

Computer Networks
Assignment 1
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Solution 1.

a) Learn to use the `ifconfig` command, and figure out the IP address of your network interface. Put a screenshot.

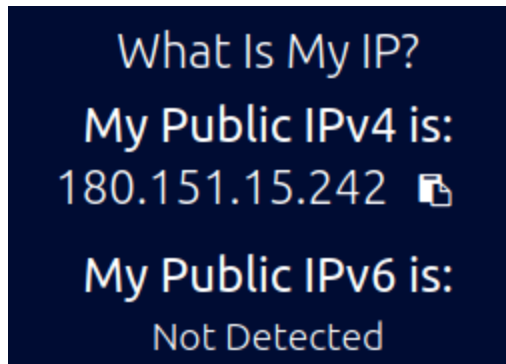
```
yashika@ubuntu:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500
    inet 192.168.204.130  netmask 255.255.255.0  broadcast 192.168.204.255
    inet6 fe80::a358:e58b:d79:46e5  prefixlen 64  scopeid 0x20<link>
    ether 00:0c:29:4b:75:ce  txqueuelen 1000  (Ethernet)
    RX packets 3715  bytes 4745879 (4.7 MB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 1048  bytes 74727 (74.7 KB)
    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 189  bytes 16049 (16.0 KB)
    RX errors 0  dropped 0  overruns 0  frame 0
    TX packets 189  bytes 16049 (16.0 KB)
    TX errors 0  dropped 0 overruns 0  carrier 0  collisions 0

yashika@ubuntu:~$
```

IP address of network interface is 192.168.204.130

b) Go to the webpage <https://www.whatismyip.com> and find out what IP is shown for your machine. Are they identical or different?



Both ip addresses are different, first one is the private ip address and second one is the public ip address of the machine. Private ip addr is used within an internal network. Public addr are used to connect to external network and is unique. Private addr may not be unique.

2 a) Get an authoritative result in nslookup. Put a screenshot. Explain how you did it.

```
yashika@Yashika:~$ nslookup -type=NS iiitd.ac.in
Server:          172.26.240.1
Address:         172.26.240.1#53

Non-authoritative answer:
iiitd.ac.in      nameserver = win-k8poif9gsn6.iiitd.edu.in.
iiitd.ac.in      nameserver = adc.iiitd.edu.in.
Name:   win-k8poif9gsn6.iiitd.edu.in
Address: 192.168.1.90
Name:   adc.iiitd.edu.in
Address: 192.168.1.7

Authoritative answers can be found from:

yashika@Yashika:~$ nslookup iiitd.ac.in adc.iiitd.edu.in
Server:          adc.iiitd.edu.in
Address:         192.168.1.7#53

Name:   iiitd.ac.in
Address: 192.168.2.127

yashika@Yashika:~$
```

First I used `nslookup -type=NS iiitd.ac.in` this send a request to the default local DNS server to get the host names of the authoritative DNS for `iiitd.ac.in`.

Then we get two servers. I use `nslookup iiitd.ac.in adc.iiitd.edu.in` Here DNS server `adc.iiitd.edu.in` provides the IP address of host `iiitd.ac.in`. Thus we get authoritative result.

2 b) Find out time to live for any website on the local dns. Put a screenshot. Explain in words (with unit) that after how much time this entry would expire.

```
yashika@ubuntu:~$ nslookup -debug google.in
Server:          127.0.0.53
Address:         127.0.0.53#53

-----
      QUESTIONS:
        google.in, type = A, class = IN
      ANSWERS:
    -> google.in
        internet address = 142.250.183.164
        ttl = 5
      AUTHORITY RECORDS:
      ADDITIONAL RECORDS:
-----
Non-authoritative answer:
Name:   google.in
Address: 142.250.183.164
-----
      QUESTIONS:
        google.in, type = AAAA, class = IN
      ANSWERS:
    -> google.in
        has AAAA address 2404:6800:4009:828::2004
        ttl = 5
      AUTHORITY RECORDS:
      ADDITIONAL RECORDS:
-----
Name:   google.in
Address: 2404:6800:4009:828::2004

yashika@ubuntu:~$
```

