UBUNTU Process

- Run VM using vagrant
- Login using following credentials:

Login: vagrant

Password: vagrant

- Execute following commands for updating and creating a new user

sudo su

apt update

apt upgrade

adduser cris -> set password

```
root@ubuntu-focal:/home/vagrant# adduser cris
Adding user `cris' ...
Adding new group `cris' (1002) ...
Adding new user `cris' (1002) with group `cris' ...
Creating home directory `/home/cris' ...
Copying files from `/etc/skel' ...
New password:
Retype new password:
passwd: password updated successfully
Changing the user information for cris
Enter the new value, or press ENTER for the default
        Full Name []: cris
        Room Number []:
        Work Phone []:
        Home Phone []:
        Other []:
Is the information correct? [Y/n] y
root@ubuntu-focal:/home/vagrant#
```

- Add new user to sudoers group and verify

usermod -a -G sudo cris

su cris -> insert password

sudo whoami

```
vagrant@ubuntu-focal:~$ su cris
Password:
cris@ubuntu-focal:/home/vagrant$ sudo whoami
[sudo] password for cris:
root
cris@ubuntu-focal:/home/vagrant$ _
```

- Look at the ip address of the machine

sudo apt install net-tools

ifconfig

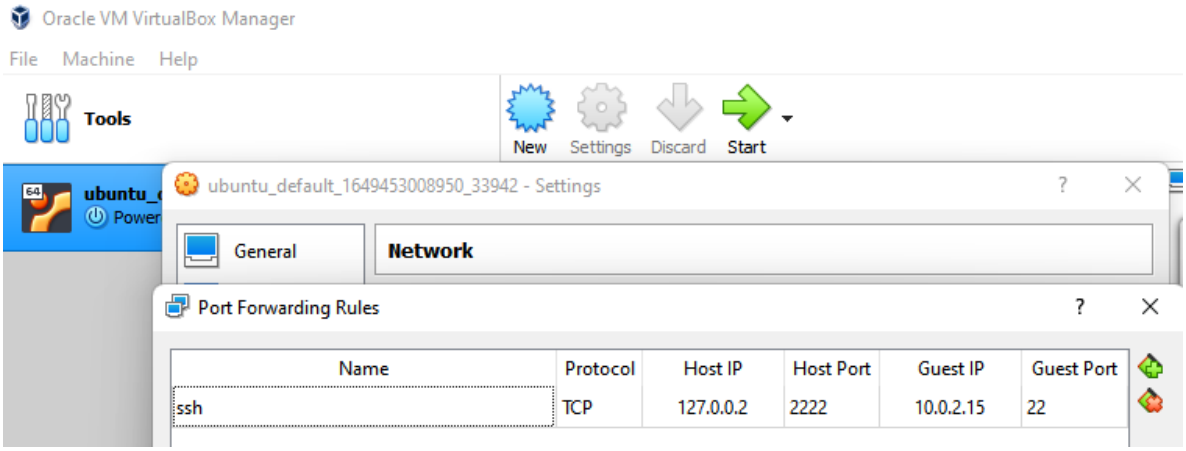
- Authorize password login and restart ssh service

sudo vi /etc/ssh/sshd_config

```
# To disable tunneled clear text passwords, change to no here!
PasswordAuthentication yes_
#PermitEmptyPasswords no

# Change to yes to enable challenge-response passwords (beware issues with
# some PAM modules and threads)
ChallengeResponseAuthentication no
```

sudo systemctl restart sshd

- Turn off machine and configure VM Network ports, then start the machine again



- LogIn from windows terminal **USING** password

This is needed in order to connect remotely and copy the SSH key to the host

ssh cris@127.0.0.2 -p 2222 -> insert password

```
Cristian@DESKTOP-PM304DL MINGW64 ~
$ ssh cris@127.0.0.2 -p 2222
cris@127.0.0.2's password:
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-107-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Fri Apr  8 22:06:46 UTC 2022

  System load:  0.18              Processes:               118
  Usage of /:   4.5% of 38.71GB   Users logged in:         1
  Memory usage: 19%               IPv4 address for enp0s3: 10.0.2.15
  Swap usage:   0%


0 updates can be applied immediately.


Last login: Fri Apr  8 22:06:00 2022 from 10.0.2.2
cris@ubuntu-focal:~$
```

- Generate a new SSH key pair on the client side

ssh-keygen

```
Cristian@DESKTOP-PM304DL MINGW64 ~
$ ssh-keygen
Generating public/private rsa key pair.
Enter file in which to save the key (/c/Users/user/.ssh/id_rsa):
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /c/Users/user/.ssh/id_rsa
Your public key has been saved in /c/Users/user/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:V5ElTg1+P6CuQevHtd9yPl5qFBw5ReYowlJx9Amy99o Cristian@DESKTOP-PM304DL
The key's randomart image is:
+---[RSA 3072]----+
|          +oO=.++|
|         o B.=== |
|        . + *o=o.|
|         . +.++. |
|        S...  .o.|
|        ..o  +. .|
|         o..o.E .|
|        . oo .oo+|
|         o.  .+*+|
+----[SHA256]-----+
```

