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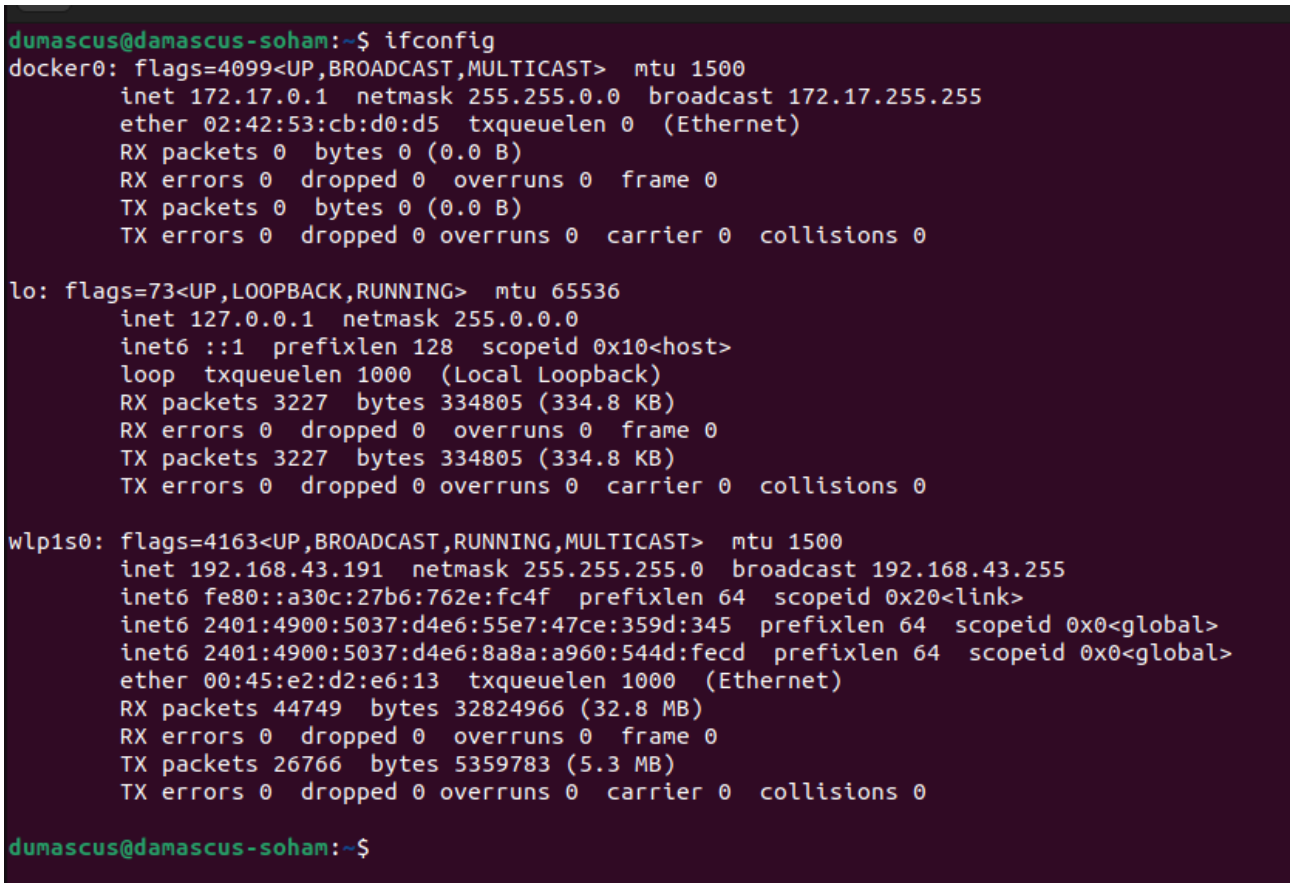
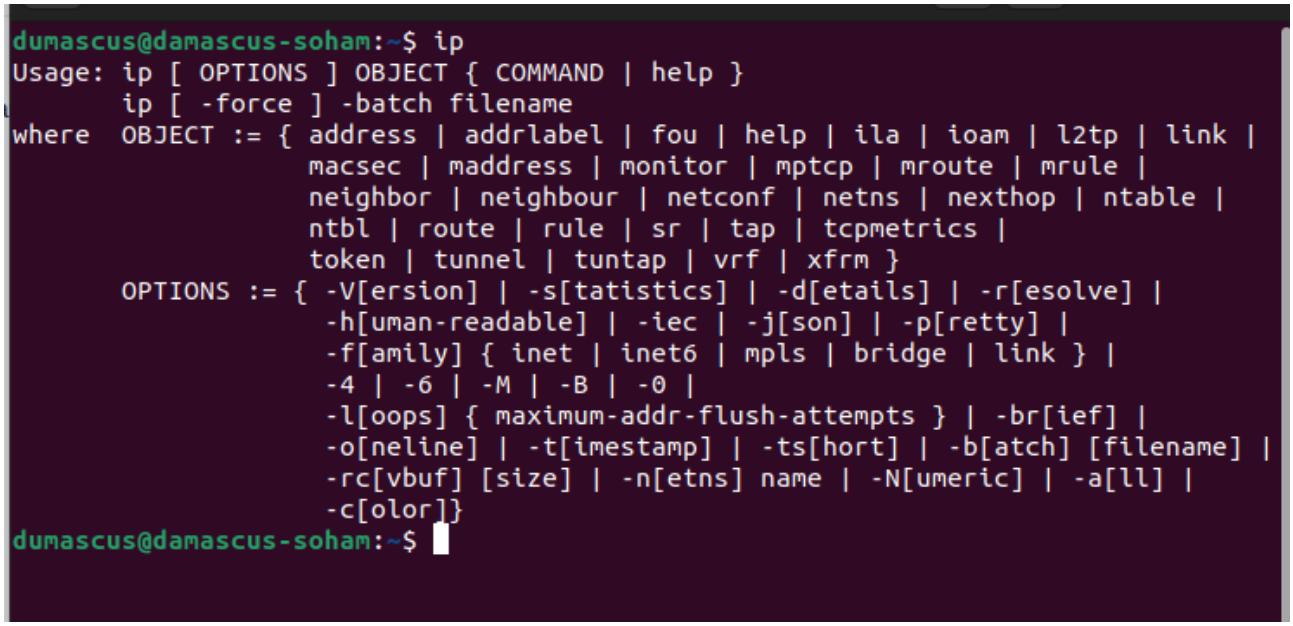
1. IPCONFIG :

