


TASK#1 BASED ON BOTH LINUX SESSIONS

1. Create a file via touch and update that file and also verify the timestamp and output will be redirected to another file.

Commands Used:

- `mkdir "name"` //makes a directory
- `cd` //change directory
- `touch "filename.txt"` //it updates the timestamp of the respective file if the file is already existing, otherwise it creates a new file if the file doesn't exists.
- `ls` //listing files.



```
centos-osboxes [Running] - Oracle VM VirtualBox
File Machine View Input Devices Help
Applications Places Terminal cm Mon 11:11
root@osboxes:~/dipali
File Edit View Search Terminal Help
[root@osboxes ~]# mkdir dipali
[root@osboxes ~]# cd dipali
[root@osboxes dipali]# touch q1.txt
[root@osboxes dipali]# ls
q1.txt
[root@osboxes dipali]#
```

- vim "filename.txt":takes to an editor(something like a notepad)
 - i //means insert mode
 - :wq //to come out of the file(write quit)

A screenshot of the Oracle VM VirtualBox interface. The main window displays a terminal window titled "centos-osboxes [Running] - Oracle VM VirtualBox". The terminal has a menu bar with "File", "Machine", "View", "Input", "Devices", and "Help". Below the menu bar, there's another set of menus: "File", "Edit", "View", "Search", "Terminal", and "Help". The terminal content shows "Welcome to linux" followed by several tilde (~) characters representing command history. At the bottom of the terminal, it says "-- INSERT --" and "1, 17". The status bar at the very bottom of the window shows "root@osboxes: ~/dipali" and "1 / 4". The host's taskbar is visible at the bottom right.


```
[root@osboxes dipali]# cat q1.txt
Welcome to linux.Linux is an operating system.
[root@osboxes dipali]#
```

2. Add some of the data as per your choice and append that data via echo command in the same file

Commands used:

1. cat file1.txt // Displaying the contents.
2. echo "some_text >> file1.txt // Appending the statement.
3. cat file1.txt // Displaying updated content.

```
[root@osboxes dipali]# cat q1.txt
Welcome to linux.Linux is an operating system.
[root@osboxes dipali]# echo "CentOS is a discontinued linux distribution. " >
> q1.txt
[root@osboxes dipali]# cat q1.txt
Welcome to linux.Linux is an operating system.
CentOS is a discontinued linux distribution. "
[root@osboxes dipali]#
```

3. Install httpd and set up your own web server.

Commands used:

1. yum -y install httpd
2. vim /var/www/html/index.html
3. systemctl restart httpd // Restarting httpd
4. systemctl status httpd // Checking the status
5. ifconfig enp0s3 | grep inet // Ip address of Linux CentOS machine.
6. iptables -F // Use this when firewall is blocking your connection.

```
[root@osboxes dipali]# yum -y install httpd
Loaded plugins: fastestmirror, langpacks
Loading mirror speeds from cached hostfile
 * base: centos.mirrors.estointernet.in
 * extras: centos.mirrors.estointernet.in
 * updates: centos.mirrors.estointernet.in
Resolving Dependencies
--> Running transaction check
---> Package httpd.x86_64 0:2.4.6-97.el7.centos will be installed
--> Processing Dependency: httpd-tools = 2.4.6-97.el7.centos for package: httpd-2.4.6-97.el7.centos.x86_64
--> Processing Dependency: /etc/mime.types for package: httpd-2.4.6-97.el7.centos.x86_64
--> Processing Dependency: libaprutil-1.so.0()(64bit) for package: httpd-2.4.6-97.el7.centos.x86_64
--> Processing Dependency: libapr-1.so.0()(64bit) for package: httpd-2.4.6-97.el7.centos.x86_64
--> Running transaction check
---> Package apr.x86_64 0:1.4.8-7.el7 will be installed
---> Package apr-util.x86_64 0:1.5.2-6.el7 will be installed
---> Package httpd-tools.x86_64 0:2.4.6-97.el7.centos will be installed
```



```
[root@osboxes dipali]# ifconfig enp0s3 | grep inet
    inet 192.168.31.214 netmask 255.255.255.0 broadcast 192.168.31.255
    inet6 fe80::3ac3:69aa:8708:cbb6 prefixlen 64 scopeid 0x20<link>
[root@osboxes dipali]# iptables -F
[root@osboxes dipali]#
```

← → ↻ ⚠ Not secure | 192.168.31.214

Apps Gmail Microsoft Teams (PDF) Based Real Ti... Profile | Dashboard Home | AMQP DDS Portal – Data D... XMPP | XMPP Main

Linux CentOS is working fine.

