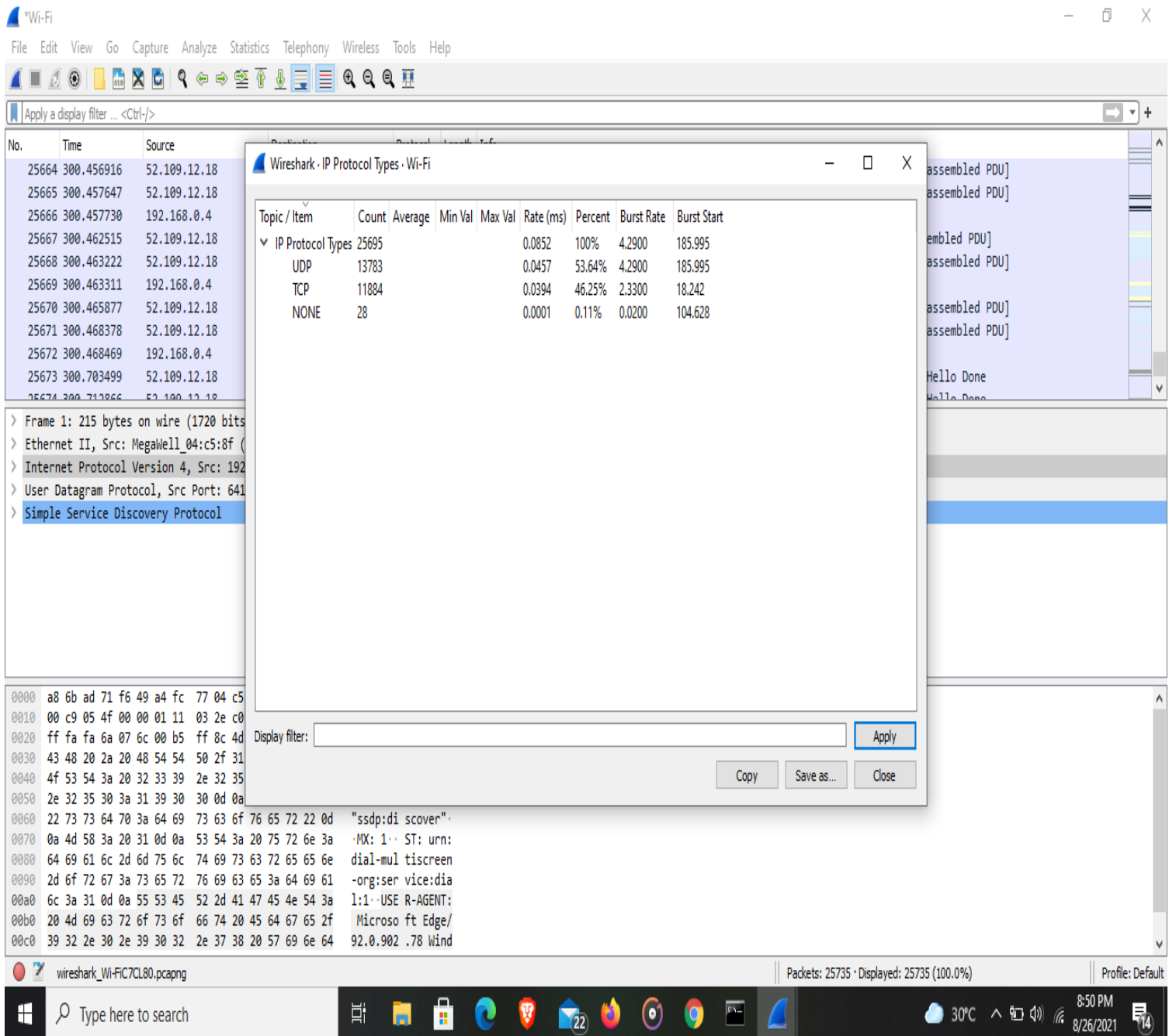


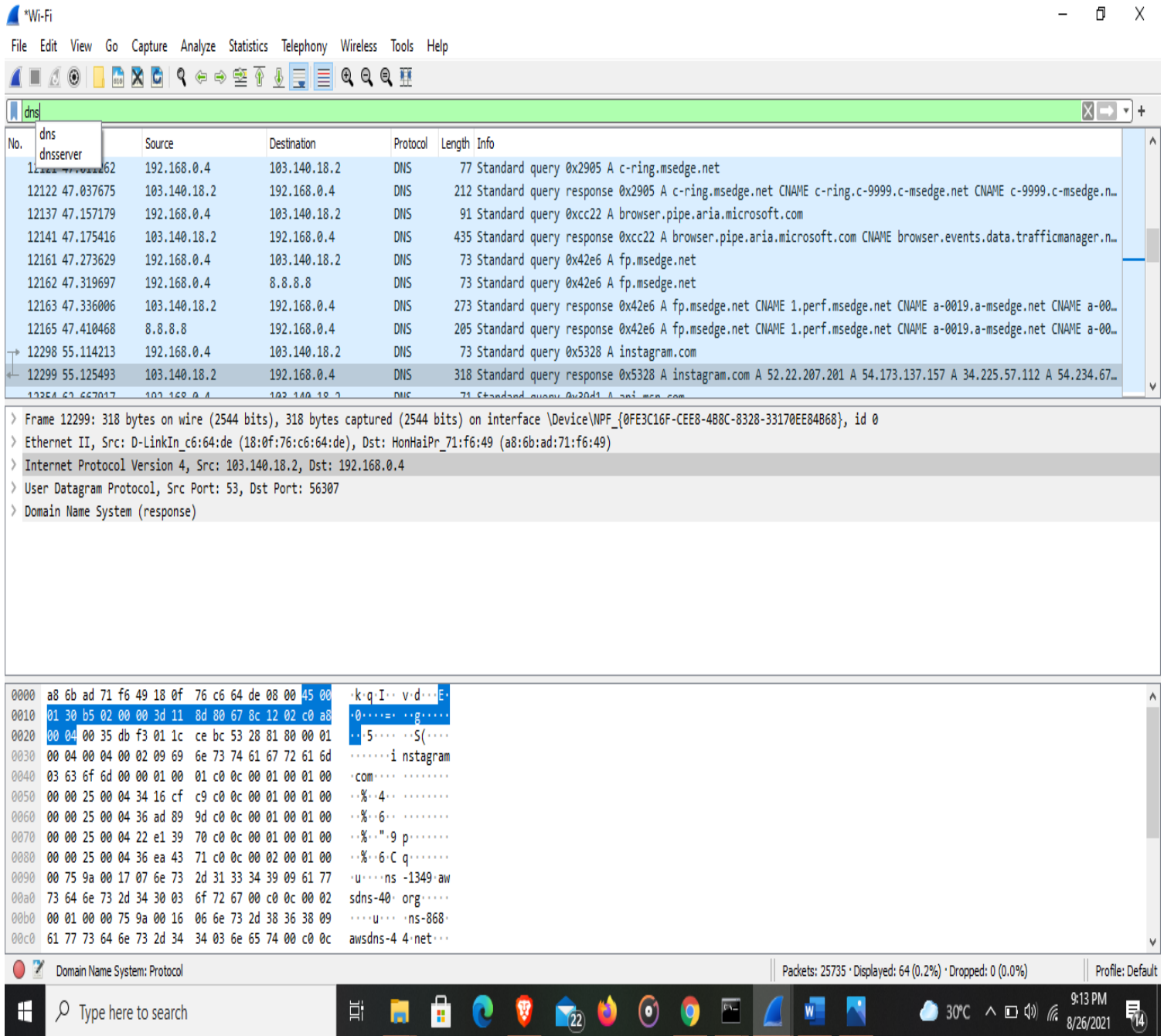
# TASK-1



After capturing the internet traffic for 5 minutes, the above figure shows the total UDP and TCP packets

Total UDP packets-13783

Total TCP packets-11884



The above figure shows the DNS packets captured

Topic / Item	Count	Average	Min Val	Max Val	Rate (ms)	Percent	Burst Rate	Burst Start
▼ Total Packets	64				0.0002	100%	0.0400	180.455
▼ rcode	64				0.0002	100.00%	0.0400	180.455
No error	64				0.0002	100.00%	0.0400	180.455
▼ opcodes	64				0.0002	100.00%	0.0400	180.455
Standard query	64				0.0002	100.00%	0.0400	180.455
▼ Query/Response	64				0.0002	100.00%	0.0400	180.455
Response	32				0.0001	50.00%	0.0200	43.677
Query	32				0.0001	50.00%	0.0200	43.497
▼ Query Type	64				0.0002	100.00%	0.0400	180.455
A (Host Address)	64				0.0002	100.00%	0.0400	180.455
▼ Class	64				0.0002	100.00%	0.0400	180.455
IN	64				0.0002	100.00%	0.0400	180.455
▼ Service Stats	0				0.0000	100%	-	-
request-response time (secs)	32	0.04	0.010712	0.180228	0.0001		0.0200	43.677
no. of unsolicited responses	0				0.0000		-	-
no. of retransmissions	0				0.0000		-	-
▼ Response Stats	0				0.0000	100%	-	-
no. of questions	64	1.00	1	1	0.0002		0.0400	43.677
no. of authorities	64	3.00	0	10	0.0002		0.0400	43.677
no. of answers	64	4.69	1	17	0.0002		0.0400	43.677
no. of additionals	64	3.63	0	8	0.0002		0.0400	43.677
▼ Query Stats	0				0.0000	100%	-	-
Qname Len	32	20.06	11	36	0.0001		0.0200	43.497
▼ Label Stats	0				0.0000		-	-
4th Level or more	4				0.0000		0.0200	180.455
3rd Level	27				0.0001		0.0200	43.497
2nd Level	1				0.0000		0.0100	55.114
1st Level	0				0.0000		-	-
Payload size	64	162.28	29	512	0.0002	100%	0.0400	180.455

Display filter:

Apply

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The above figure shows the details about DNS packets

