

## DevOps Capstone Project

-Submitted by,

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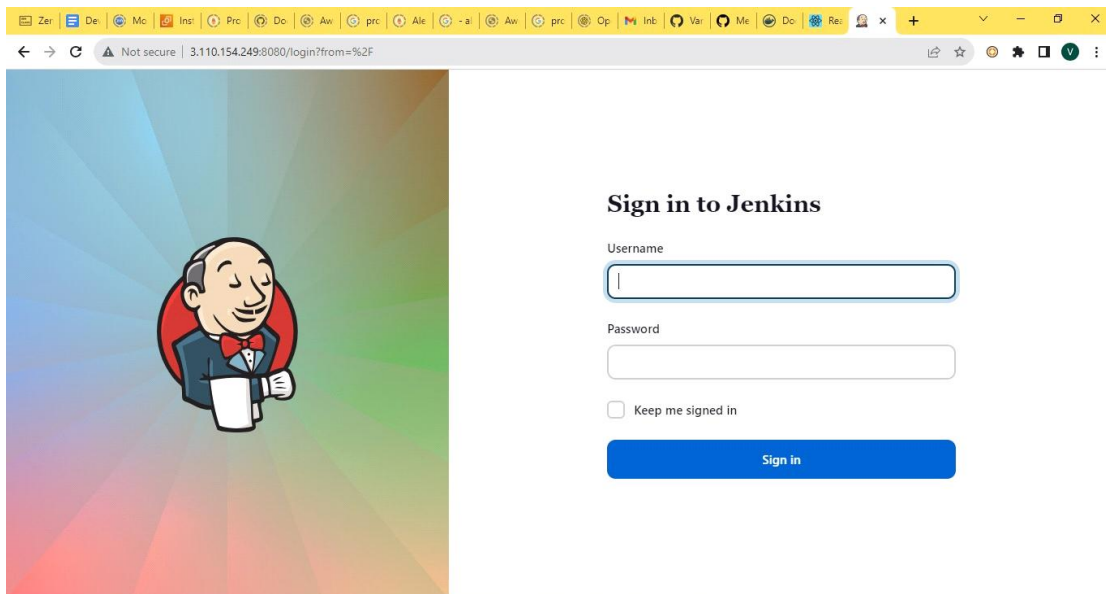
A document contains the screen shots of:

1. Jenkins (login page, configuration settings, execute step commands)
2. AWS (EC2-Console, SG Configs)
3. Docker hub repo with image tags
4. Deployed site page
5. Monitoring health check status

Docker images name : app1, dev, prod

Docker tags :v1

### 1. Jenkins Login Page



## 2. Jenkins Configuration Settings

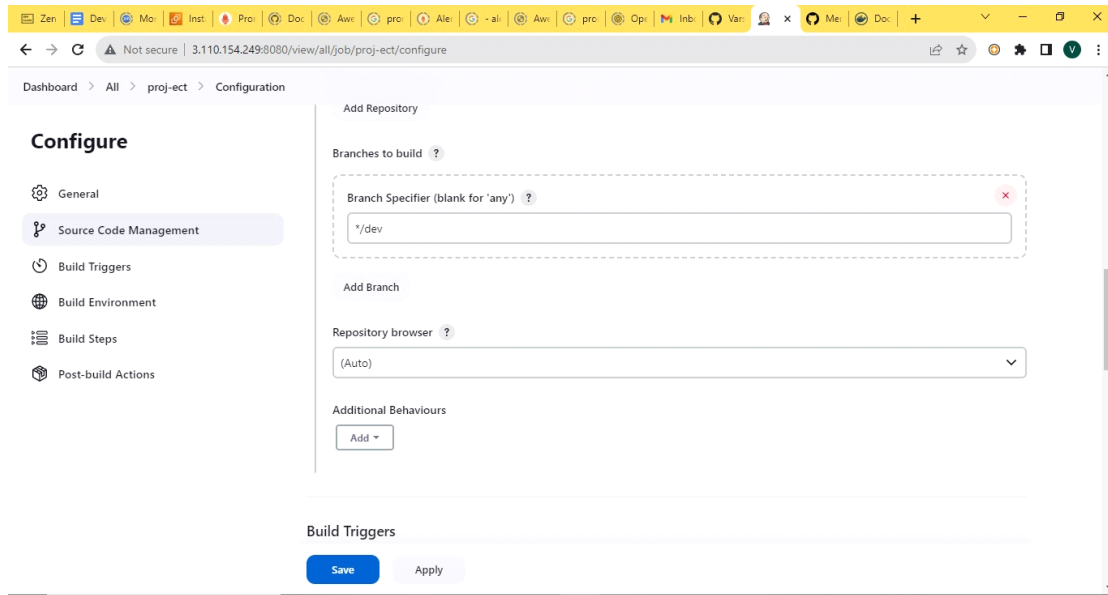
The image displays two screenshots of the Jenkins Configuration page for a job named 'proj-ect'.

