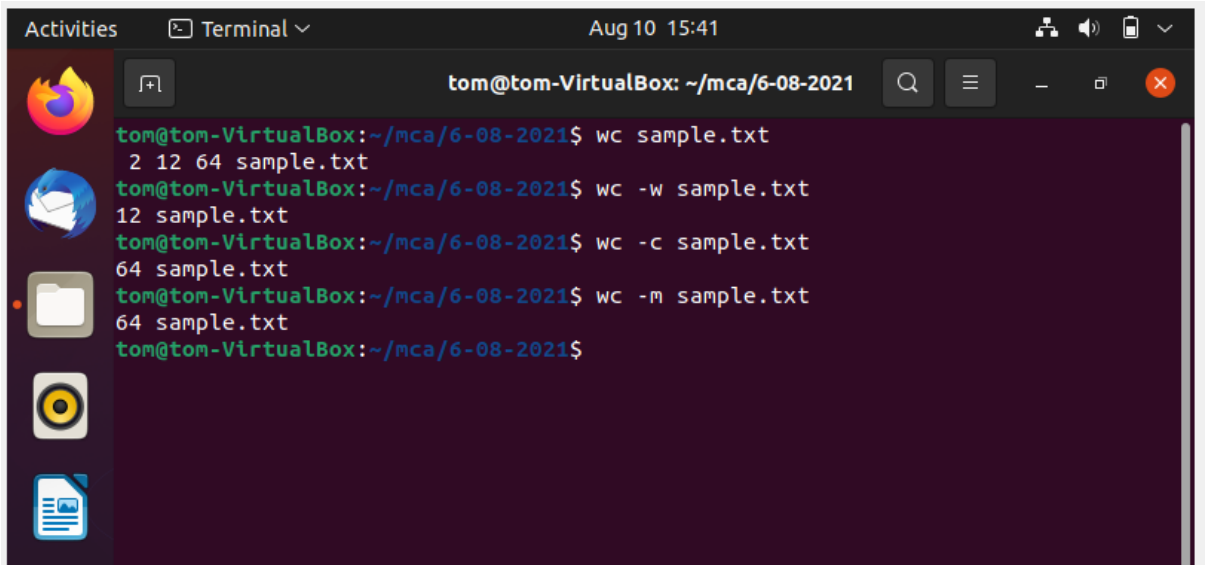
Assignment-4

Commands

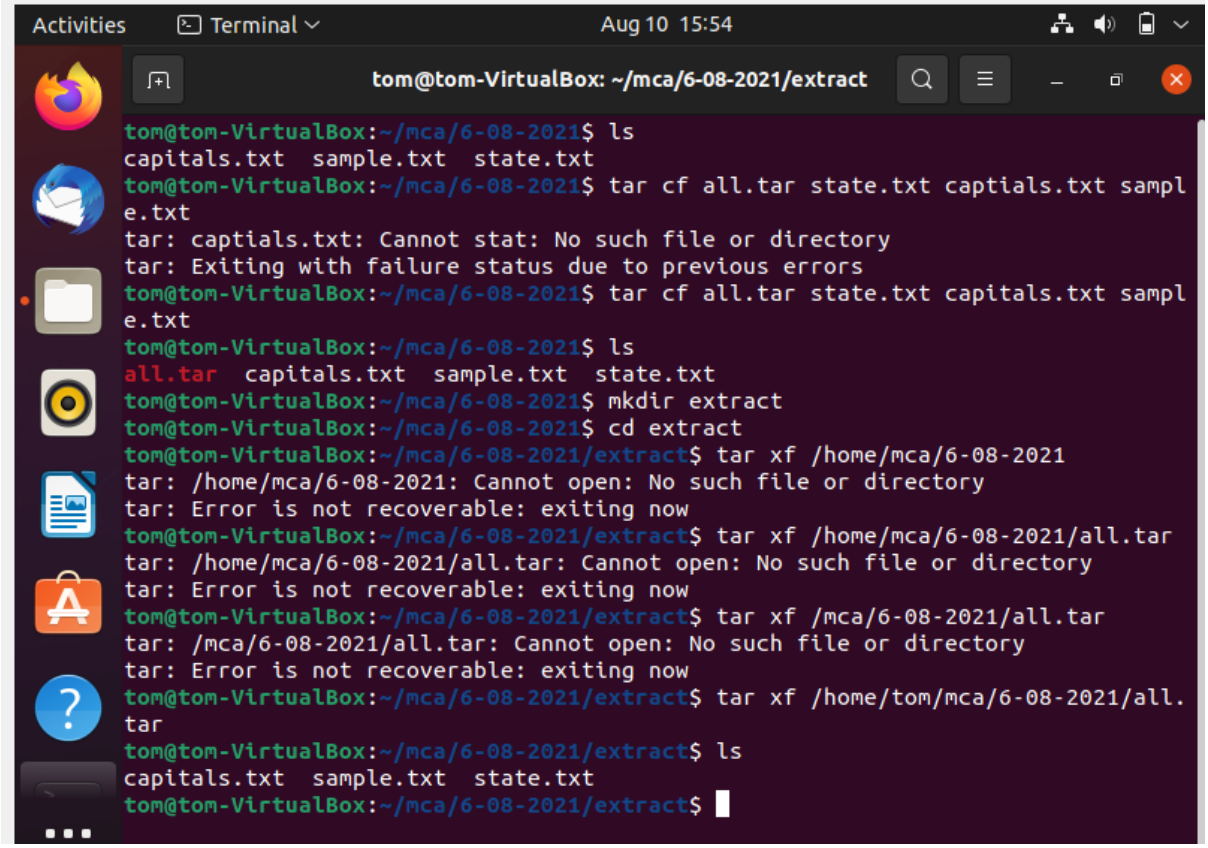
1. wc

The wc command in Linux with examples It is used to find out number of lines, word count, byte and characters count in the files specified in the file.



2. tar

The Linux “tar” stands for tape archive, which is used by large number of Linux/Unix system administrators to deal with tape drives backup. The tar command used to rip a collection of files and directories into highly compressed archive file commonly called tarball or tar, gzip and bzip in Linux.



Types for creating and extracting

- Gzip

  A file that ends in .tar.gz or .tgz is a Tar archive compressed with Gzip. Gzip is most often used to compress text files, Tar archives, and web pages**.** Do not use Gzip to compress images, audio, PDF documents, and other binary files as they are already compressed.

