Assignment – 7

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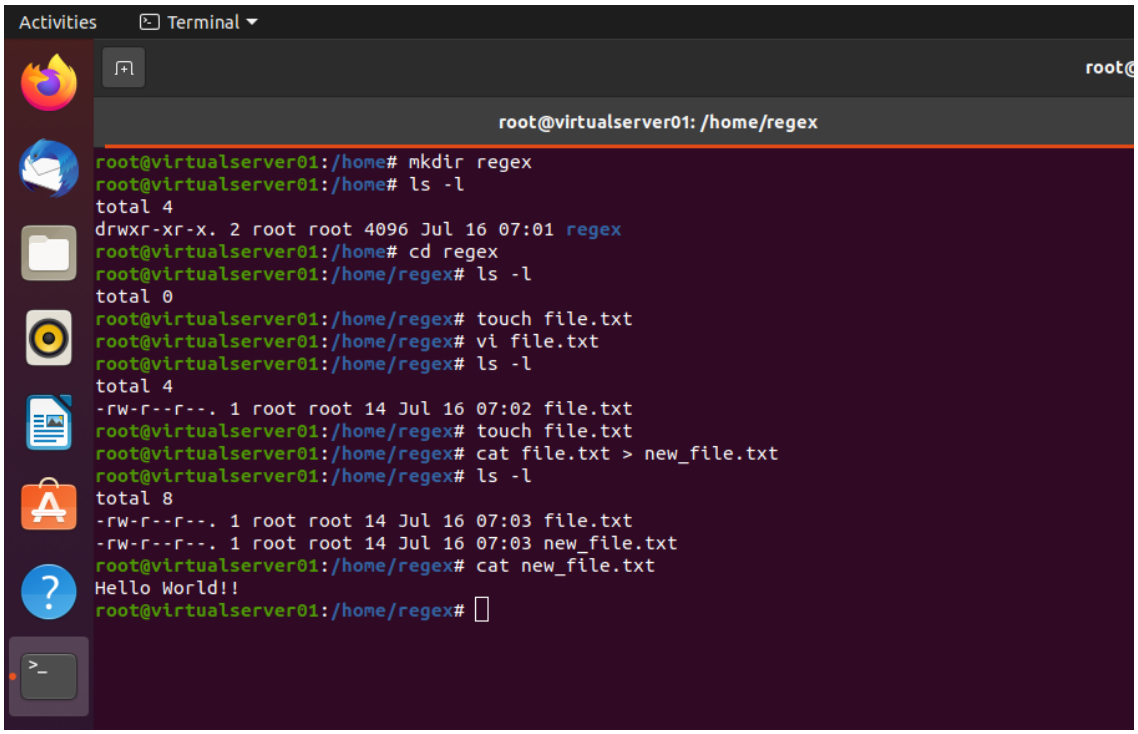
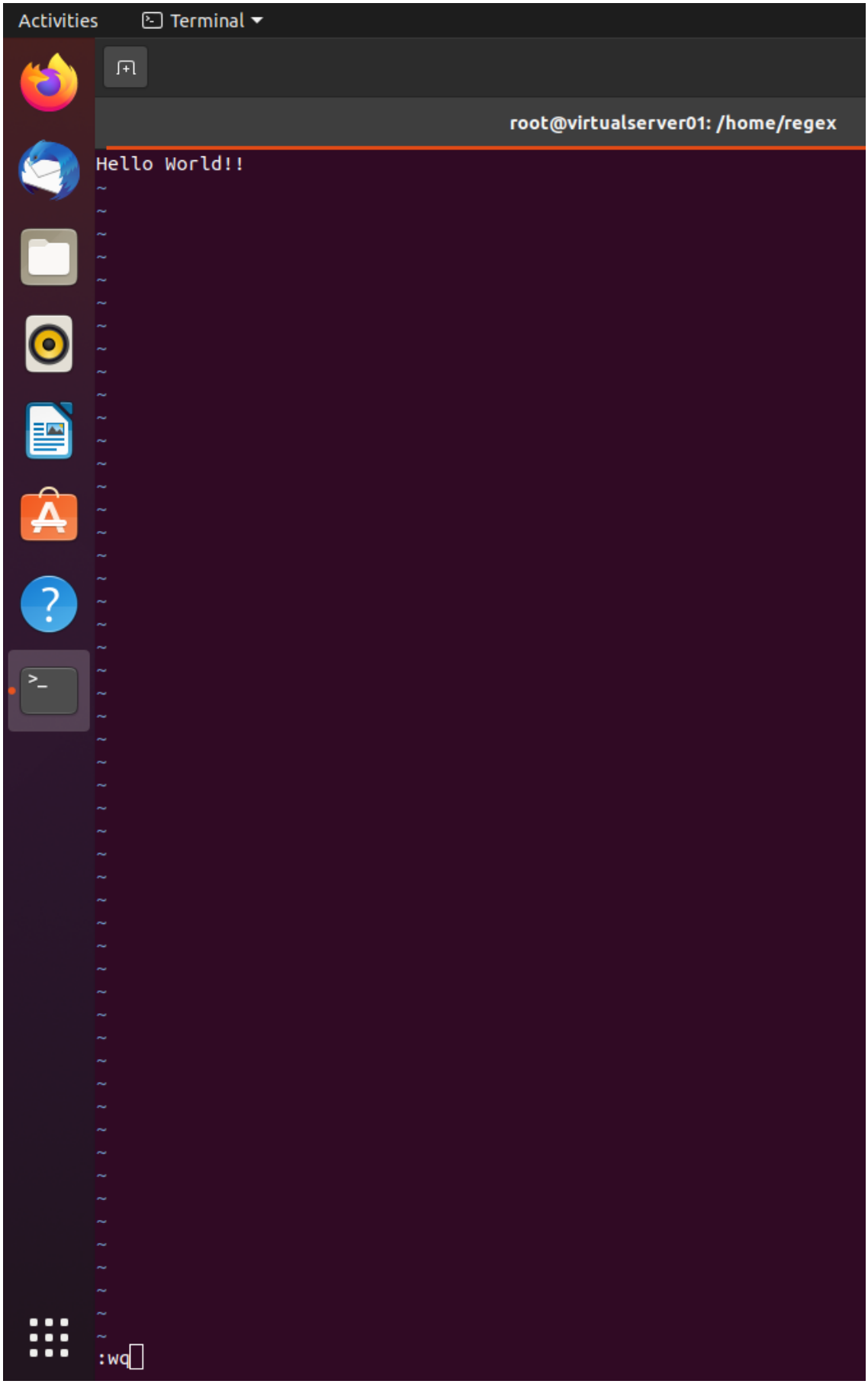
1. **Create a file via touch and update that file and also verify the timestamp and output will be redirected to another file.**