Entry would destroy in 5s

Q3. Run the command, traceroute google.in

a) How many intermediate hosts do you see, what are the IP addresses, compute the average latency to each intermediate host. Put a screenshot.

```
yashika@Yashika:~$ traceroute google.in
traceroute to google.in (216.58.221.36), 30 hops max, 60 byte packets
 1  Yashika.mshome.net (172.26.240.1)  0.309 ms  0.242 ms  0.236 ms
 2  192.168.48.254 (192.168.48.254)  9.552 ms  9.545 ms  9.540 ms
 3  auth.iiitd.edu.in (192.168.1.99)  7.745 ms  9.521 ms  7.735 ms
 4  180.151.15.241.reverse.spectranet.in (180.151.15.241)  16.297 ms  16.291 ms  15.082 ms
 5  72.14.194.202 (72.14.194.202)  16.292 ms  16.286 ms  16.281 ms
 6  108.170.251.97 (108.170.251.97)  16.598 ms  108.170.251.113 (108.170.251.113)  16.146 ms  18.338 ms
 7  216.239.57.113 (216.239.57.113)  16.024 ms  216.239.57.33 (216.239.57.33)  14.949 ms  14.933 ms
 8  del03s07-in-f4.1e100.net (216.58.221.36)  6.722 ms  6.706 ms  8.200 ms
yashika@Yashika:~$
```

There are 8 intermediate hosts

- | | |
|-------------------|---------------------------|
| 1. 216.58.221.36 | Average latency 0.262 ms |
| 2. 192.168.48.254 | Average latency 9.546 ms |
| 3. 192.168.1.99 | Average latency 8.334 ms |
| 4. 180.151.15.241 | Average latency 15.89 ms |
| 5. 72.14.194.202 | Average latency 16.286 ms |
| 6. 108.170.251.97 | Average latency 17.027 ms |
| 7. 216.239.57.113 | Average latency 15.302 ms |
| 8. 216.58.221.36 | Average latency 7.209 ms |

b) Send 100 ping messages to google.in, Determine the average latency. Put a screenshot.[2]

```

64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=84 ttl=116 time=29.4 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=85 ttl=116 time=5.73 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=86 ttl=116 time=40.0 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=87 ttl=116 time=5.52 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=88 ttl=116 time=13.1 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=89 ttl=116 time=39.1 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=90 ttl=116 time=4.74 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=91 ttl=116 time=8.18 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=92 ttl=116 time=38.6 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=93 ttl=116 time=14.8 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=94 ttl=116 time=4.87 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=95 ttl=116 time=47.3 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=96 ttl=116 time=6.94 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=97 ttl=116 time=5.14 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=98 ttl=116 time=24.7 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=99 ttl=116 time=45.5 ms
64 bytes from kul01s10-in-f36.1e100.net (216.58.221.36): icmp_seq=100 ttl=116 time=20.5 ms

--- google.in ping statistics ---
100 packets transmitted, 100 received, 0% packet loss, time 99172ms
rtt min/avg/max/mdev = 3.879/17.864/106.250/18.529 ms
yashika@Yashika:~$

```

Average latency is 17.864 ms

c) Send 100 ping messages to columbia.edu, Determine the average latency. Put a screenshot.[2]

```

64 bytes from childpolicy.org (128.59.105.24): icmp_seq=90 ttl=233 time=261 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=91 ttl=233 time=249 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=92 ttl=233 time=249 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=93 ttl=233 time=258 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=94 ttl=233 time=305 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=95 ttl=233 time=258 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=96 ttl=233 time=265 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=97 ttl=233 time=257 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=98 ttl=233 time=250 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=99 ttl=233 time=252 ms
64 bytes from childpolicy.org (128.59.105.24): icmp_seq=100 ttl=233 time=251 ms

--- columbia.edu ping statistics ---
100 packets transmitted, 100 received, 0% packet loss, time 99151ms
rtt min/avg/max/mdev = 244.575/253.063/304.733/9.270 ms
yashika@Yashika:~$

```

Average latency is 253.063 ms

d) Add up the ping latency of all the intermediate hosts and compare with (b). Are they matching, explain?[1+1]

After adding up all ping latency of intermediate hosts we get 89.856 ms. $0.262 + 9.546 + 8.334 + 15.89 + 16.286 + 17.027 + 15.302 + 7.209 = 89.956$ ms.

