

```
tudent@localhost SYC40]$ ifconfig
: 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 1 (Local Loopback)
  RX packets 56 bytes 4988 (4.8 KiB)
  RX errors 0 dropped 0 overruns 0 frame 0
  TX packets 56 bytes 4988 (4.8 KiB)
  TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

p1: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
  inet 172.25.2.19 netmask 255.255.0.0 broadcast 172.25.255.255
  inet6 fe80::9380:dffd:512b:f429 prefixlen 64 scopeid 0x20<link>
  inet6 fe80::4265:f342:68c9:edfd prefixlen 64 scopeid 0x20<link>
  inet6 fe80::19ee:2485:1eb3:95fe prefixlen 64 scopeid 0x20<link>
  ether 50:9a:4c:2e:22:12 txqueuelen 1000 (Ethernet)
  RX packets 1735703 bytes 128592893 (122.6 MiB)
  RX errors 0 dropped 3044 overruns 0 frame 0
  TX packets 100 bytes 12518 (12.2 KiB)
  TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

rbr0: flags=4099<UP,BROADCAST,MULTICAST> mtu 1500
  inet 192.168.122.1 netmask 255.255.255.0 broadcast 192.168.122.255
  ether 52:54:00:a2:6f:30 txqueuelen 1000 (Ethernet)
  RX packets 0 bytes 0 (0.0 B)
  RX errors 0 dropped 0 overruns 0 frame 0
  TX packets 0 bytes 0 (0.0 B)
  TX errors 0 dropped 0 overruns 0 carrier 0 collisions 0

tudent@localhost SYC40]$ █
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```
student@localhost SYC40]$ ip addr show
1: lo: <LOOPBACK,UP,LOWER_UP> mtu 65536 qdisc noqueue state UNKNOWN qlen 1
    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: p8p1: <BROADCAST,MULTICAST,UP,LOWER_UP> mtu 1500 qdisc pfifo_fast state UP qlen 1000
    link/ether 50:9a:4c:2e:22:12 brd ff:ff:ff:ff:ff:ff
    inet 172.25.2.19/16 brd 172.25.255.255 scope global p8p1
        valid_lft forever preferred_lft forever
    inet6 fe80::19ee:2485:1eb3:95fe/64 scope link tentative dadfailed
        valid_lft forever preferred_lft forever
    inet6 fe80::9380:dffd:512b:f429/64 scope link tentative dadfailed
        valid_lft forever preferred_lft forever
    inet6 fe80::4265:f342:68c9:edfd/64 scope link tentative dadfailed
        valid_lft forever preferred_lft forever
3: virbr0: <NO-CARRIER,BROADCAST,MULTICAST,UP> mtu 1500 qdisc noqueue state DOWN qlen 1000
    link/ether 52:54:00:a2:6f:30 brd ff:ff:ff:ff:ff:ff
    inet 192.168.122.1/24 brd 192.168.122.255 scope global virbr0
        valid_lft forever preferred_lft forever
4: virbr0-nic: <BROADCAST,MULTICAST> mtu 1500 qdisc pfifo_fast master virbr0 state DOWN qlen 1000
    link/ether 52:54:00:a2:6f:30 brd ff:ff:ff:ff:ff:ff
[student@localhost SYC40]$ █
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```
student@tocalhost:~$ ping 210.212.172.190
```

```
PING 210.212.172.190 (210.212.172.190) 56(84) bytes of data.  