- The touch command is a standard command used in UNIX/Linux operating system which is used to update the timestamp of a file or if file does not exist, it creates with current timestamp.

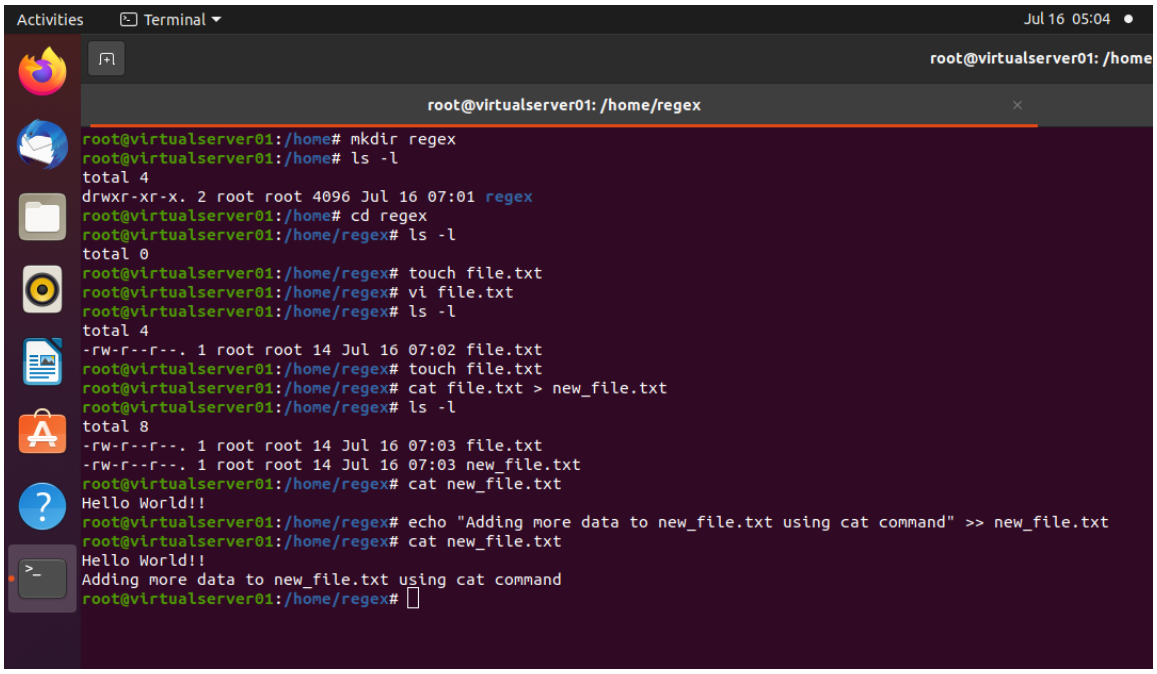
  In terminal enter command: touch file.txt
- This creates a new file named file.txt and we use editor vi to edit the file and add text to it. Command: vi file.txt
- Press key i to change mode to insert mode and enter the data, after adding data press ESC key and :wq and press enter to save and exit the editor
  We can view the details of the file by using command: ls –l
- Using touch command again on file file.txt updates its timestamp to the current one.
- We can use cat command to see the content of the file directly from the terminal without opening any editor. Command: cat file.txt
- We use > operator to direct the output of cat command to create a new file which here create new_file.txt with data similar to file.txt




Activities
Terminal
root@virtualserver01: /home/regex
Hello World!!
:wq

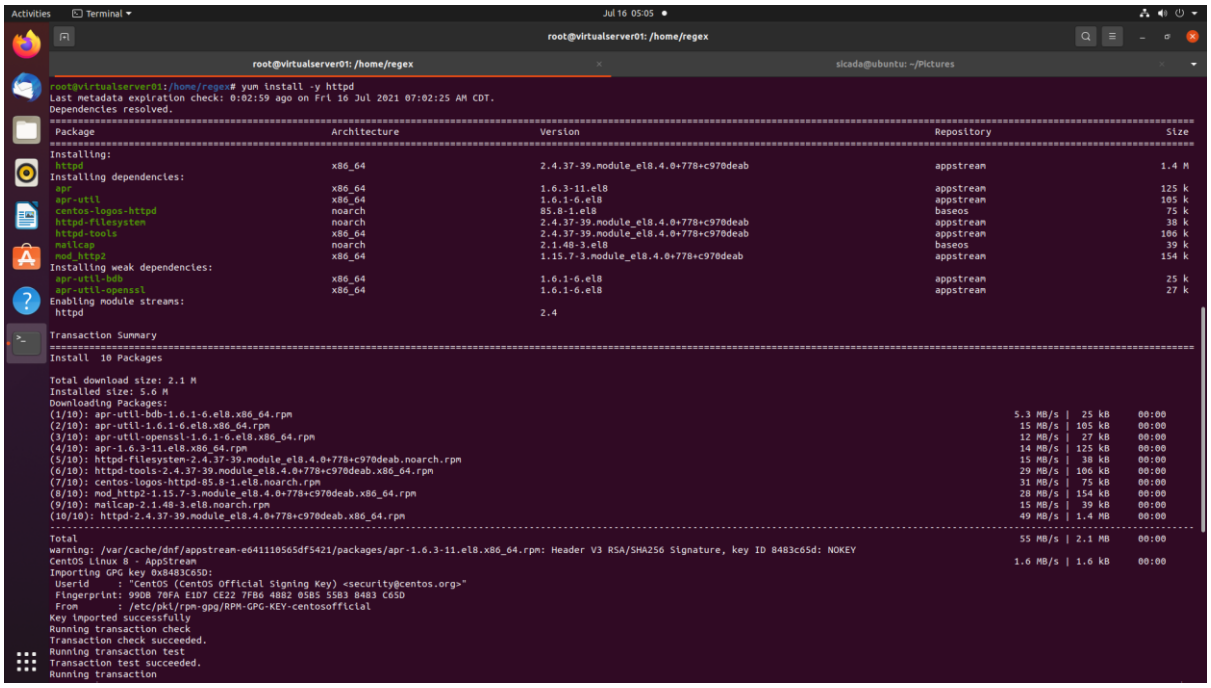
2. **Add some of the data as per your choice and append that data via echo command in the same file**