**Top Screenshot: General Configuration**

- Navigation:** Dashboard > All > proj-ect > Configuration
- Left Sidebar:** General (selected), Source Code Management, Build Triggers, Build Environment, Build Steps, Post-build Actions.
- General Tab:**
  - Description:** This is job is for project capstone
  - Plain text:** [Preview](#)
  - ☐ Discard old builds ?
  - ☐ GitHub project
  - ☐ This project is parameterized ?
  - ☐ Throttle builds ?
  - ☐ Execute concurrent builds if necessary ?
  - Buttons:** Save, Apply

**Bottom Screenshot: Source Code Management Configuration**

- Navigation:** Dashboard > All > proj-ect > Configuration
- Left Sidebar:** General, Source Code Management (selected), Build Triggers, Build Environment, Build Steps, Post-build Actions.
- Source Code Management Tab:**
  - ☐ None
  - ☒ Git ?
  - Repositories:** ?
    - Repository URL:** ?
    - Credentials:** ?
    - Buttons:** Add
    - Advanced:** ▾
  - Buttons:** Save, Apply



### 3. Jenkins Execute Step Command

#### 1) Update Package List:

sudo apt update

#### 2) Install Java Development Kit (JDK):

sudo apt install openjdk-8-jdk

#### 3) Add Jenkins Repository Key:

wget -q -O - https://pkg.jenkins.io/debian/jenkins.io.key | sudo apt-key add -

#### 4) Add Jenkins Repository:

sudo sh -c 'echo deb http://pkg.jenkins.io/debian-stable binary/ > /etc/apt/sources.list.d/jenkins.list'

#### 5) Install Jenkins:

sudo apt update

sudo apt install Jenkins

#### 6) Start Jenkins:

```
sudo systemctl start jenkins
```

### 7) Enable Jenkins to Start on Boot:

```
sudo systemctl start Jenkins
```

### 8) Check Jenkins Status:

```
sudo systemctl status Jenkins
```

### 9) Open Jenkins in Your Browser:

[http://your\\_server\\_ip:8080](http://your_server_ip:8080)

## 10) Unlock Jenkins:

```
sudo cat /var/lib/jenkins/secrets/initialAdminPassword
```

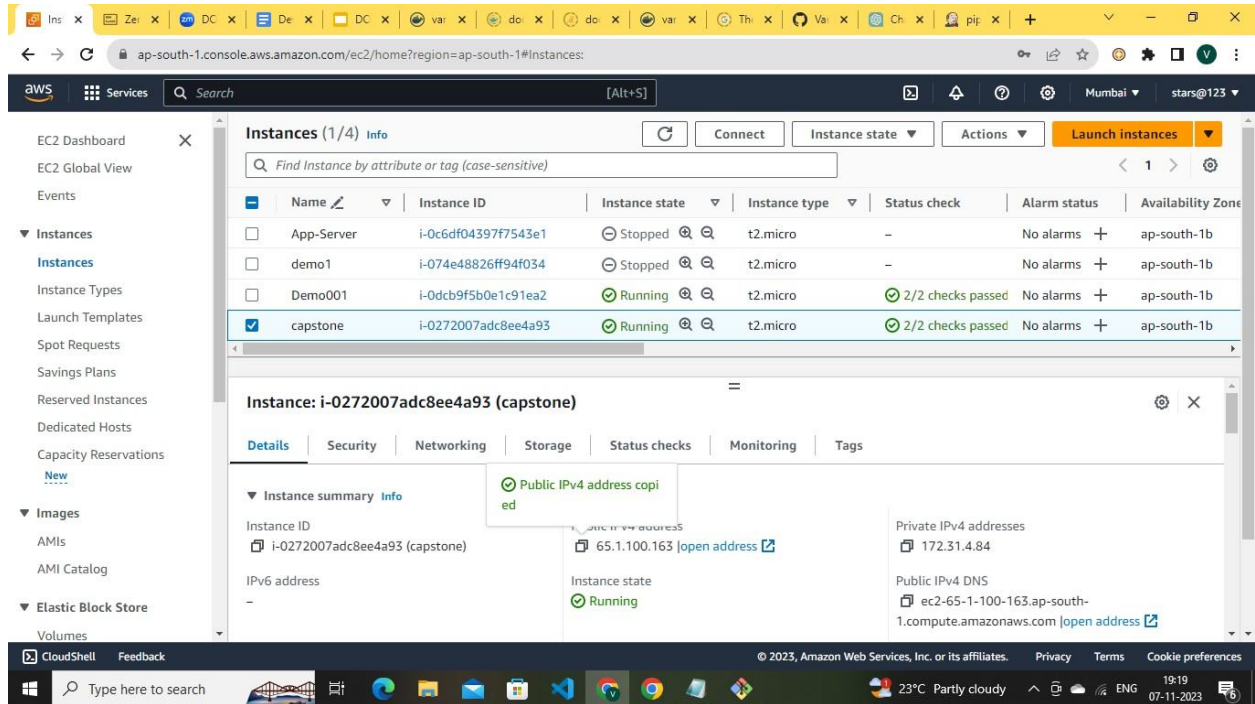
### 11) Install Recommended Plugins:

