

Day - 1

# Linux Commands

ls

-t →

sort Based on time  
long listing format

-l →

-g →

Show the size of each file

-h →

human readable

-a →

all the files

In Unix-based file systems, each file or directory is represented by an inode, which contains information about the file or directory, such as its owner, permissions, creation and modification timestamps, and the location of its data blocks on the file system. The inode number is a unique identifier that is assigned to each inode on the file system. The inode number allows the operating system to quickly access and manipulate the file or directory without having to search for it by name.

$ls -l$   
It will list  
all the files  
with their inode  
number

du (disk usage)

-s → Size of each directory or file


-h → human readable

# du and ls One difference

→ du will give the size of the directory along with the size of directories that are present inside that, but not ls.

- `pwd` → Present working directory
- `who am i` → current user that is logged in
- `mkdir` → used to create a new directory
- `touch` → used to create a file
- `free` → tell how much RAM, swap memory is in used or free.

In the context of the output of the free command in Linux, "swap memory" refers to the portion of the system's virtual memory that is stored on the hard disk. When the system runs out of physical memory (RAM) to store the data that is required by the running programs, the kernel moves some of the least-used data from the RAM to the hard disk to free up space in the RAM. This process is called "paging" or "swapping", and the space on the hard disk that is used to store the data is called "swap space" or "swap memory".



Swap  
memory

Cp ↳ copy the file to the destination

Cp [option] source destination

-r → for directories

-i → interactive

-f → force



mv

↳ also used to rename the file.

• mv [options]

source destination

↓  
-i (interactive)

-f (force)

`rm` → used to remove files or dir

`ps` → What all processes are running  
with their process id.

`kill` → used to kill any process.

- Learn Grep command ✓
- Explore Rtop. ✓
- SSH - Keygen ✓
- Create a bash script which will call to flipkart API and fetch the product details.

