

Name :Dheeraj, Roll_no: 2020194, Assignment-1

```
itachi@itachi-virtual-machine: ~  
e ens33  
    valid_lft 1649sec preferred_lft 1649sec  
    inet6 fe80::e642:2c70:b8c1:951e/64 scope link noprefixroute  
    valid_lft forever preferred_lft forever  
itachi@itachi-virtual-machine:~$ ifconfig  
ens33: flags=4163<UP,BROADCAST,RUNNING,MULTICAST>  mtu 1500  
    inet 192.168.100.128 netmask 255.255.255.0  broadcast 192.168.100.255  
    inet6 fe80::e642:2c70:b8c1:951e prefixlen 64  scopeid 0x20<link>  
    ether 00:0c:29:65:9c:52 txqueuelen 1000 (Ethernet)  
    RX packets 12068  bytes 13704001 (13.7 MB)  
    RX errors 0  dropped 0  overruns 0  frame 0  
    TX packets 6369  bytes 834152 (834.1 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 1077  bytes 119569 (119.5 KB)  
    RX errors 0  dropped 0  overruns 0  frame 0  
    TX packets 1077  bytes 119569 (119.5 KB)  
    TX errors 0  dropped 0  overruns 0  carrier 0  collisions 0
```

Q1) a) My network Ip address is 192.168.198.100.128 for Ubuntu

The screenshot shows a web browser displaying the 'WhatIsMyIP.com' website. The page title is 'IP Address Information about 180.151.15.242'. The website has a dark blue header with navigation links: Home, IP Address Lookup, IP WHOIS Lookup, Tools, Investigate, Privacy, Learn, Safety, and WiFi. Below the header, there is a large white box with the text 'IP Address Information about 180.151.15.242'. To the left of this box, there are several promotional banners for 'DIWALI WITH Tech Ka', 'BIGGEST SALE EVER', 'TECH KA SHUBH MUHURAT IS HERE', and 'SAVINGS UPTO ₹34,500*'. To the right of the main box, there is a table titled 'IP Address Location Information for 180.151.15.242' with the following data:

IP Address Location Information for 180.151.15.242	
City:	Ludhiana
State:	Punjab
Country:	India
Postal Code:	141008
Time Zone:	+05:30

Below the table, there is a banner for 'ATLASSIAN Remote Jobs At Atlassian' with the text 'Atlassian believes the future of work is...'. The bottom of the page shows a Windows taskbar with various application icons and a system clock showing 05:14 PM on 22-09-2022.

Q1)B)

whatismyip.org is showing the address that our ISP has provided to us, and config is showing us our local Ip

Q2)

```
itachi@itachi-virtual-machine:~$ sudo nslookup -type=soa netflix.com
Server:      127.0.0.53
Address:     127.0.0.53#53

Non-authoritative answer:
netflix.com
    origin = ns-81.awsdns-10.com
    mail addr = awsdns-hostmaster.amazon.com
    serial = 1
    refresh = 7200
    retry = 900
    expire = 1209600
    minimum = 1800

Authoritative answers can be found from:
ns-81.awsdns-10.com    internet address = 205.251.192.81
ns-81.awsdns-10.com    has AAAA address 2600:9000:5300:5100::1
```

```
itachi@itachi-virtual-machine:~$ sudo nslookup netflix.com ns-81.awsdns-10.com
Server:      ns-81.awsdns-10.com
Address:     205.251.192.81#53

Name:   netflix.com
Address: 54.155.178.5
Name:   netflix.com
Address: 3.251.50.149
Name:   netflix.com
Address: 54.74.73.31
Name:   netflix.com
Address: 2a05:d018:76c:b683:f711:f0cf:5cc7:b815
Name:   netflix.com
Address: 2a05:d018:76c:b685:3b38:679d:2640:1ced
Name:   netflix.com
Address: 2a05:d018:76c:b684:8e48:47c9:84aa:b34d
```

A)When we use command " sudo nslookup -type=soa" we get the actual server name, and then we use that actual server name to get the authorial address which is"ns-81.awsdns-10.com"

Command "sudo nslookup netflix.com ns-81.awsdns-10.com "

