



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

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Data Communication & Computer Networks (CS302)

## **Lab Task 01/08/2022**

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# 1 ifconfig

**Definition - ifconfig** stands for "interface configuration." It is used to view and change the configuration of the network interfaces on your system.

**Syntax -**

```
$ ifconfig
```

**Screenshot -**

```
paras@parascoding:~$ ifconfig
enp1s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.18.221 netmask 255.255.248.0 broadcast 172.16.23.255
    inet6 fe80::4f4d:162b:b433:76e4 prefixlen 64 scopeid 0x20<link>
    ether 98:e7:43:2f:88:49 txqueuelen 1000 (Ethernet)
    RX packets 49008924 bytes 24428116080 (24.4 GB)
    RX errors 0 dropped 328569 overruns 0 frame 0
    TX packets 8806974 bytes 1927915001 (1.9 GB)
    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 395263 bytes 48379495 (48.3 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 395263 bytes 48379495 (48.3 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

wlp2s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 10.42.0.1 netmask 255.255.255.0 broadcast 10.42.0.255
    inet6 fe80::63df:fe5f:1543:19b5 prefixlen 64 scopeid 0x20<link>
    ether 40:5b:d8:4f:2f:05 txqueuelen 1000 (Ethernet)
    RX packets 6664928 bytes 1671523481 (1.6 GB)
    RX errors 0 dropped 3460 overruns 0 frame 0
    TX packets 14142079 bytes 16839294723 (16.8 GB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

paras@parascoding:~$
```

**Other Variations**

```
paras@parascoding:~$ ifconfig enp1s0
enp1s0: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 172.16.18.221 netmask 255.255.248.0 broadcast 172.16.23.255
    inet6 fe80::4f4d:162b:b433:76e4 prefixlen 64 scopeid 0x20<link>
    ether 98:e7:43:2f:88:49 txqueuelen 1000 (Ethernet)
    RX packets 49041847 bytes 24450167364 (24.4 GB)
    RX errors 0 dropped 328797 overruns 0 frame 0
    TX packets 8817542 bytes 1929021450 (1.9 GB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

• paras@parascoding:~\$

```
paras@parascoding:~$ ifconfig lo
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 395438 bytes 48407938 (48.4 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 395438 bytes 48407938 (48.4 MB)
    TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0
```

• paras@parascoding:~\$

## 2 ip

**Definition -** This is the latest and updated version of ifconfig command.

**Syntax -**

```
$ ip a
$ ip addr
```

**Screenshots -**

- ```

paras@parascoding:~$ ip a
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
       valid_lft forever preferred_lft forever
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
   link/ether 98:e7:43:2f:88:49 brd ff:ff:ff:ff:ff:ff
   inet 172.16.18.221/21 brd 172.16.23.255 scope global dynamic noprefixroute enp1s0
       valid_lft 84494sec preferred_lft 84494sec
   inet6 fe80::4f4d:162b:b433:76e4/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
3: wlp2s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc noqueue state UP group default qlen 1000
   link/ether 40:5b:d8:4f:2f:05 brd ff:ff:ff:ff:ff:ff
   inet 10.42.0.1/24 brd 10.42.0.255 scope global noprefixroute wlp2s0
       valid_lft forever preferred_lft forever
   inet6 fe80::63df:fe5f:1543:19b5/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
paras@parascoding:~$

```
- ```

paras@parascoding:~$ ip a show enp1s0
2: enp1s0: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc fq_codel state UP group default qlen 1000
   link/ether 98:e7:43:2f:88:49 brd ff:ff:ff:ff:ff:ff
   inet 172.16.18.221/21 brd 172.16.23.255 scope global dynamic noprefixroute enp1s0
       valid_lft 84452sec preferred_lft 84452sec
   inet6 fe80::4f4d:162b:b433:76e4/64 scope link noprefixroute
       valid_lft forever preferred_lft forever
paras@parascoding:~$

```

### 3 traceroute

**Definition** - Linux traceroute is one of the most useful commands in networking. It is used to troubleshoot the network. It detects the delay and determines the pathway to your target. It basically helps in the following ways:

- It provides the names and identifies every device on the path.
- It follows the route to the destination
- It determines where the network latency comes from and reports it.

#### Syntax -

