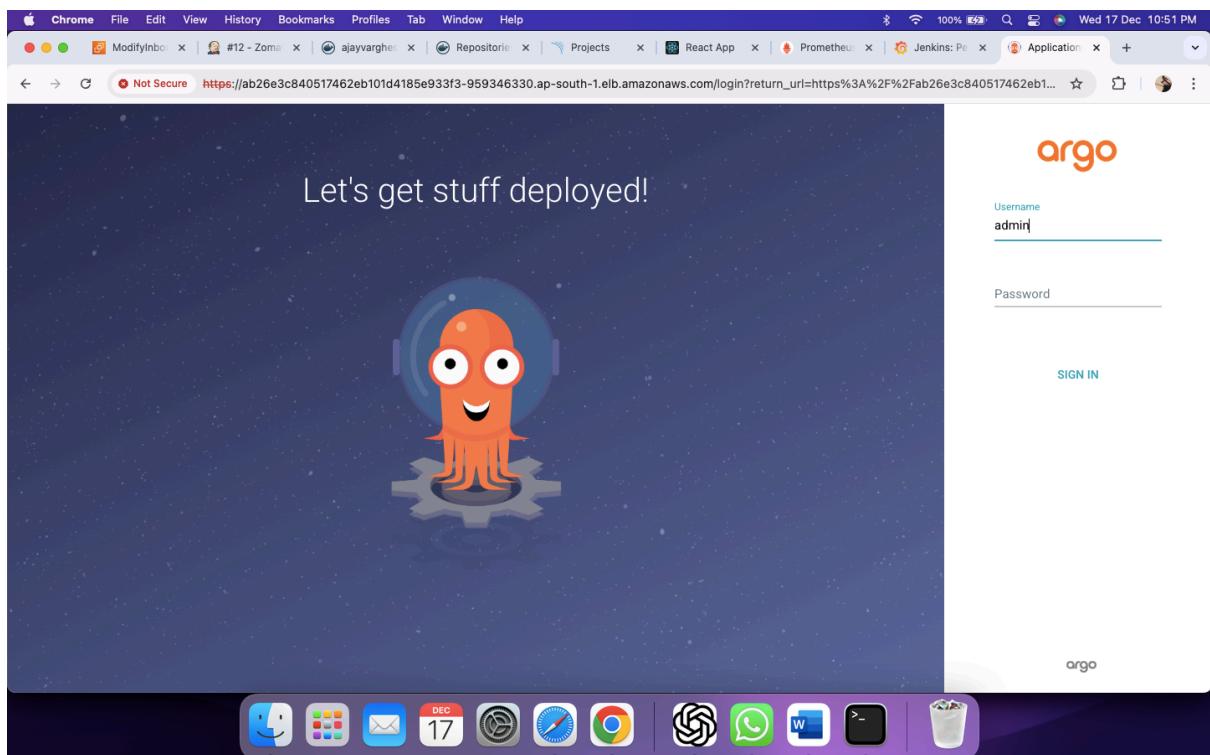
```
Terminal Shell Edit View Window Help
Downloads — root@ip-172-31-17-53: /home/ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com — 207x51
... ~ ~ ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-10.ap-south-1.compute.amazonaws.com + Editing Share
... /ubuntu — ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com
root@ip-172-31-17-53:/home/ubuntu# kubectl patch svc argocd-server -n argocd \
-p '{"spec": {"type": "LoadBalancer"}}'
service/argocd-server patched
root@ip-172-31-17-53:/home/ubuntu# kubectl get svc -n argocd
NAME           TYPE      CLUSTER-IP      EXTERNAL-IP      PORT(S)          AGE
argocd-applicationset-controller   ClusterIP   10.100.241.74   <none>           80/TCP          79s
argocd-dex-server   ClusterIP   10.100.228.97   <none>           443/TCP,80/TCP 79s
argocd-metrics   ClusterIP   10.100.145.226  <none>           80/TCP          79s
argocd-notifications-controller-metrics   ClusterIP   10.100.72.146  <none>           80/TCP          79s
argocd-redis   ClusterIP   10.100.137.198 <none>           6379/TCP        79s
argocd-repo-server   ClusterIP   10.100.160.25   <none>           8081/TCP,8884/TCP 79s
argocd-server   LoadBalancer  10.100.218.59   62b63c840517462eb101d4185e933f3-959346330.ap-south-1.elb.amazonaws.com  80:3151/TCP,443:31845/TCP 79s
argocd-server-metrics   ClusterIP   10.100.251.158  <none>           8083/TCP        79s
root@ip-172-31-17-53:/home/ubuntu#
```