Q2)B)

```
itachi@itachi-virtual-machine:~$ nslookup -debug netflix.com
Server:          127.0.0.53
Address:         127.0.0.53#53
```

```
-----
```

```
QUESTIONS:
```

```
    netflix.com, type = A, class = IN
```

```
ANSWERS:
```

```
-> netflix.com
```

```
    internet address = 52.214.181.141
```

```
    ttl = 5
```

```
-> netflix.com
```

```
    internet address = 54.246.79.9
```

```
    ttl = 5
```

```
-> netflix.com
```

```
    internet address = 54.170.196.176
```

```
    ttl = 5
```

```
AUTHORITY RECORDS:
```

```
ADDITIONAL RECORDS:
```

```
-----
```

```

-----
Non-authoritative answer:
Name:   netflix.com
Address: 52.214.181.141
Name:   netflix.com
Address: 54.246.79.9
Name:   netflix.com
Address: 54.170.196.176
-----
      QUESTIONS:
        netflix.com, type = AAAA, class = IN
      ANSWERS:
-> netflix.com
   has AAAA address 2a05:d018:76c:b685:c898:aa3a:42c7:9d21
   ttl = 5
-> netflix.com
   has AAAA address 2a05:d018:76c:b684:b233:ac1f:be1f:7
   ttl = 5
-> netflix.com
   has AAAA address 2a05:d018:76c:b683:e1fe:9fbf:c403:57f1
   ttl = 5
      AUTHORITY RECORDS:
      ADDITIONAL RECORDS:
-----
Name:   netflix.com
Address: 2a05:d018:76c:b685:c898:aa3a:42c7:9d21
Name:   netflix.com
Address: 2a05:d018:76c:b684:b233:ac1f:be1f:7
Name:   netflix.com
Address: 2a05:d018:76c:b683:e1fe:9fbf:c403:57f1

```

command:"nslookup -debug netflix.com"

Time to live for Ipv4 address(type = A): 5 sec

Time to live for Ipv6 address(type =AAAA): 5sec

The Ipv4 and Ipv6 expire in 5 seconds, packets are loaded into the cache and expired after time to live

Q3

```

C:\Users\DHEERAJ> tracert google.in

Tracing route to google.in [216.58.221.36]
over a maximum of 30 hops:

  1    5 ms    10 ms    5 ms  192.168.48.254
  2   52 ms   44 ms   10 ms  auth.iiitd.edu.in [192.168.1.99]
  3   37 ms   22 ms    6 ms  180.151.15.241.reverse.spectranet.in [180.151.15.241]
  4   18 ms    5 ms    6 ms  72.14.194.202
  5    7 ms    6 ms   10 ms  108.170.251.97
  6   19 ms   12 ms    6 ms  216.239.57.33
  7   13 ms    6 ms   17 ms  del03s07-in-f4.1e100.net [216.58.221.36]

Trace complete.

```

After putting tracert google.in we get all the path router's ip address which connect us to the google.com

S.no	Latency	avg(ms)	path
1	5ms+10ms+5ms	16.7	192.168.48.254
2	52ms+44ms+10ms	35.3	auth.iiitd.edu.in
3	37ms+22ms+6ms	21.6	180.151.15.241.reverse.spectranet.in
4	18ms+5ms+6ms	9.6	72.14.194.202
5	7ms+6ms+10ms	7.6	108.170.251.97
6	19ms+12ms+6ms	12.3	216.239.57.33
7	13ms+6ms+17ms	12	del03s07-in-f4.1e100.net