```
$ traceroute <detination>
```

#### Screenshots

```
paras@parascoding:~$ traceroute www.iiitk.ac.in
traceroute to www.iiitk.ac.in (173.236.185.145), 64 hops max
 1  117.200.53.210  21.656ms  22.069ms  24.900ms
 2  * * *
 3  * * *
 4  103.87.125.29  61.791ms  *  51.739ms
 5  103.87.124.93  309.878ms  *  270.914ms
 6  103.87.124.146  275.480ms  284.277ms  *
 7  * * *
 8  154.54.76.217  261.232ms  263.219ms  254.318ms
 9  154.54.56.125  256.016ms  258.365ms  254.674ms
10  154.54.85.245  241.534ms  246.917ms  235.114ms
11  154.54.47.166  285.022ms  257.085ms  240.442ms
12  154.54.25.226  233.440ms  241.061ms  245.859ms
13  38.122.62.254  262.720ms  253.714ms  257.201ms
14  208.113.156.208  254.199ms  240.215ms  247.841ms
15  * * *
16  * * *
17  * * *
18  * * *
19  * * ^C
```

```
paras@parascoding:~$ traceroute google.com
traceroute to google.com (142.250.72.142), 64 hops max
 1  117.200.53.210  15.941ms  8.740ms  3.496ms
 2  * * 117.216.207.223  51.691ms
 3  * * *
 4  72.14.218.250  41.433ms  48.234ms  57.514ms
 5  * * *
 6  108.170.253.97  16.282ms  23.531ms  16.307ms
 7  74.125.242.130  29.590ms  66.665ms  54.498ms
 8  142.251.244.99  97.661ms  146.613ms  88.210ms
 9  172.253.51.110  129.083ms  129.372ms  125.291ms
10  142.250.213.211  211.803ms  236.587ms  218.809ms
11  108.170.230.120  243.661ms  240.191ms  238.534ms
12  108.170.247.193  231.530ms  226.227ms  220.652ms
13  142.251.60.111  229.668ms  222.350ms  222.032ms
14  * ^C
paras@parascoding:~$
```

## 4 tracepath

**Definition -** Linux tracepath is similar to traceroute command. It is used to detect network delays. However, it doesn't require root privileges

**Syntax -**

```
$ tracepath <destination>
```

**Screenshots -**

```
paras@parascoding:~$ tracepath google.com
1?: [LOCALHOST] pmtu 1500
1: ??? 6.823ms
1: ^C

paras@parascoding:~$ traceroute iitk.ac.in
traceroute to iitk.ac.in (173.236.185.145), 64 hops max
 1 117.200.53.210 16.806ms 15.599ms *
 2 * 117.216.207.223 61.119ms 57.339ms
^C

paras@parascoding:~$ traceroute localhost
traceroute to localhost (127.0.0.1), 64 hops max
 1 127.0.0.1 0.005ms 0.002ms 0.001ms
```

## 5 ping

**Definition -**

Linux ping is one of the most used network troubleshooting commands. It basically checks for the network connectivity between two nodes.

Ping stands for Packet INternet Groper.

The ping command sends the ICMP echo request to check the network connectivity. It keeps executing until it is interrupted. Use Ctrl+C Key to interrupt the execution.

**Syntax -**

```
$ ping <destination>
```

**Screenshots -**

```
paras@parascoding:~$ ping iitk.ac.in
PING iitk.ac.in (173.236.185.145) 56(84) bytes of data.
64 bytes from apache2-yak.warehouse.dreamhost.com (173.236.185.145): icmp_seq=1
ttl=50 time=278 ms
64 bytes from apache2-yak.warehouse.dreamhost.com (173.236.185.145): icmp_seq=2
ttl=50 time=277 ms
64 bytes from apache2-yak.warehouse.dreamhost.com (173.236.185.145): icmp_seq=3
ttl=50 time=301 ms
64 bytes from apache2-yak.warehouse.dreamhost.com (173.236.185.145): icmp_seq=5
ttl=50 time=265 ms
64 bytes from apache2-yak.warehouse.dreamhost.com (173.236.185.145): icmp_seq=7
ttl=50 time=278 ms
64 bytes from apache2-yak.warehouse.dreamhost.com (173.236.185.145): icmp_seq=8
ttl=50 time=279 ms
^C
--- iitk.ac.in ping statistics ---
8 packets transmitted, 6 received, 25% packet loss, time 7029ms
rtt min/avg/max/mdev = 265.067/279.646/300.713/10.566 ms
paras@parascoding:~$
```