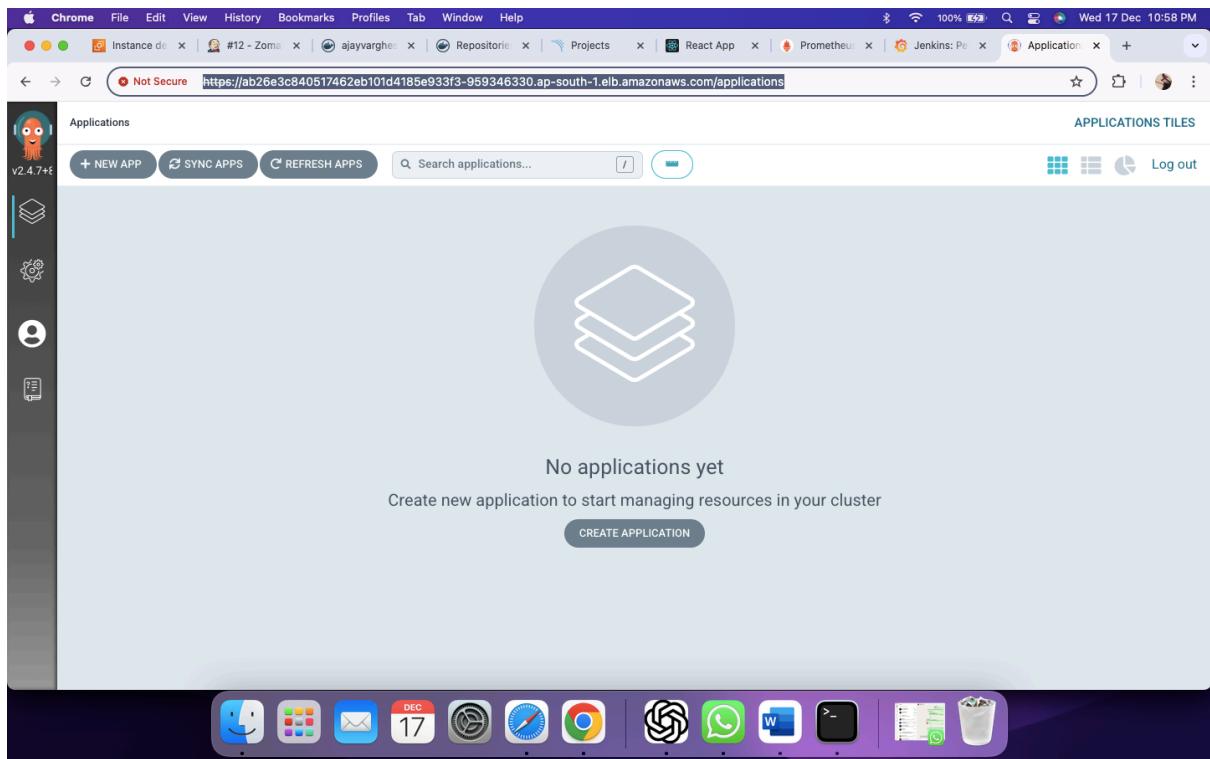
```

root@ip-172-31-17-53:/home/ubuntu -- ssh -i Capstone Key.pem ubuntu@ec2-3-109-98-50.ap-south-1.compute.amazonaws.com -- 207x51
... ~ -- ssh -i Capstone Key.pem ubuntu@ec2-65-2-116-10.ap-south-1.compute.amazonaws.com + Editing Share
root@ip-172-31-17-53:/home/ubuntu# kubectl delete deployment argocd-dex-server -n argocd
deployment.apps "argocd-dex-server" deleted from argocd namespace
root@ip-172-31-17-53:/home/ubuntu# kubectl rollout restart deployment argocd-server -n argocd
deployment.apps/argocd-server restarted
root@ip-172-31-17-53:/home/ubuntu# kubectl get pods -n argocd
NAME          READY   STATUS    RESTARTS   AGE
argocd-application-controller-0   0/1   Pending   0          4m22s
argocd-application-set-controller-8477cf5d6d-9cbw   1/1   Running   0          4m23s
argocd-notifications-controller-5ffff6cd8b7-25vrg  1/1   Running   0          4m22s
argocd-redis-d9d464c7c-q82cl  1/1   Running   0          4m22s
argocd-repo-server-58d7f6d6d7-hfsfk  1/1   Running   0          4m22s
argocd-server-68dcfcf789d-r4ifg  0/1   Pending   0          6s
argocd-server-c9596d75c-196p  0/1   ContainerCreating   0          4m22s
root@ip-172-31-17-53:/home/ubuntu# kubectl get pods -n argocd
NAME          READY   STATUS    RESTARTS   AGE
argocd-application-controller-0   0/1   Pending   0          5m51s
argocd-application-set-controller-8477cf5d6d-9cbw   1/1   Running   0          5m52s
argocd-notifications-controller-5ffff6cd8b7-25vrg  1/1   Running   0          5m51s
argocd-redis-d9d464c7c-q82cl  1/1   Running   0          5m51s
argocd-repo-server-58d7f6d6d7-hfsfk  1/1   Running   0          5m51s
argocd-server-68dcfcf789d-r4ifg  0/1   Pending   0          95s
argocd-server-c9596d75c-196p  1/1   Running   0          5m51s
root@ip-172-31-17-53:/home/ubuntu# kubectl get pods -n argocd
