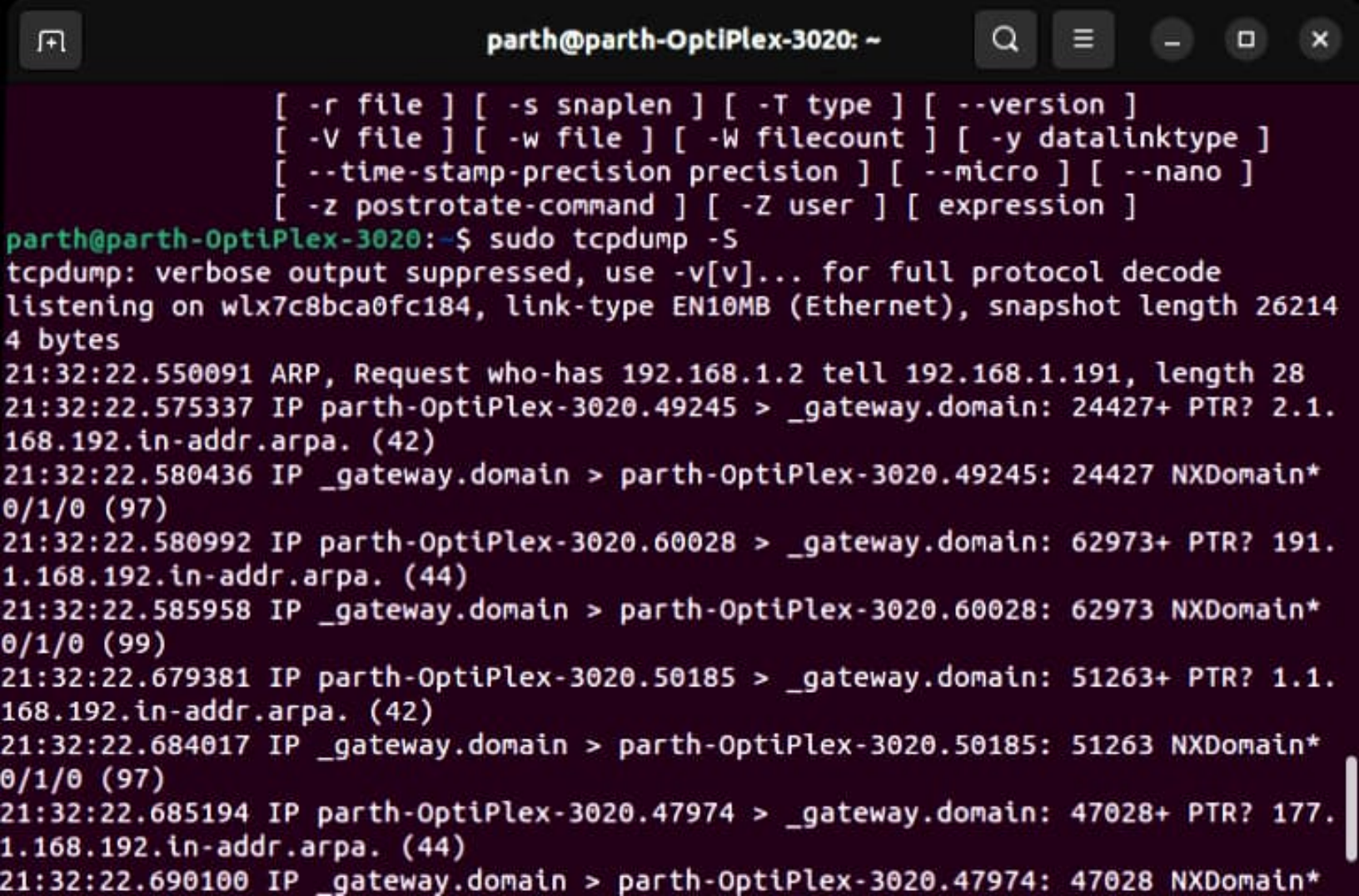
```
9 packets received by filter
0 packets dropped by kernel
parth@parth-OptiPlex-3020:~$ sudo tcpdump -e
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on wlx7c8bca0fc184, link-type EN10MB (Ethernet), snapshot length 26214
4 bytes
21:38:07.535520 00:1e:a6:fa:d3:e1 (oui Unknown) > 01:80:c2:00:00:00 (oui Unknown
), 802.3, length 38: LLC, dsap STP (0x42) Individual, ssap STP (0x42) Command, c
trl 0x03: STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d3:e0.800
2, length 35
21:38:08.605941 00:1e:a6:fa:d3:e0 (oui Unknown) > 7c:8b:ca:0f:c1:84 (oui Unknown
), ethertype ARP (0x0806), length 60: Request who-has parth-OptiPlex-3020 tell _
gateway, length 46
21:38:08.605961 7c:8b:ca:0f:c1:84 (oui Unknown) > 00:1e:a6:fa:d3:e0 (oui Unknown
), ethertype ARP (0x0806), length 42: Reply parth-OptiPlex-3020 is-at 7c:8b:ca:0
f:c1:84 (oui Unknown), length 28
21:38:08.663476 7c:8b:ca:0f:c1:84 (oui Unknown) > 00:1e:a6:fa:d3:e0 (oui Unknown
), ethertype IPv4 (0x0800), length 86: parth-OptiPlex-3020.48310 > _gateway.doma
in: 12835+ PTR? 177.1.168.192.in-addr.arpa. (44)
21:38:08.669351 00:1e:a6:fa:d3:e0 (oui Unknown) > 7c:8b:ca:0f:c1:84 (oui Unknown
), ethertype IPv4 (0x0800), length 141: _gateway.domain > parth-OptiPlex-3020.48
310: 12835 NXDomain* 0/1/0 (99)
21:38:08.670185 7c:8b:ca:0f:c1:84 (oui Unknown) > 00:1e:a6:fa:d3:e0 (oui Unknown
), ethertype IPv4 (0x0800), length 84: parth-OptiPlex-3020.55139 > _gateway.doma
```


parth@parth-OptiPlex-3020: ~
[-r file] [-s snaplen] [-T type] [--version]
[-V file] [-w file] [-W filecount] [-y datalinktype]
[--time-stamp-precision precision] [--micro] [--nano]
[-z postrotate-command] [-Z user] [expression]
parth@parth-OptiPlex-3020:~$ sudo tcpdump -S
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on wlx7c8bca0fc184, link-type EN10MB (Ethernet), snapshot length 26214
4 bytes
21:32:22.550091 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
21:32:22.575337 IP parth-OptiPlex-3020.49245 > _gateway.domain: 24427+ PTR? 2.1.
168.192.in-addr.arpa. (42)
21:32:22.580436 IP _gateway.domain > parth-OptiPlex-3020.49245: 24427 NXDomain*