Total DNS packets obtained-64

Wi-Fi

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ts

No.	Time	Source	Destination	Protocol	Length	Info
12211	47.953530	192.168.0.4	52.168.117.170	TLSv1.2	55	Application Data
12220	48.223033	52.168.117.170	192.168.0.4	TLSv1.2	481	Application Data
12223	48.323952	192.168.0.4	13.107.21.200	TLSv1.2	912	Application Data
12228	48.324941	192.168.0.4	13.107.21.200	TLSv1.2	894	Application Data
12229	48.325360	192.168.0.4	13.107.21.200	TLSv1.2	92	Application Data
12239	48.441056	13.107.21.200	192.168.0.4	TLSv1.2	197	Application Data
12289	53.718357	192.168.0.4	157.240.228.16	TLSv1.3	83	Application Data
12291	53.933415	157.240.228.16	192.168.0.4	TLSv1.3	79	Application Data
12295	54.055055	192.168.0.4	91.108.56.121	SSL	383	Continuation Data
12296	54.131716	91.108.56.121	192.168.0.4	SSL	143	Continuation Data
12297	54.238465	192.168.0.4	157.240.228.16	TLSv1.3	86	Application Data

> Frame 12296: 143 bytes on wire (1144 bits), 143 bytes captured (1144 bits) on interface \Device\NPF\_{0FE3C16F-CEE8-4B8C-8328-33170EE84B68}, id 0

> Ethernet II, Src: D-LinkIn\_c6:64:de (18:0f:76:c6:64:de), Dst: HonHaiPr\_71:f6:49 (a8:6b:ad:71:f6:49)

> Internet Protocol Version 4, Src: 91.108.56.121, Dst: 192.168.0.4

> Transmission Control Protocol, Src Port: 443, Dst Port: 64020, Seq: 90, Ack: 467, Len: 89

Transport Layer Security

```

0000 a8 6b ad 71 f6 49 18 0f 76 c6 64 de 08 00 45 00  .k.q.I...v.d...E.
0010 00 81 10 f6 40 00 34 06 e0 ef 5b 6c 38 79 c0 a8  ....@.4...l8y...
0020 00 04 01 bb fa 14 4f 61 79 66 25 a5 ef dc 50 18  ....0a yf%...P.
0030 7e ca e9 b2 00 00 98 c4 ec ba a0 36 15 b1 96 54  ~.....6...T
0040 b3 45 7a 5e ab 29 41 cf 5c 6e f0 fd 3f e9 f0 38  .Ez^.)A\ \n...?..8
0050 f5 5b 56 ad 90 b5 d9 0f 3d 6e 03 fe 21 87 53 4c  .[V.....=n...!..SL
0060 0a dd c2 eb 2e 0b b2 ee cb 52 7f 86 f3 a7 15 32  .......R.....2
0070 0c 27 c2 fc d9 19 dc 68 07 eb 9c a7 f4 46 42 58  .'.....h.....FBX
0080 9a 26 21 e0 0a 95 21 71 3a ca 81 b0 83 7e b8    .&!....!q :.....

```

Transport Layer Security: Protocol

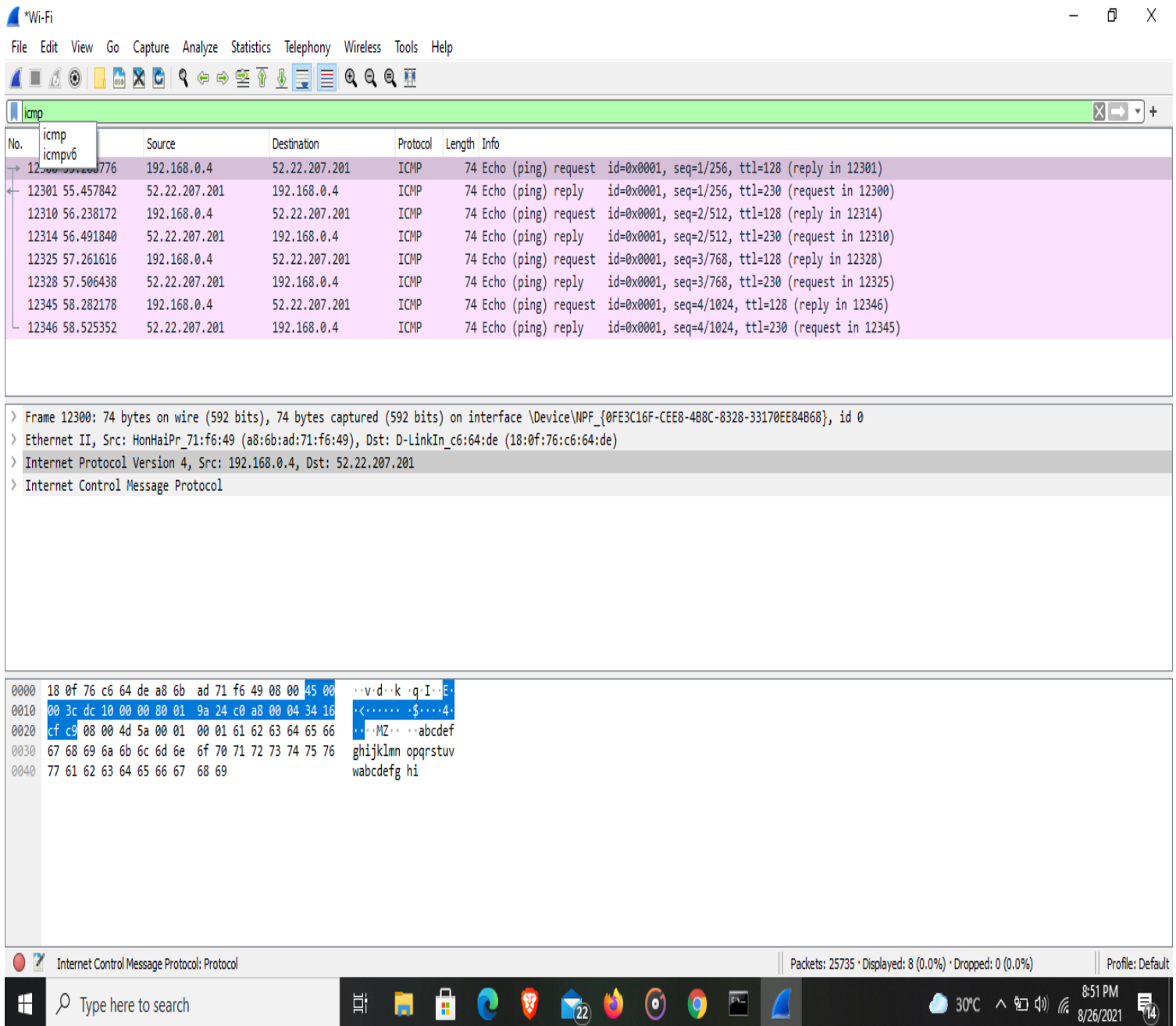
Packets: 25735 · Displayed: 3097 (12.0%) · Dropped: 0 (0.0%)