No it is not comparable with (b). As when we ping a server we get rtt to reach the server but in traceroute each avg latency is corresponding to the time to reach that particular intermediate host.

So after adding all avg latency in (a) we will get the sum of time needed to ping all host individually from our machine but ping google.com shows the time needed to reach google's server.

In average latency of a node, average latency of a predecessor node might actually be included so if we again add latency of previous node it is a repetition. This is why the difference between two values.

e) Take the maximum of ping latency amongst the intermediate hosts and compare with (b). Are they matching, explain?

Maximum of ping latency amongst the intermediate node is 17.027 ms. For (b) we get answer 17.864 ms and both of them are comparable. As 17.027 is the node which is taking the most time to reach hence when we ping google it is also around that amount. Latency at each successive node keeps on increasing as distance is increasing. Thus around the last few nodes we get maximum value and that is the value which majorly affects latency received by ping command.

f) Traceroute columbia.edu. Compare the number of hops between google.in and columbia.edu (between the traceroute result of google.in and columbia.edu). Can you explain the reason for the latency difference between google.in and columbia.edu? [1+1]

```
rtt min/avg/max/mdev = 244.573/253.063/304.733/9.270 ms
yashika@Yashika:~$ traceroute columbia.edu
traceroute to columbia.edu (128.59.105.24), 30 hops max, 60 byte packets
 0  yashika.mshome.net (172.26.240.1)  0.504 ms  0.367 ms  0.328 ms
 1  192.168.48.254 (192.168.48.254)  10.199 ms  10.141 ms  10.099 ms
 2  vpn.iiitd.edu.in (192.168.1.99)  8.788 ms  8.733 ms  8.558 ms
 3  180.151.15.241.reverse.spectranet.in (180.151.15.241)  9.227 ms  9.109 ms  9.095 ms
 4  219.65.112.205.static-delhi.vsnl.net.in (219.65.112.205)  9.973 ms  9.688 ms  9.793 ms
 5  172.23.183.134 (172.23.183.134)  38.563 ms  46.020 ms  39.409 ms
 6  ix-ae-0-100.tcore1.mlv-mumbai.as6453.net (180.87.38.5)  36.866 ms  36.247 ms  39.702 ms
 7  * * *
 8  if-ae-7-2.tcore1.pye-paris.as6453.net (195.219.174.9)  156.732 ms  * *
 9  * * *
10  be6453.agr21.par04.atlas.cogentco.com (130.117.15.69)  145.857 ms  145.850 ms  156.685 ms
11  be3169.ccr31.par04.atlas.cogentco.com (154.54.37.237)  158.944 ms  154.136 ms  be2151.ccr32.par04.atlas.cogentco.com
(154.54.61.33)  161.655 ms
12  be2103.ccr42.par01.atlas.cogentco.com (154.54.61.21)  161.105 ms  be3184.ccr42.par01.atlas.cogentco.com (154.54.38.15
7)  163.404 ms  153.077 ms
13  be3628.ccr42.jfk02.atlas.cogentco.com (154.54.27.169)  245.315 ms  245.575 ms  243.198 ms
14  be2897.rcr24.jfk01.atlas.cogentco.com (154.54.84.214)  249.325 ms  246.650 ms  250.089 ms
15  38.122.8.210 (38.122.8.210)  248.382 ms  243.649 ms  261.878 ms
16  cc-core-1-x-nyser32-gw-1.net.columbia.edu (128.59.255.5)  278.544 ms  279.082 ms  270.987 ms
17  cc-conc-1-x-cc-core-1.net.columbia.edu (128.59.255.21)  248.156 ms  246.139 ms  247.939 ms
18  columbiauniversity.org (128.59.105.24)  253.698 ms  253.669 ms  253.661 ms
19  yashika@Yashika:~$
```

There are 8 intermediate hosts when trying to reach google.in whereas there are 19 hosts when trying to reach columbia.edu. As each host adds up to the latency of the signal, we can see that avg latency to reach google.in is less compared to when we try to reach columbia.edu.