TODO

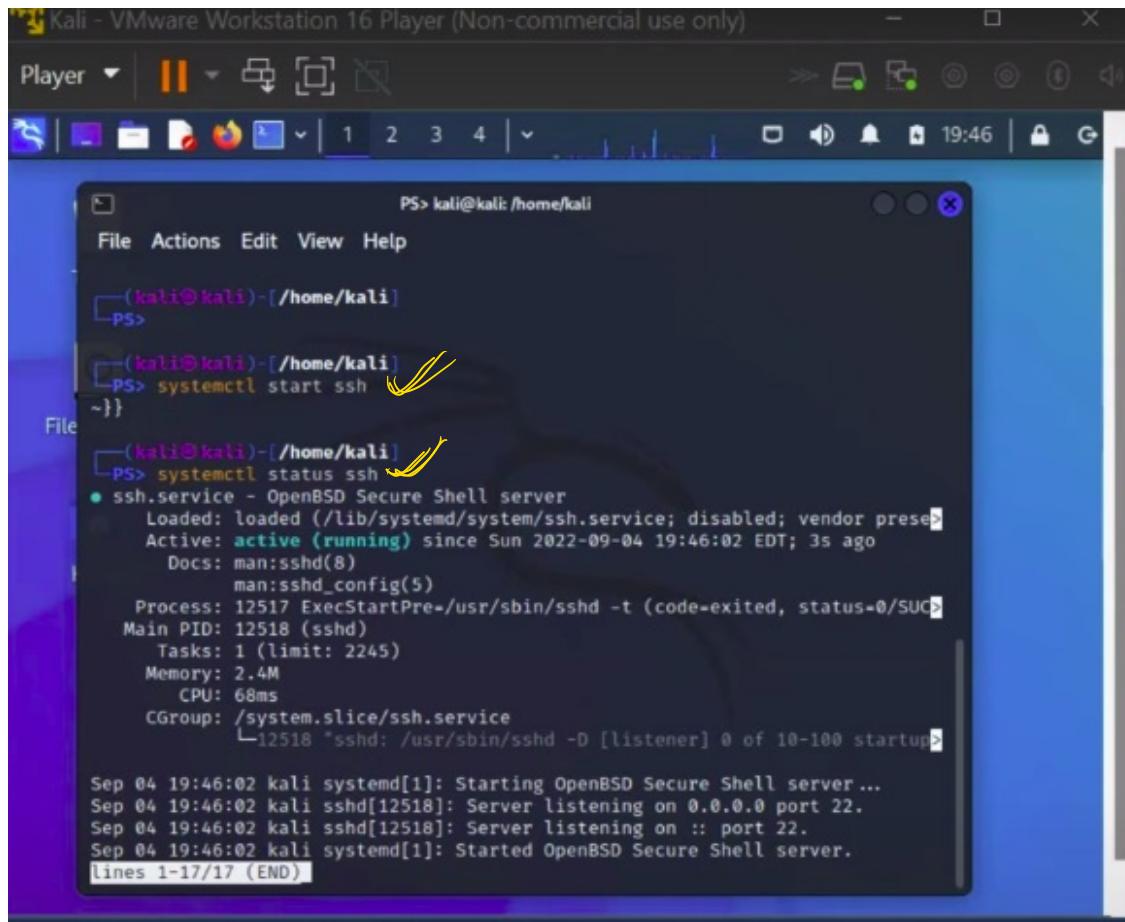
Day 2

for SSH watch those videos.