Profile: Default

Type here to search

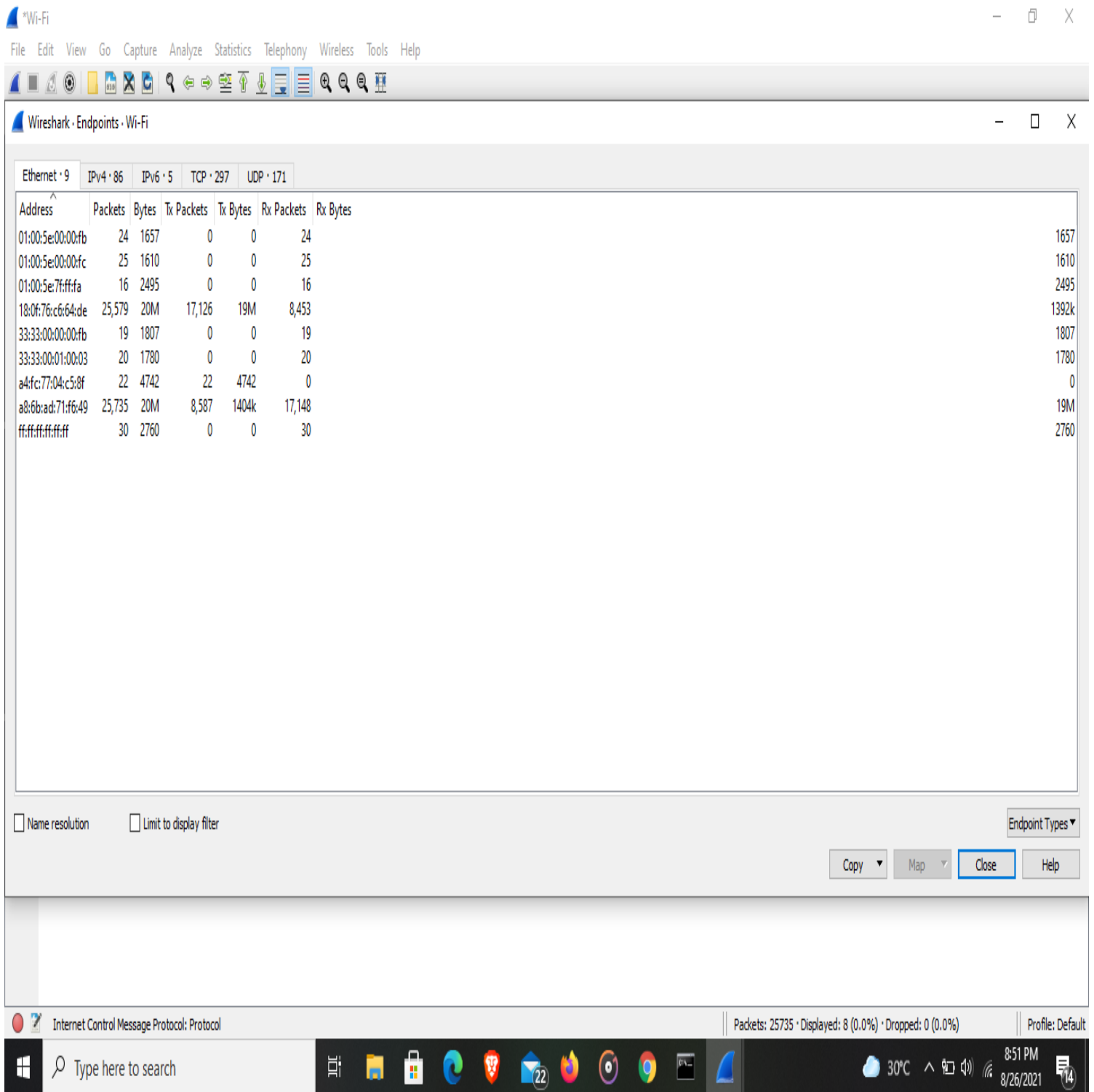
30°C 8:59 PM 8/26/2021

The above figure shows the TLS packets captured

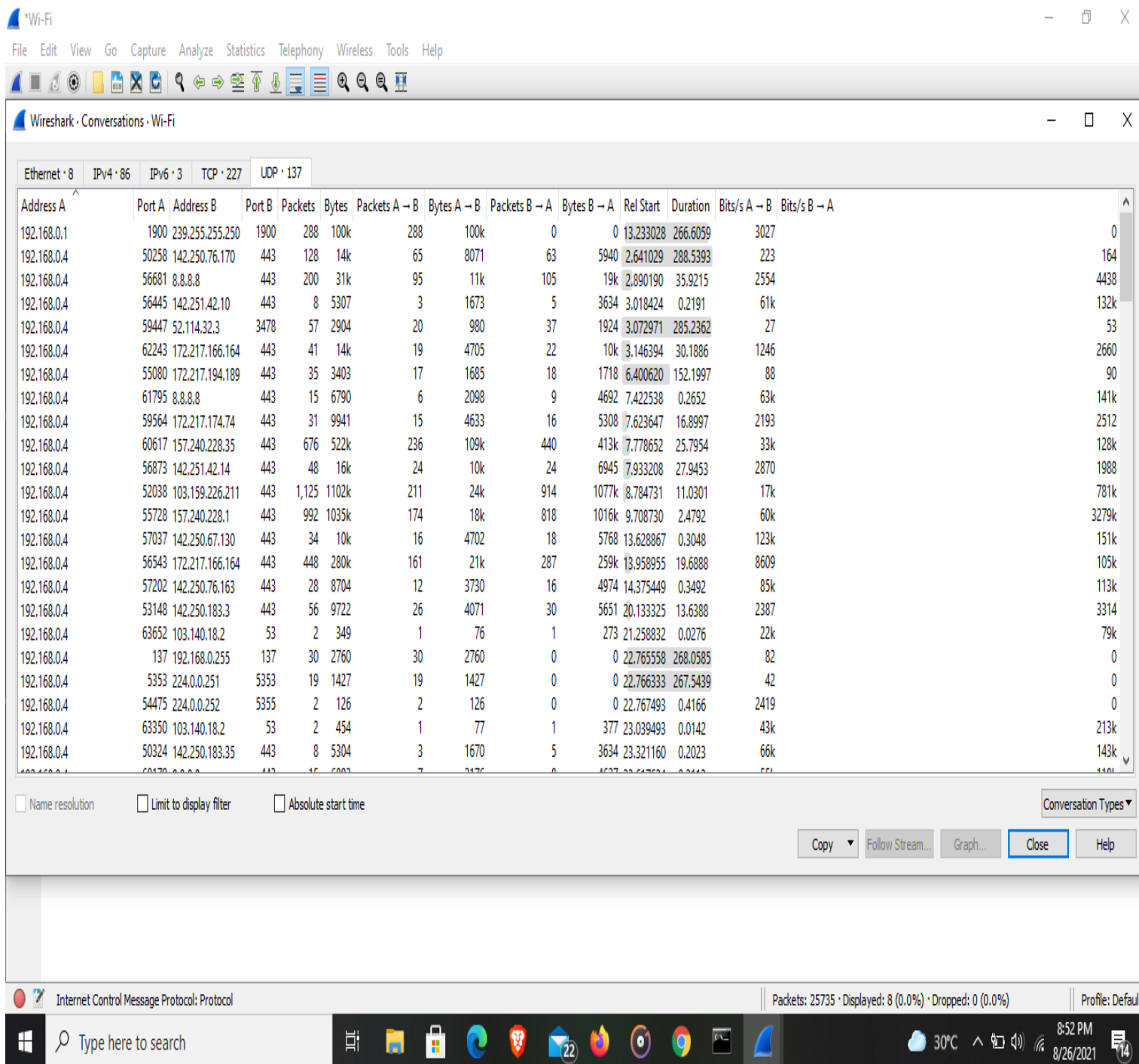


