

EXP.NO:1B

30.7.2024

# Linux commands

```
Aug 6 13:56
student@kali: ~
$ arp -a
? (172.16.52.166) at 88:ae:dd:15:ed:2b [ether] on eth0
? (172.16.52.167) at 7c:5b:1c:ef:be:3e [ether] on eth0
? (172.16.52.150) at 88:ae:dd:15:ef:bc [ether] on eth0
? (172.16.52.142) at 1c:69:7a:ff:53:3d [ether] on eth0
? (172.16.52.179) at 88:ae:dd:15:eb:a0 [ether] on eth0
? (172.16.52.167) at 88:ae:dd:15:ed:47 [ether] on eth0
? (172.16.52.151) at 88:ae:dd:15:ee:1e [ether] on eth0
? (172.16.52.143) at 88:ae:dd:15:ed:c6 [ether] on eth0
? (172.16.52.168) at 88:ae:dd:15:ee:2a [ether] on eth0
? (172.16.53.105) at 88:ae:dd:14:72:38 [ether] on eth0
? (172.16.53.55) at 88:ae:dd:15:ed:5d [ether] on eth0
? (172.16.52.144) at 88:ae:dd:15:ee:a9 [ether] on eth0
? (172.16.52.169) at 88:ae:dd:15:ed:ec [ether] on eth0
? (172.16.52.171) at 88:ae:dd:15:eb:ab [ether] on eth0
? (172.16.52.103) at 88:ae:dd:15:ee:27 [ether] on eth0
? (172.16.52.180) at 88:ae:dd:15:ed:8d [ether] on eth0
? (172.16.52.161) at 88:ae:dd:12:e2:91 [ether] on eth0
? (172.16.52.153) at 88:ae:dd:15:ed:7c [ether] on eth0
? (172.16.53.180) at 88:ae:dd:15:ed:cd [ether] on eth0
? (172.16.52.145) at 88:ae:dd:15:ed:91 [ether] on eth0
? (172.16.52.119) at 88:ae:dd:15:ee:9c [ether] on eth0
? (172.16.53.73) at 88:ae:dd:15:ed:18 [ether] on eth0
? (172.16.53.115) at 88:ae:dd:15:ee:1c [ether] on eth0
? (172.16.52.146) at 88:ae:dd:12:7e:13 [ether] on eth0
? (172.16.52.171) at 88:ae:dd:15:ee:38 [ether] on eth0
? (172.16.52.72) at c8:d3:ff:0d:1e:2d [ether] on eth0
? (172.16.52.196) at 2c:76:8a:04:a3:d7 [ether] on eth0
? (172.16.53.190) at 88:ae:dd:15:ee:a3 [ether] on eth0
? (172.16.53.102) at 88:ae:dd:15:ef:0b [ether] on eth0
? (172.16.52.147) at 88:ae:dd:15:ef:17 [ether] on eth0
? (172.16.52.172) at 88:ae:dd:15:eb:cc [ether] on eth0
? (172.16.53.207) at 04:2d:7e:c7:ab:c5 [ether] on eth0
? (172.16.52.106) at 88:ae:dd:15:ee:a8 [ether] on eth0
? (172.16.52.164) at 88:ae:dd:15:ee:62 [ether] on eth0
? (172.16.53.249) at 88:ae:dd:15:ee:5b [ether] on eth0
? (172.16.53.148) at 88:ae:dd:15:ee:1a [ether] on eth0
? (172.16.52.173) at 88:ae:dd:15:ed:f3 [ether] on eth0
? (172.16.53.68) at 88:ae:dd:15:ee:5e [ether] on eth0
? (172.16.52.165) at 88:ae:dd:14:6d:f6 [ether] on eth0
? (172.16.52.149) at 88:ae:dd:15:ed:c7 [ether] on eth0
? (172.16.52.108) at 88:ae:dd:15:ee:34 [ether] on eth0
? (172.16.52.141) at 88:ae:dd:15:ed:ca [ether] on eth0
student@kali: ~
```

```
(student@kali)-[~]
$ hostname
kali

(student@kali)-[~]
$ ipconfig /all
Command 'ipconfig' not found, did you mean:
  command 'iwconfig' from deb wireless-tools
  command 'hipconfig' from deb hipcc
  command 'ifconfig' from deb net-tools
  command 'iconfig' from deb ipmiutil
Try: sudo apt install <deb name>
```

EXP.NO:1B

30.7.2024

```
student@kali: ~  
$ netstat  
Active Internet connections (w/o servers)  
Proto Recv-Q Send-Q Local Address           Foreign Address         State  
tcp        0      0 kali:55594             93.243.107.34.bc.:https ESTABLISHED  
tcp        0      0 kali:52302             maa05s20-in-f5.1e:https ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.142:57226     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.171:46808     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.172:41444     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.148:53856     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.166:43218     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.164:51924     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.145:41456     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.168:44144     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.175:46438     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.149:57886     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.170:40720     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.150:35562     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.146:38238     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.151:39120     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.141:59982     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.169:37584     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.144:36528     ESTABLISHED  
tcp6       0      0 172.16.52.152:35034    172.16.52.162:1716     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.173:39308     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.147:59646     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.165:52082     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.153:39906     ESTABLISHED  
tcp6       0      0 172.16.52.152:1716     172.16.52.143:53538     ESTABLISHED  
Active UNIX domain sockets (w/o servers)  
Proto RefCnt Flags               Type           State         I-Node  Path  
unix    3      [ ]                   STREAM         CONNECTED    18883  
unix    2      [ ]                   DGRAM          CONNECTED    15065
```

```
(student@kali)-[~]  
$ nslookup www.google.com  
Server: 172.16.52.1  
Address: 172.16.52.1#53  
  
Non-authoritative answer:  
Name: www.google.com  
Address: 142.250.182.4  
Name: www.google.com  
Address: 2404:6800:4007:819::2004
```