Solution 4 :

127.0.0.1 is the ip address of our internal device lo as shown in the ifconfig command.


```

yashika@ubuntu:~$ ifconfig
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST> mtu 1500
    inet 192.168.204.130 netmask 255.255.255.0 broadcast 192.168.204.255
    inet6 fe80::a358:e58b:d79:46e5 prefixlen 64 scopeid 0x20<linklocal>
    ether 00:0c:29:4b:75:ce txqueuelen 1000 (Ethernet)
    RX packets 12142 bytes 9376700 (9.3 MB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 5815 bytes 686430 (686.4 KB)
    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 1242 bytes 131255 (131.2 KB)
    RX errors 0 dropped 0 overruns 0 frame 0
    TX packets 1242 bytes 131255 (131.2 KB)
    Show Applications 0 dropped 0 overruns 0 carrier 0 collisions 0

```

we can use the command `sudo ifconfig lo down` to turn down 127.0.0.1, Now when we send the ping we get 100% packet loss as we can't reach as its not up.

```

yashika@ubuntu:~$ ping 127.0.0.1
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.
64 bytes from 127.0.0.1: icmp_seq=1 ttl=64 time=12.0 ms
64 bytes from 127.0.0.1: icmp_seq=2 ttl=64 time=0.130 ms
^C
--- 127.0.0.1 ping statistics ---
2 packets transmitted, 2 received, 0% packet loss, time 1001ms
rtt min/avg/max/mdev = 0.130/6.066/12.002/5.936 ms
yashika@ubuntu:~$ sudo ifconfig lo down
yashika@ubuntu:~$ ping 127.0.0.1
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.
^C
--- 127.0.0.1 ping statistics ---
3 packets transmitted, 0 received, 100% packet loss, time 2040ms

yashika@ubuntu:~$

```

Solution 5 :

No.	Time	Source	Destination	Protocol	Length	Info
59	4.798517046	192.168.204.130	180.149.59.136	OCSP	477	Request
62	4.816219238	180.149.59.136	192.168.204.130	OCSP	942	Response
140	9.407723830	192.168.204.130	188.184.21.108	HTTP	398	GET / HTTP/1.1
144	9.576496357	188.184.21.108	192.168.204.130	HTTP	932	HTTP/1.1 200 OK (text/html)
188	10.263629251	192.168.204.130	188.184.21.108	HTTP	350	GET /favicon.ico HTTP/1.1
213	10.498344247	188.184.21.108	192.168.204.130	HTTP	1708	HTTP/1.1 200 OK (image/vnd.microsoft.icon)

For 1st HTTP packet

Wireshark · Packet 140 · ens33

GET / HTTP/1.1\r\n

- [Expert Info (Chat/Sequence): GET / HTTP/1.1\r\n]
 - Request Method: GET
 - Request URI: /
 - Request Version: HTTP/1.1
- Host: info.cern.ch\r\n
- User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:104.0) Gecko/20100101 Firefox/104.0\r\n
- Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/avif,image/webp,*/*;q=0.8\r\n
- Accept-Language: en-US,en;q=0.5\r\n
- Accept-Encoding: gzip, deflate\r\n
- Connection: keep-alive\r\n
- Upgrade-Insecure-Requests: 1\r\n
- \r\n
- [Full request URI: <http://info.cern.ch/>]
- [HTTP request 1/1]
- [Response in frame: 144]

0000 00 50 56 fd 12 82 00 0c 29 4b 75 ce 08 00 45 00 :PV.....)Ku...E.

0010 01 80 88 ea 40 00 40 06 51 3e c0 a8 cc 82 bc b8 :...@.. Q>.....

0020 15 6c 90 56 00 50 14 0f 53 c0 1f 1d 32 52 50 18 :.l.V.P..S...2RP.