```

paras@parascoding:~$ ping -c 5 -s 1 google.com
PING google.com (142.250.189.14) 1(29) bytes of data.
9 bytes from lax31s16-in-f14.1e100.net (142.250.189.14): icmp_seq=1 ttl=60
9 bytes from lax31s16-in-f14.1e100.net (142.250.189.14): icmp_seq=2 ttl=60
9 bytes from lax31s16-in-f14.1e100.net (142.250.189.14): icmp_seq=3 ttl=60
9 bytes from lax31s16-in-f14.1e100.net (142.250.189.14): icmp_seq=4 ttl=60
9 bytes from lax31s16-in-f14.1e100.net (142.250.189.14): icmp_seq=5 ttl=60

--- google.com ping statistics ---
5 packets transmitted, 5 received, 0% packet loss, time 4004ms

```

- paras@parascoding:~\$

## 6 netstat

### Definition -

Linux netstat command refers to the network statistics. It provides statistical figures about different interfaces which include open sockets, routing tables, and connection information.

### Syntax -

### Screenshots -

```

paras@parascoding:~$ netstat -p
(Not all processes could be identified, non-owned process info
 will not be shown, you would have to be root to see it all.)
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
PID/Program name
tcp        0      0 parascoding:55936       64.52.120.34.bc.g:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:39538       a29-04-02-vip.rec:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:54136       n30-03-09-vip.lb.:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:55934       64.52.120.34.bc.g:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:45466       maa05s16-in-f5.1e:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:39536       a29-04-02-vip.rec:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:54138       n30-03-09-vip.lb.:https ESTABLISHED
1410581/opera-beta
tcp        0      0 parascoding:45464       maa05s16-in-f5.1e:https ESTABLISHED

```

- 

```

paras@parascoding:~$ netstat -s
Ip:
  Forwarding: 1
 38934725 total packets received
 44 with invalid headers
 77 with invalid addresses
20709707 forwarded
 3037 with unknown protocol
 0 incoming packets discarded
16724620 incoming packets delivered
24326891 requests sent out
 220 outgoing packets dropped
 978 dropped because of missing route
 747 fragments dropped after timeout
147547 reassemblies required
 72665 packets reassembled ok
 747 packet reassemblies failed
22194 fragments received ok
44489 fragments created
Icmp:
 33153 ICMP messages received
1893 input ICMP message failed

```

-

```

paras@parascoding:~$ netstat -r
Kernel IP routing table
Destination        Gateway           Genmask          Flags   MSS Window  irtt Iface
default            172.16.16.1      0.0.0.0          UG      0 0        0 enp1s0
10.42.0.0          0.0.0.0          255.255.255.0    U        0 0        0 wlp2s0
link-local         0.0.0.0          255.255.0.0      U        0 0        0 enp1s0
172.16.16.0        0.0.0.0          255.255.248.0    U        0 0        0 enp1s0

```

## 7 SS

### Definition -

Linux ss command is the replacement for netstat command. It is regarded as a much faster and more informative command than netstat. The faster response of ss is possible as it fetches all the information from within the kernel userspace.

### Syntax -

```

$ ss
$ ss -ta
$ ss -ua

```

### Screenshots -

```

paras@parascoding:~$ ss
Netid State      Recv-Q Send-Q           Local Address:Port
Peer Address:Port           Process
u_seq ESTAB      0      0             * 4235147
@000b9 4235146
u_seq ESTAB      0      0             * 4235149
@000ba 4235148
u_dgr ESTAB      0      0             * 0
/run/systemd/notify 21789
u_dgr ESTAB      0      0             * 0
/run/systemd/journal/dev-log 21813
u_dgr ESTAB      0      0             * 0
/run/systemd/journal/socket 21817
u_str ESTAB      0      0             * 4061575
* 4057040
u_str ESTAB      0      0             * 4241983
* 4241984
u_str ESTAB      0      0             * 4239717
* 4239716
u_str ESTAB      0      0             * 3297388
* 3294945
u_str ESTAB      0      0             /run/user/1000/bus 57456
* 55508
u_str ESTAB      0      0             /run/dbus/system_bus_socket 53336

```