64 bytes from 210.212.172.190: icmp_seq=7 ttl=63 time=0.773 ms  
64 bytes from 210.212.172.190: icmp_seq=8 ttl=63 time=0.718 ms  
64 bytes from 210.212.172.190: icmp_seq=9 ttl=63 time=0.716 ms  
64 bytes from 210.212.172.190: icmp_seq=10 ttl=63 time=0.617 ms  
64 bytes from 210.212.172.190: icmp_seq=11 ttl=63 time=0.757 ms  
64 bytes from 210.212.172.190: icmp_seq=12 ttl=63 time=0.719 ms  
64 bytes from 210.212.172.190: icmp_seq=13 ttl=63 time=0.819 ms  
64 bytes from 210.212.172.190: icmp_seq=14 ttl=63 time=0.675 ms  
64 bytes from 210.212.172.190: icmp_seq=15 ttl=63 time=0.710 ms  
64 bytes from 210.212.172.190: icmp_seq=16 ttl=63 time=0.623 ms  
64 bytes from 210.212.172.190: icmp_seq=17 ttl=63 time=0.786 ms  
64 bytes from 210.212.172.190: icmp_seq=18 ttl=63 time=0.697 ms  
64 bytes from 210.212.172.190: icmp_seq=19 ttl=63 time=0.704 ms  
64 bytes from 210.212.172.190: icmp_seq=20 ttl=63 time=0.643 ms  
64 bytes from 210.212.172.190: icmp_seq=21 ttl=63 time=0.611 ms  
64 bytes from 210.212.172.190: icmp_seq=22 ttl=63 time=0.724 ms  
64 bytes from 210.212.172.190: icmp_seq=23 ttl=63 time=0.702 ms  
64 bytes from 210.212.172.190: icmp_seq=24 ttl=63 time=0.643 ms  
64 bytes from 210.212.172.190: icmp_seq=25 ttl=63 time=0.667 ms  
64 bytes from 210.212.172.190: icmp_seq=26 ttl=63 time=0.797 ms  
64 bytes from 210.212.172.190: icmp_seq=27 ttl=63 time=0.810 ms  
64 bytes from 210.212.172.190: icmp_seq=28 ttl=63 time=0.845 ms  
64 bytes from 210.212.172.190: icmp_seq=50 ttl=63 time=0.745 ms  
64 bytes from 210.212.172.190: icmp_seq=51 ttl=63 time=0.824 ms  
64 bytes from 210.212.172.190: icmp_seq=52 ttl=63 time=0.498 ms  
64 bytes from 210.212.172.190: icmp_seq=53 ttl=63 time=0.615 ms  
64 bytes from 210.212.172.190: icmp_seq=54 ttl=63 time=0.629 ms  
64 bytes from 210.212.172.190: icmp_seq=55 ttl=63 time=0.803 ms  
64 bytes from 210.212.172.190: icmp_seq=56 ttl=63 time=0.730 ms  
64 bytes from 210.212.172.190: icmp_seq=57 ttl=63 time=0.522 ms  
64 bytes from 210.212.172.190: icmp_seq=58 ttl=63 time=0.597 ms  
64 bytes from 210.212.172.190: icmp_seq=59 ttl=63 time=0.710 ms  
64 bytes from 210.212.172.190: icmp_seq=60 ttl=63 time=0.771 ms  
64 bytes from 210.212.172.190: icmp_seq=61 ttl=63 time=0.802 ms  
64 bytes from 210.212.172.190: icmp_seq=62 ttl=63 time=0.826 ms  
64 bytes from 210.212.172.190: icmp_seq=63 ttl=63 time=0.797 ms  
64 bytes from 210.212.172.190: icmp_seq=64 ttl=63 time=0.665 ms  
64 bytes from 210.212.172.190: icmp_seq=65 ttl=63 time=0.834 ms  
64 bytes from 210.212.172.190: icmp_seq=66 ttl=63 time=0.717 ms
```

```
student@localhost SYC40]$ traceroute 210.212.172.190  
traceroute to 210.212.172.190 (210.212.172.190), 30 hops max, 60 byte packets
```

```
1  * * *  
2  * * *  
3  * * *  
4  * * *  
5  * * *  
6  * * *  
7  * * *  
8  * * *  
9  * * *  
10 * * *  
11 * * *  
12 * * *  
13 * * *  
14 * * *  
15 * * *  
16 * * *  
17 * * *  
18 * * *  
19 * * *  
20 * * *  
21 * * *  
22 * * *  
23 * * *  
24 * * *  
25 * * *  