NAME          READY   STATUS    RESTARTS   AGE
argocd-application-controller-0   0/1   Pending   0          5m56s
argocd-application-set-controller-8477cf5d6d-9cbw   1/1   Running   0          5m57s
argocd-notifications-controller-5ffff6cd8b7-25vrg  1/1   Running   0          5m56s
argocd-redis-d9d464c7c-q82cl  1/1   Running   0          5m56s
argocd-repo-server-58d7f6d6d7-hfsfk  1/1   Running   0          5m56s
argocd-server-68dcfcf789d-r4ifg  0/1   Pending   0          108s
argocd-server-c9596d75c-196p  0/1   Pending   0          5m56s
root@ip-172-31-17-53:/home/ubuntu# kubectl get pods -n argocd
NAME          READY   STATUS    RESTARTS   AGE
argocd-application-controller-0   0/1   Pending   0          6m31s
argocd-application-set-controller-8477cf5d6d-9cbw   1/1   Running   0          6m32s
argocd-notifications-controller-5ffff6cd8b7-25vrg  1/1   Running   0          6m31s
argocd-redis-d9d464c7c-q82cl  1/1   Running   0          6m31s
argocd-repo-server-58d7f6d6d7-hfsfk  1/1   Running   0          6m31s
argocd-server-68dcfcf789d-r4ifg  0/1   Pending   0          2m15s
argocd-server-c9596d75c-196p  1/1   Running   0          6m31s
root@ip-172-31-17-53:/home/ubuntu# kubectl get pods -n argocd
NAME          READY   STATUS    RESTARTS   AGE
argocd-application-controller-0   0/1   Pending   0          6m36s
argocd-application-set-controller-8477cf5d6d-9cbw   1/1   Running   0          6m37s
argocd-notifications-controller-5ffff6cd8b7-25vrg  1/1   Running   0          6m36s
argocd-redis-d9d464c7c-q82cl  1/1   Running   0          6m36s
argocd-repo-server-58d7f6d6d7-hfsfk  1/1   Running   0          6m36s
argocd-server-68dcfcf789d-r4ifg  0/1   Pending   0          2m20s
argocd-server-c9596d75c-196p  1/1   Running   0          6m36s
root@ip-172-31-17-53:/home/ubuntu#