```

35.244.244.136:https
paras@parascoding:~$ ss -ta
State      Recv-Q Send-Q Local Address:Port      Peer Address:Port      Process
LISTEN     0      32      10.42.0.1:domain        0.0.0.0:*
LISTEN     0     4096    127.0.0.53%lo:domain    0.0.0.0:*
LISTEN     0      5       127.0.0.1:ipp           0.0.0.0:*
LISTEN     0     244     127.0.0.1:postgresql   0.0.0.0:*
LISTEN     0      5       127.0.0.1:5054          0.0.0.0:*
ESTAB      0      0       172.16.18.209:37958     34.110.214.126:https
TIME-WAIT  0      0       172.16.18.209:35320     142.250.182.10:https
ESTAB      0      0       172.16.18.209:35698     34.120.73.225:https
ESTAB      0      0       172.16.18.209:55936     34.120.52.64:https
ESTAB      0      0       172.16.18.209:41948     34.117.101.158:https
ESTAB      0      0       172.16.18.209:59380     199.232.93.137:https
CLOSE-WAIT 25     0       172.16.18.209:32940     209.58.131.199:https
ESTAB      0      0       172.16.18.209:40842     142.250.77.176:https
CLOSE-WAIT 25     0       172.16.18.209:32942     209.58.131.199:https
ESTAB      0      0       172.16.18.209:55938     34.120.52.64:https
CLOSE-WAIT 25     0       172.16.18.209:60462     18.65.25.30:https
ESTAB      0      0       172.16.18.209:57570     35.241.10.116:https
ESTAB      0      0       172.16.18.209:51968     35.244.183.250:https
CLOSE-WAIT 25     0       172.16.18.209:32944     209.58.131.199:https
ESTAB      0      0       172.16.18.209:45518     104.16.51.111:https
ESTAB      0      0       172.16.18.209:44258     34.107.204.85:https

paras@parascoding:~$ ss -ua
State      Recv-Q Send-Q Local Address:Port      Peer Address:Port      Process
UNCONN     0      0       0.0.0.0:bootps          0.0.0.0:*
ESTAB      0      0       172.16.18.209%enp1s0:bootpc 172.16.16.1:bootps
UNCONN     0      0       0.0.0.0:631             0.0.0.0:*
UNCONN     0      0       0.0.0.0:35939           0.0.0.0:*
UNCONN     0      0       224.0.0.251:mdns        0.0.0.0:*
UNCONN     0      0       224.0.0.251:mdns        0.0.0.0:*
UNCONN     0      0       0.0.0.0:mdns            0.0.0.0:*
ESTAB      0      0       127.0.0.1:38247          127.0.0.1:38247
UNCONN     0      0       10.42.0.1:domain        0.0.0.0:*
UNCONN     0      0       127.0.0.53%lo:domain    0.0.0.0:*
UNCONN     0      0       *:1716                  *:1716
UNCONN     0      0       [::]:53777              [::]:*
UNCONN     0      0       [::]:mdns               [::]:*
paras@parascoding:~$

```

## 8 dig

### Definition -

Linux dig command stands for Domain Information Groper. This command is used in DNS lookup to query the DNS name server. It is also used to troubleshoot DNS related issues.

It is mainly used to verify DNS mappings, MX Records, host addresses, and all other DNS records for a better understanding of the DNS topography.

### Syntax -

### Screenshot -

```

paras@parascoding:~$ dig iitk.ac.in

; <<>> DiG 9.16.1-Ubuntu <<>> iitk.ac.in
;; global options: +cmd
;; Got answer:
;; ->>HEADER<<- opcode: QUERY, status: NOERROR, id: 4744
;; flags: qr rd ra; QUERY: 1, ANSWER: 1, AUTHORITY: 0, ADDITIONAL: 1

;; OPT PSEUDOSECTION:
; EDNS: version: 0, flags:; udp: 65494
;; QUESTION SECTION:
;iitk.ac.in.                IN      A

;; ANSWER SECTION:
iitk.ac.in.                267     IN      A      173.236.185.145