B)

```
Select Administrator: C:\WINDOWS\system32\cmd.exe
C:\WINDOWS\system32>ping -n 100 google.in

Pinging google.in [172.217.166.68] with 32 bytes of data:
Reply from 172.217.166.68: bytes=32 time=56ms TTL=116
Reply from 172.217.166.68: bytes=32 time=32ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=57ms TTL=116
Reply from 172.217.166.68: bytes=32 time=36ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=53ms TTL=116
Reply from 172.217.166.68: bytes=32 time=40ms TTL=116
Reply from 172.217.166.68: bytes=32 time=42ms TTL=116
Reply from 172.217.166.68: bytes=32 time=42ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=41ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=41ms TTL=116
Reply from 172.217.166.68: bytes=32 time=32ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=38ms TTL=116
Reply from 172.217.166.68: bytes=32 time=37ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=48ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=39ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116

c) Send 100 ping messages to columbia.edu. Determine the average latency. Put a screenshot.[2]
d) Add up the ping latency of all the intermediate hosts and compare with (b). Are they matching, explain?[1+1]
e) Take the maximum of ping latency amongst the intermediate hosts and compare with (b). Are they matching, explain? [1+1]
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]

Q4. [2+1] Make your ping command fail for 127.0.0.1 (with 100% packet loss). Explain how you do it. Put a screenshot that it failed
```

```
Select Administrator: C:\WINDOWS\system32\cmd.exe

Reply from 172.217.166.68: bytes=32 time=42ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=37ms TTL=116
Reply from 172.217.166.68: bytes=32 time=62ms TTL=116
Reply from 172.217.166.68: bytes=32 time=33ms TTL=116
Reply from 172.217.166.68: bytes=32 time=37ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116
Reply from 172.217.166.68: bytes=32 time=34ms TTL=116
Reply from 172.217.166.68: bytes=32 time=51ms TTL=116
Reply from 172.217.166.68: bytes=32 time=36ms TTL=116
Reply from 172.217.166.68: bytes=32 time=33ms TTL=116
Reply from 172.217.166.68: bytes=32 time=79ms TTL=116
Reply from 172.217.166.68: bytes=32 time=32ms TTL=116
Reply from 172.217.166.68: bytes=32 time=40ms TTL=116
Reply from 172.217.166.68: bytes=32 time=35ms TTL=116

Ping statistics for 172.217.166.68:
    Packets: Sent = 100, Received = 98, Lost = 2 (2% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 27ms, Maximum = 79ms, Average = 38ms
```

Avg latency: 38ms
C)

```
Administrator: C:\WINDOWS\system32\cmd.exe
Minimum = 27ms, Maximum = 79ms, Average = 38ms

C:\WINDOWS\system32>ping -n 100 columbia.com

Pinging columbia.com [104.17.146.181] with 32 bytes of data:
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=41ms TTL=58
Reply from 104.17.146.181: bytes=32 time=35ms TTL=58
Reply from 104.17.146.181: bytes=32 time=38ms TTL=58
Reply from 104.17.146.181: bytes=32 time=34ms TTL=58
Reply from 104.17.146.181: bytes=32 time=46ms TTL=58
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=31ms TTL=58
Reply from 104.17.146.181: bytes=32 time=40ms TTL=58
Reply from 104.17.146.181: bytes=32 time=34ms TTL=58
Reply from 104.17.146.181: bytes=32 time=37ms TTL=58
Reply from 104.17.146.181: bytes=32 time=33ms TTL=58
Reply from 104.17.146.181: bytes=32 time=32ms TTL=58
Reply from 104.17.146.181: bytes=32 time=40ms TTL=58
Reply from 104.17.146.181: bytes=32 time=37ms TTL=58
Reply from 104.17.146.181: bytes=32 time=38ms TTL=58
Reply from 104.17.146.181: bytes=32 time=34ms TTL=58
Reply from 104.17.146.181: bytes=32 time=34ms TTL=58
Reply from 104.17.146.181: bytes=32 time=38ms TTL=58
Reply from 104.17.146.181: bytes=32 time=31ms TTL=58
Reply from 104.17.146.181: bytes=32 time=42ms TTL=58
Reply from 104.17.146.181: bytes=32 time=60ms TTL=58
Reply from 104.17.146.181: bytes=32 time=33ms TTL=58
Reply from 104.17.146.181: bytes=32 time=32ms TTL=58
Reply from 104.17.146.181: bytes=32 time=33ms TTL=58
```

```
Administrator: C:\WINDOWS\system32\cmd.exe

Reply from 104.17.146.181: bytes=32 time=34ms TTL=58
Reply from 104.17.146.181: bytes=32 time=33ms TTL=58
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=34ms TTL=58
Reply from 104.17.146.181: bytes=32 time=29ms TTL=58
Reply from 104.17.146.181: bytes=32 time=33ms TTL=58
Reply from 104.17.146.181: bytes=32 time=27ms TTL=58
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=26ms TTL=58
Reply from 104.17.146.181: bytes=32 time=27ms TTL=58
Reply from 104.17.146.181: bytes=32 time=29ms TTL=58
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=36ms TTL=58
Reply from 104.17.146.181: bytes=32 time=44ms TTL=58
Reply from 104.17.146.181: bytes=32 time=37ms TTL=58
Reply from 104.17.146.181: bytes=32 time=28ms TTL=58
Reply from 104.17.146.181: bytes=32 time=39ms TTL=58
Reply from 104.17.146.181: bytes=32 time=30ms TTL=58
Reply from 104.17.146.181: bytes=32 time=29ms TTL=58
Reply from 104.17.146.181: bytes=32 time=33ms TTL=58
Reply from 104.17.146.181: bytes=32 time=28ms TTL=58

Ping statistics for 104.17.146.181:
    Packets: Sent = 100, Received = 100, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 26ms, Maximum = 98ms, Average = 36ms
```