part1 : <https://www.youtube.com/watch?v=Ei3nU-fHI6E>

part2 : <https://www.youtube.com/watch?v=S1a7RmqeZ5E>

All about ssh  
[ Accessing another Linux server using ssh



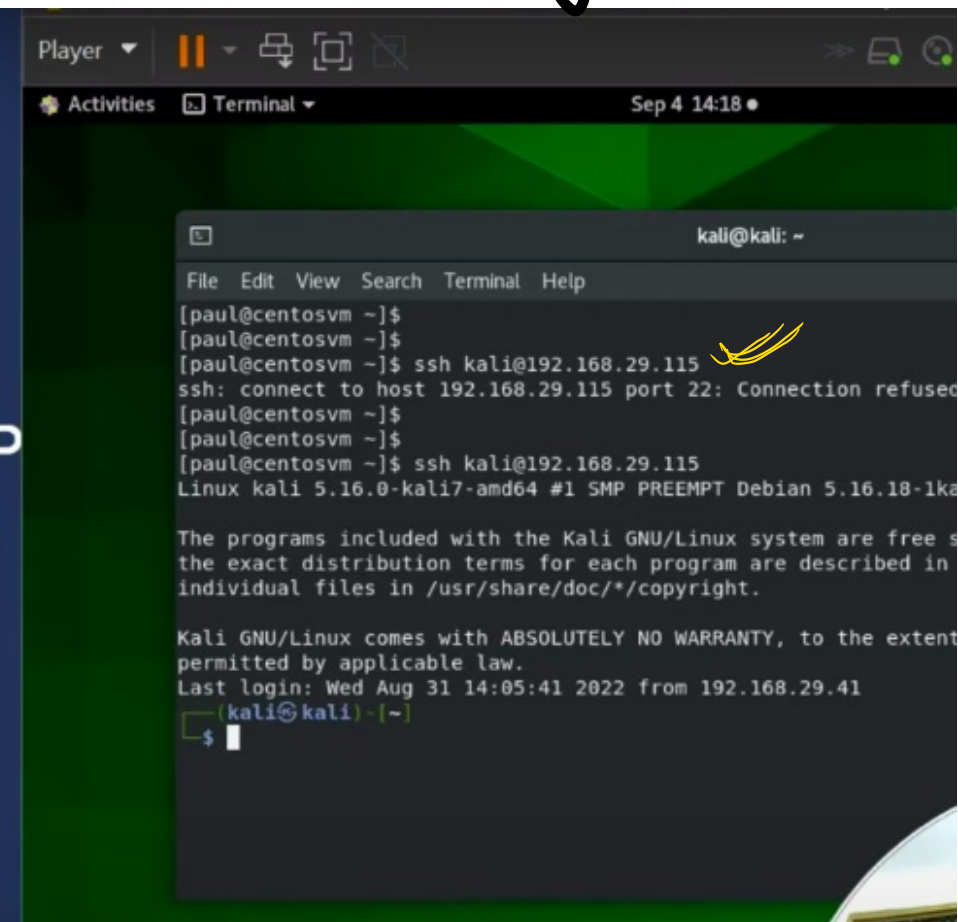
```
PS> kali@kali: /home/kali
File Actions Edit View Help

(kali@kali)-[/home/kali]
PS> systemctl start ssh

(kali@kali)-[/home/kali]
PS> systemctl status ssh

● ssh.service - OpenBSD Secure Shell server
   Loaded: loaded (/lib/systemd/system/ssh.service; disabled; vendor prese
   Active: active (running) since Sun 2022-09-04 19:46:02 EDT; 3s ago
     Docs: man:sshd(8)
           man:sshd_config(5)
   Process: 12517 ExecStartPre=/usr/sbin/sshd -t (code=exited, status=0/SUC
 Main PID: 12518 (sshd)
    Tasks: 1 (limit: 2245)
   Memory: 2.4M
      CPU: 68ms
   CGroup: /system.slice/ssh.service
           └─12518 "sshd: /usr/sbin/sshd -D [listener] 0 of 10-100 startup>

Sep 04 19:46:02 kali systemd[1]: Starting OpenBSD Secure Shell server ...
Sep 04 19:46:02 kali sshd[12518]: Server listening on 0.0.0.0 port 22.
Sep 04 19:46:02 kali sshd[12518]: Server listening on :: port 22.
Sep 04 19:46:02 kali systemd[1]: Started OpenBSD Secure Shell server.
lines 1-17/17 (END)
```



```
Player  ||  [ ]  [ ]
Activities Terminal Sep 4 14:18 •

kali@kali: ~
File Edit View Search Terminal Help

[paul@centosvm ~]$
[paul@centosvm ~]$
[paul@centosvm ~]$ ssh kali@192.168.29.115
ssh: connect to host 192.168.29.115 port 22: Connection refused
[paul@centosvm ~]$
[paul@centosvm ~]$
[paul@centosvm ~]$ ssh kali@192.168.29.115
Linux kali 5.16.0-kali7-amd64 #1 SMP PREEMPT Debian 5.16.18-1ka

The programs included with the Kali GNU/Linux system are free s
the exact distribution terms for each program are described in
individual files in /usr/share/doc/*/copyright.

Kali GNU/Linux comes with ABSOLUTELY NO WARRANTY, to the extent
permitted by applicable law.
Last login: Wed Aug 31 14:05:41 2022 from 192.168.29.41
(kali@kali)-[~]
$
```

## Extra things Needed 6-8

- putty → sudo apt install putty ✓
- ifconfig → sudo apt install net-tools ✓  
(give the ip address of the machine)
- ssh → sudo apt install ssh ✓
- Enable ssh → systemctl status sshd. ✓

# How to access remote server without password?

## Follow the steps below

- ✓ 1. Generate A New SSH Key Pair on Local Machine.
- ✓ 2. Copy Public Key to Remote Machine.
- ✓ 3. Login to Remote Server without password

Step 2  
SSH-keygen

ssh-keygen -b 4096

Step 2  
SSH-copy-id

ssh-copy-id

username@ip\_address

→ Copying the public  
SSH key to  
remote server

Step 3  
ssh user@ip.add.  
↳ login



add a user

↳ sudo adduser username.

USER

delete a user

↳ sudo userdel -r username.

switch user

↳ su username.

see all the users

↳ cat -d : /etc/passwd

add a group

↳ sudo groupadd groupname

delete a group

↳ sudo groupdel groupname

List all groups

↳ cat /etc/group

# GROUP

add user to group

↳ sudo usermod -aG groupname  
username

remove user from group

↳ sudo gpasswd -d username  
groupname

List groups for a specific  
user → groups username

(r mod

(r mod u + r w x file name

g + r w

o - x . . . .

- r → recursively

(r mod 7 7 7 file name

7 → 7 7 7

(hown

→ (hown [options] owner : group file name

-R recursively.