The above figure shows the ICMP packets captured

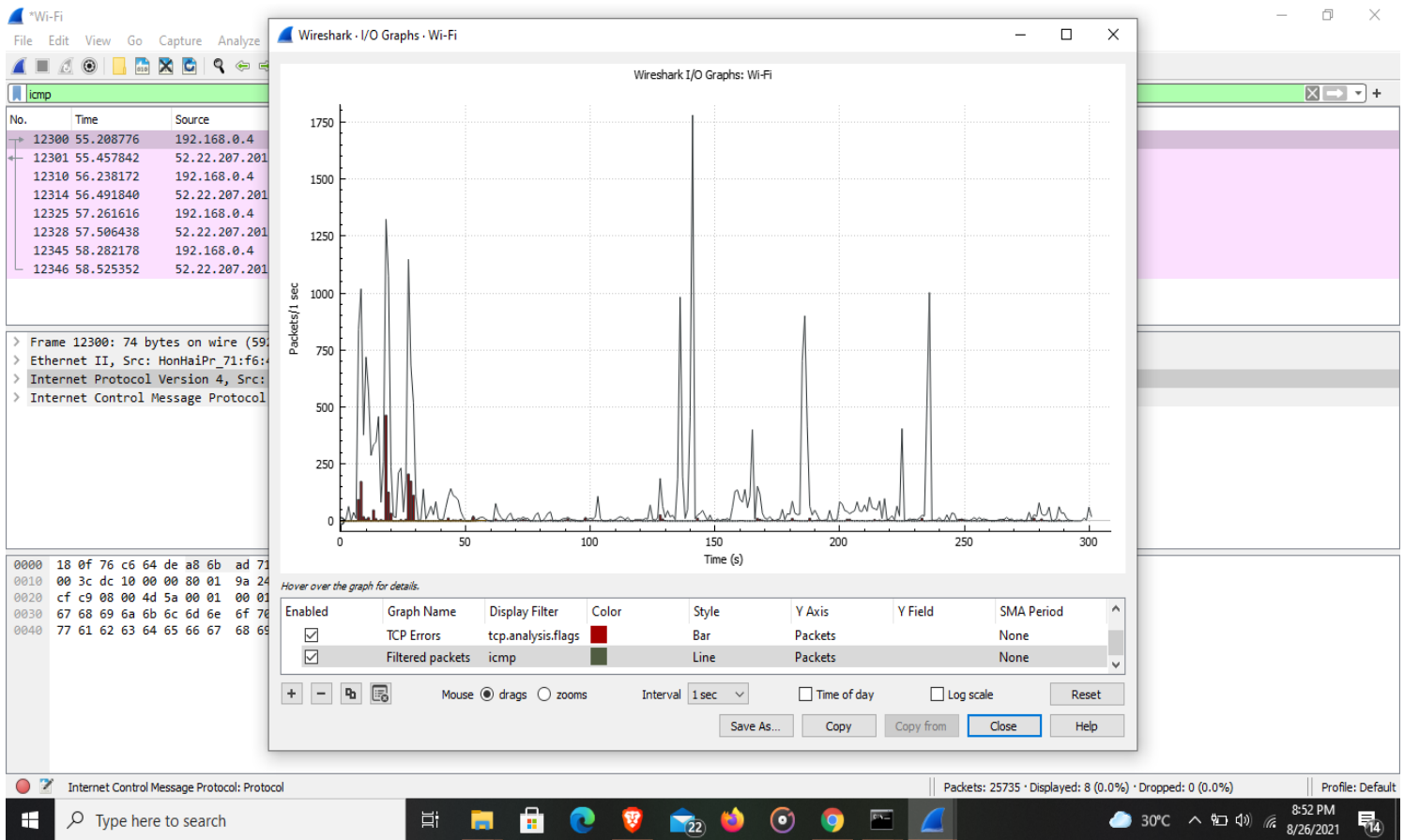
TOTAL ICMP PACKETS-8



The above figure shows the endpoints  
ETHERNET-9, IPv4-86, IPv6-5, TCP-297, UDP-171

