

VISVESVARAYA TECHNOLOGICAL UNIVERSITY

“Jnana Sangama”, Belagavi-590 014



AN ASSIGNMENT-I REPORT

On

“JENKINS ON CLOUD ENVIRONMENT”

Submitted in partial fulfillment of the requirements for the **DEVOPS (BCSL657D)**

course of the 6th semester

Bachelor of Engineering

In

Artificial Intelligence and Machine Learning

Submitted by,

PRAKUL H N

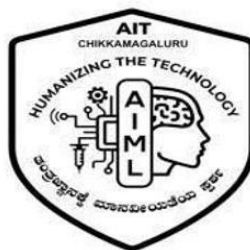
4AI22AI041

Under the guidance of,

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Assistant Professor

Dept. of AI & ML



ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING
ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY

CHIKKAMAGALURU - 577102

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ADICHUNCHANAGIRI INSTITUTE OF TECHNOLOGY

(Affiliated to Visvesvaraya Technological University, Belagavi)

Chikkamagaluru, Karnataka, India-577102

DEPARTMENT OF ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING



CERTIFICATE

This is to certify that the **Assignment-I** entitled **“JENKINS ON CLOUD ENVIRONMENT”** is a bonafide work carried out by **PRAKUL H N (4AI22AI041)** in partial fulfillment for the **DEVOPS (BCSL657D)** course of **6th semester Bachelor of Engineering in ARTIFICIAL INTELLIGENCE AND MACHINE LEARNING** of the Visvesvaraya Technological University, Belagavi during the academic year **2024-25**. It is certified that all corrections and suggestions indicated for Internal Assessment have been incorporated in the report deposited in the department library. The assignment has been approved, as it satisfies the academic requirements in respect of DevOps Assignment prescribed for the said Degree.

Signature

Prof. Sathyabhama R B.E., M. Tech.

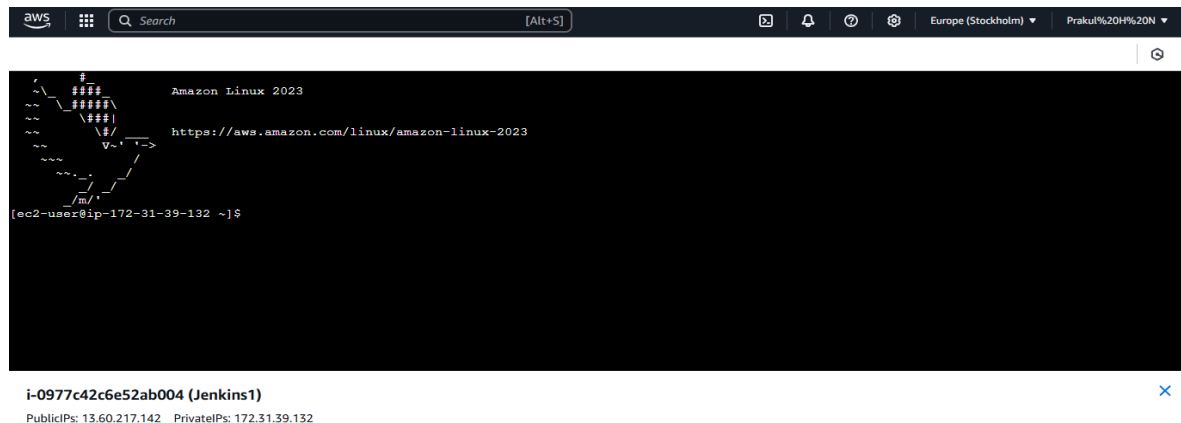
Assistant Professor

Dept. of AI&ML

Installing Jenkins on AWS

Step 1: Launch an EC2 Instance

1. Log into the **AWS Management Console**.
2. Search for EC2 in the **AWS search bar** and click on **EC2**.
3. Click on **Launch Instance**.
4. Enter the instance name as **Jenkins1**.
5. Keep the **default settings** as they are.
6. Select **Proceed without a key pair** (not recommended for production environments).
7. Click on **Launch Instance**.
8. Once the instance is created, go to the **EC2 Dashboard**.
9. Select the **newly created instance**.
10. Click on **Connect**.
11. The **EC2 Linux terminal** will open.