## 12) Create Admin User:

### 13) Start Using Jenkins:

[illegible]

#### 4. AWS EC2 Console, SG Configure



The screenshot shows the AWS Management Console for the 'ap-south-1' region. The 'Instances' page is active, displaying a list of four EC2 instances. The 'capstone' instance (ID: i-0272007adc8ee4a93) is selected, and its details are shown in the right pane. The instance is a 't2.micro' type, in a 'Running' state, and has two status checks passed. The right pane shows the 'Instance summary' tab, which includes the instance ID, name, and various addresses. A tooltip is visible over the 'Public IPv4 address' field, showing the address '65.1.100.163' and a link to 'open address'. The bottom of the screen shows the Windows taskbar with various application icons and the system clock.

| Name       | Instance ID         | Instance state | Instance type | Status check      | Alarm status | Availability Zone |
|------------|---------------------|----------------|---------------|-------------------|--------------|-------------------|
| App-Server | i-0c6df04397f7543e1 | Stopped        | t2.micro      | -                 | No alarms    | ap-south-1b       |
| demo1      | i-074e48826ff94f034 | Stopped        | t2.micro      | -                 | No alarms    | ap-south-1b       |
| Demo001    | i-0dcb9f5b0e1c91ea2 | Running        | t2.micro      | 2/2 checks passed | No alarms    | ap-south-1b       |
| capstone   | i-0272007adc8ee4a93 | Running        | t2.micro      | 2/2 checks passed | No alarms    | ap-south-1b       |

**Instance: i-0272007adc8ee4a93 (capstone)**

**Instance summary info**

Instance ID: i-0272007adc8ee4a93 (capstone)

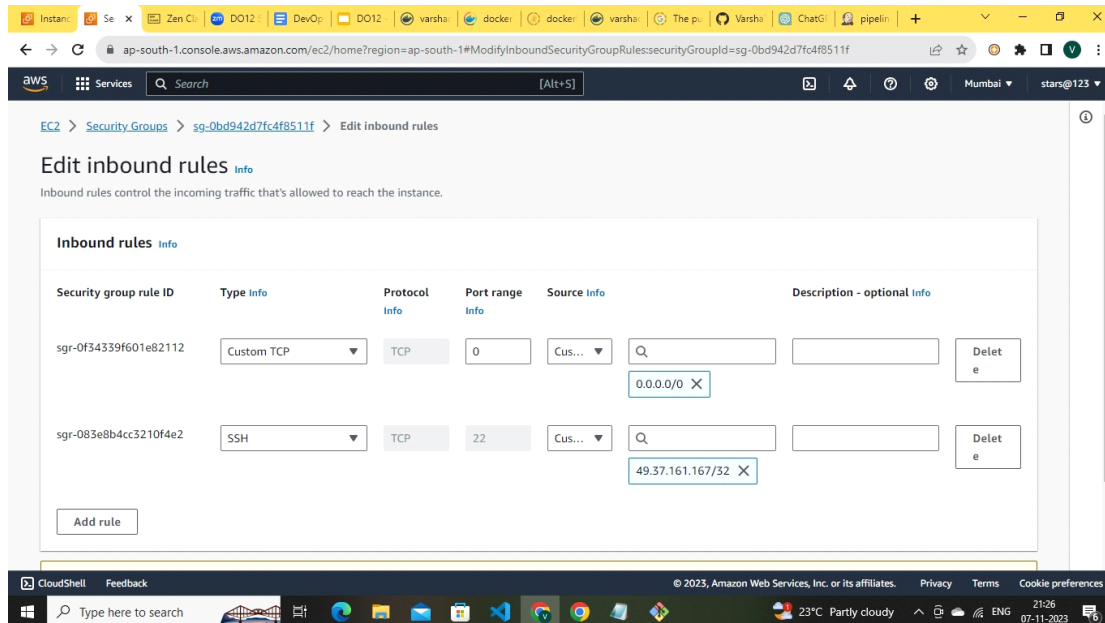
IPv6 address: -

Public IPv4 address: 65.1.100.163 [open address](#)

Private IPv4 addresses: 172.31.4.84

Public IPv4 DNS: ec2-65-1-100-163.ap-south-1.compute.amazonaws.com [open address](#)

Instance state: Running



The screenshot shows the 'Edit inbound rules' page for a security group in the AWS Management Console. The page displays a list of existing inbound rules and allows adding new ones. The 'Add rule' button is visible at the bottom left. The right pane shows the 'Instance summary' tab, which includes the instance ID, name, and various addresses. A tooltip is visible over the 'Public IPv4 address' field, showing the address '65.1.100.163' and a link to 'open address'. The bottom of the screen shows the Windows taskbar with various application icons and the system clock.