Avg = 36ms

d) sum = 115.1

No, they don't match because traceroute involves sending UDP packets to each node along the way and waiting for its timeout response (then moving on to the next node), whereas a ping is just given the time taken from the computer to that particular router

E) max =35.3 and avg latency (ping) 38ms

Yes they are nearly equal because ping command given the time taken to the destination, on the other hand, Traceroute give time taken for the packet to travel till the individual routers on the way so avg time of ping and max time of traceroute always will be nearly equal

F)

```
C:\WINDOWS\system32\cmd.exe
Trace complete.
C:\WINDOWS\system32>tracert columbia.edu

Tracing route to columbia.edu [128.59.105.24]
over a maximum of 30 hops:

  1  19 ms   15 ms   12 ms  192.168.48.254
  2  18 ms    8 ms    7 ms  auth.iiitd.edu.in [192.168.1.99]
  3  12 ms   10 ms   16 ms  180.151.15.241.reverse.spectranet.in [180.151.15.241]
  4  23 ms   48 ms   20 ms  219.65.112.205.static-delhi.vsnl.net.in [219.65.112.205]
  5  32 ms   72 ms   92 ms  172.23.183.134
  6  45 ms   58 ms  100 ms  ix-ae-0-100.tcore1.mlv-mumbai.as6453.net [180.87.38.5]
  7  *        *        *      Request timed out.
  8  *        *        *      Request timed out.
  9 253 ms  150 ms  161 ms  if-ae-55-4.tcore1.pvu-paris.as6453.net [80.231.153.168]
10 146 ms  155 ms  156 ms  be6453.agr21.par04.atlas.cogentco.com [130.117.15.69]
11 157 ms  155 ms  151 ms  be2151.ccr32.par04.atlas.cogentco.com [154.54.61.33]
12 154 ms  149 ms  158 ms  be2103.ccr42.par01.atlas.cogentco.com [154.54.61.21]
13 272 ms  290 ms  282 ms  be3628.ccr42.jfk02.atlas.cogentco.com [154.54.27.169]
14 266 ms  266 ms  268 ms  be2897.rcr24.jfk01.atlas.cogentco.com [154.54.84.214]
15 263 ms  261 ms  273 ms  38.122.8.210
16 260 ms  280 ms  260 ms  cc-core-1-x-nyser32-gw-1.net.columbia.edu [128.59.255.5]
17 300 ms  267 ms  273 ms  cc-conc-1-x-cc-core-1.net.columbia.edu [128.59.255.21]
18 261 ms  263 ms  269 ms  columbia.edu [128.59.105.24]

Trace complete.
C:\WINDOWS\system32>
```



```

C:\WINDOWS\system32>tracert google.in

Tracing route to google.in [142.250.67.196]
over a maximum of 30 hops:

  1    10 ms    10 ms    18 ms  192.168.48.254
  2    12 ms     9 ms     5 ms  auth.iiitd.edu.in [192.168.1.99]
  3    10 ms     6 ms     8 ms  180.151.15.241.reverse.spectranet.in [180.151.15.241]
  4    21 ms    14 ms    11 ms  72.14.194.202
  5    20 ms    10 ms    13 ms  108.170.251.108
  6    29 ms     5 ms    39 ms  72.14.233.107
  7    41 ms    29 ms    37 ms  72.14.232.138
  8    27 ms    26 ms    41 ms  108.170.248.177
  9    60 ms    36 ms    26 ms  142.250.235.11
 10    42 ms    40 ms    30 ms  bom12s08-in-f4.1e100.net [142.250.67.196]

Trace complete.