Used to to display the configuration of network interfaces on a local computer. It provides information about the computer's IP (Internet Protocol) address, subnet mask, default gateway, and more.



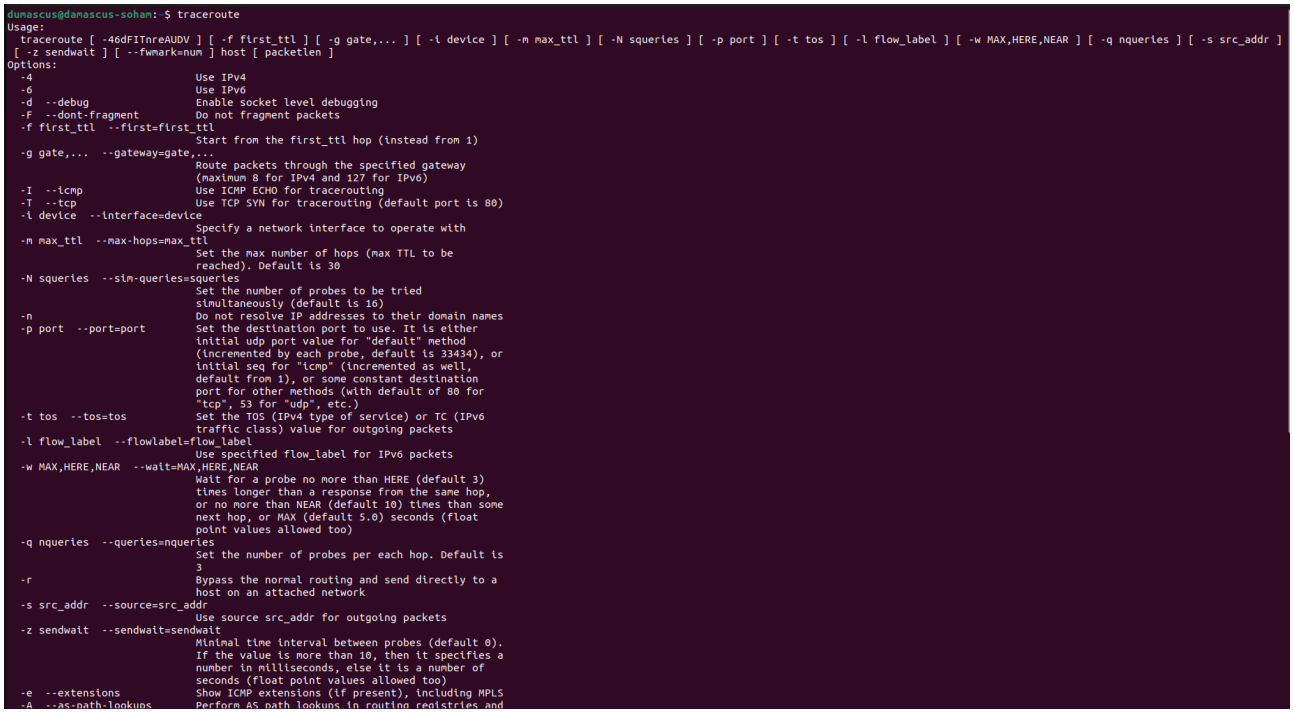
2. IP :