0030 65 50 00 00 00 00 00 00 00 00 00 00 00 00 00 :.....T / HTTP

It is a request packet

HTTP request type = GET

User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:104.0) Gecko/20100101 Firefox/104.0\r\n

HTTP request packet's URL = / full request url = <http://info.cern.ch>

For 2nd HTTP packet

```
HTTP/1.1 200 OK\r\n
  [Expert Info (Chat/Sequence): HTTP/1.1 200 OK\r\n]
    Response Version: HTTP/1.1
    Status Code: 200
    [Status Code Description: OK]
    Response Phrase: OK
    Date: Fri, 23 Sep 2022 11:22:45 GMT\r\n
    Server: Apache\r\n
    Last-Modified: Wed, 05 Feb 2014 16:00:31 GMT\r\n
    ETag: "286-4f1aadb3105c0"\r\n
    Accept-Ranges: bytes\r\n
  Content-Length: 646\r\n
  Connection: close\r\n
  Content-Type: text/html\r\n
  \r\n
  [HTTP response 1/1]
  [Time since request: 0.168772527 seconds]
  [Request in frame: 140]
  [Request URI: http://info.cern.ch/]
  File Data: 646 bytes
  Line-based text data: text/html (13 lines)
```

It is a http response packet

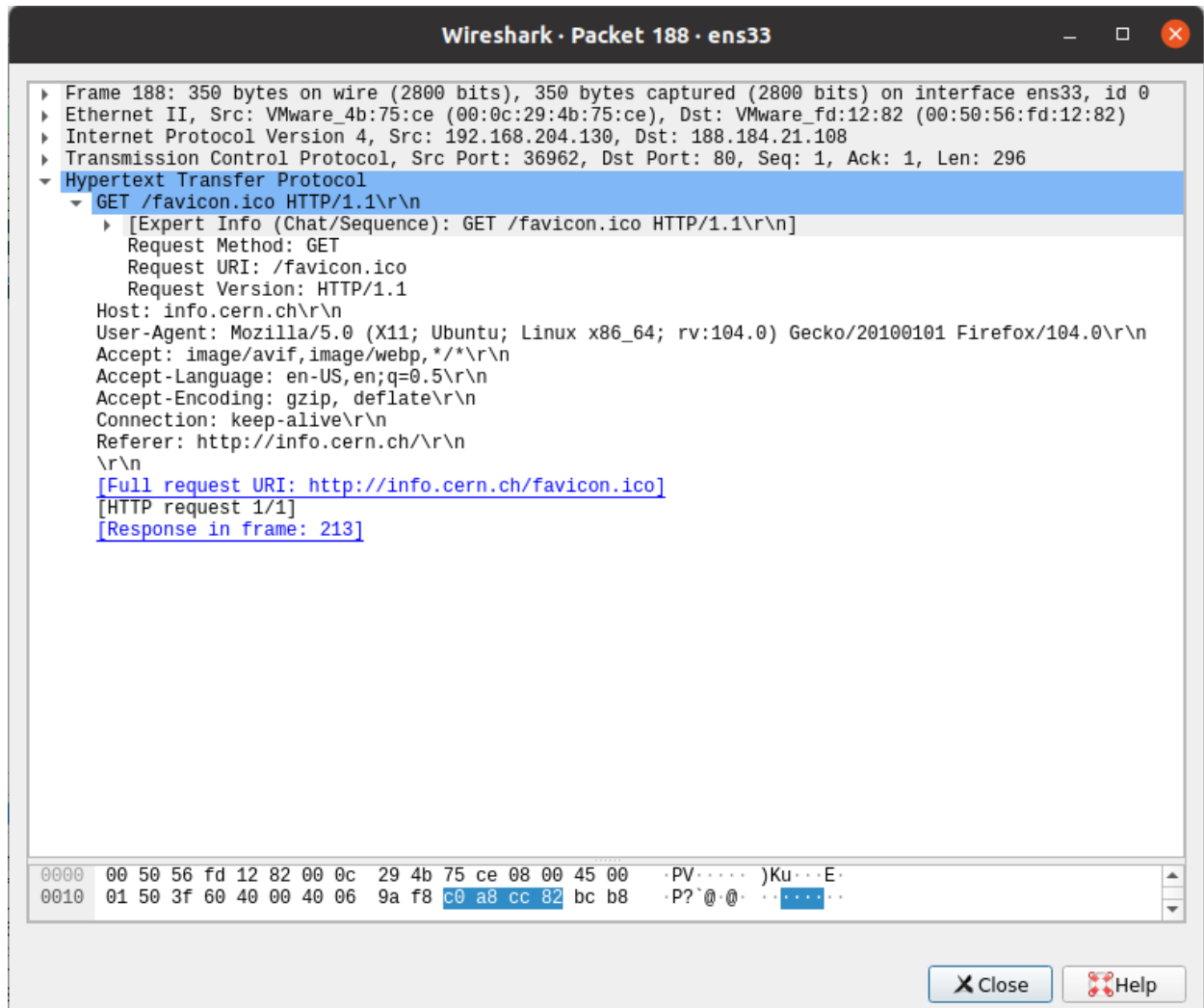
HTTP response code =

```
Status Code: 200
[Status Code Description: OK]
```