```

No. of hops for google: 10

No. of hops for Columbia: 18

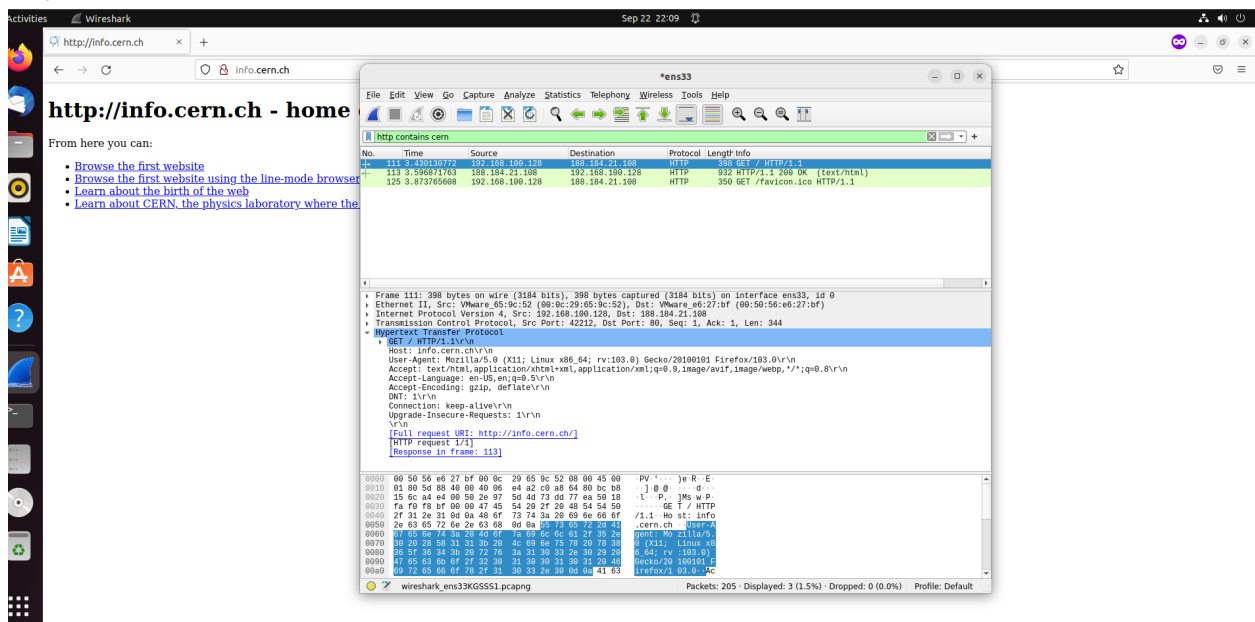
Latency difference between google and Columbia because Google is a large service provider and have many servers set up around the world, so path taken to google.in must always be smaller than Columbia.edu, which has fewer servers around the world; hence the latency of google. in is smaller than Columbia.edu

Q4)

```
itachi@itachi-virtual-machine: ~  
itachi@itachi-virtual-machine:~$ sudo ifconfig lo down  
[sudo] password for itachi:  
itachi@itachi-virtual-machine:~$ ping 127.0.0.1  
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.  
^[[A  
  
^C  
--- 127.0.0.1 ping statistics ---  
113 packets transmitted, 0 received, 100% packet loss, time 114676ms  
  
itachi@itachi-virtual-machine:~$ ping -c 50 127.0.0.1  
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.  
^C  
--- 127.0.0.1 ping statistics ---  
50 packets transmitted, 0 received, 100% packet loss, time 50202ms  
  
itachi@itachi-virtual-machine:~$ ping -c 50 127.0.0.1  
PING 127.0.0.1 (127.0.0.1) 56(84) bytes of data.  
^C  
--- 127.0.0.1 ping statistics ---  
18 packets transmitted, 0 received, 100% packet loss, time 17407ms  
  
itachi@itachi-virtual-machine:~$
```

If we type the command `sudo ifconfig lo down` it will make localhost(127.0.01) down(that is causes the driver for the loopback interface to be shut down). When the ping command is run on 127.0.01 we don't get any response and ping command fails with 100% packet loss.