used to perform a wide range of network-related tasks. It allows you to interact with and configure various aspects of network interfaces, routing tables, and more.



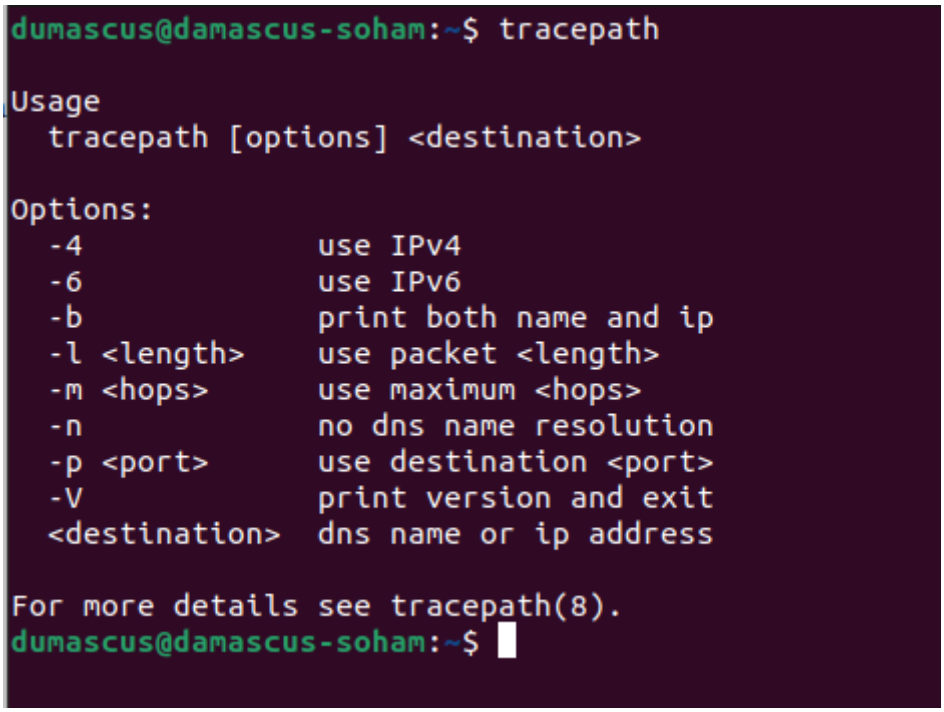
3. traceroute

Used to trace the route that packets take to reach a destination host on a network. It helps you identify the network hops (routers or intermediate devices) between your computer and the target host.



4. tracepath:

used to trace the route that packets take to reach a destination host on a network. However, `tracepath` is often available on Linux systems as a simplified version of `traceroute` with a different output format.