;; Query time: 0 msec
;; SERVER: 127.0.0.53#53(127.0.0.53)
;; WHEN: Sun Aug 07 13:49:50 IST 2022
;; MSG SIZE rcvd: 56

paras@parascoding:~$ █

```

## 9 nslookup

### Definition -

Linux nslookup is also a command used for DNS related queries. It is the older version of dig.

### Syntax -

### Screenshot -

```

paras@parascoding:~$ nslookup iitk.ac.in
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   iitk.ac.in
Address: 173.236.185.145

paras@parascoding:~$ nslookup google.com
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.182.110
Name:   google.com
Address: 2404:6800:4007:825::200e

paras@parascoding:~$ █

```

## 10 nslookup

### Definition -

Linux nslookup is also a command used for DNS related queries. It is the older version of dig.

**Syntax -****Screenshot -**

```

paras@parascoding:~$ nslookup iitk.ac.in
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   iitk.ac.in
Address: 173.236.185.145

paras@parascoding:~$ nslookup google.com
Server:          127.0.0.53
Address:         127.0.0.53#53

Non-authoritative answer:
Name:   google.com
Address: 142.250.182.110
Name:   google.com
Address: 2404:6800:4007:825::200e

paras@parascoding:~$ █

```

## 11 route

**Definition -**

Linux route command displays and manipulates the routing table existing for your system. A router is basically used to find the best way to send the packets across to a destination.

**Syntax -****Screenshot -**

```

paras@parascoding:~$ route
Kernel IP routing table
Destination Gateway Genmask Flags Metric Ref Use Iface
default _gateway 0.0.0.0 UG 100 0 0 enp1s0
10.42.0.0 0.0.0.0 255.255.255.0 U 600 0 0 wlp2s0
link-local 0.0.0.0 255.255.0.0 U 1000 0 0 enp1s0
172.16.16.0 0.0.0.0 255.255.248.0 U 100 0 0 enp1s0

paras@parascoding:~$ █

```

## 12 host

**Definition -**

Linux host command displays the domain name for a given IP address and IP address for a given hostname. It is also used to fetch DNS lookup for DNS related query. **Syntax**

-

**Screenshot -**

```

paras@parascoding:~$ host iiitk.ac.in
iiitk.ac.in has address 173.236.185.145
iiitk.ac.in mail is handled by 5 ALT2.ASPMX.L.GOOGLE.COM.
iiitk.ac.in mail is handled by 5 ALT1.ASPMX.L.GOOGLE.COM.
iiitk.ac.in mail is handled by 10 ALT4.ASPMX.L.GOOGLE.COM.
iiitk.ac.in mail is handled by 1 ASPMX.L.GOOGLE.COM.
iiitk.ac.in mail is handled by 10 ALT3.ASPMX.L.GOOGLE.COM.
paras@parascoding:~$ host google.com
google.com has address 142.250.68.46
google.com has IPv6 address 2607:f8b0:4007:815::200e
google.com mail is handled by 10 smtp.google.com.
paras@parascoding:~$ host localhost
localhost has address 127.0.0.1
localhost has IPv6 address ::1
paras@parascoding:~$

```

## 13 arp

### Definition -

Linux arp command stands for Address Resolution Protocol. It is used to view and add content to the kernel's ARP table. Linux arp command stands for Address Resolution Protocol. It is used to view and add content to the kernel's ARP table. **Syntax -**

### Screenshot -

```

paras@parascoding:~$ arp
Address HWtype HWaddress Flags Mask Iface
172.16.16.63 ether 64:db:8b:a4:60:e1 C enp1s
0
172.16.16.61 ether fe:f6:0c:30:8e:ed C enp1s
0
172.16.16.42 ether 60:38:e0:d1:2b:8c C enp1s
0
172.16.16.32 (incomplete) enp1s
0
172.16.16.33 (incomplete) enp1s
0
10.42.0.213 ether fc:19:99:ed:1f:88 C wlp2s
0
172.16.16.26 (incomplete) enp1s
0
172.16.16.27 ether b0:7b:25:19:b9:0d C enp1s
0
172.16.16.24 ether e4:54:e8:7a:1f:fb C enp1s
0
172.16.16.25 (incomplete) enp1s
0
172.16.16.30 (incomplete) enp1s