```

Open ArgoCD in browser

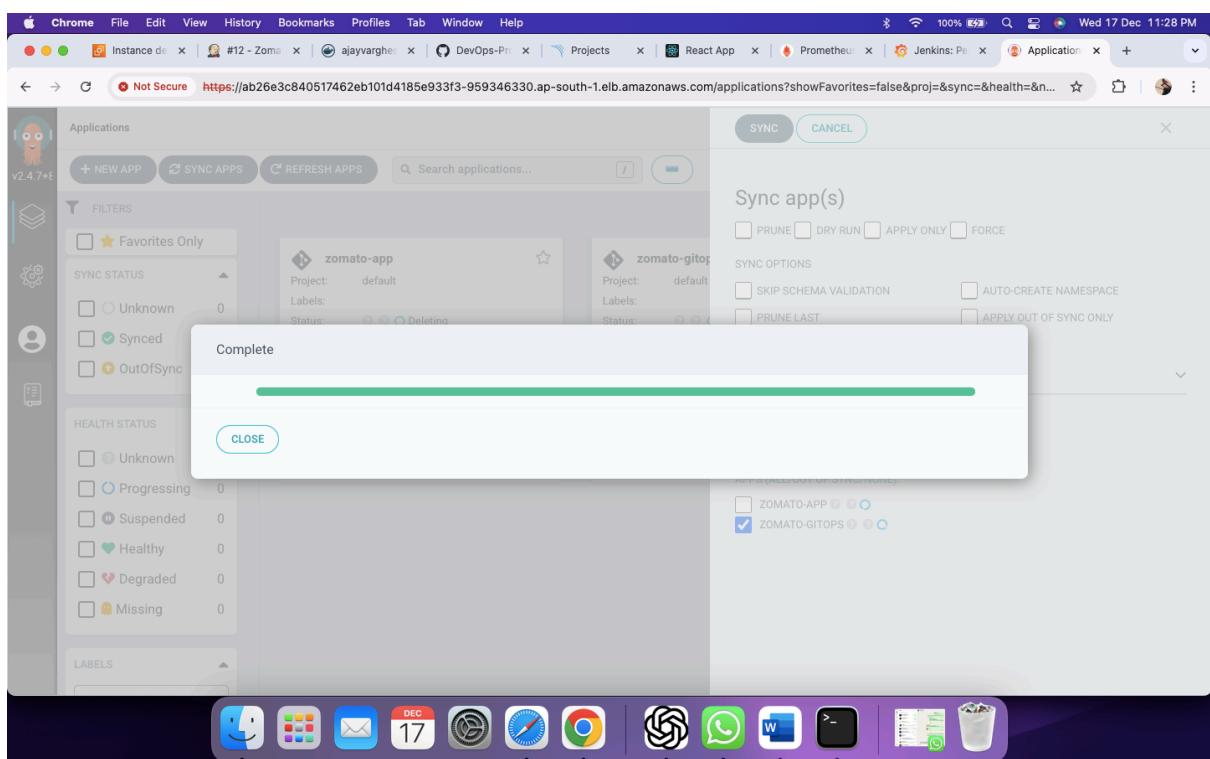
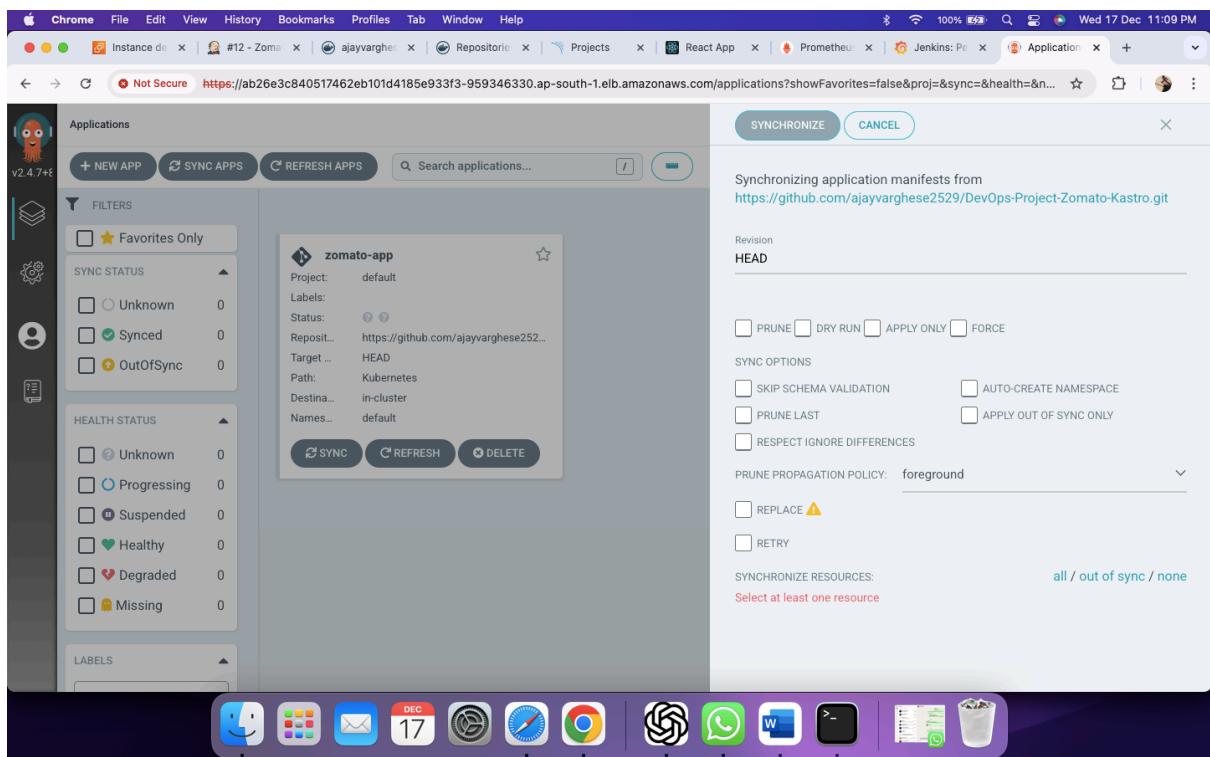