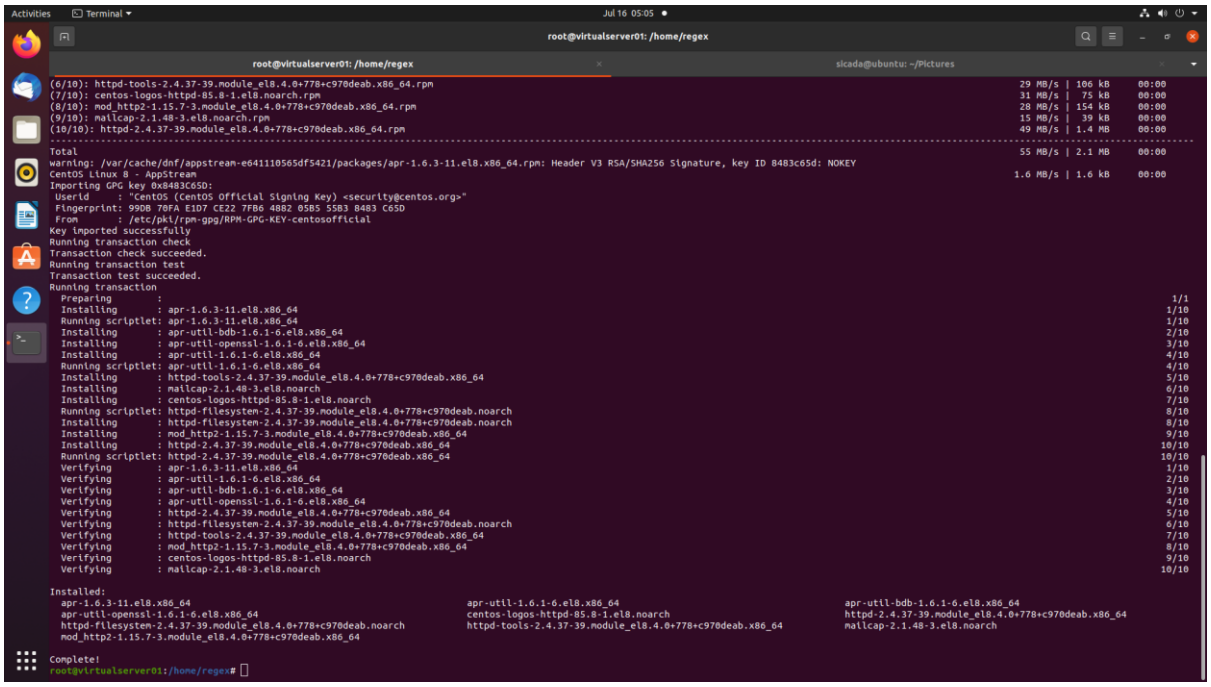
- The echo command is somewhat similar to print command in python or cout in C/C++ which print values or value of variable whichever is passed to it.
- We use echo command and direct its output to append in new_file.txt that we crated earlier.
- >> operator is used to append data while > operator is used to write data to a file (if data is already present in file, it overwrites it).
- We can see that data is appended to new_file.txt