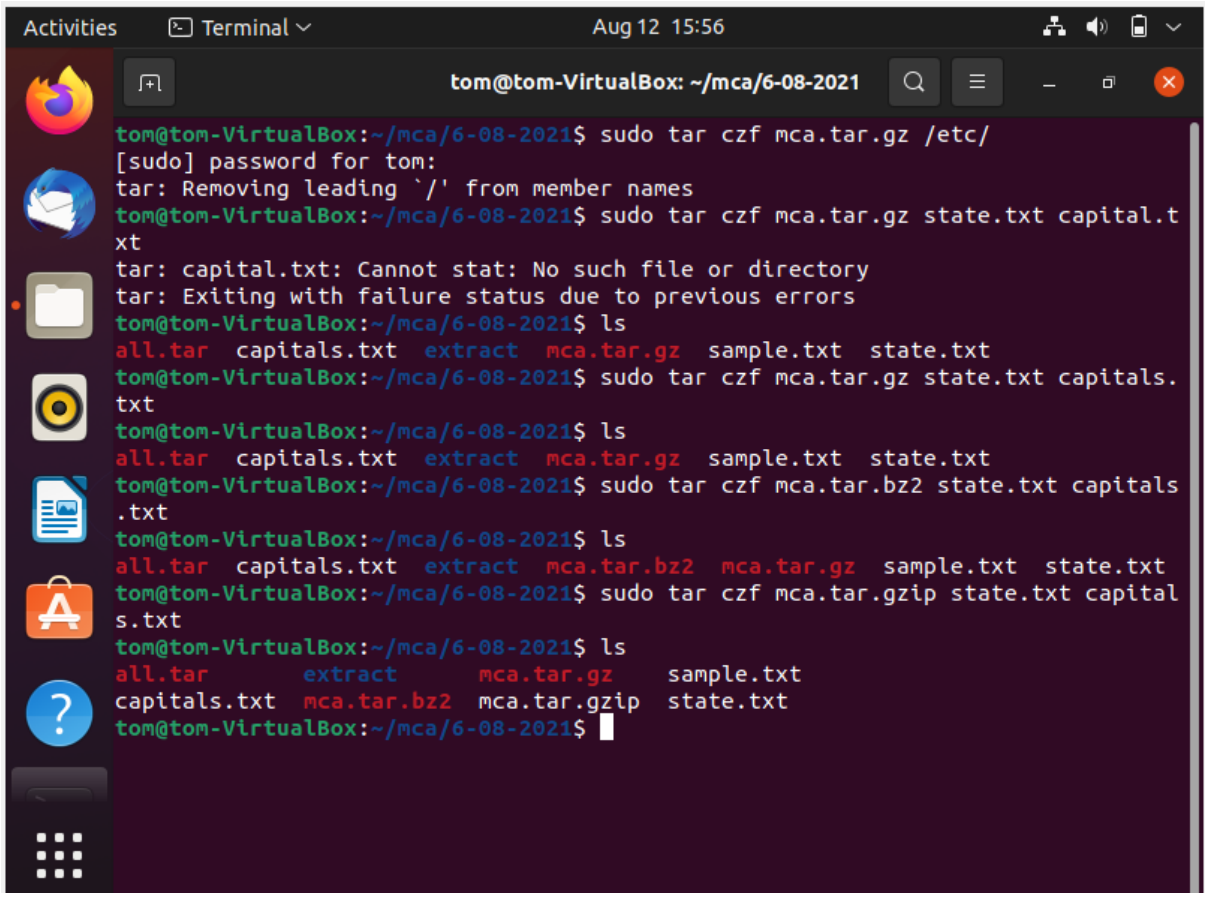
- Bz2

  The .bz2 extension suffix tells us it has been compressed using the bzip2 command. bzip2 command in Linux is used to compress and decompress the files i.e. it helps in binding the files into a single file which takes less storage space as the original file use to take. It has a slower decompression time and higher memory use.

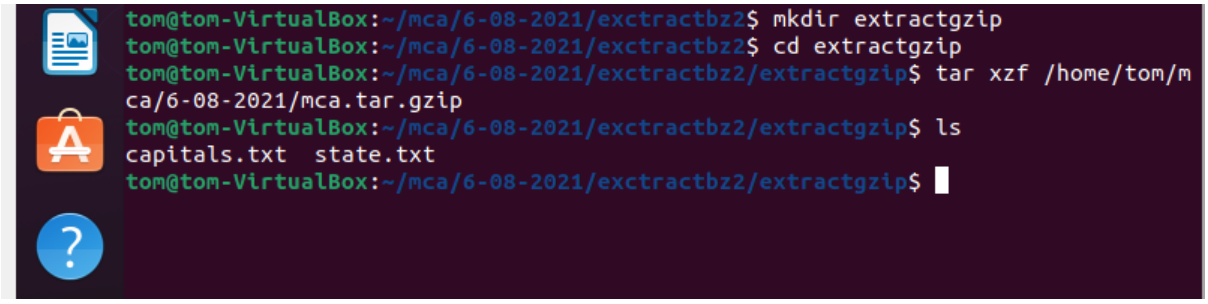
- Gz

  You need to use the tar command which can create and manipulate archive files in .tar.gz under Unix like operating systems. It is very useful for archiving multiple files together into a single archive file. It allows us to restore files individually.