CREATE ARGO CD APPLICATION

A screenshot of the Argo CD Application Center showing a list of applications. The URL is https://ab26e3c840517462eb101d4185e933f3-959346330.ap-south-1.elb.amazonaws.com/applications?showFavorites=false&proj=&sync=&health=&n... The list includes one application: "zomato-app". The details for "zomato-app" are shown in a card: Project: default, Labels: none, Status: Unknown (indicated by a question mark icon), Repository: https://github.com/ajayvarghese252..., Target: HEAD, Path: Kubernetes, Destination: in-cluster, Names: default. Below the card are buttons for SYNC, REFRESH, and DELETE. On the left, there are filters for Favorites Only, SYNC STATUS (Unknown, Synced, OutOfSync), HEALTH STATUS (Unknown, Progressing, Suspended, Healthy, Degraded, Missing), and LABELS. The top navigation bar and sidebar are identical to the first screenshot.

GitOps Synchronization



Chrome File Edit View History Bookmarks Profiles Tab Window Help

Not Secure https://ab26e3c840517462eb101d4185e933f3-959346330.ap-south-1.elb.amazonaws.com/applications?showFavorites=false&proj=&sync=&health=&n... ☆

Applications

+ NEW APP SYNC APPS REFRESH APPS Search applications... Log out

FILTERS

★ Favorites Only

SYNC STATUS

- Unknown 0
- Synced 0
- OutOfSync 0

HEALTH STATUS

- Unknown 0
- Progressing 0
- Suspended 0
- Healthy 0
- Degraded 0
- Missing 0

LABELS

APPLICATIONS TILES

Items per page: 10 ▾

zomato-app Project: default Labels: Status: Deleting Repository: https://github.com/ajayvarghese252... Target: master Path: Kubernetes Destination: in-cluster Names: default

zomato-gitops Project: default Labels: Status: Syncing Repository: https://github.com/ajayvarghese252... Target: master Path: Kubernetes Destination: in-cluster Names: default

The screenshot shows the main application management interface. On the left, there's a sidebar with icons for creating a new app, syncing apps, and refreshing apps. The main area displays two applications: 'zomato-app' and 'zomato-gitops'. Each application card includes details like project name, repository URL, target, path, destination, and names. Below each card are buttons for 'SYNC', 'REFRESH', and 'DELETE'. A 'FILTERS' section on the left allows users to refine their search by sync status (Unknown, Synced, OutOfSync) and health status (Unknown, Progressing, Suspended, Healthy, Degraded, Missing). A 'LABELS' section is also present. The top right has a 'Log out' button and an 'Items per page' dropdown set to 10. The bottom features a dark dock with various Mac OS X application icons.

Chrome File Edit View History Bookmarks Profiles Tab Window Help

Not Secure https://ab26e3c840517462eb101d4185e933f3-959346330.ap-south-1.elb.amazonaws.com/applications/zomato-gitops?view=tree&resource=...

Applications / zomato-gitops APPLICATION DETAILS TREE

APP DETAILS APP DIFF SYNC SYNC STATUS HISTORY AND ROLLBACK DELETE REFRESH

APP HEALTH CURRENT SYNC STATUS Unknown MORE master

LAST SYNC RESULT Syncing MORE

Running a few seconds ago (Wed Dec 17 2025 23:35:17 GMT+0530)
waiting to start

FILTERS

NAME NAME

KINDS KINDS

SYNC STATUS

- Synced 0
- OutOfSync 0

HEALTH STATUS

- Healthy 0

This screenshot shows the detailed view for the 'zomato-gitops' application. It includes tabs for 'APP DETAILS', 'APP DIFF', 'SYNC', 'SYNC STATUS', 'HISTORY AND ROLLBACK', 'DELETE', and 'REFRESH'. The 'SYNC STATUS' tab is active, showing 'Unknown' status with a 'master' branch. Below it, the 'LAST SYNC RESULT' is listed as 'Syncing' with a note about running a few seconds ago and waiting to start. The left sidebar contains filters for 'NAME', 'KINDS', 'SYNC STATUS', and 'HEALTH STATUS'. The bottom features a dark dock with Mac OS X application icons.