0/1/0 (97)
21:32:22.580992 IP parth-OptiPlex-3020.60028 > _gateway.domain: 62973+ PTR? 191.
1.168.192.in-addr.arpa. (44)
21:32:22.585958 IP _gateway.domain > parth-OptiPlex-3020.60028: 62973 NXDomain*
0/1/0 (99)
21:32:22.679381 IP parth-OptiPlex-3020.50185 > _gateway.domain: 51263+ PTR? 1.1.
168.192.in-addr.arpa. (42)
21:32:22.684017 IP _gateway.domain > parth-OptiPlex-3020.50185: 51263 NXDomain*
0/1/0 (97)
21:32:22.685194 IP parth-OptiPlex-3020.47974 > _gateway.domain: 47028+ PTR? 177.
1.168.192.in-addr.arpa. (44)
21:32:22.690100 IP _gateway.domain > parth-OptiPlex-3020.47974: 47028 NXDomain*

```
1681747281.172630 ARP, Request who-has parth-OptiPlex-3020 tell _gateway, length
 46
1681747281.172650 ARP, Reply parth-OptiPlex-3020 is-at 7c:8b:ca:0f:c1:84 (oui Un
known), length 28
1681747281.723828 STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d
3:e0.8002, length 35
^C
13 packets captured
13 packets received by filter
0 packets dropped by kernel
parth@parth-OptiPlex-3020:~$ sudo tcpdump -c
tcpdump: option requires an argument -- 'c'
tcpdump version 4.99.1
libpcap version 1.10.1 (with TPACKET_V3)
OpenSSL 3.0.2 15 Mar 2022
Usage: tcpdump [-AbdDefhHIJKlLnNOpqStuUvxX#] [ -B size ] [ -c count ] [--count]
                [ -C file_size ] [ -E algo:secret ] [ -F file ] [ -G seconds ]
                [ -i interface ] [ --immediate-mode ] [ -j tstamptype ]
                [ -M secret ] [ --number ] [ --print ] [ -Q in|out|inout ]
                [ -r file ] [ -s snaplen ] [ -T type ] [ --version ]
                [ -V file ] [ -w file ] [ -W filecount ] [ -y datalinktype ]
                [ --time-stamp-precision precision ] [ --micro ] [ --nano ]
                [ -z postrotate-command ] [ -Z user ] [ expression ]
parth@parth-OptiPlex-3020:~$
```

```
21:29:44.649073 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
^C
12 packets captured
12 packets received by filter
0 packets dropped by kernel
parth@parth-OptiPlex-3020:~$ sudo tcpdump -tt
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on wlx7c8bca0fc184, link-type EN10MB (Ethernet), snapshot length 26214