**Edit inbound rules**

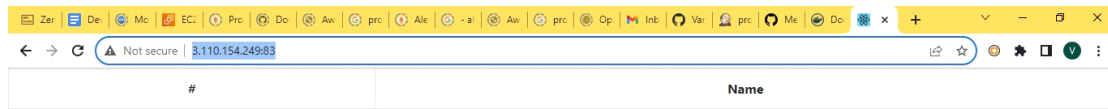
Inbound rules control the incoming traffic that's allowed to reach the instance.

**Inbound rules info**

| Security group rule ID | Type       | Protocol | Port range | Source | Description - optional |
|------------------------|------------|----------|------------|--------|------------------------|
| sg-0f34339f601e82112   | Custom TCP | TCP      | 0          | Cus... |                        |
| sg-083e8b4cc3210f4e2   | SSH        | TCP      | 22         | Cus... |                        |

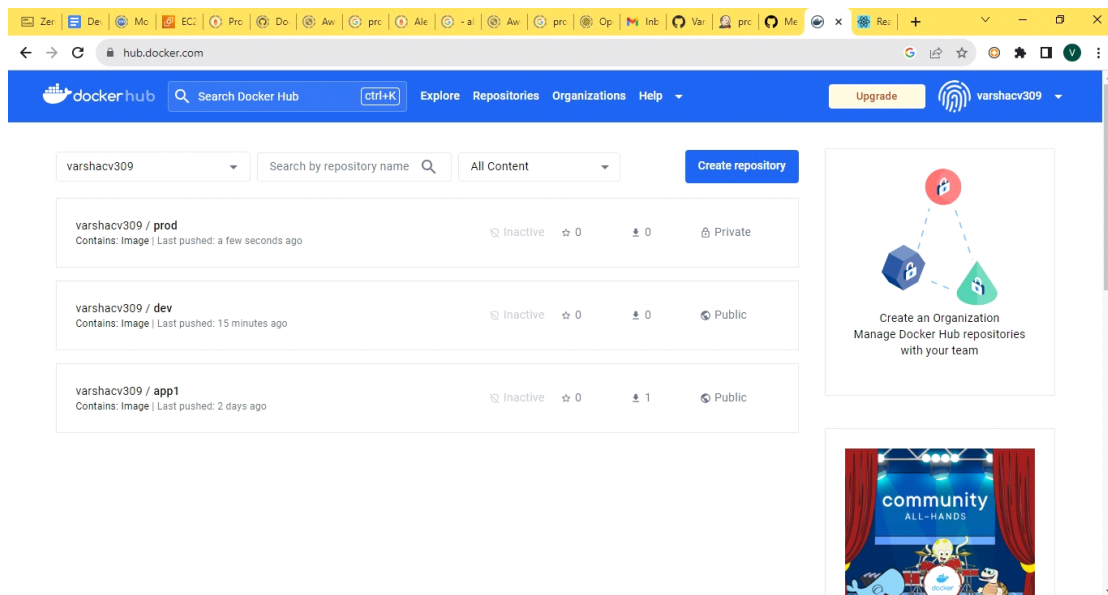
[Add rule](#)

## 5. Deployed site page

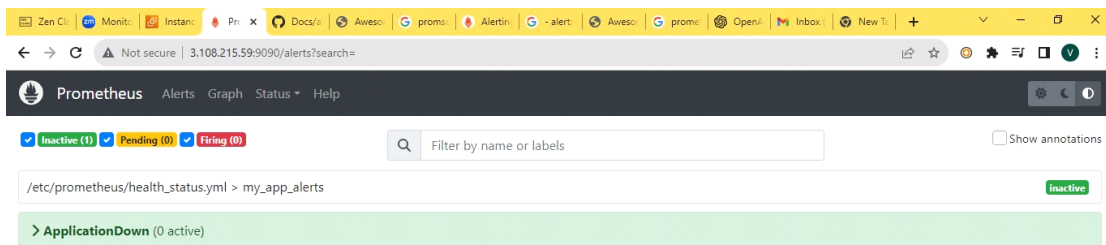


## 6. Docker hub repo with image tags

Docker images: app1, dev, prod



## 7. Monitoring health checkup



## 8. Jenkins Ready Page