HTTP response description = Response Version: HTTP/1.1

Name and version of the web server = Server: Apache\r\n

For 3rd HTTP packet



It is a request packet

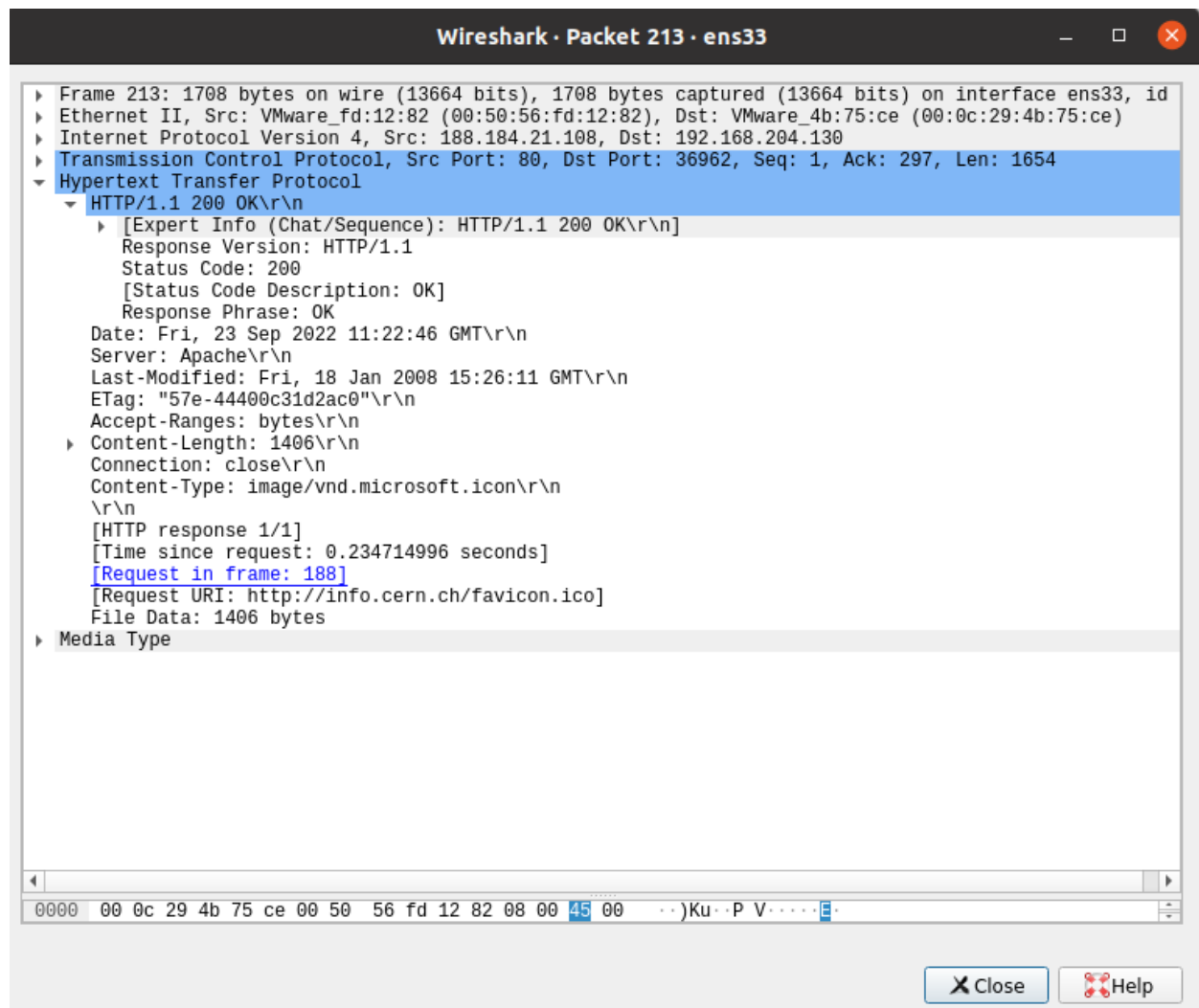
HTTP request type = GET

User-Agent: Mozilla/5.0 (X11; Ubuntu; Linux x86_64; rv:104.0)