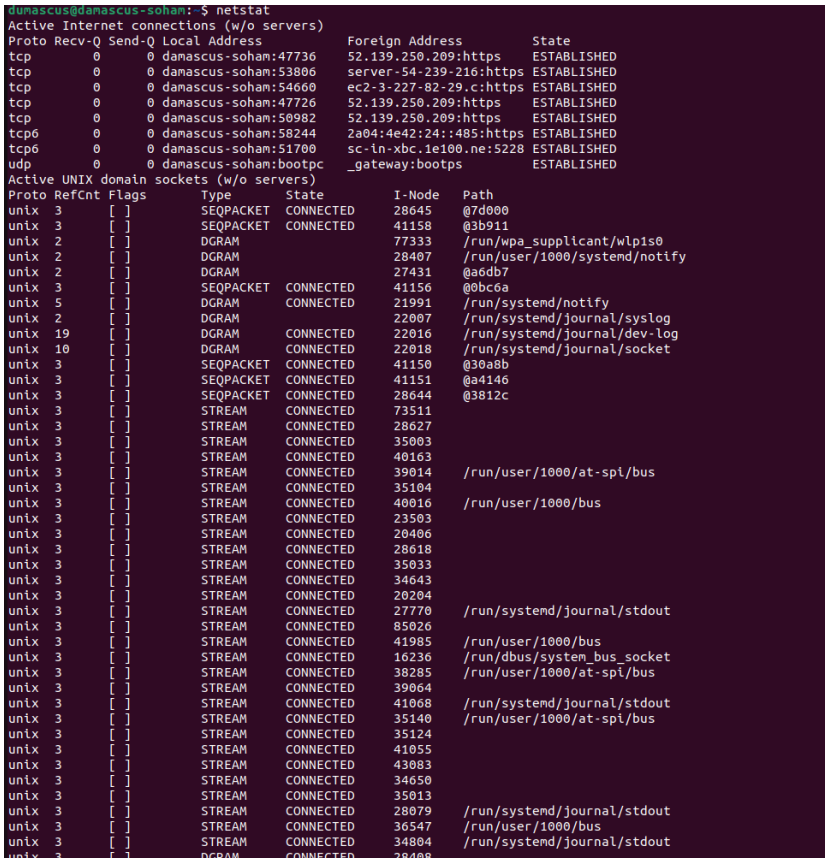
5. ping:

It's used to test the connectivity between your computer and a remote host on a network, typically a web server or another computer

```
dumascus@damascus-soham:~$ ping google.com
PING google.com(bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e)) 56 data byt
es
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=1 tt
l=55 time=389 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=2 tt
l=55 time=227 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=3 tt
l=55 time=250 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=4 tt
l=55 time=272 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=5 tt
l=55 time=295 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=6 tt
l=55 time=75.5 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=7 tt
l=55 time=239 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=8 tt
l=55 time=364 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=9 tt
l=55 time=388 ms
64 bytes from bom12s14-in-x0e.1e100.net (2404:6800:4009:827::200e): icmp_seq=10 t
tl=55 time=207 ms
```

6.netstat:

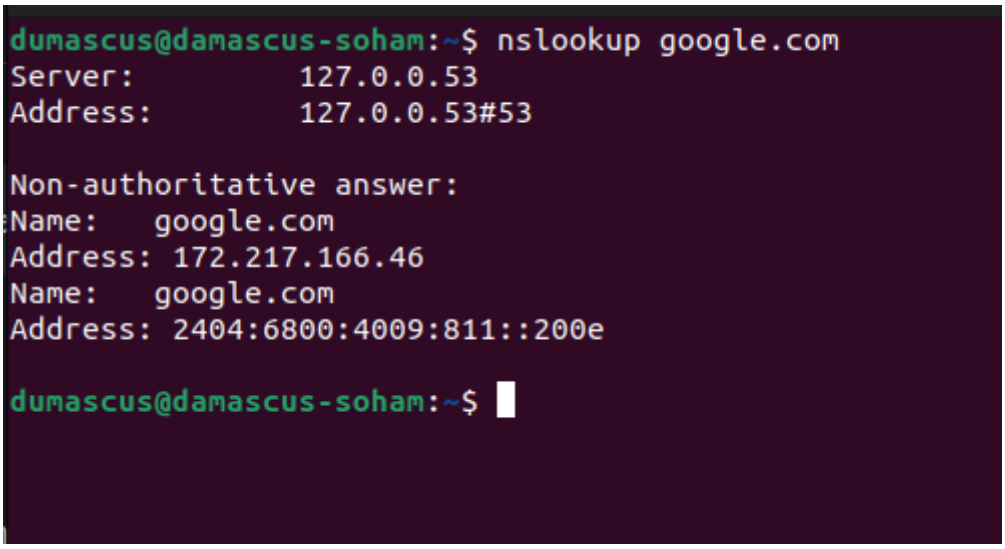
It is used to display network-related information, including network connections, routing tables, interface statistics, and more.



```
dumascus@damascus-soham:~$ netstat
Active Internet connections (w/o servers)
Proto Recv-Q Send-Q Local Address           Foreign Address         State
tcp        0      0 damascus-soham:47736    52.139.250.209:https    ESTABLISHED
tcp        0      0 damascus-soham:53806    server-54-239-216:https ESTABLISHED
tcp        0      0 damascus-soham:54660    ec2-3-227-82-29.c:https ESTABLISHED
tcp        0      0 damascus-soham:47726    52.139.250.209:https    ESTABLISHED
tcp        0      0 damascus-soham:50982    52.139.250.209:https    ESTABLISHED
tcp6       0      0 damascus-soham:58244    2a04:4e42:24::485:https ESTABLISHED
tcp6       0      0 damascus-soham:51700    sc-in-xbc.1e100.ne:5228 ESTABLISHED
udp        0      0 damascus-soham:bootpc   _gateway:bootps         ESTABLISHED
Active UNIX domain sockets (w/o servers)
Proto RefCnt Flags       Type       State         I-Node   Path
unix  3      [ ]         SEQPACKET  CONNECTED     28645    @7d000
unix  3      [ ]         SEQPACKET  CONNECTED     41158    @3b911
unix  2      [ ]         DGRAM                    77333    /run/wpa_supplicant/wlp1s0
unix  2      [ ]         DGRAM                    28407    /run/user/1000/systemd/notify
unix  2      [ ]         DGRAM                    27431    @a6db7
unix  3      [ ]         SEQPACKET  CONNECTED     41156    @0bc6a
unix  5      [ ]         DGRAM      CONNECTED     21991    /run/systemd/notify
unix  2      [ ]         DGRAM                    22007    /run/systemd/journal/syslog
unix  19     [ ]         DGRAM      CONNECTED     22016    /run/systemd/journal/dev-log
unix  10     [ ]         DGRAM      CONNECTED     22018    /run/systemd/journal/socket
unix  3      [ ]         SEQPACKET  CONNECTED     41150    @30a8b
unix  3      [ ]         SEQPACKET  CONNECTED     41151    @a4146
unix  3      [ ]         SEQPACKET  CONNECTED     28644    @3812c
unix  3      [ ]         STREAM     CONNECTED     73511
unix  3      [ ]         STREAM     CONNECTED     28627
unix  3      [ ]         STREAM     CONNECTED     35003
unix  3      [ ]         STREAM     CONNECTED     40163
unix  3      [ ]         STREAM     CONNECTED     39014    /run/user/1000/at-spi/bus
unix  3      [ ]         STREAM     CONNECTED     35104
unix  3      [ ]         STREAM     CONNECTED     40016    /run/user/1000/bus
unix  3      [ ]         STREAM     CONNECTED     23503
unix  3      [ ]         STREAM     CONNECTED     20406
unix  3      [ ]         STREAM     CONNECTED     28618
unix  3      [ ]         STREAM     CONNECTED     35033
unix  3      [ ]         STREAM     CONNECTED     34643
unix  3      [ ]         STREAM     CONNECTED     20204
unix  3      [ ]         STREAM     CONNECTED     27770    /run/systemd/journal/stdout
unix  3      [ ]         STREAM     CONNECTED     85026
unix  3      [ ]         STREAM     CONNECTED     41985    /run/user/1000/bus
unix  3      [ ]         STREAM     CONNECTED     16236    /run/dbus/system_bus_socket
unix  3      [ ]         STREAM     CONNECTED     38285    /run/user/1000/at-spi/bus
unix  3      [ ]         STREAM     CONNECTED     39064
unix  3      [ ]         STREAM     CONNECTED     41068    /run/systemd/journal/stdout
unix  3      [ ]         STREAM     CONNECTED     35140    /run/user/1000/at-spi/bus
unix  3      [ ]         STREAM     CONNECTED     35124
unix  3      [ ]         STREAM     CONNECTED     41055
unix  3      [ ]         STREAM     CONNECTED     43083
unix  3      [ ]         STREAM     CONNECTED     34650
unix  3      [ ]         STREAM     CONNECTED     35013
unix  3      [ ]         STREAM     CONNECTED     28079    /run/systemd/journal/stdout
unix  3      [ ]         STREAM     CONNECTED     36547    /run/user/1000/bus
unix  3      [ ]         STREAM     CONNECTED     34804    /run/systemd/journal/stdout
unix  3      [ ]         DGRAM      CONNECTED     28408
```