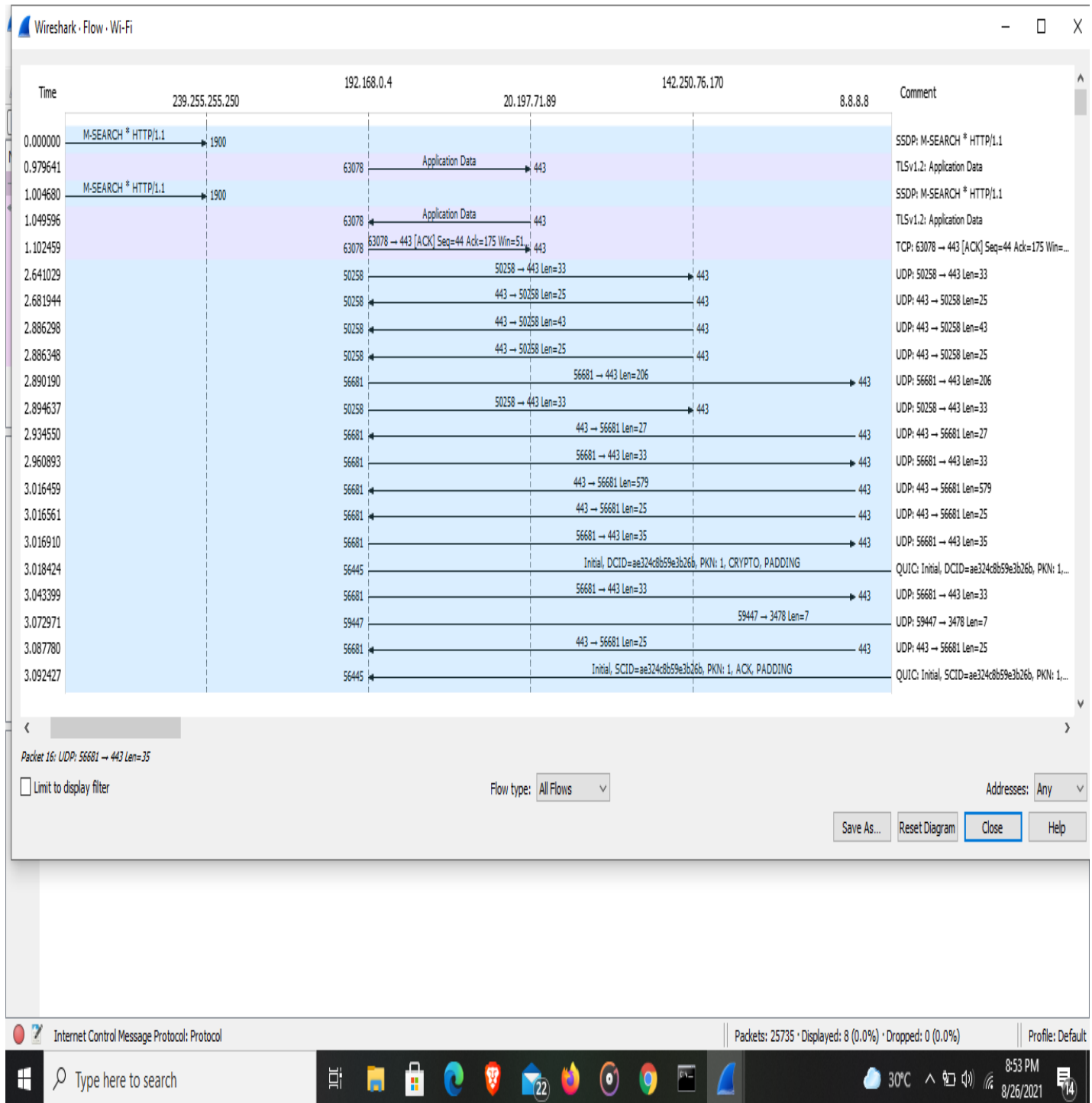


The above figure shows the Conversations  
ETHERNET-8, IPv4-86, IPv6-3, TCP-227, UDP-137



The above figure shows the I/O Graph





The above figure shows the Flow Graph

# TASK-2

```
Command Prompt - iperf3 -s
Server listening on 5201
-----
iperf3: interrupt - the server has terminated
C:\Users\My\Desktop\iperf-3.1.3-win64>iperf3 -s
-----
Server listening on 5201
Accepted connection from 127.0.0.1, port 51696
[ 5] local 127.0.0.1 port 5201 connected to 127.0.0.1 port 51697
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-1.00  sec   591 MBytes  4.96 Gbits/sec
[ 5] 1.00-2.01  sec   806 MBytes  6.72 Gbits/sec
[ 5] 2.01-3.01  sec   255 MBytes  2.13 Gbits/sec
[ 5] 3.01-4.00  sec   359 MBytes  3.04 Gbits/sec
[ 5] 4.00-5.00  sec   465 MBytes  3.90 Gbits/sec
[ 5] 5.00-6.00  sec   562 MBytes  4.72 Gbits/sec
[ 5] 6.00-7.00  sec   268 MBytes  2.25 Gbits/sec
[ 5] 7.00-8.00  sec   537 MBytes  4.50 Gbits/sec
[ 5] 8.00-9.00  sec   409 MBytes  3.44 Gbits/sec
[ 5] 9.00-10.01 sec   234 MBytes  1.94 Gbits/sec
[ 5] 10.01-10.02 sec    0.00 Bytes  0.00 bits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 5] 0.00-10.02 sec    0.00 Bytes  0.00 bits/sec
