**free tier digitalocean**.

https://try.digitalocean.com/freetrialoffer/

try with google

task:Create 1 machine for jenkins master, one for slave node, one for app

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login server as root, create user ashray and pwd useradd, passwd

#Create the admin user and add to sudoers

groupadd ashray

useradd -m -g ashray -s /bin/bash ashray

#Set the admin user's password

echo "ashray :ashray99" | chpasswd

#to change the hostname

sudo hostnamectl set-hostname buildnode

#give perm sudo privillage (like root)

echo "ashray ALL=(ALL) NOPASSWD:ALL" > /etc/sudoers.d/ashray

chmod 0440 /etc/sudoers.d/ashray

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costume Jdk install -

cd /home/dandab/apps

curl -sO https://download.oracle.com/java/17/archive/jdk-17.0.11\_linux-x64\_bin.tar.gz

tar -xvf jdk-17.0.11\_linux-x64\_bin.tar.gz

/home/dandab/apps/jdk-17.0.11\_linux-x64/bin/java - -version

export JAVA\_HOME=/home/ashray/jdk-17.0.11\_linux-x64/bin

export PATH=$JAVA\_HOME:$PATH

java - -version

install jdk with root

sudo yum install fontconfig java-17-openjdk -y

java –version

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**Jenkins-Server -**Build a droplet from digitalocean - 4 GB Memory / 2 AMD vCPUs / 80 GB Disk / BLR1 - CentOS 9 Stream x64

Install Jenkins and configure

<https://www.jenkins.io/doc/book/installing/linux/#red-hat-centos>

sudo yum install wget -y

sudo wget -O /etc/yum.repos.d/jenkins.repo \

https://pkg.jenkins.io/redhat-stable/jenkins.repo

sudo rpm --import https://pkg.jenkins.io/redhat-stable/jenkins.io-2023.key

sudo yum upgrade -y

# Add required dependencies for the jenkins package

sudo yum install fontconfig java-17-openjdk -y

sudo yum install jenkins -y

sudo systemctl daemon-reload

sudo systemctl enable jenkins

sudo systemctl start jenkins

sudo systemctl status jenkins

Browse the jenkins url with id and port

http://64.227.137.59:8080

-prompt for pwd, get it from the file shown or check the status of jenkins where you get it as well.

/var/lib/jenkins/secrets/initialAdminPassword

-Select -> ‘Install selected plugins’ then all plugins will be getting started

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**Build-server - -**Build a droplet from digitalocean -/8 GB Memory / 2 AMD vCPUs / 100 GB Disk / BLR1 - CentOS 9 Stream x64

#Install jdk

sudo yum install fontconfig java-17-openjdk -y

mkdir jenkins

-go to Jenkins -> Dashboard ->Manage Jenkins -> Security ->Agents ->TCP port for inbound agents (check Random)

-go to nodes - new node, provide directory /root/jenkins and save; you will see agent.jar and command to execute to make slave/agent is connected

curl -sO <http://64.227.137.59:8080/jnlpJars/agent.jar>

nohup java -jar agent.jar -url http://64.227.137.59:8080/ -secret 40e2ca1b3d9965932e8a8606281354027efc059c7a098a554def1124f249de2f -name "build-server" -workDir "/root/jenkins" &

Check log, Agent is connected from jenkins console

Maven

security

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**application-server**

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open port

https://www.jenkins.io/doc/book/installing/linux/#red-hat-centos

sudo yum install firewalld -y

sudo systemctl start firewalld

YOURPORT=8080

PERM="--permanent"

SERV="$PERM --service=jenkins"

sudo firewall-cmd $PERM --new-service=jenkins

sudo firewall-cmd $SERV --set-short="Jenkins ports"

sudo firewall-cmd $SERV --set-description="Jenkins port exceptions"

sudo firewall-cmd $SERV --add-port=$YOURPORT/tcp

sudo firewall-cmd $PERM --add-service=jenkins

sudo firewall-cmd --zone=public --add-service=http --permanent

sudo firewall-cmd --reload

sudo firewall-cmd --permanent --add-icmp-block=echo-request

sudo firewall-cmd --reload

Warning: ALREADY\_ENABLED: echo-request

success

success

sudo firewall-cmd --list-all

public (active)

target: default

icmp-block-inversion: no

interfaces: eth0 eth1

sources:

services: cockpit dhcpv6-client http jenkins ssh

ports: 8080/tcp

protocols:

forward: yes

masquerade: no

forward-ports:

source-ports:

icmp-blocks:

rich rules:

sudo firewall-cmd --permanent --add-port=8080/tcp

sudo firewall-cmd --reload