4 bytes
1681747279.573366 STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d
3:e0.8002, length 35
1681747279.881240 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
1681747279.960031 IP parth-OptiPlex-3020.44567 > _gateway.domain: 40837+ PTR? 2.
1.168.192.in-addr.arpa. (42)
1681747279.965546 IP _gateway.domain > parth-OptiPlex-3020.44567: 40837 NXDomain
* 0/1/0 (97)
1681747279.966645 IP parth-OptiPlex-3020.54510 > _gateway.domain: 57303+ PTR? 19
1.1.168.192.in-addr.arpa. (44)
1681747279.970973 IP _gateway.domain > parth-OptiPlex-3020.54510: 57303 NXDomain
* 0/1/0 (99)
1681747280.063396 IP parth-OptiPlex-3020.47418 > _gateway.domain: 22666+ PTR? 1.
1.168.192.in-addr.arpa. (42)
1681747280.068299 IP _gateway.domain > parth-OptiPlex-3020.47418: 22666 NXDomain
* 0/1/0 (97)
```

```
parth@parth-OptiPlex-3020:~$ sudo apt-get install tcpdump
[sudo] password for parth:
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
tcpdump is already the newest version (4.99.1-3ubuntu0.1).
tcpdump set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 29 not upgraded.
parth@parth-OptiPlex-3020:~$ tcpdump -n
tcpdump: wlx7c8bca0fc184: You don't have permission to capture on that device
(socket: Operation not permitted)
parth@parth-OptiPlex-3020:~$ sudo tcpdump -n
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on wlx7c8bca0fc184, link-type EN10MB (Ethernet), snapshot length 26214
4 bytes
20:43:13.122869 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
20:43:13.736615 STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d3:
e0.8002, length 35
20:43:15.702606 ARP, Request who-has 192.168.1.177 tell 192.168.1.1, length 46
20:43:15.702626 ARP, Reply 192.168.1.177 is-at 7c:8b:ca:0f:c1:84, length 28
20:43:16.194794 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
20:43:17.116400 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
20:43:17.730134 STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d3:
e0.8002, length 35
```

```
20:43:28.175457 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
20:43:29.097152 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
20:43:29.710823 STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d3:
e0.8002, length 35
20:43:30.018629 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
20:43:35.547644 STP 802.1d, Config, Flags [none], bridge-id 8000.00:1e:a6:fa:d3:
e0.8002, length 35
^C
34 packets captured
34 packets received by filter
0 packets dropped by kernel
parth@parth-OptiPlex-3020:~$ sudo tcpdump -D
[sudo] password for parth:
\\1.wlx7c8bca0fc184 [Up, Running, Wireless]
2.any (Pseudo-device that captures on all interfaces) [Up, Running]
3.lo [Up, Running, Loopback]
4.enp2s0 [Up, Disconnected]
5.bluetooth-monitor (Bluetooth Linux Monitor) [Wireless]
6.nflog (Linux netfilter log (NFLOG) interface) [none]
7.nfqueue (Linux netfilter queue (NFQUEUE) interface) [none]
8.dbus-system (D-Bus system bus) [none]
9.dbus-session (D-Bus session bus) [none]
parth@parth-OptiPlex-3020:~$
parth@parth-OptiPlex-3020:~$
```

```
parth@parth-OptiPlex-3020:~$
parth@parth-OptiPlex-3020:~$ sudo tcpdump -q
tcpdump: verbose output suppressed, use -v[v]... for full protocol decode
listening on wlx7c8bca0fc184, link-type EN10MB (Ethernet), snapshot length 26214
4 bytes
21:29:42.052819 ARP, Request who-has parth-OptiPlex-3020 tell _gateway, length 4
6
21:29:42.052839 ARP, Reply parth-OptiPlex-3020 is-at 7c:8b:ca:0f:c1:84 (oui Unkn
own), length 28
21:29:42.071640 IP parth-OptiPlex-3020.51938 > _gateway.domain: UDP, length 44
21:29:42.082626 IP _gateway.domain > parth-OptiPlex-3020.51938: UDP, length 99
21:29:42.083415 IP parth-OptiPlex-3020.53919 > _gateway.domain: UDP, length 42
21:29:42.088692 IP _gateway.domain > parth-OptiPlex-3020.53919: UDP, length 97
21:29:42.498688 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
21:29:42.591431 IP parth-OptiPlex-3020.52445 > _gateway.domain: UDP, length 42
21:29:42.601121 IP _gateway.domain > parth-OptiPlex-3020.52445: UDP, length 97
21:29:42.602343 IP parth-OptiPlex-3020.52909 > _gateway.domain: UDP, length 44
21:29:42.608181 IP _gateway.domain > parth-OptiPlex-3020.52909: UDP, length 99
21:29:44.649073 ARP, Request who-has 192.168.1.2 tell 192.168.1.191, length 28
^C
12 packets captured
12 packets received by filter
0 packets dropped by kernel
parth@parth-OptiPlex-3020:~$
```