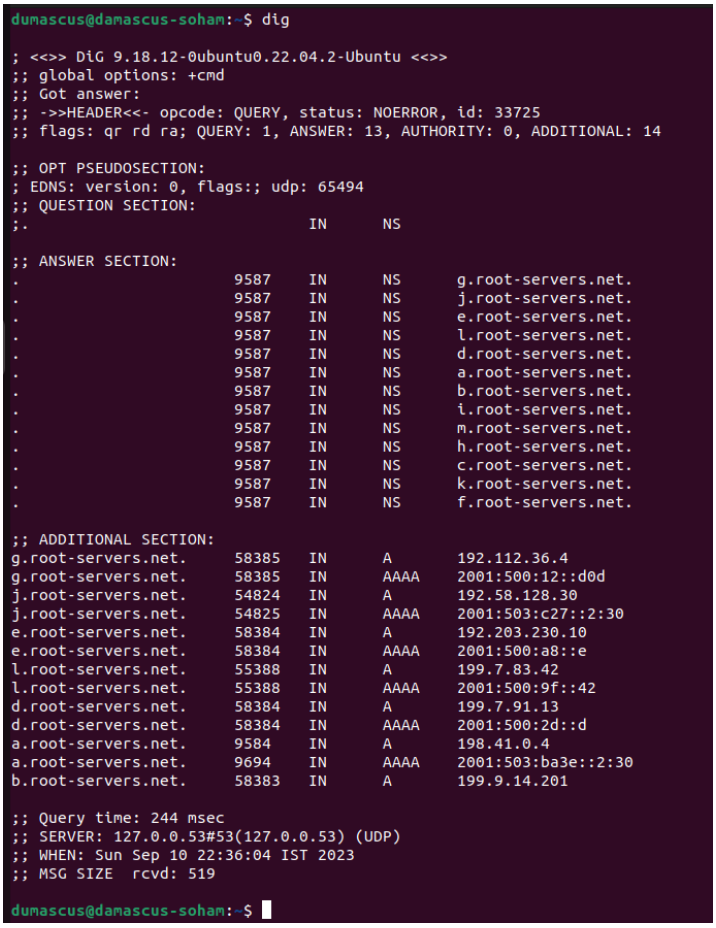
7.nslookup:

It is used to perform DNS (Domain Name System) lookups to query DNS servers and retrieve information about domain names or IP addresses.



8.dig :

It is used to perform various DNS-related queries, such as looking up DNS records, resolving domain names to IP addresses, and querying DNS servers.



9.route :

It allows you to examine the routing table, add or delete static routes, and configure routing parameters.

```
dumascus@damascus-soham:~$ route
Kernel IP routing table
Destination     Gateway         Genmask         Flags Metric Ref    Use Iface
default         _gateway        0.0.0.0         UG    600    0        0 wlp1s0
link-local      0.0.0.0         255.255.0.0     U     1000   0        0 docker0
172.17.0.0      0.0.0.0         255.255.0.0     U     0      0        0 docker0
192.168.43.0    0.0.0.0         255.255.255.0   U     600    0        0 wlp1s0
dumascus@damascus-soham:~$
```

10. Host:

The `host` command is used to perform DNS lookups for domain names, similar to `nslookup` and `dig`.

> It can be used to retrieve information about domain names or IP addresses.

```
dumascus@damascus-soham:~$ host
Usage: host [-aCdilrTvVw] [-c class] [-N ndots] [-t type] [-W time]
            [-R number] [-m flag] [-p port] hostname [server]
       -a is equivalent to -v -t ANY
       -A is like -a but omits RRSIG, NSEC, NSEC3
       -c specifies query class for non-IN data
       -C compares SOA records on authoritative nameservers
       -d is equivalent to -v
       -l lists all hosts in a domain, using AXFR
       -m set memory debugging flag (trace|record|usage)
       -N changes the number of dots allowed before root lookup is done
       -p specifies the port on the server to query
       -r disables recursive processing
       -R specifies number of retries for UDP packets
       -s a SERVFAIL response should stop query
       -t specifies the query type
       -T enables TCP/IP mode
       -U enables UDP mode
       -v enables verbose output
       -V print version number and exit
       -w specifies to wait forever for a reply
       -W specifies how long to wait for a reply
       -4 use IPv4 query transport only
       -6 use IPv6 query transport only
dumascus@damascus-soham:~$
```

11.arp;

is used to display and manipulate the ARP cache on a computer.

> It allows you to view the mapping between IP addresses and MAC (Media Access Control) addresses on your local network.

```
dumascus@damascus-soham:~$ arp
Address                  HWtype  HWaddress           Flags Mask            Iface
_gateway                 ether   72:5a:ac:ba:2c:7a   C                     wlp1s
0
dumascus@damascus-soham:~$
```

12.iwconfig:

The `iwconfig` command is used to configure and display wireless network interface settings on Linux systems.