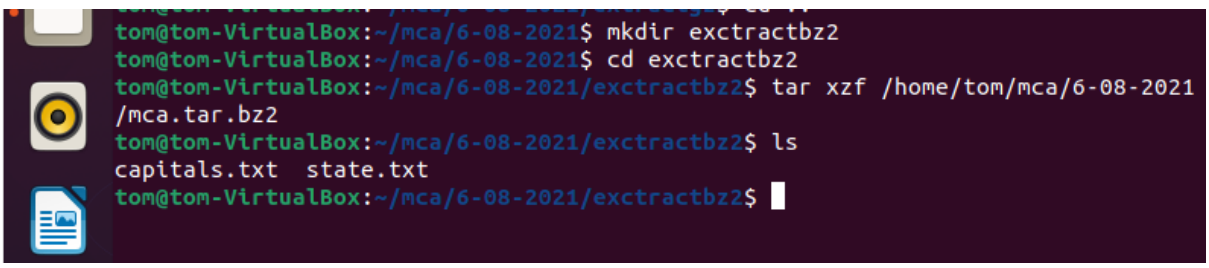
Creation using Gzip,bz2,gz



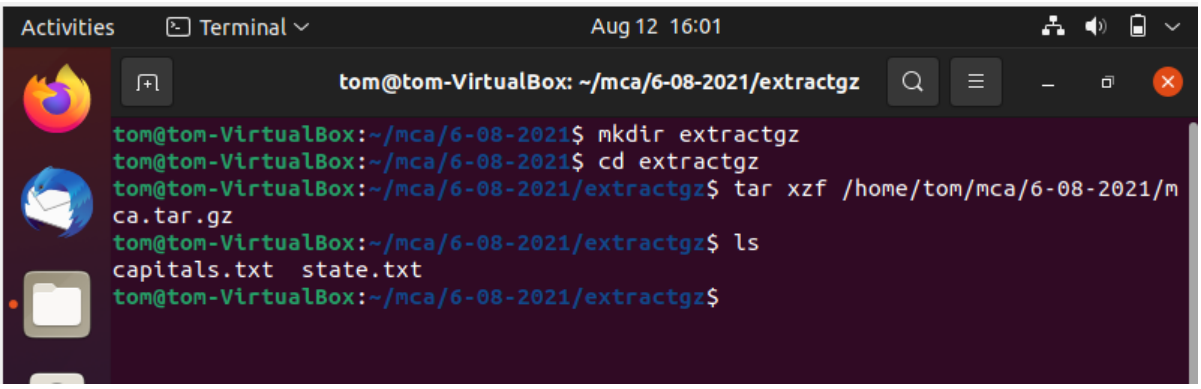
Extracting using Gzip



Extraction using Bz2



Extraction using Gz

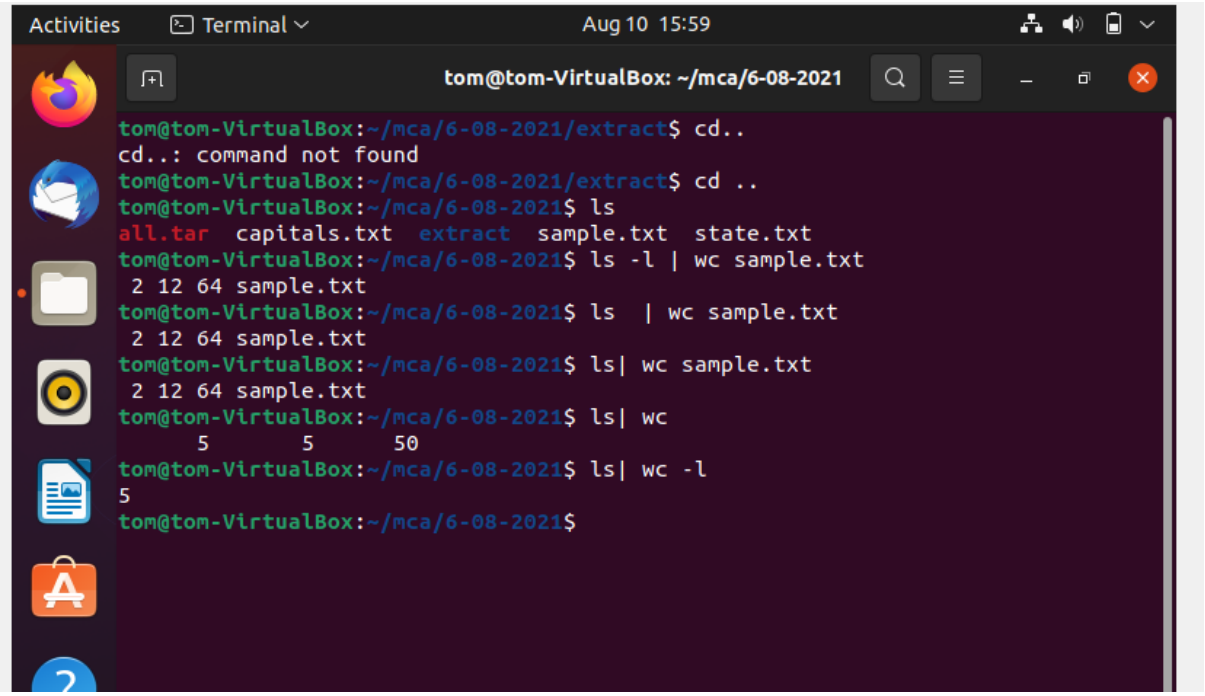


3. expr

The expr command supports the following operators: for integer: addition, subtraction, multiplication, division, and