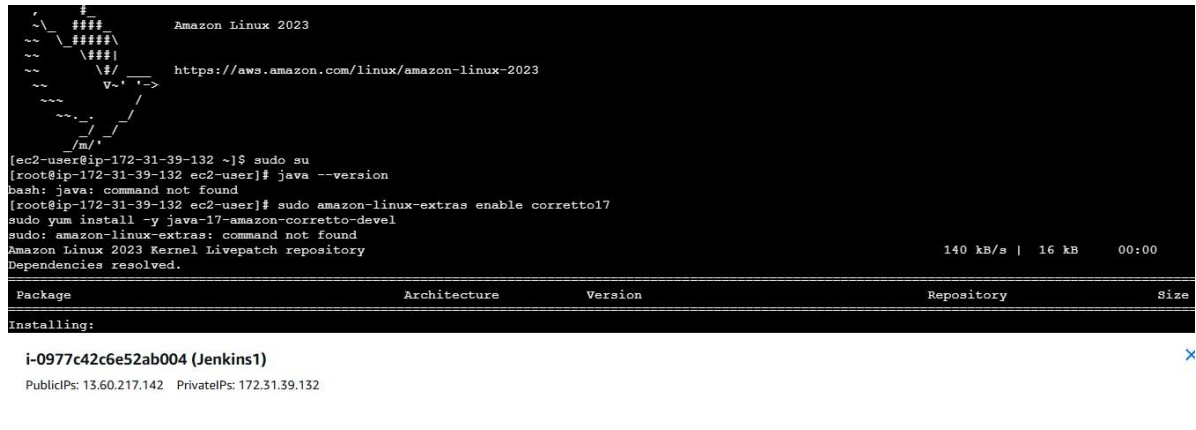
Step 2: Install Java

1. Switch to the root user:
`sudo su`
2. Check if Java is installed:
`java --version`
3. If Java is not installed, install it using the following commands:

```
sudo amazon-linux-extras enable corretto17
sudo yum install -y java-17-amazon-corretto-devel
```

4. Verify the Java installation:

```
java --version
```



```
Amazon Linux 2023
https://aws.amazon.com/linux/amazon-linux-2023

[ec2-user@ip-172-31-39-132 ~]$ sudo su
[root@ip-172-31-39-132 ec2-user]# java --version
bash: java: command not found
[root@ip-172-31-39-132 ec2-user]# sudo amazon-linux-extras enable corretto17
sudo yum install -y java-17-amazon-corretto-devel
sudo: amazon-linux-extras: command not found
Amazon Linux 2023 Kernel Livepatch repository
Dependencies resolved.
140 kB/s | 16 kB    00:00

Package Architecture Version Repository Size
Installing:
i-0977c42c6e52ab004 (Jenkins1)
PublicIPs: 13.60.217.142 PrivateIPs: 172.31.39.132
```

Step 3: Download and Install Jenkins

1. Open a **web browser** and search for **Jenkins download**.
2. Click on the **Download button**.
3. Under the **Downloading Jenkins** section, click on **Installing Jenkins**.
4. Under user hand book **Click on Linux**.
5. Red Hat Enterprise **Linux and derivatives**
6. Scroll down to the **Long-Term Support (LTS) Release** section.
7. Copy and run the following commands to install Jenkins:

Check the Jenkins service status:

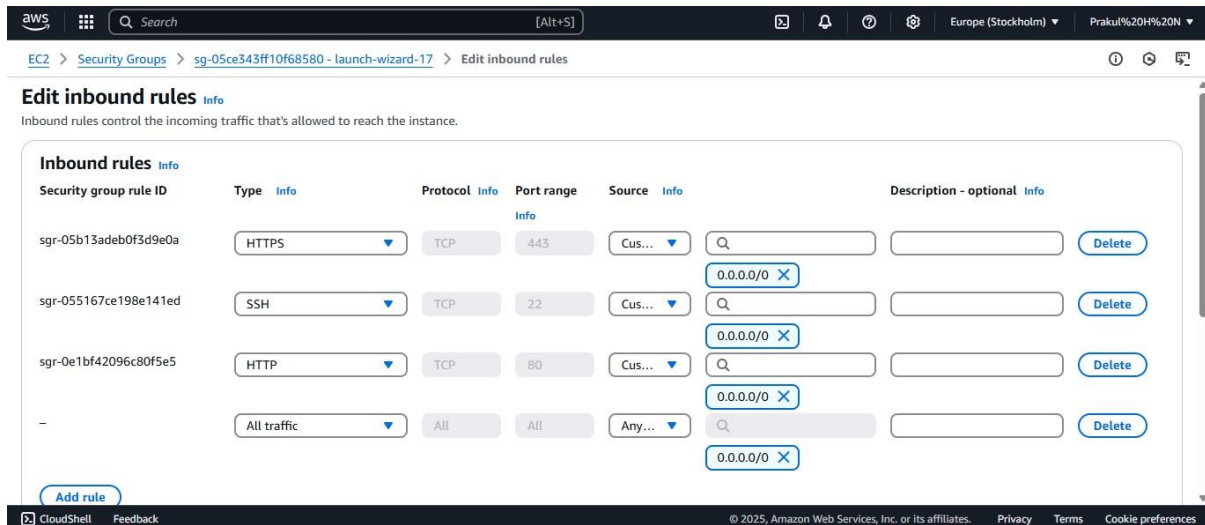
```
systemctl status jenkins
```

Start the Jenkins service:

```
systemctl start jenkins
```

Step 4: Configure Security Group in AWS

- Go to the **AWS EC2 Dashboard**.
- Click on the **EC2 instance running Jenkins**.
- Click on **Edit Security Group**.
- Click on Add Rule, **select Type:** All Traffic, and choose Source: Anywhere (IPv4).
- Click on **Save Rule**.