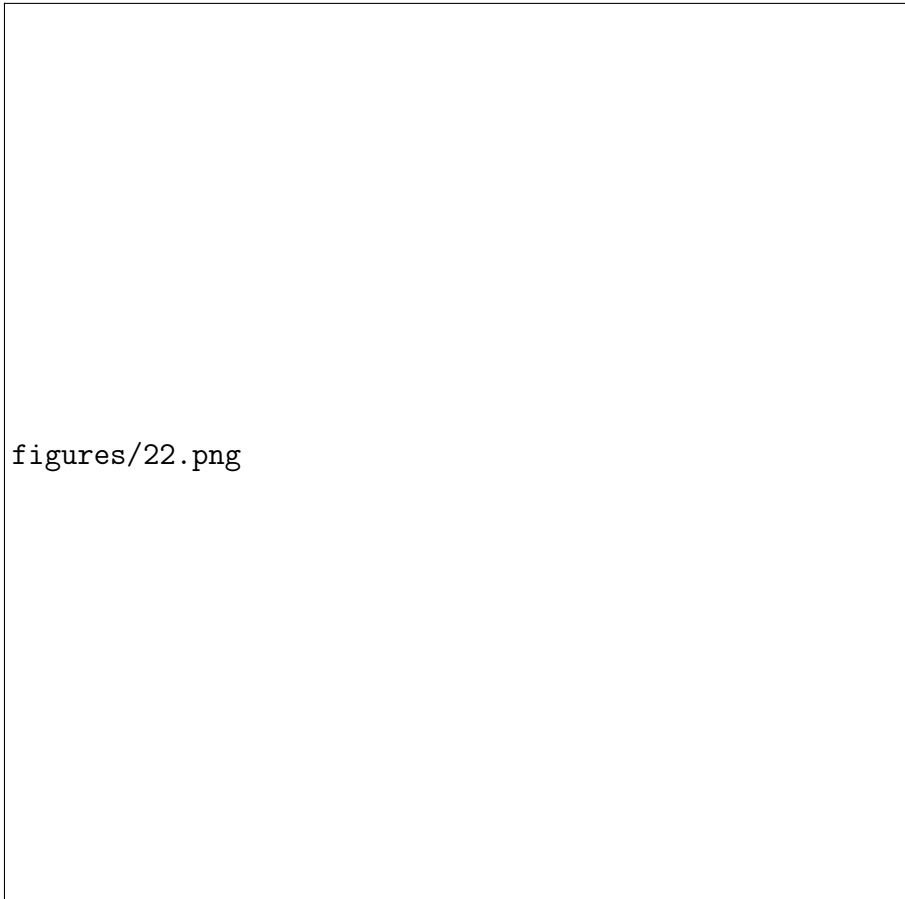
```

## 14 iwconfig

### Definition -

Linux iwconfig is used to configure the wireless network interface. It is used to set and view the basic WI-FI details like SSID and encryption. To know more about this command, refer to the man page. **Syntax -**

### Screenshot -



figures/22.png

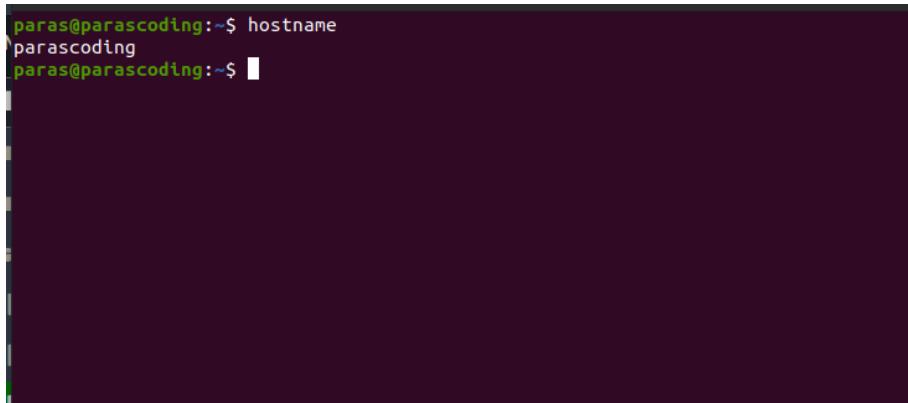
## 15 hostname

### Definition -

Linux hostname is the simple command used to view and set the hostname of a system.

### Syntax -

### Screenshot -