Gecko/20100101 Firefox/104.0\r\n

HTTP request packet's URL = /favicon.ico

For 4th packet :



It is a http response packet

HTTP response code =

Status Code: 200
[Status Code Description: OK]

HTTP response description = Response Version: HTTP/1.1

Name and version of the web server = Server: Apache\r\n

How many web objects get downloaded? Were they over the same TCP connection or different connections?

2 web objects get downloaded. They are over two different connections as we can also see in the connection it is close no keep alive that means it closes after the transaction finishes.

- From this tell if it is HTTP persistent or non-persistent?
HTTP is **non persistent** as the connection closes after the transaction finishes and for new transaction new connections are formed.

Q6. [1+1] Note: perform this test after Q5

Using netstat command with flags t p a . p insures that pid is visible, a ensures that connection is active, t ensures only tcp connections are listed

a) Write the command to display all active tcp connections with pids

```
sudo netstat -atp
```

```
yashika@ubuntu:~$ sudo netstat -atp
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 localhost:ipp           0.0.0.0:*               LISTEN      696/cupsd
tcp        0      0 localhost:domain       0.0.0.0:*               LISTEN      652/systemd-resolve
tcp        0      0 ubuntu:58916           102.115.120.34.bc:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:43146           a23-63-111-227.dep:http ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:33576           76.237.120.34.bc.:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:59868           kazooie.canonical.:http TIME_WAIT    -
tcp        0      0 ubuntu:38172           webafs706.cern.ch:http  TIME_WAIT    -
tcp        0      0 ubuntu:53456           webafs706.cern.ch:http  TIME_WAIT    -
tcp        0      0 ubuntu:45572           123.208.120.34.bc:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:43160           a23-63-111-227.dep:http ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:48260           ec2-52-27-12-161.:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:59852           kazooie.canonical.:http TIME_WAIT    -
tcp        0      0 ubuntu:40810           117.18.237.29:http      ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:47564           server-13-35-191-:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:56290           82.221.107.34.bc.g:http ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:50132           239.237.117.34.bc:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:60962           server-13-224-245:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:47580           server-13-35-191-:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:53466           webafs706.cern.ch:http  ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:40796           117.18.237.29:http      ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:57132           221.5.120.34.bc.g:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:54844           server-99-86-47-8:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:56284           82.221.107.34.bc.g:http ESTABLISHED 1982/firefox
tcp6       0      0 ip6-localhost:ipp     [::]:*                 LISTEN      696/cupsd
yashika@ubuntu:~$
```

b) Determine the state of the TCP connection(s) to this server
<http://info.cern.ch>

`sudo netstat -tpa http://info.cern.ch`

```
yashika@ubuntu:~$ sudo netstat -tpa http://info.cern.ch
Active Internet connections (servers and established)
Proto Recv-Q Send-Q Local Address           Foreign Address         State       PID/Program name
tcp        0      0 localhost:ipp           0.0.0.0:*               LISTEN      696/cupsd
tcp        0      0 localhost:domain       0.0.0.0:*               LISTEN      652/systemd-resolve
tcp        0      0 ubuntu:38022           webafs706.cern.ch:http  ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:52222           webafs706.cern.ch:http  TIME_WAIT    -
tcp        0      0 ubuntu:48260           ec2-52-27-12-161.:https ESTABLISHED 1982/firefox
tcp        0      0 ubuntu:56144           del03s13-in-f3.1e1:http TIME_WAIT    -
tcp6       0      0 ip6-localhost:ipp     [::]:*                 LISTEN      696/cupsd
yashika@ubuntu:~$
```