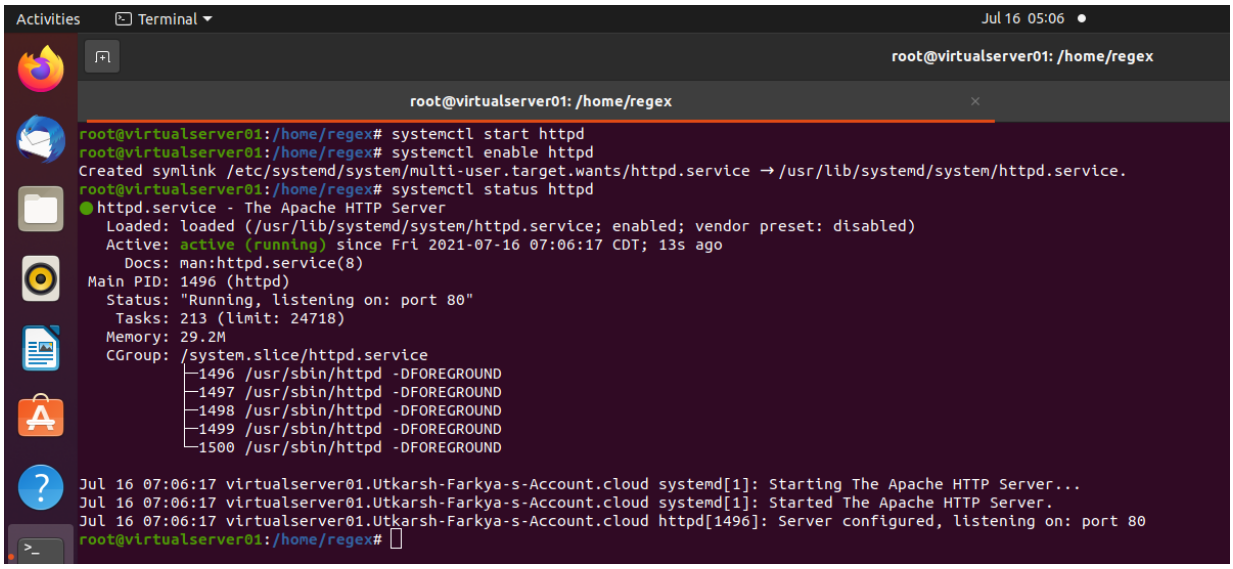
3. **Install httpd and set up your own web server**

- Installing httpd service (hypertext transfer protocol daemon)
- Command: yum install <service-name>
- We run command yum install httpd to install httpd service to setup our own http webserver
- Transfer files in folder /var/www/html to make them accessible from other devices.