```
paras@parascoding:~$ hostname
parascoding
paras@parascoding:~$
```

## 16 curl

### Definition -

Curl (short for "Client URL") is a command line tool that enables data transfer over various network protocols. It communicates with a web or application server by specifying a relevant URL and the data that need to be sent or received.

### Syntax -

### Screenshot -

```

paras@parascoding:~$ curl -O https://github.com/parascoding/Smart-Contact-Manager/blob/main/src/main/java/com/smart/contactManager/ContactManagerApplication.java
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 156k    0 156k    0    0 35354      0 --:--:--  0:00:04 --:--:-- 39675

paras@parascoding:~$ curl -O https://iiitk.ac.in/images/pages/1629952172.pdf
  % Total    % Received % Xferd  Average Speed   Time    Time     Time  Current
                                 Dload  Upload   Total   Spent    Left   Speed
100 353k 100 353k    0    0 15817      0 0:00:22 0:00:22 --:--:-- 14515

```

## 17 wget

### Definition -

Wget is the non-interactive network downloader which is used to download files from the server even when the user has not logged on to the system and it can work in the background without hindering the current process.

### Syntax -

### Screenshot -

```

paras@parascoding:~$ wget https://iiitk.ac.in/images/pages/1629952172.pdf
--2022-08-07 16:12:12-- https://iiitk.ac.in/images/pages/1629952172.pdf
Resolving iiitk.ac.in (iiitk.ac.in)... 173.236.185.145
Connecting to iiitk.ac.in (iiitk.ac.in)|173.236.185.145|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 361884 (353K) [application/pdf]
Saving to: '1629952172.pdf.1'

1629952172.pdf.1 100%[=====] 353.40K 18.5KB/s in 19s
2022-08-07 16:12:34 (18.8 KB/s) - '1629952172.pdf.1' saved [361884/361884]

paras@parascoding:~$

paras@parascoding:~$ wget https://i.imgur.com/fEJhX1o.png
--2022-08-07 16:15:14-- https://i.imgur.com/fEJhX1o.png
Resolving i.imgur.com (i.imgur.com)... 199.232.92.193
Connecting to i.imgur.com (i.imgur.com)|199.232.92.193|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 79058 (77K) [image/png]
Saving to: 'fEJhX1o.png'

fEJhX1o.png 100%[=====] 77.21K 189KB/s in 0.4s
2022-08-07 16:15:17 (189 KB/s) - 'fEJhX1o.png' saved [79058/79058]

paras@parascoding:~$

```

## 18 whois

### Definition -

Linux whois command is used to fetch all the information related to a website. You can get all the information about a website including the registration and the owner information.

### Syntax -

### Screenshot -

```
paras@parascoding:~$ whois iitk.ac.in
Domain Name: iitk.ac.in
Registry Domain ID: D9465659-IN
Registrar WHOIS Server:
Registrar URL: http://www.ernet.in
Updated Date: 2019-06-13T08:37:18Z
Creation Date: 2015-05-14T12:15:59Z
Registry Expiry Date: 2025-05-14T12:15:59Z
Registrar: ERNET India
Registrar IANA ID: 800068
Registrar Abuse Contact Email:
Registrar Abuse Contact Phone:
Domain Status: ok http://www.icann.org/epp#OK
Registry Registrant ID: REDACTED FOR PRIVACY
Registrant Name: REDACTED FOR PRIVACY
Registrant Organization: Indian Institute of Information Technology Kurnool
Registrant Street: REDACTED FOR PRIVACY
Registrant Street: REDACTED FOR PRIVACY
Registrant Street: REDACTED FOR PRIVACY
Registrant City: REDACTED FOR PRIVACY
Registrant State/Province:
Registrant Postal Code: REDACTED FOR PRIVACY
Registrant Country: IN
Registrant Phone: REDACTED FOR PRIVACY
```

## 19 ifplugstatus

### Definition -

Linux ifplugstatus command is used to check if a cable is plugged into the network interface. This command is not directly available on Ubuntu. **Syntax -**

### Screenshot -

```
paras@parascoding:~$ ifplugstatus
lo: link beat detected
enp1s0: link beat detected
wlp2s0: unplugged
paras@parascoding:~$
```