> It provides information about wireless network interfaces, including SSID, signal strength, and encryption settings.

```
dumascus@damascus-soham:~$ iwconfig
lo        no wireless extensions.

wlp1s0    IEEE 802.11  ESSID:"Galaxy J86C7A"
          Mode:Managed  Frequency:2.412 GHz  Access Point: 72:5A:AC:BA:2C:7A
          Bit Rate=72.2 Mb/s   Tx-Power=20 dBm
          Retry short limit:7   RTS thr:off   Fragment thr:off
          Power Management:on
          Link Quality=70/70  Signal level=-30 dBm
          Rx invalid nwid:0  Rx invalid crypt:0  Rx invalid frag:0
          Tx excessive retries:0  Invalid misc:12   Missed beacon:0

docker0   no wireless extensions.

dumascus@damascus-soham:~$
```

13.curl:

The `curl` command is a versatile tool for making HTTP requests from the command line.

It can be used to retrieve content from web servers, interact with APIs, and perform file transfers using various protocols.

14.wget:

The `wget` command is a command-line utility for downloading files from the internet.

It allows you to download files from FTP, HTTP, and HTTPS servers, and it supports resuming interrupted downloads.

```
dumascus@damascus-soham:~$ wget https://google.com
--2023-09-10 22:43:31--  https://google.com/
Resolving google.com (google.com)... 2404:6800:4009:80c::200e, 172.217.166.46
Connecting to google.com (google.com)|2404:6800:4009:80c::200e|:443... connected
.
HTTP request sent, awaiting response... 301 Moved Permanently
Location: https://www.google.com/ [following]
--2023-09-10 22:43:33--  https://www.google.com/
Resolving www.google.com (www.google.com)... 2404:6800:4009:82b::2004, 172.217.2
7.196
Connecting to www.google.com (www.google.com)|2404:6800:4009:82b::2004|:443... c
onnected.
HTTP request sent, awaiting response... 200 OK
Length: unspecified [text/html]
Saving to: ‘index.html’

index.html              [  <=>                ]  20.34K  67.7KB/s    in 0.3s

2023-09-10 22:43:35 (67.7 KB/s) - ‘index.html’ saved [20826]

dumascus@damascus-soham:~$
```

15.telnet :

The `telnet` command is used to establish text-based connections to remote servers and network devices.

> It is often used for testing network connectivity and for accessing remote systems, although it is less secure than SSH.

```
dumascus@damascus-soham:~$ telnet google.com 80
Trying 2404:6800:4009:80c::200e...
Connected to google.com.
Escape character is '^]'.
```

16.whois :

The `whois` command is used to query WHOIS databases to retrieve information about domain names, IP addresses, and network registrations.

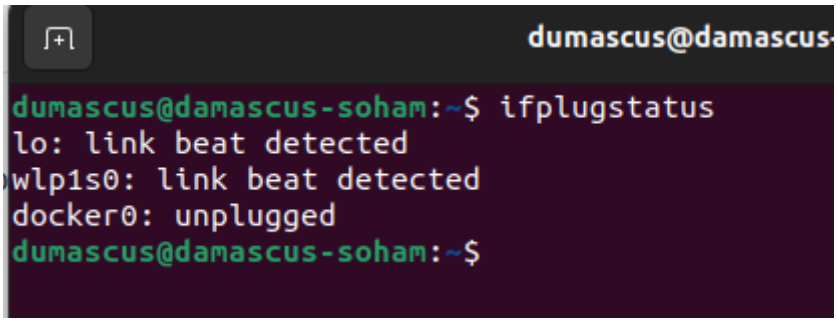
> It provides details about domain ownership, contact information, and registration dates.

```
dumascus@damascus-soham:~$ whois
Usage: whois [OPTION]... OBJECT...

-h HOST, --host HOST   connect to server HOST
-p PORT, --port PORT   connect to PORT
-I                     query whois.iana.org and follow its referral
-H                     hide legal disclaimers
      --verbose        explain what is being done
      --no-recursion   disable recursion from registry to registrar servers
      --help           display this help and exit
      --version        output version information and exit

These flags are supported by whois.ripe.net and some RIPE-like servers:
-l                     find the one level less specific match
-L                     find all levels less specific matches
-m                     find all one level more specific matches
-M                     find all levels of more specific matches
-c                     find the smallest match containing a mnt-irt attribute
-x                     exact match
-b                     return brief IP address ranges with abuse contact
-B                     turn off object filtering (show email addresses)
-G                     turn off grouping of associated objects
-d                     return DNS reverse delegation objects too
-i ATTR[,ATTR]...      do an inverse look-up for specified ATTRibutes
-T TYPE[,TYPE]...      only look for objects of TYPE
-K                     only primary keys are returned
-r                     turn off recursive look-ups for contact information
-R                     force to show local copy of the domain object even
                       if it contains referral
-a                     also search all the mirrored databases
-s SOURCE[,SOURCE]...  search the database mirrored from SOURCE
-g SOURCE:FIRST-LAST   find updates from SOURCE from serial FIRST to LAST
-t TYPE                request template for object of TYPE
-v TYPE                request verbose template for object of TYPE
-q [version|sources|types]  query specified server info
dumascus@damascus-soham:~$
```

17.ifplugstatus:

The `ifplugstatus` command is used to check the status of Ethernet cable connections on network interfaces.