4. Copy some files from one Linux host to another Linux host via SCP.

Steps:

- Firstly turn off the running linux machine.
- Secondly make the clone of it.
- Turn on both the machines.

Oracle VM VirtualBox Manager

File Machine Help



Tools



New



Settings



Discard



Start



Ubuntu 20.04.1

Powered Off



centos-osboxes

Powered Off



General

Name:

centos-osboxes

Operating System:

Red Hat (64-bit)



System

Base Memory: 5043 MB



Settings...

Ctrl+S



Clone...

Ctrl+O



Move...



Export to OVF...



Remove...



Group



Start



Pause



Reset



Close



Discard Saved State...



Show Log...

Ctrl+L



Refresh



Show in Explorer



Create Shortcut on Desktop



Sort



Search

Ctrl+F

← Clone Virtual Machine

New machine name and path

Please choose a name and optionally a folder for the new virtual machine. The new machine will be a clone of the machine **centos-osboxes**.

Name:

Path:

MAC Address Policy:

Additional Options: ☐ Keep Disk Names

☐ Keep Hardware UUIDs

Expert Mode

Next

Cancel

← Clone Virtual Machine

Clone type

Please choose the type of clone you wish to create.

If you choose **Full clone**, an exact copy (including all virtual hard disk files) of the original virtual machine will be created.

If you choose **Linked clone**, a new machine will be created, but the virtual hard disk files will be tied to the virtual hard disk files of original machine and you will not be able to move the new virtual machine to a different computer without moving the original as well.

If you create a **Linked clone** then a new snapshot will be created in the original virtual machine as part of the cloning process.

☒ Full clone

☐ Linked clone

Clone

Cancel

← Clone Virtual Machine

Clone type

Clone Virtual Machine: Cloning Machine

Cloning Disk 'CentOS 7-1908 (64bit).vdi' ... (2/3)

0%

☒ Full clone

☐ Linked clone

Clone Cancel

Oracle VM VirtualBox Manager

File Machine Help

Tools

Ubuntu 20.04.1 Powered Off

centos-osboxes Powered Off

centos-osboxes Clone Powered Off

General

Name: centos-osboxes Clone
Operating System: Red Hat (64-bit)

System

Base Memory: 5047 MB
Processors: 2
Boot Order: Floppy, Optical, Hard Disk
Acceleration: VT-x/AMD-V, Nested Paging, PAE/NX, KVM Paravirtualization

Display

Video Memory: 16 MB
Graphics Controller: VMSVGA
Remote Desktop Server: Disabled
Recording: Disabled

Storage

Controller: IDE
IDE Secondary Master: [Optical Drive] Empty
Controller: SATA
SATA Port 0: centos-osboxes Clone-disk1.vdi (Normal, 500.00 GB)

Audio

Host Driver: Windows DirectSound
Controller: ICH AC97

- Type this command in Host1 (Original CentOS) :
 - `hostnamectl set-hostname host1`
 - `exec bash`
 - `ifconfig enp0s3 | grep inet`
 - `cd Desktop`
 - `vim new_file.txt`
 - `cat new_file.txt`
 - `scp new_file.txt root@192.168.31.13:/tmp`
- Type this command in Host2 (Cloned CentOS) :

- hostnamectl set-hostname host2
- exec bash
- ifconfig enp0s3 | grep inet
- cd Desktop
- ls -al
- ls /tmp/ | grep new_file
- cat /tmp/ | grep new_file.txt

Host1

[illegible]

```
Applications  Places  Terminal  cm  Mon 12:45  [network icon] [volume icon]
root@osboxes:~/Desktop

File Edit View Search Terminal Help
[root@host1 ~]# cd Desktop
[root@host1 Desktop]# vim new_file.txt
[root@host1 Desktop]# cat new_file.txt

Hello ,Welcome to host1.
[root@host1 Desktop]#
```