[ 5] 0.00-10.02 sec   4.38 GBytes  3.76 Gbits/sec
-----
Server listening on 5201
-----
```

```
Microsoft Windows [Version 10.0.19042.1052]
(c) Microsoft Corporation. All rights reserved.

C:\Users\My\Desktop\iperf-3.1.3-win64>iperf3 -c 127.0.0.1
Connecting to host 127.0.0.1, port 5201
[ 4] local 127.0.0.1 port 51697 connected to 127.0.0.1 port 5201
[ ID] Interval      Transfer    Bandwidth
[ 4] 0.00-1.00  sec   591 MBytes  4.96 Gbits/sec
[ 4] 1.00-2.01  sec   806 MBytes  6.71 Gbits/sec
[ 4] 2.01-3.01  sec   255 MBytes  2.14 Gbits/sec
[ 4] 3.01-4.00  sec   358 MBytes  3.04 Gbits/sec
[ 4] 4.00-5.00  sec   466 MBytes  3.91 Gbits/sec
[ 4] 5.00-6.00  sec   563 MBytes  4.72 Gbits/sec
[ 4] 6.00-7.00  sec   268 MBytes  2.24 Gbits/sec
[ 4] 7.00-8.00  sec   537 MBytes  4.50 Gbits/sec
[ 4] 8.00-9.00  sec   409 MBytes  3.44 Gbits/sec
[ 4] 9.00-10.01 sec   234 MBytes  1.94 Gbits/sec
-----
[ ID] Interval      Transfer    Bandwidth
[ 4] 0.00-10.01 sec   4.38 GBytes  3.76 Gbits/sec
[ 4] 0.00-10.01 sec   4.38 GBytes  3.76 Gbits/sec
-----
iperf Done.

C:\Users\My\Desktop\iperf-3.1.3-win64>
```