Q5)



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http contains cern

No.	Time	Source	Destination	Protocol	Length	Info
111	3.430130772	192.168.100.128	188.184.21.108	HTTP	398	GET / HTTP/1.1
113	3.596871763	188.184.21.108	192.168.100.128	HTTP	932	HTTP/1.1 200 OK (text/html)
125	3.873765608	192.168.100.128	188.184.21.108	HTTP	350	GET /favicon.ico HTTP/1.1

Frame 113: 932 bytes on wire (7456 bits), 932 bytes captured (7456 bits) on interface ens33, id 0

Ethernet II, Src: VMware_e6:27:bf (00:50:56:e6:27:bf), Dst: VMware_65:9c:52 (00:0c:29:65:9c:52)

Internet Protocol Version 4, Src: 188.184.21.108, Dst: 192.168.100.128

Transmission Control Protocol, Src Port: 80, Dst Port: 42212, Seq: 1, Ack: 345, Len: 878

Hypertext Transfer Protocol

HTTP/1.1 200 OK\r\n

Date: Thu, 22 Sep 2022 16:39:13 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: 0.166740991 seconds]

[Request in frame: 111]

[Request URI: http://info.cern.ch/]

File Data: 646 bytes

Line-based text data: text/html (13 lines)

0000 00 0c 29 65 9c 52 00 50 56 e6 27 bf 08 00 45 00 ..)e-R-P V...E-

0010 03 96 9d bd 00 00 80 06 a2 57 bc b8 15 6c c0 a8W...l..

0020 64 80 00 50 a4 e4 73 dd 77 ea 2e 97 5e a5 50 19 d..P...s..w...A-P-

0030 fa f0 22 cb 00 00 48 54 54 50 2f 31 2e 31 20 32 .."...HT TP/1.1 2

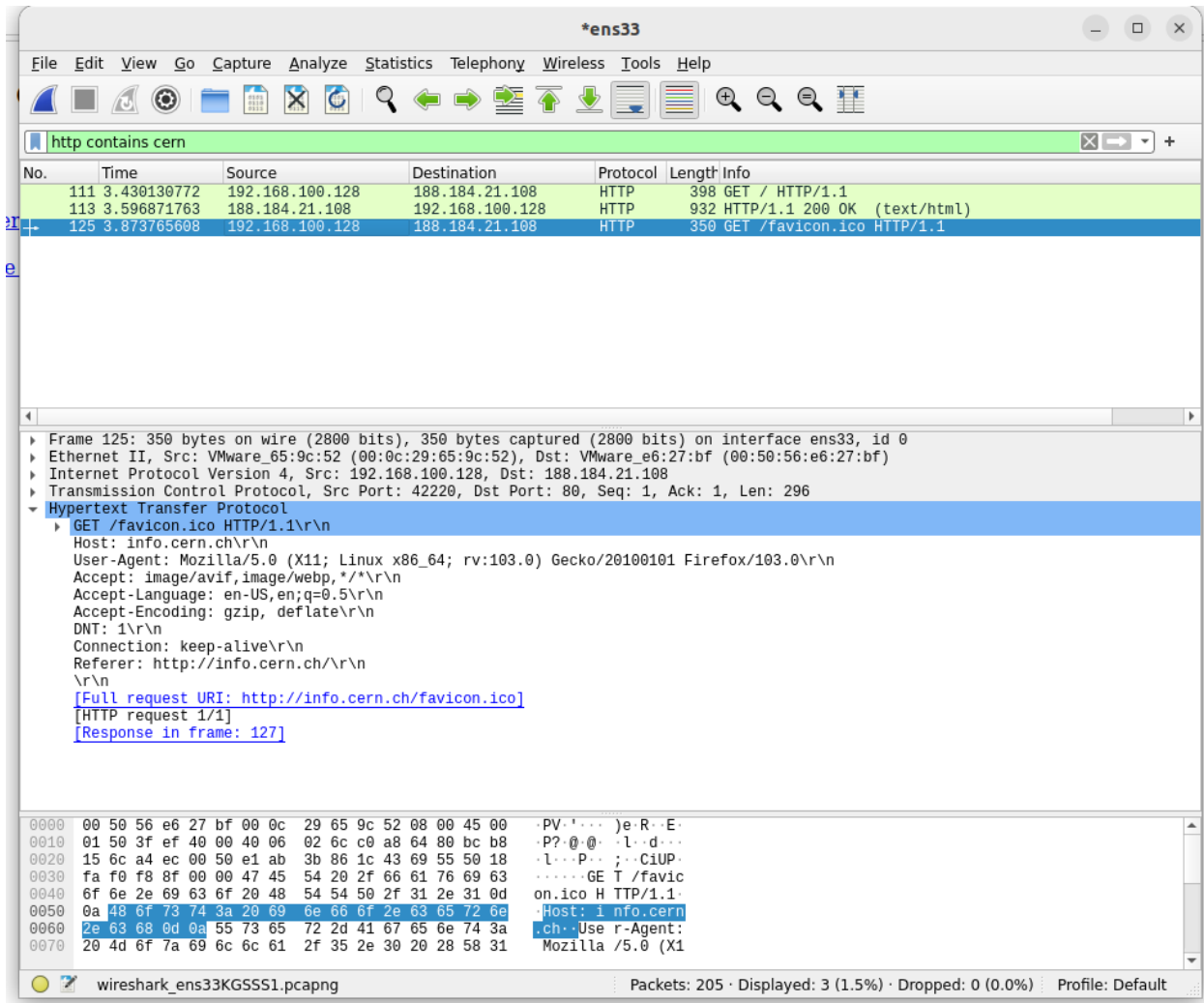
0040 30 30 20 4f 4b 0d 0a 44 61 74 65 3a 20 54 68 75 00 OK...D ate: Thu