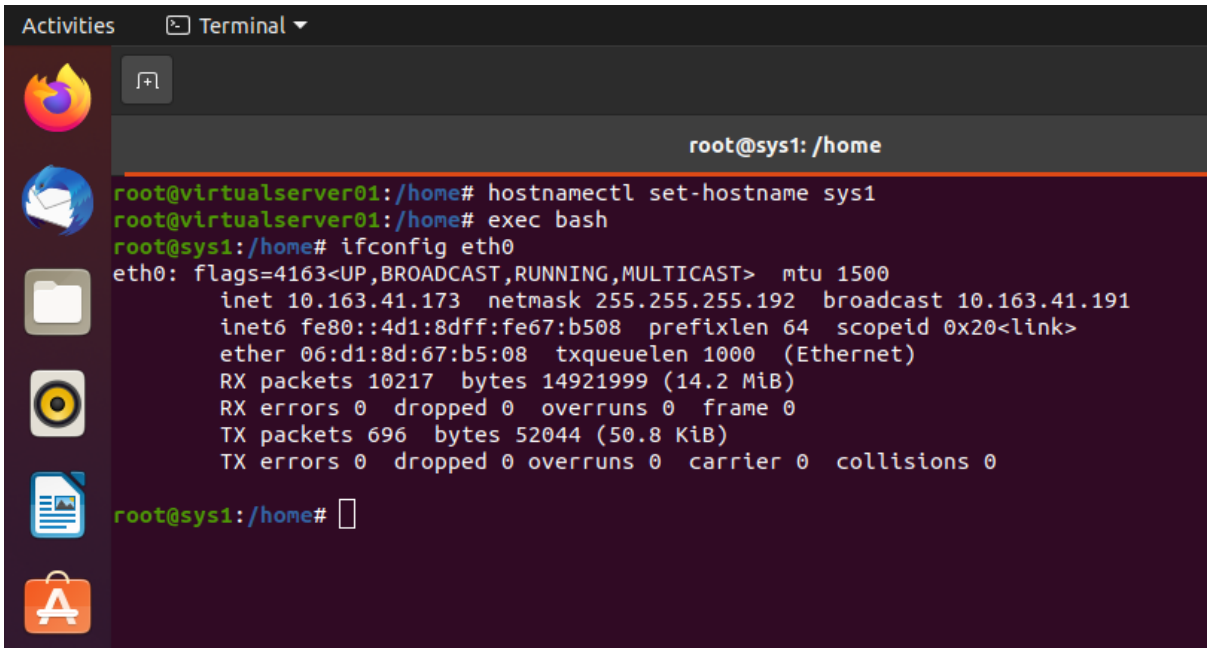


- After installing httpd, we start the service using systemctl command and check for its status which shows that our server is running and ready for use.



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

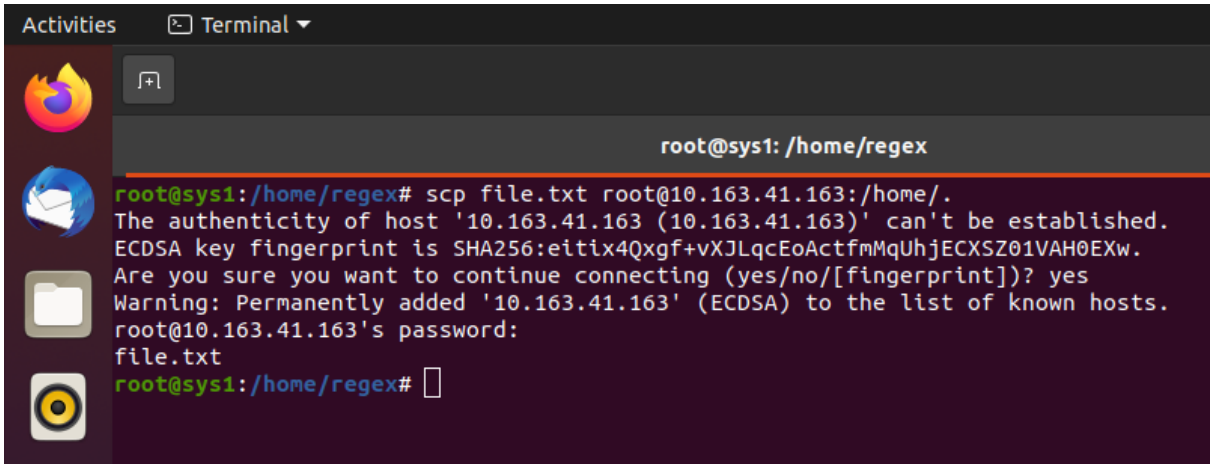
- Firstly, change the hostname properties of both the machines
- SCP is a tool used to securely transfer files between two machines that might be in local network or different networks. It requires the authentication details of the destination machine which is going to receive/send the file and its IP address.



