**Assignment No-4**

**Aim:** Find a procedure to transfer the files from one virtual machine to another virtual machine.

# Objective:

* To transfer the files from one virtual machine to another virtual machine.
* To learn basics of virtualization and its importance

# Theory:

Oracle VM VirtualBox is cross-platform virtualization software. It allows users to extend their existing computer to run multiple operating systems including Microsoft Windows, Mac OS X, Linux, and Oracle Solaris, at the same time.

Oracle VM VirtualBox is a type-2 hypervisor for x86 virtualization developed by Oracle Corporation.

The Steps are as follows:-

1. Download and install Oracle's Virtual Box. (Reboot needed after installation)
2. Download Ubuntu VMDK Image.
3. Launch Virtualbox and create a new VM.
4. Click on new and mention the Name and the machine folder along with the Type and Version of the Machine to be created.
5. Assign memory size for our VM (1024 MB sufficient for now).
6. Select the option Use an existing virtual hard disk file and locate the donwloaded VMDK image below and create VM.
7. Now we have to create a NAT Network so go to File -> Preferences -> Network -> Add a New NAT Network (Click on +)
8. Right click and edit the Network name and CIDR if needed. Example :

Name - My VMbox Network

CIDR - 172.168.2.0/24 and save the changes.

1. Repeat the process of launching the VM for 2 instances.
2. Now go to the setting, go to the network setting and change the adapter to NAT Network and and select the NAT Network you made ( in our case : My VMbox Network ) and click ok.
3. Launch the VM now.
4. Install the net-tools to know the IP's of the instance.

$ sudo apt install net-tools

$ sudo apt update

1. To know the IP address

$ ifconfig

Now the IP will be in the range of 172.168.2.\*

\* - any number in the range of 1 to 254 (total 256 addresses)

1. Now create a file and write something into it.

$ touch tranfer.txt

$ nano transfer.txt

-> hey, How are you?

ctrl + X and save

Some Commands for Linux Based Distros:

ls - list all the files and directories

cat - show the content inside a file

scp - it will help us to copy files from one vm to other

cd - change directory

mkdir - make a new directory

touch - it makes a new file

nano - nano is a editor inside linux os

1. If your file is on the VM with IP 172.168.2.4 and the second VM's IP is 172.168.2.5.
2. Tranfer the file using SCP

$ scp tranfer.txt vagrant@172.168.2.5:/home/vagrant

Put in the password of the 2nd VM and done.

1. Check for the file in the Second VM under the

/home/vagrant directory.

1. Finished

**Conclusion:** Thus, we have studied virtualization and understood the procedure to transfer the files from one virtual machine to another virtual machine.