modulus. For strings: regular expression, set of characters in a string.

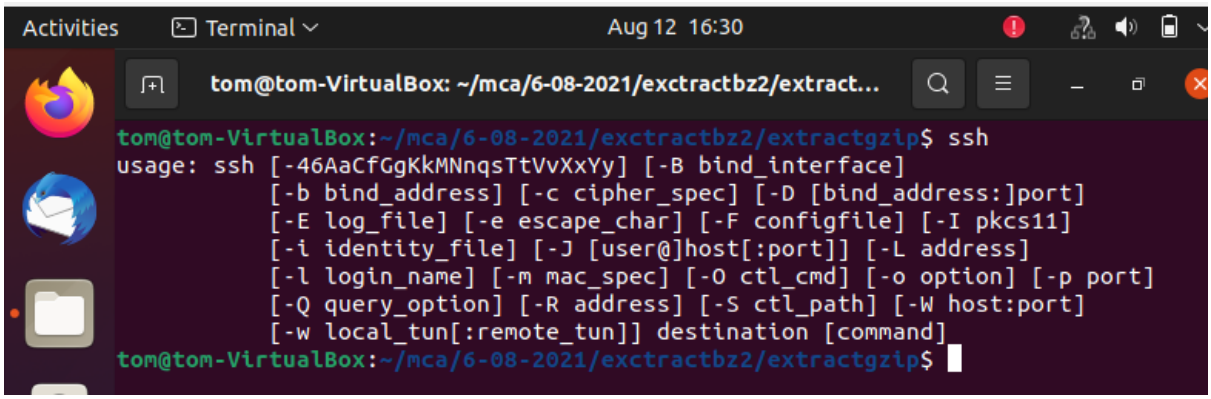
4. Redirection and piping

The pipe command denoted by the symbol | allows you to send output of one command to another for further processing. It can redirect the standard output, input, or error of one process **to** another.