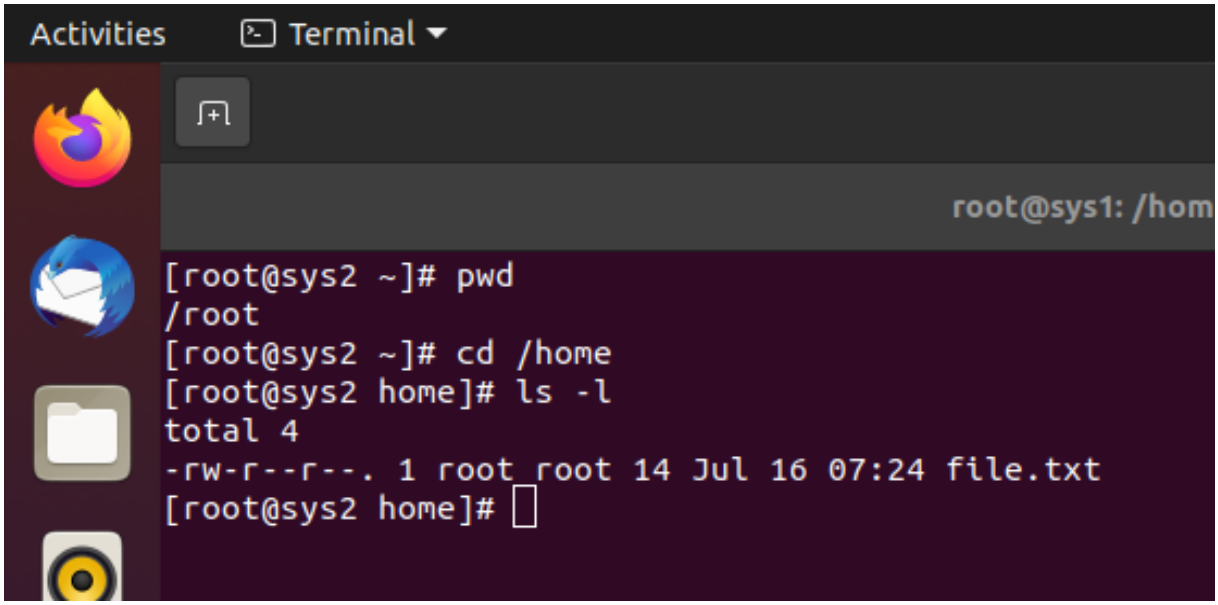
```
[root@centos ~]# hostnamectl set-hostname sys2
[root@centos ~]# exec bash
[root@sys2 ~]# ifconfig eth0
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
        inet 10.163.41.163  netmask 255.255.255.192  broadcast 10.163.41.191
        inet6 fe80::454:8eff:fe5b:dcb1  prefixlen 64  scopeid 0x20<link>
        ether 06:54:8e:5b:dc:b1  txqueuelen 1000  (Ethernet)
        RX packets 7  bytes 496 (496.0 B)
        RX errors 0  dropped 0  overruns 0  frame 0
        TX packets 17  bytes 1174 (1.1 KiB)
        TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

[root@sys2 ~]#
```

- We use scp to transfer file.txt from machine sys1 to machine sys2.



- We can see in machine sys2's home directory that it received the file file.txt



5. **Create another VM and setup password less authentication**

- Create another Linux VM of any type for which we will establish password less authentication.
- Generate ssh key pair which will be used to establish permanent authentication between the two machines.
- Use command: ssh-keygen
- Then use ssh-copy-id <destination-machine-username@IP> to start the authentication process and the key generated earlier will be used to establish password less authentication. If successfully completely it will not ask for credentials anymore, if changed otherwise.