26 * * *  
27 * * 210.212.172.190 (210.212.172.190)  0.691 ms !X  
[student@localhost SYC40]$ █
```

```
[student@localhost SYC40]$ route
```

```
Kernel IP routing table
```

Destination	Gateway	Genmask	Flags	Metric	Ref	Use	Iface
default	gateway	0.0.0.0	UG	100	0	0	p8p1
172.25.0.0	0.0.0.0	255.255.0.0	U	100	0	0	p8p1
192.168.122.0	0.0.0.0	255.255.255.0	U	0	0	0	virbr0

```
[student@localhost SYC40]$ nmcli dev status
```

DEVICE	TYPE	STATE	CONNECTION
virbr0	bridge	connected	virbr0
p8p1	ethernet	connected	p8p1
lo	loopback	unmanaged	--
virbr0-nic	tun	unmanaged	--

```
[student@localhost SYC40]$ ss
```

Netid	State	Recv-Q	Send-Q	Local Address:Port	Peer Address:Port
u_str	ESTAB	0	0	* 36658	* 34539
u_str	ESTAB	0	0	@/tmp/dbus-UY4bTx9M	* 25395
u_str	ESTAB	0	0	@/tmp/dbus-jsBThRsF9Y	* 27275
u_str	ESTAB	0	0	* 28315	* 25215
u_str	ESTAB	0	0	* 24079	* 24080
u_str	ESTAB	0	0	* 31937	* 29178
u_str	ESTAB	0	0	* 24073	* 24072
u_str	ESTAB	0	0	/run/systemd/journal/stdout	* 21186
u_str	ESTAB	0	0	* 30974	* 31942
u_str	ESTAB	0	0	* 29408	* 29409
u_str	ESTAB	0	0	* 30186	* 31211
u_str	ESTAB	0	0	* 26383	* 25368
u_str	ESTAB	0	0	* 24080	* 24079
u_str	ESTAB	0	0	@/tmp/dbus-jsBThRsF9Y	* 29178
u_str	ESTAB	0	0	* 28379	* 31937
u_str	ESTAB	0	0	* 21117	* 26314
u_str	ESTAB	0	0	/run/systemd/journal/stdout	* 19421
u_str	ESTAB	0	0	* 16635	* 16253
u_str	ESTAB	0	0	* 30981	* 31995
u_str	ESTAB	0	0	@/tmp/.X11-unix/X0	* 29062
u_str	ESTAB	0	0	* 24069	* 24070
u_str	ESTAB	0	0	* 21735	* 19270
u_str	ESTAB	0	0	@/tmp/dbus-D4NzUP4uCF	* 31942
u_str	ESTAB	0	0	* 25411	* 30974
u_str	ESTAB	0	0	* 17007	* 27348
u_str	ESTAB	0	0	* 19588	* 17008
u_str	ESTAB	0	0	@/tmp/dbus-jsBThRsF9Y	* 17010
u_str	ESTAB	0	0	* 31006	* 31005
u_str	ESTAB	0	0	/run/systemd/journal/stdout	* 19270
u_str	ESTAB	0	0		* 21735

```
[student@localhost SYC40]$ nc
Ncat: You must specify a host to connect to. QUITTING.
[student@localhost SYC40]$ host google.com
;; connection timed out; trying next origin
;; connection timed out; no servers could be reached
[student@localhost SYC40]$ dig google.com

; <<> DiG 9.9.4-RedHat-9.9.4-51.el7_4.2 <<> google.com
;; global options: +cmd
;; connection timed out; no servers could be reached
[student@localhost SYC40]$ nslookup google.com
;; connection timed out; trying next origin
;; connection timed out; no servers could be reached

[student@localhost SYC40]$ tcpdump
tcpdump:
[student@localhost SYC40]$ █
```

```
[student@localhost SYC40]$ sudo ifup
[sudo] password for student:
Sorry, try again.
[sudo] password for student:
student is not in the sudoers file. This incident will be reported.
[student@localhost SYC40]$ sudo ifdown
[sudo] password for student:
Sorry, try again.
[sudo] password for student:
student is not in the sudoers file. This incident will be reported.
[student@localhost SYC40]$ sudo ifquery
[sudo] password for student:
Sorry, try again.
[sudo] password for student:
Sorry, try again.
[sudo] password for student:
sudo: 3 incorrect password attempts
[student@localhost SYC40]$ █
```