Host 2

```
root@osboxes:~/Desktop

File Edit View Search Terminal Help
[root@host2 ~]# hostnamectl set-hostname host2
[root@host2 ~]# exec bash
[root@host2 ~]# ifconfig enp0s3 | grep inet
    inet 192.168.31.13 netmask 255.255.255.0 broadcast 192.168.31.255
    inet6 fe80::561:2e8:97f4:876d prefixlen 64 scopeid 0x20<link>
[root@host2 ~]# cd Desktop
[root@host2 Desktop]#
```

Host 1

```
[root@host1 Desktop]# scp new_file.txt root@192.168.31.13:/tmp
root@192.168.31.13's password:
new_file.txt                                100%   26    17.9KB/s   00:00
[root@host1 Desktop]#
```

Host 2

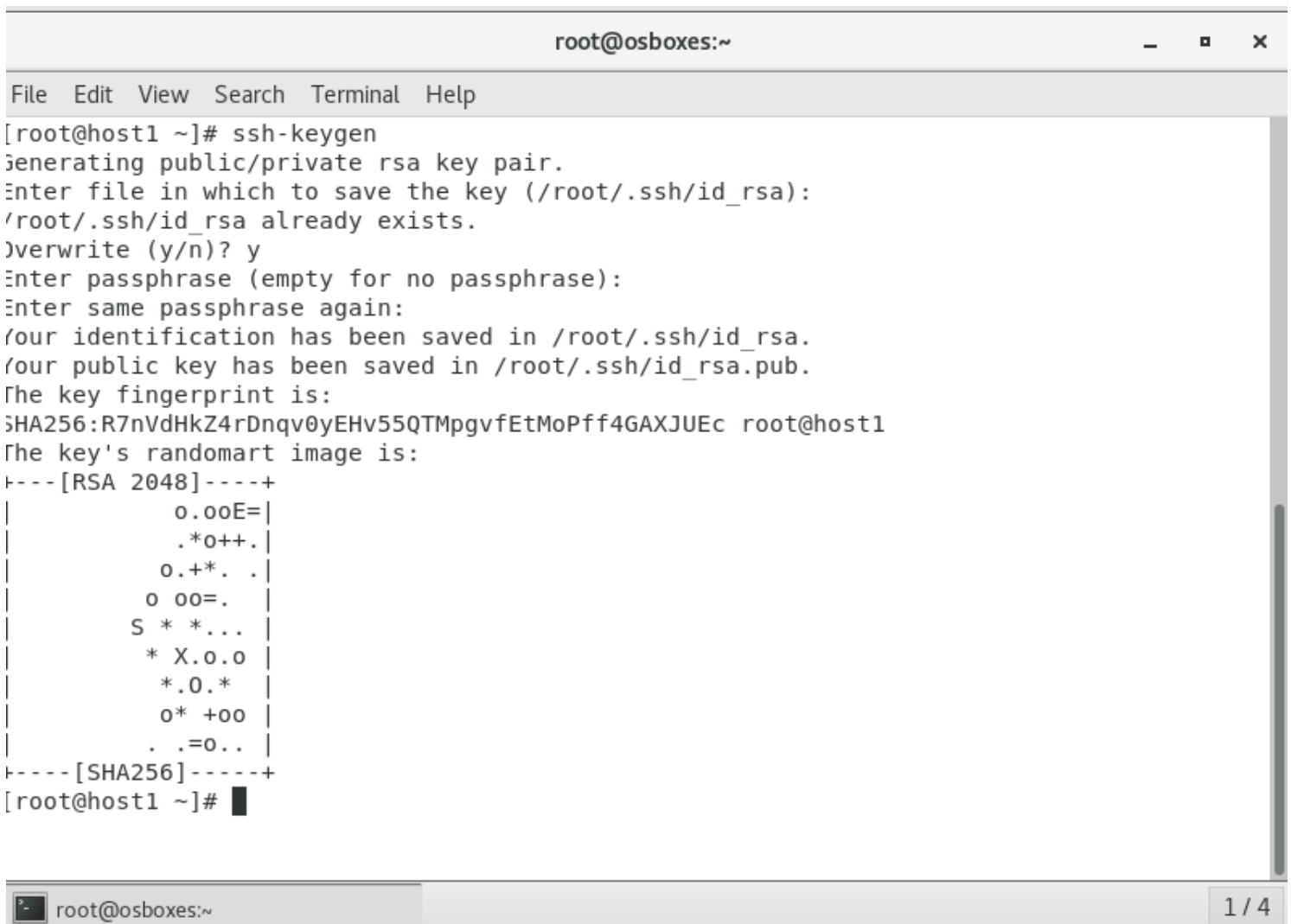
```
[root@host2 Desktop]# ls -al
total 4
drwxr-xr-x.  2 root root    6 Jul  2 14:09 .
dr-xr-x---. 19 root root 4096 Jul  5 12:34 ..
[root@host2 Desktop]# ls /tmp/ | grep new_file
new_file.txt
[root@host2 Desktop]# cat new_file.txt
cat: new_file.txt: No such file or directory
[root@host2 Desktop]# cat /tmp/ | grep new_file.txt

Hello ,Welcome to host1.
```