CLIENT-SERVER in COMMAND PROMPT



Adapter for loopback traffic capture

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Wireshark · Conversations · Adapter for loopback traffic capture

Ethernet

IPv4 · 4

IPv6

TCP · 142

UDP · 1

Address A	Port A	Address B	Port B	Packets	Bytes	Packets A → B	Bytes A → B	Packets B → A	Bytes B → A	Rel Start	Duration	Bits/s A → B	Bits/s B → A
127.0.0.1	60942	127.0.0.1	4843	2	100	1	56	1	44	0.000000	0.0000	—	—
127.0.0.1	60942	127.0.0.1	4843	2	100	1	56	1	44	0.000338	0.0000	—	—
127.0.0.1	60943	127.0.0.1	4843	10	500	5	280	5	220	0.250733	2.0380	1099	863
127.0.0.1	60943	127.0.0.1	4843	2	100	1	56	1	44	2.289271	0.0000	—	—
127.0.0.1	60944	127.0.0.1	4843	10	500	5	280	5	220	2.290082	2.0414	1097	862
127.0.0.1	60944	127.0.0.1	4843	2	100	1	56	1	44	4.332286	0.0000	—	—
127.0.0.1	60945	127.0.0.1	4843	10	500	5	280	5	220	4.582511	2.0462	1094	860
127.0.0.1	60945	127.0.0.1	4843	2	100	1	56	1	44	6.629344	0.0001	—	—
127.0.0.1	60946	127.0.0.1	4843	10	500	5	280	5	220	6.630517	2.0497	1092	858
127.0.0.1	60946	127.0.0.1	4843	2	100	1	56	1	44	8.680951	0.0001	—	—
127.0.0.1	60947	127.0.0.1	4843	10	500	5	280	5	220	8.932647	2.0314	1102	866
127.0.0.1	60947	127.0.0.1	4843	2	100	1	56	1	44	10.964373	0.0000	—	—
127.0.0.1	60948	127.0.0.1	4843	10	500	5	280	5	220	10.964826	2.0435	1096	861
127.0.0.1	60948	127.0.0.1	4843	2	100	1	56	1	44	13.009417	0.0000	—	—
127.0.0.1	64669	127.0.0.1	4843	10	500	5	280	5	220	13.259264	2.0367	1099	864
127.0.0.1	64669	127.0.0.1	4843	2	100	1	56	1	44	15.297231	0.0001	—	—
127.0.0.1	51695	127.0.0.1	4843	10	500	5	280	5	220	15.299024	2.0443	1095	860
127.0.0.1	51696	127.0.0.1	5201	33	2013	17	1087	16	926	16.780259	10.5321	825	703
127.0.0.1	51697	127.0.0.1	5201	14,267	515M	10,366	515M	3,901	171k	16.817771	9.9574	413M	137k
127.0.0.1	51698	127.0.0.1	4843	2	100	1	56	1	44	18.612637	0.0000	—	—
127.0.0.1	51699	127.0.0.1	4843	4	200	2	112	2	88	20.655992	1.0176	880	691
127.0.0.1	51699	127.0.0.1	4843	2	100	1	56	1	44	21.674149	0.0000	—	—
127.0.0.1	51700	127.0.0.1	4843	2	100	1	56	1	44	21.927183	0.0001	—	—

☐ Name resolution
 ☐ Limit to display filter
 ☐ Absolute start time

Conversation Types ▾

Copy ▾

Follow Stream...

Graph...

Close

Help

Frame (frame), 56 bytes

Packets: 15133 · Displayed: 15133 (100.0%)

Profile: Default

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9:40 PM

8/26/2021

## TCP DETAILS



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Wireshark · Conversations · Adapter for loopback traffic capture

Ethernet		IPv4 · 4		IPv6		TCP · 142		UDP · 1			
Address A	Address B	Packets	Bytes	Packets A → B	Bytes A → B	Packets B → A	Bytes B → A	Rel Start	Duration	Bits/s A → B	Bits/s B → A
127.0.0.1	127.0.0.1	15,122	515M	15,122	515M	0	0	0.000000	156.5622	26M	0
192.168.0.4	239.255.255.250	7	932	7	932	0	0	27.501217	116.4983	64	0
192.168.0.4	224.0.0.251	2	72	2	72	0	0	80.494851	66.0060	8	0
192.168.0.4	224.0.0.252	2	72	2	72	0	0	81.995779	62.5021	9	0

☐ Name resolution ☐ Limit to display filter ☐ Absolute start time Conversation Types ▾

Copy ▾ Follow Stream... Graph... Close Help

Page 4 of 4 2 of 14 words English (United States) Focus 100%

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## IPv4 DETAILS