**Setting Up Jenkins Pipeline to Deploy Docker Swarm**

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JENKINS WITH DOCKER

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STEP:1 CREATE AWS UBUNTU INSTANCE WITH PORT NO:8080

STEP:2 INSTALL DOCKER

STEP:3 INSTALL JDK

STEP:4 INSTALL MAVEN

STEP:5 INSTALL JENKINS

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STEP:1 CREATE AWS UBUNTU INSTANCE WITH PORT NO:8080

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1. Prepare AWS Instance (Ubuntu Server 22.04 LTS (HVM), SSD Volume Type)

2. Security: Add port no: 80 with Custom TCP Rule

3. Download. pem Key and connect using Moba x-term

open moba x-term

* cd e: //here e: is my drive
* cd AWS //AWS is a folder inside e: driver where .pem key is available

>goto > aws > instance > choose your instance > connect > ssh > copy example key

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STEP:2 DOCKER INSTALLATION ON UBUNTU OS

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GOTO > GOOGLE> DOCKER INSTALLTION ON UBUNTU

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LINK: <https://docs.docker.com/engine/install/ubuntu/>

* sudo apt-get update
* sudo apt-get install ca-certificates curl gnupg lsb-release
* sudo mkdir -p /etc/apt/keyrings
* curl -fsSL https://download.docker.com/linux/ubuntu/gpg | sudo gpg --dearmor -o /etc/apt/keyrings/docker.gpg
* echo "deb [arch=$(dpkg --print-architecture) signed-by=/etc/apt/keyrings/docker.gpg] https://download.docker.com/linux/ubuntu $(lsb\_release -cs) 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-compose-plugin

------TO VERIFY THE INSTALLTION------

* sudo docker -v

output: Docker version 20.10.18, build b40c2f6

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STEP:3 INSTALL JDK

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* sudo apt-get update
* sudo apt install default-jdk -y

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STEP:4 INSTALL MAVEN

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* sudo apt-get update
* sudo apt install maven -y

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STEP:5 INSTALL JENKINS

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Goto > google > how to download Jenkins in ubuntu

link: <https://www.jenkins.io/doc/book/installing/linux/>

* curl -fsSL https://pkg.jenkins.io/debian-stable/jenkins.io.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 > /dev/null
* sudo apt-get update
* sudo apt-get install jenkins

1. TO START WITH JENKINS

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* sudo service jenkins start
* sudo service jenkins status

CONNECT: goto > AWS > EC2 > Copy Public IP:8080 on browser hit enter

2. TO GENERATE SECRET PASSWORD

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

---to deal with permission denied error----

* sudo chmod 777 /var/run/docker.sock

copy the secret password to jenkins and start installation

3. FOR CONTINUOUS INTEGRATION (CI)

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1. click on install suggested plugins

2. provide your credentials

3. welcome to jenkins

4. manage plugin > maven integration > click on install without restart

5. goto > dashboard > create > new job > select Pipeline project > give name > click ok

6. give description

7. In Pipeline, select **Pipeline Script** in definition

Enter the Script

Script:

**pipeline {**

**agent any**

**stages {**

**stage('Initialize') {**

**steps {**

**echo 'Hello World'**

**}**

**}**

**stage('Image build') {**

**steps {**

**echo 'Image build successfully'**

**}**

**}**

**stage('Container Build') {**

**steps {**

**echo 'Container Build successfully'**

**}**

**}**

**stage('App Run') {**

**steps {**

**echo 'App is running successfully'**

**}**

**}**

**}**

**}**

8. CLICK ON APPLY AND SAVE

9. BUILD THE PROJECT