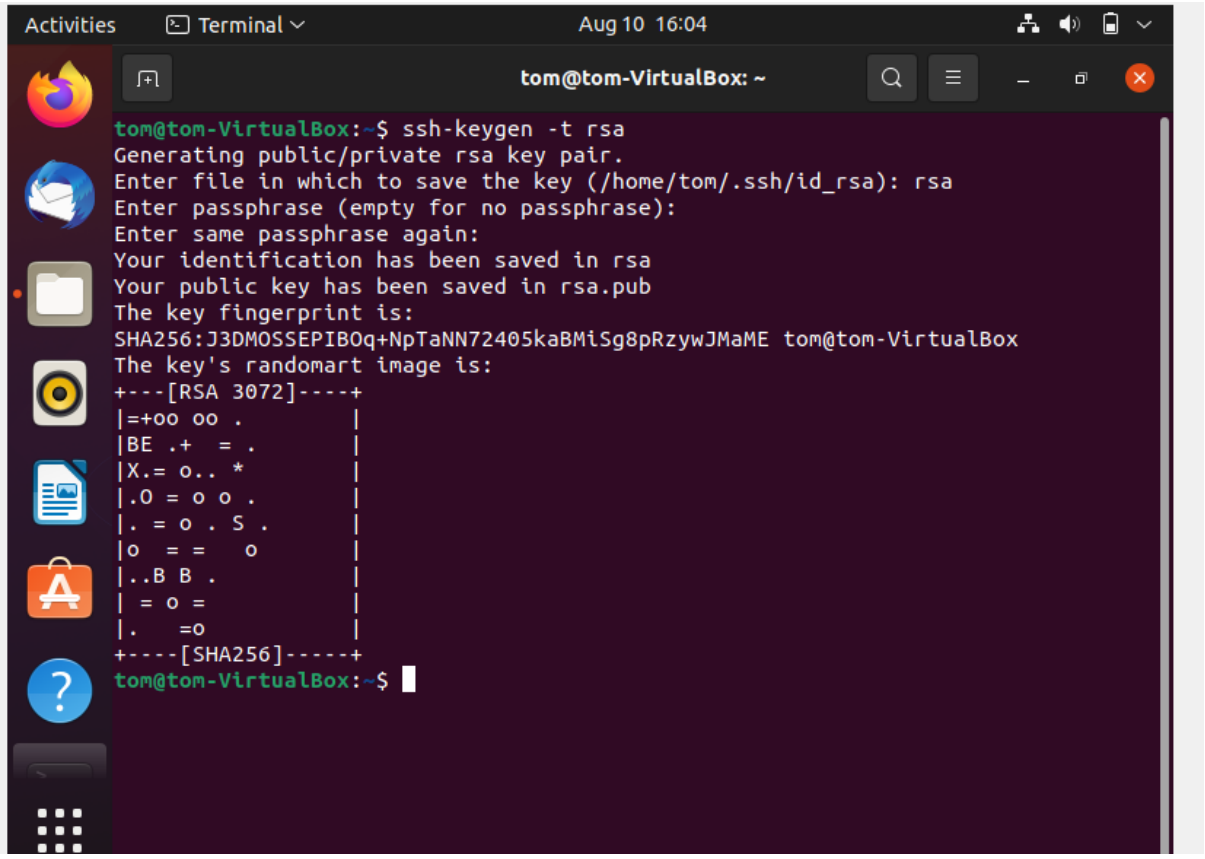
5. ssh

In Linux, ssh is a protocol, which stands for S ecure Shell or S ecure Socket Shell. The secure shell is useful for security while connecting to a remote server. The ssh command uses a ssh protocol, which is a secure protocol, as the data transfer between the client and the host takes place in encrypted form.



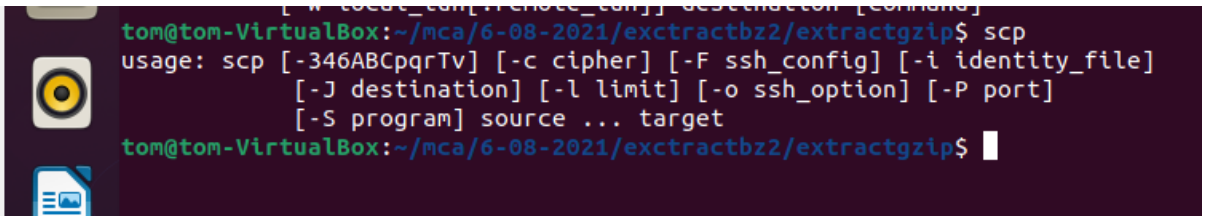
6. ssh-keygen

the ssh-keygen command to generate a public/private authentication key pair. Authentication keys allow a user to connect to a remote system without supplying a password. Keys must be generated for each user separately. If you generate key pairs as the root user, only the root can use the keys.