5. Create another VM and setup password less authentication

Commands used:

1. ssh-keygen
2. ls -a
3. cd .ssh/
4. ls
5. cd
6. ssh-copy-id [root@192.168.31.13](#)
7. hostname // Host1
8. ssh 192.168.29.227 // ip address of Host2
9. hostname // Host2
10. exit // Coming out from Host2



```
root@osboxes:~  
File Edit View Search Terminal Help  
[root@host1 ~]# ssh-keygen  
Generating public/private rsa key pair.  
Enter file in which to save the key (/root/.ssh/id_rsa):  
/root/.ssh/id_rsa already exists.  
Overwrite (y/n)? y  
Enter passphrase (empty for no passphrase):  
Enter same passphrase again:  
Your identification has been saved in /root/.ssh/id_rsa.  
Your public key has been saved in /root/.ssh/id_rsa.pub.  
The key fingerprint is:  
SHA256:R7nVdHkZ4rDnqv0yEHv55QTMpgvfEtMoPff4GAXJUEc root@host1  
The key's randomart image is:  
+---[RSA 2048]---+  
|           0.00E=|  
|          .+0++.|  
|         0.+*..|  
|        0 00=.|  
|       S * *...|  
|      * X.0.0|  
|     *.0.*|  
|    0* +00|  
|   . .=0..|  
+---[SHA256]---+  
[root@host1 ~]#
```

root@osboxes:~ 1 / 4

```
root@osboxes:~/ssh
File Edit View Search Terminal Help
[root@host1 ~]# ls -a
.          .bashrc  dipali    host1      Public
..         .cache   dips      .ICEauthority .ssh
anaconda-ks.cfg .config  Documents initial-setup-ks.cfg .tcshrc
.bash_history .cshrc   Downloads .local      Templates
.bash_logout .dbus    .esd_auth Music        Videos
.bash_profile Desktop  .gnupg    Pictures     .viminfo
[root@host1 ~]# cd .ssh/
[root@host1 .ssh]# ls
id_rsa  id_rsa.pub  known_hosts
[root@host1 .ssh]#

[root@host1 .ssh]# cd
[root@host1 ~]# ssh-copy-id root@192.168.31.13
/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
root@192.168.31.13's password:

Number of key(s) added: 1

Now try logging into the machine, with:  "ssh 'root@192.168.31.13'"
and check to make sure that only the key(s) you wanted were added.

[root@host1 ~]#
```

```
root@osboxes:~
File Edit View Search Terminal Help
[root@host1 ~]# hostname
host1
[root@host1 ~]# ssh 192.168.31.13
Last login: Mon Jul  5 12:34:46 2021
[root@host2 ~]# hostname
host2
[root@host2 ~]# ifconfig enp0s3 | grep inet
    inet 192.168.31.13 netmask 255.255.255.0 broadcast 192.168.31.255
    inet6 fe80::561:2e8:97f4:876d prefixlen 64 scopeid 0x20<link>
[root@host2 ~]# exit
logout
Connection to 192.168.31.13 closed.
[root@host1 ~]#
```