

25. Study of Various Commands Used In Linux and Windows.

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Experiment 1 :-

1. arp -a :

- gateway (10.0.0.2) at 52:54:00:12:35:02  
[ether] on enp0s3.

2. hostname :

localhost-live

3. ifconfig :

enp0s3: flags=1163 <UP,BROADCAST,RUNNING,MULTICAST>  
mtu 1500 qdisc mq netdev 10.0.2.15 netmask 255.255.255.0  
broadcast 10.0.2.255.

lo : flags=73 <UP,LOOPBACK,RUNNING> mtu 65536  
inet 127.0.0.1 netmask 255.0.0.0

4. nmblookup -A 192.168.1.1 :

looking up for status of 192.168.1.1  
no reply from 192.168.1.1.

netstat :

Active Internet Connection (wlio Services).

Proto	Recv-Q	Send-Q	local address	Foreign Address	State
tcp	0	0	localhost-live : 58446	166.186.17.34 bc.https	Established
tcp	0	0	localhost-live : 43492	104.18.32.113.https	Established

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6. nslookup google.com :
- Server : 127.0.0.1  
Address : 127.0.0.1#53.
- Non-authoritative answer :
- Name : google.com  
Address : 216.58.203.46.
7. ping google.com :
- 64 bytes from hkg12s10-in-f46.1el0n.net (216.58.203.46) : icmp\_seq=1 ttl=59 time=0ms
8. Route :
- | Destination | Gateway | Genmask | Flags | Metric | Ref | Use | Iface |
|-------------|---------|---------|-------|--------|-----|-----|-------|
| default     | gateway | 0.0.0.0 | UG    | 100    | 0   | 0   | eno3  |
- Linux.
10. ip address show :
- wlp3s0: <NO-CARRIER, BROADCAST, MULTICAST, UP> mtu 1500 qdisc noqueue state DOWN group default qlen 1000 link ether 00:55:f1:87:9e:dd brd ff:ff:ff:ff:ff:ff
2. ip address add 192.168.1.254/24 dev ens03 :
- RTNETLINK answers: Operation not permitted

3. To delete an IP on an interface:

ip address del 192.168.1.254/24 dev eth0:30:

4. To alter the status of the interface by bringing

the interface eth0 online and offline

online:-

ip link set eth0 up

offline:-

ip link set eth0 down.

5. Alter the status by enabling promiscuous mode of eth0:

ip link set eth0 promisc on.

6. Add a default route:

ip route add default via 192.168.1.254 dev eth0

7. Add a route:

ip route add 192.168.1.0/24 via 192.168.1.254.

8. Display the route:

ip route get 10.10.1.4.

9. mtr:

Hosts	Packets			Pings		
	Loss	Sent	Last	Avg	Best	Worst
192.168.1.1	0.0%	57	0.1	0.1	0.1	0.2
					0.0	0.0

10. Show numeric IP address

mtr -b google.com

11. Set the number of ports :  
mtr -c 10 google.com

12. tcptdump -d  
obj install -y tcptcpdump.

① tcptcpdump -i enp0s3  
Verbosity output suppressed, use -v[v]... for  
full protocol details  
Listening on enp0s3, link-type EN10MB(Ethernet),  
Snapshot length 262144 bytes.

16:32:18.655388 ARD request who has 192.168.4.12 tell-  
② tcptcpdump -i enp0s3 host 8.8.8.8. gateway length

dropped packets to tcptcpdump

tcptcpdump : Verbosity output suppressed, use -v[v]... for  
full protocol.  
^C

0 packet captured

0 packet received by filter.

0 packet dropped by Kernel.

③ tcptcpdump -i enp0s3 -c

dropped packets to tcptcpdump

tcptcpdump : Verbosity output suppressed, use -v[v]... for  
full protocol details

16:33:19.629767 IP localhost -> 192.0.4.7

MAC00593-81-f3.1e100.n

HTTP

flags [P], seq 4162835473, ack 4162835510, dck

26699339727, win 501 option [nop,nop,TS val

19933689, 36 ack 3471518263], length 39

3 packet captured

3 packet received on filter.

o packet dropped by kernel.

(ii) `tcpdump -i enp0s3 host google.com and port 43.`  
dropped prevs to tcpdump

tcpdump : verbose output suppressed, use `-vvv` for full protocol details

Listening on enp0s3, link type EN10MB snapshot length  
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Using nmcli :-

① \$nmcli connection show

Name	Device	UUID	Type
Wire1	Wireless	C9ff3198-1003-4607-a633-62fcc415e700	802-11

② \$nmcli connection add con-name enp0s3 type ethernet  
connection Cenp0s3 Successfully added.

③ \$ ip address show enp0s3

2 : enp0s3: <BROADCAST, MULTICAST, PROMISC, UP,  
LOWER-UP> mtu 1500 qdisc fq-codel state UP group  
default qlen 1000 link layer 08:00:27:1f:01:65 brd  
ff:ff:ff:ff:ff:ff

④ \$ ip route show default

default via 192.168.137.1 dev enp0s3 proto dhcp  
src 192.168.137.92 metric 1000

⑤ \$ cat /etc/resolv.conf

nameserver 127.0.0.53  
option edns0 trust-ad  
search msthome.net

Result :- ~~The study of various commands in Linux and windows are successfully completed.~~