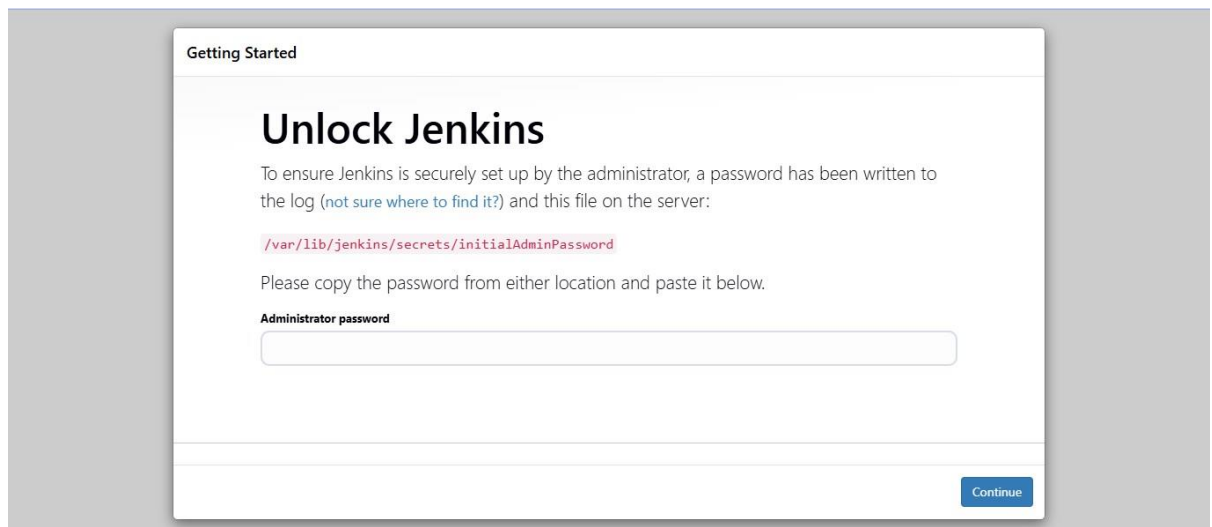


Step 5: Access Jenkins

- Copy the public IP address of the EC2 instance.
- Open a web browser and enter:

<http://<public-ip>:8080>

- If Jenkins is successfully installed, the Unlock Jenkins page will appear.



Step 6: Unlock Jenkins

- Copy the path displayed on the screen.
- Open the terminal and run:

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

- Copy the Administrator password from the file.
- Press ESC, then type :wq to save and exit.
- Paste the copied password into the Administrator Password field.
- Click Continue.

[illegible]

Step 7: Configure Jenkins

- On the Customize Jenkins page, **select Install Suggested Plugins.**
- Once the **plugins are installed, create the first admin user:**
- Enter Username.
- Enter and confirm Password.
- Enter Full Name.
- Enter Email Address.
- Click Save and Continue.
- Click Save and Finish.
- Jenkins is now ready! Click Start using Jenkins.

Getting Started

Jenkins is ready!

Your Jenkins setup is complete.

Start using Jenkins

Jenkins 2.504.1

JENKINS DASHBOARD

The screenshot shows the Jenkins Dashboard in a web browser. The browser's address bar displays '13.60.217.142:8080'. The Jenkins logo is in the top left, and the user 'Prakul H N' is logged in. The dashboard includes a sidebar with links to 'New Item', 'Build History', 'Manage Jenkins', and 'My Views'. The main content area features a 'Build Queue' section with 'No builds in the queue', a 'Build Executor Status' section showing '0/2' executors and one 'Built-In Node' (offline), a 'Welcome to Jenkins!' message, and sections for 'Start building your software project' (with a 'Create a job' button) and 'Set up a distributed build' (with buttons for 'Set up an agent' and 'Configure a cloud').

Dashboard >

+ New Item

Build History

Manage Jenkins

My Views

Build Queue

No builds in the queue.

Build Executor Status 0/2

Built-In Node (offline)

Hi there, I'm Prakul H N! How may I help you today?

Edit description

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