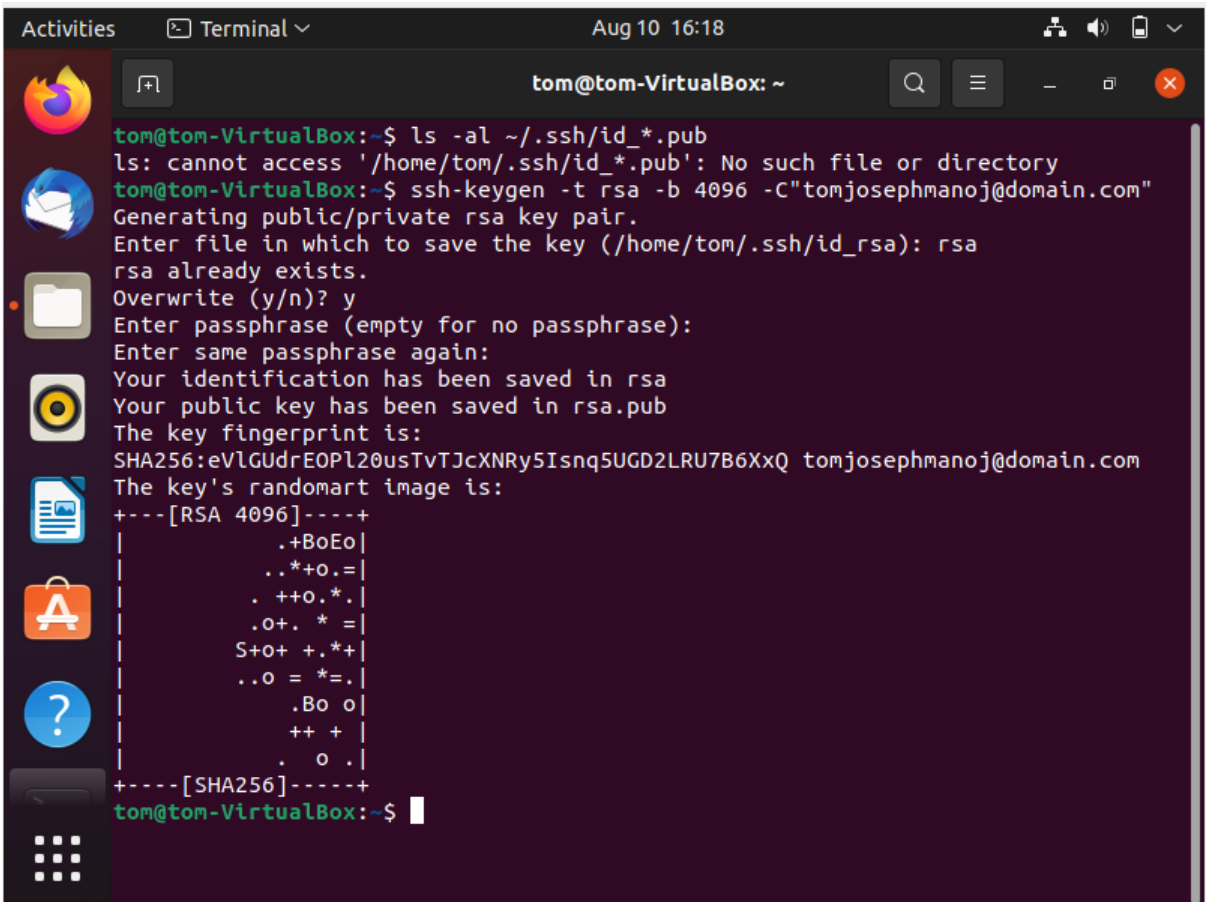
7. scp

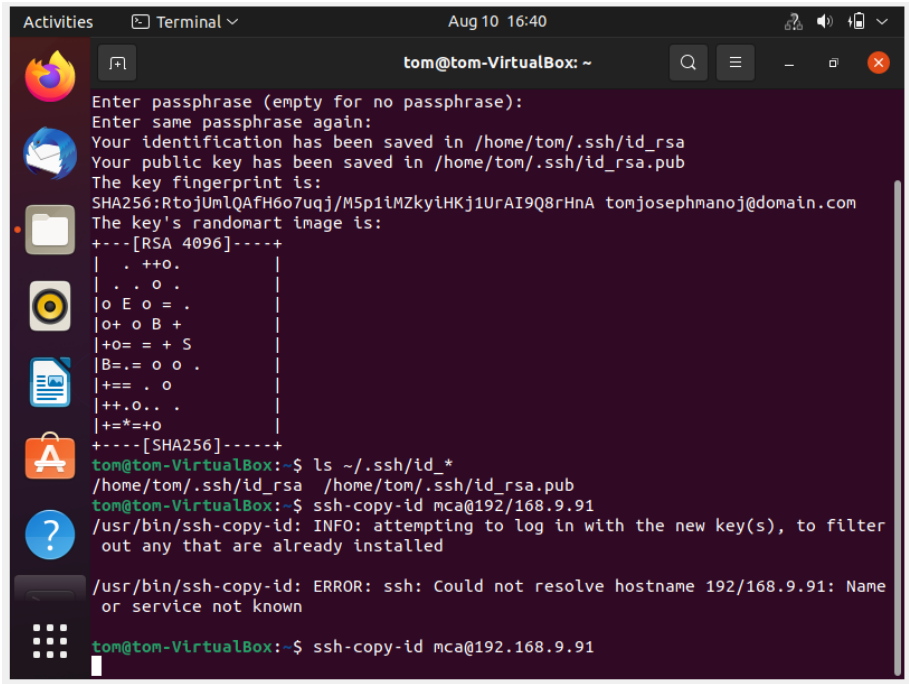
The scp (secure copy) command in Linux system is **used** to copy file (s) between servers in a secure way. The SCP command or secure copy allows secure transferring of files in between the local host and the remote host or between two remote hosts. It uses the same authentication and security as it is used in the Secure Shell (SSH) protocol.



8. ssh-copy-id

The ssh-copy-id command is a simple tool that allows you to install an SSH key on a remote server's authorized keys. This command facilitates SSH key login, which removes the need for a password for each login, thus ensuring a password-less, automatic login process.


Activities
Terminal
Aug 10 16:18
tom@tom-VirtualBox: ~
tom@tom-VirtualBox:~$ ls -al ~/.ssh/id_*.pub
ls: cannot access '/home/tom/.ssh/id_*.pub': No such file or directory
tom@tom-VirtualBox:~$ ssh-keygen -t rsa -b 4096 -C"tomjosephmanoj@domain.com"
Generating public/private rsa key pair.
Enter file in which to save the key (/home/tom/.ssh/id_rsa): rsa
rsa already exists.
Overwrite (y/n)? y
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in rsa