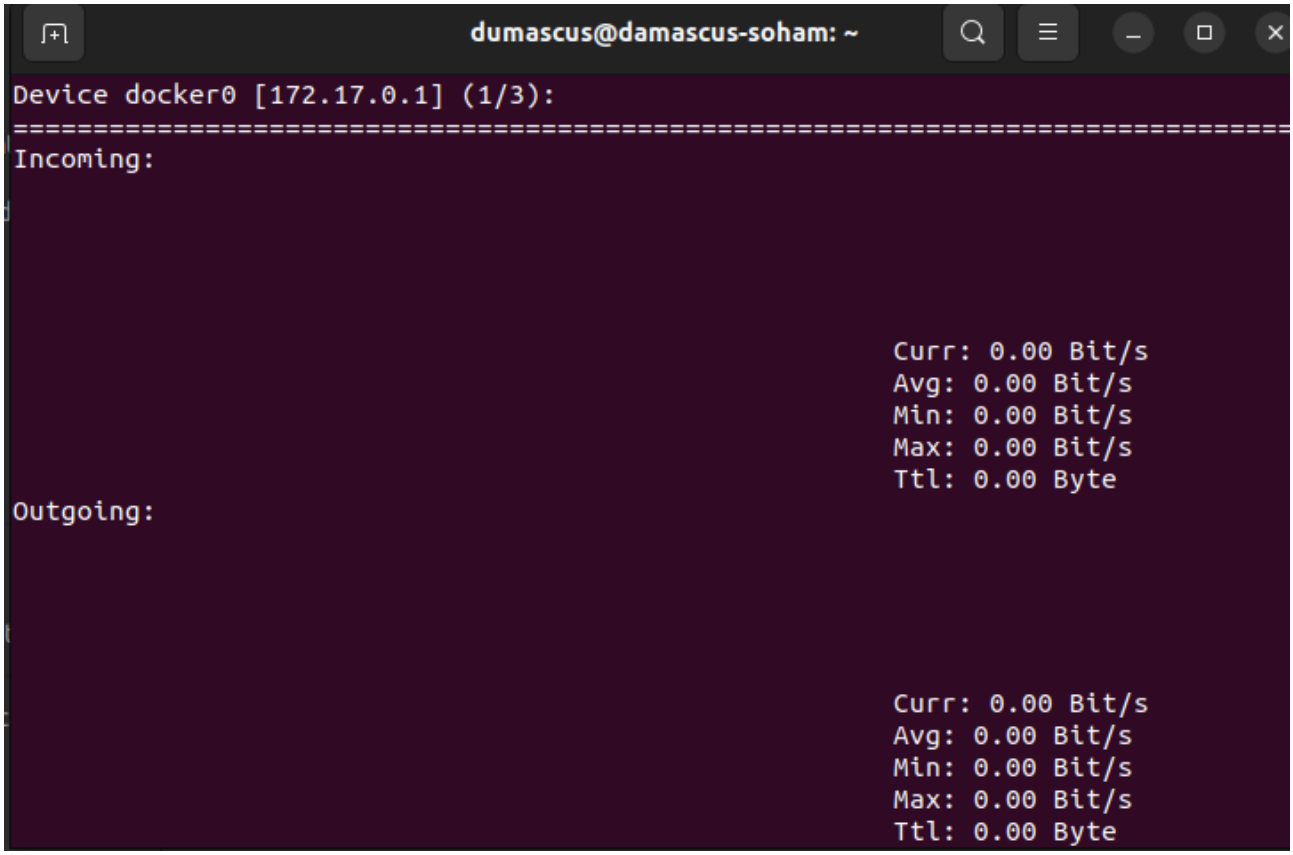
> It can indicate whether a network cable is plugged in or unplugged.



18. nload:

The `nload` command is a console-based network traffic monitoring tool.

> It displays real-time statistics about network interfaces, including bandwidth usage and traffic distribution.



19.mail:

The `mail` command is used for sending and receiving email from the command line on Unix-like systems.

- It allows you to compose and send emails and read email messages in your mailbox.