- Copy SSH key for the host

ssh-copy-id --p 2222 cris@127.0.0.2

```
Cristian@DESKTOP-PM304DL MINGW64 ~/.ssh
$ ssh-copy-id -i fedora_key -p 2222 cris@127.0.0.3
/usr/bin/ssh-copy-id: INFO: Source of key(s) to be installed: "fedora_key.pub"
/usr/bin/ssh-copy-id: INFO: attempting to log in with the new key(s), to filter out any that are already installed
/usr/bin/ssh-copy-id: INFO: 1 key(s) remain to be installed -- if you are prompted now it is to install the new keys
cris@127.0.0.3's password:

Number of key(s) added: 1

Now try logging into the machine, with:   "ssh -p '2222' 'cris@127.0.0.3'"
and check to make sure that only the key(s) you wanted were added.
```

- Connect to machine using ssh, user@ip -p port

```
Cristian@DESKTOP-PM304DL MINGW64 ~
$ ssh cris@127.0.0.2 -p 2222
Welcome to Ubuntu 20.04.4 LTS (GNU/Linux 5.4.0-107-generic x86_64)

 * Documentation:  https://help.ubuntu.com
 * Management:     https://landscape.canonical.com
 * Support:        https://ubuntu.com/advantage

  System information as of Fri Apr  8 22:20:19 UTC 2022

  System load:  0.05              Processes:               115
  Usage of /:   4.5% of 38.71GB   Users logged in:         1
  Memory usage: 20%               IPv4 address for enp0s3: 10.0.2.15
  Swap usage:   0%


0 updates can be applied immediately.


Last login: Fri Apr  8 22:14:20 2022 from 10.0.2.2
cris@ubuntu-focal:~$
```

Successful remote connection **WITHOUT** password

Docker Installation

- Install all the required for docker installation

sudo apt update ; apt install -y build-essential net-tools curl git software-properties-common neofetch apt-transport-https ca-certificates curl gnupg-agent docker.io docker-compose

```
cris@ubuntu-focal:~$ sudo apt install -y build-essential net-tools curl git software-properties-common neofetch apt-tran
sport-https ca-certificates curl gnupg-agent docker.io docker-compose
Reading package lists... Done
Building dependency tree
Reading state information... Done
net-tools is already the newest version (1.60+git20180626.aebd88e-1ubuntu1).
ca-certificates is already the newest version (20210119~20.04.2).
ca-certificates set to manually installed.
curl is already the newest version (7.68.0-1ubuntu2.7).
curl set to manually installed.
git is already the newest version (1:2.25.1-1ubuntu3.2).
git set to manually installed.
software-properties-common is already the newest version (0.99.9.8).
software-properties-common set to manually installed.
```

- Enable docker, create a group for docker use

systemctl enable --now docker ; usermod -aG docker $USER ; newgrp docker

- Pull jenkins image

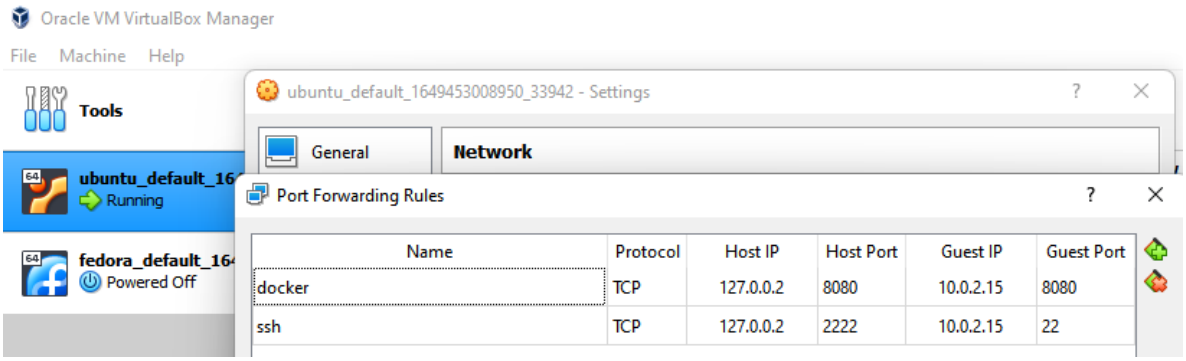
```
root@ubuntu-focal:/home/cris# systemctl enable --now docker ; usermod -aG docker $USER ; newgrp docker
root@ubuntu-focal:/home/cris# docker pull jenkins/jenkins
Using default tag: latest
latest: Pulling from jenkins/jenkins
dbba69284b27: Pull complete
6d9832bff3ec: Pull complete
7c4a6d582917: Pull complete
ae0899c462a8: Pull complete
8a5edbfff1d1: Pull complete
c780f68adf6d: Pull complete
bdd8fb65d9ef: Pull complete
b64349c106a9: Pull complete
e0e3e2500574: Pull complete
83242c04be1c: Pull complete
ecfa4c67cc7b: Pull complete
14e81afa2cd2: Pull complete
a15019ddfe0a: Pull complete
ec7f41b7f300: Pull complete
0a15abba86c8: Pull complete
31f7e553bb6b: Pull complete
3a863afeb78b: Pull complete
Digest: sha256:854af743c459e0102a19fb314396b7fb92c338810b74ddff4dc613076cc317a8
Status: Downloaded newer image for jenkins/jenkins:latest
docker.io/jenkins/jenkins:latest
```