Your public key has been saved in rsa.pub
The key fingerprint is:
SHA256:eVlGUdrEOPl20usTvTJcXNRy5Isnq5UGD2LRU7B6XxQ tomjosephmanoj@domain.com
The key's randomart image is:
+---[RSA 4096]----+
| .+BoEo|
| ..*+o.=|
| . ++o.*.|
| .o+. * =|
| S+o+ +.*+|
| ..o = *=.|
| .Bo o|
| ++ + |
| . o .|
+----[SHA256]-----+
tom@tom-VirtualBox:~$


Activities
Terminal
Aug 10 16:40
tom@tom-VirtualBox: ~
Enter passphrase (empty for no passphrase):
Enter same passphrase again:
Your identification has been saved in /home/tom/.ssh/id_rsa
Your public key has been saved in /home/tom/.ssh/id_rsa.pub
The key fingerprint is:
SHA256:RtojUmlQAfH6o7uqj/M5p1iMZkyiHKj1UrAI9Q8rHnA tomjosephmanoj@domain.com
The key's randomart image is:
+---[RSA 4096]----+
| . ++o. |
| . . o . |
|o E o = . |
|o+ o B + |
|+o= = + S |
|B=.= o o . |
|+== . o |
|++.o.. . |
|+=*=+o |
+----[SHA256]-----+
tom@tom-VirtualBox:~$ ls ~/.ssh/id_*
/home/tom/.ssh/id_rsa /home/tom/.ssh/id_rsa.pub
tom@tom-VirtualBox:~$ ssh-copy-id mca@192/168.9.91
/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: ERROR: ssh: Could not resolve hostname 192/168.9.91: Name or service not known
tom@tom-VirtualBox:~$ ssh-copy-id mca@192.168.9.91