0050 2c 20 32 32 20 53 65 70 20 32 30 32 20 31 36 , 22 Sep 2022 16

0060 3a 33 39 3a 31 33 20 47 4d 54 0d 0a 53 65 72 76 :39:13 G MT...Serv

0070 65 72 3a 20 41 70 61 63 68 65 0d 0a 4c 61 73 74 er: Apac he...Last

wireshark_ens33KGS51.pcapng Packets: 205 · Displayed: 3 (1.5%) · Dropped: 0 (0.0%) Profile: Default



- **For HTTP request packets**

- 1) HTTP request type: HTTP/1.1
- 2) User agent type: Mozilla firefox
- 3) HTTP request packet's URL: <http://info.cern.ch/>

- **For HTTP response packets**

- 1) HTTP response code: 200 OK
- 2) HTTP response description: 200 OK which tell us successfully done
- 3) Name and version of the web server: Apache

- There are 2 web objects downloaded which is the result of 2 GET requests(one which contains Html files/object, Second is image objects/files)
- AS we can see that the both have different destination port for the response of web objects and over the same TCP connection destination port can not be different hence both are on different TCP connection

- Hence this network is non-persistent

Q6) command to display all active tcp connections with pids:

a) Command : `sudo netstat -atp`

PID for tcp connection is :2091/firefox

B) The state of the TCP connection to server is established

```
itachi@itachi-virtual-machine:~$ 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      982/cupsd
tcp        0      0 localhost:domain        0.0.0.0:*               LISTEN      724/systemd-resolve
tcp        0      0 itachi-virtual-ma:41116 server-99-86-47-7:https  TIME_WAIT   -
tcp        0      0 itachi-virtual-ma:55376 82.221.107.34.bc.g:http ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:41094 server-99-86-47-7:https  ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:40558 82.221.107.34.bc.g:http TIME_WAIT   -
tcp        0      0 itachi-virtual-ma:55502 server-13-35-191:https  ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:39886 a23-63-111-227.dep:http ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:33922 36.75.98.34.bc.go:https ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:55370 82.221.107.34.bc.g:http ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:47898 239.237.117.34.bc:https TIME_WAIT   -
tcp        0      0 itachi-virtual-ma:37268 webafs706.cern.ch:http  ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:54042 172.64.155.188:http     TIME_WAIT   -
tcp        0      0 itachi-virtual-ma:40564 82.221.107.34.bc.g:http TIME_WAIT   -
tcp        0      0 itachi-virtual-ma:41792 123.208.120.34.bc:https ESTABLISHED 2901/firefox
tcp        0      0 itachi-virtual-ma:41456 ec2-44-240-140-78:https ESTABLISHED 2901/firefox
tcp6       0      0 ip6-localhost:ipp      [::]:*                 LISTEN      982/cupsd
```