- Launch Jenkins using docker

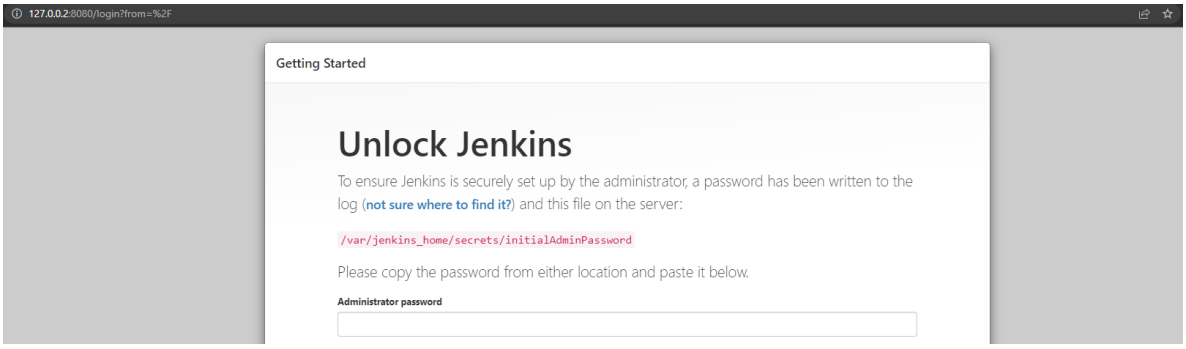
docker run -p 8080:8080 --name=jenkins-master jenkins/Jenkins

```
*************************************************************
*************************************************************
*************************************************************

Jenkins initial setup is required. An admin user has been created and a password generated.
Please use the following password to proceed to installation:

a37a48d4888c4541982eed3cadea11ef

This may also be found at: /var/jenkins_home/secrets/initialAdminPassword

*************************************************************
*************************************************************
*************************************************************
```

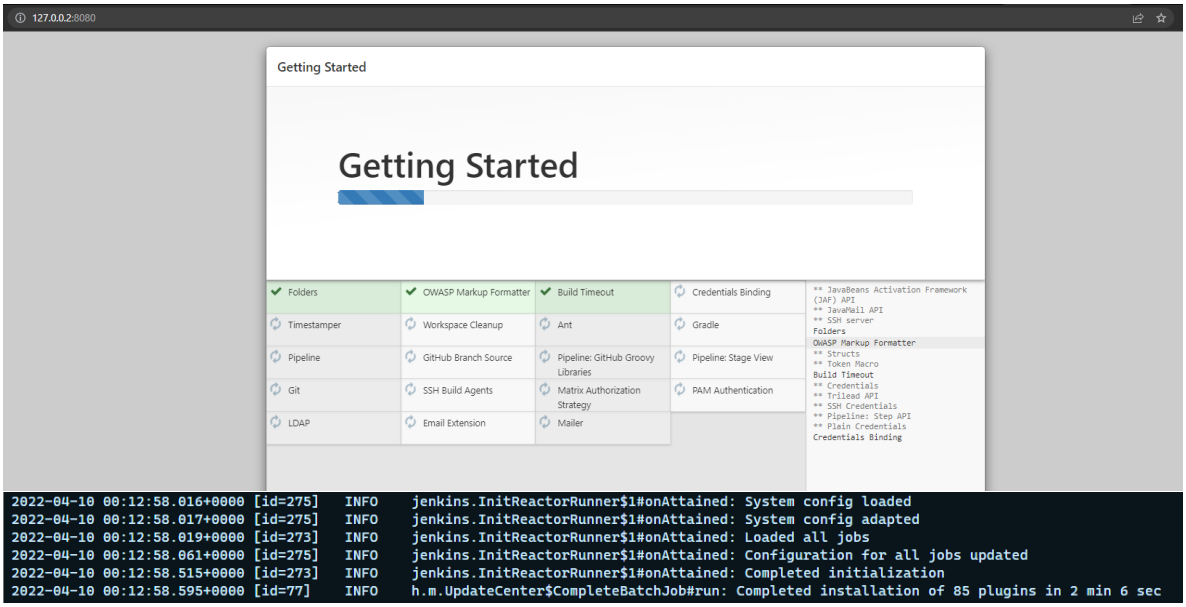
- Map virtual machine ports as follows



- Access through browser using IP and port mapped, 127.0.0.2:8080



- Use the designed password and install all the suggested plugin



- Create the new user and sabe the URL for Jenkins, then, the process has successfully finished