EXP.NO:1B

30.7.2024

```
(student@kali)-[~]
└─$ ping www.google.com
PING www.google.com (142.250.182.4) 56(84) bytes of data:
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=1 ttl=120 time=3.47 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=2 ttl=120 time=3.93 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=3 ttl=120 time=3.77 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=4 ttl=120 time=3.57 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=5 ttl=120 time=3.67 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=6 ttl=120 time=3.55 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=7 ttl=120 time=3.68 ms
64 bytes from maa05s18-in-f4.1e100.net (142.250.182.4): icmp_seq=8 ttl=120 time=3.94 ms
^C
--- www.google.com ping statistics ---
8 packets transmitted, 8 received, 0% packet loss, time 7013ms
rtt min/avg/max/mdev = 3.468/3.696/3.939/0.161 ms
```

```
(student@kali)-[~]
└─$ ifconfig
eth0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.52.152 netmask 255.255.252.0 broadcast 172.16.55.255
    inet6 fe80::8aae:ddff:fe15:db24 prefixlen 64 scopeid 0x20<link>
    ether 88:ae:dd:15:db:24 txqueuelen 1000 (Ethernet)
    RX packets 100941 bytes 67340498 (64.2 MiB)
    RX errors 0 dropped 2214 overruns 0 frame 0
    TX packets 38235 bytes 10458587 (9.9 MiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
    inet 127.0.0.1 netmask 255.0.0.0
    inet6 ::1 prefixlen 128 scopeid 0x10<host>
    loop txqueuelen 1000 (Local Loopback)
    RX packets 25 bytes 1520 (1.4 KiB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 25 bytes 1520 (1.4 KiB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

EXP.NO:1B

30.7.2024

The screenshot shows a Kali Linux desktop environment. At the top, there are tabs for 'Apps' and 'Places'. Below them is a terminal window with the following content:

```
lo: flags=73<UP,LOOPBACK,RUNNING> mtu 65536
```

Overlaid on the terminal is a window titled 'Mytraceroute'. It has a 'Hostname' field set to 'google.com', a '1.00' value, and buttons for '+', 'Pause', 'Restart', 'About', and 'Quit'. Below these is a table showing the results of a traceroute to google.com:

Hostname	Loss	Snt	Last	Avg	Best	Worst	StDev
_gateway	0.0%	29	0	0	0	1	0.27
static-41.229.249.49-tataidc.co.in	0.0%	29	77	10	2	83	23.12
142.250.171.162	0.0%	29	2	3	2	14	2.83
142.251.227.217	0.0%	29	4	9	3	51	11.89
142.251.55.223	0.0%	28	2	3	2	14	2.29
maa05s24-in-f14.1e100.net	0.0%	28	3	4	2	18	3.50

Below the table, the terminal window shows the installation of mtr:

```
sudo apt install mtr-tiny
(student@kali)-[~]
$ sudo apt install mtr
Installing:
mtr

Summary:
Upgrading: 0, Installing: 1, Removing: 0, Not Upgrading: 885
Download size: 83.4 kB
Space needed: 215 kB / 111 GB available

Get:1 http://http.kali.org/kali kali-rolling/main amd64 mtr amd64 0.95-1.1+b1 [83.4 kB]
Fetched 83.4 kB in 1s (125 kB/s)
Selecting previously unselected package mtr.
(Reading database ... 498213 files and directories currently installed.)
Preparing to unpack .../mtr_0.95-1.1+b1_amd64.deb ...
Unpacking mtr (0.95-1.1+b1) ...
Setting up mtr (0.95-1.1+b1) ...
Processing triggers for man-db (2.12.1-1) ...
Processing triggers for kali-menu (2023.4.7) ...

(student@kali)-[~]
$
(student@kali)-[~]
$ mtr google.com
```

At the bottom right, there is a dock with icons for a terminal, a folder, a document, and a web browser.

EXP.NO:1B

30.7.2024

```
(student@kali)-[~]
$ ip address show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN group default qlen 1000
    link/loopback 00:00:00:00:00:00 brd 00:00:00:00:00:00
    inet 127.0.0.1/8 scope host lo
        valid_lft forever preferred_lft forever
    inet6 ::1/128 scope host noprefixroute
        valid_lft forever preferred_lft forever
2: eth0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
    link/ether 88:ae:dd:15:db:24 brd ff:ff:ff:ff:ff:ff
    inet 172.16.52.152/22 brd 172.16.55.255 scope global noprefixroute eth0
        valid_lft forever preferred_lft forever
    inet6 fe80::8aae:ddff:fe15:db24/64 scope link noprefixroute
        valid_lft forever preferred_lft forever

(student@kali)-[~]
$
```