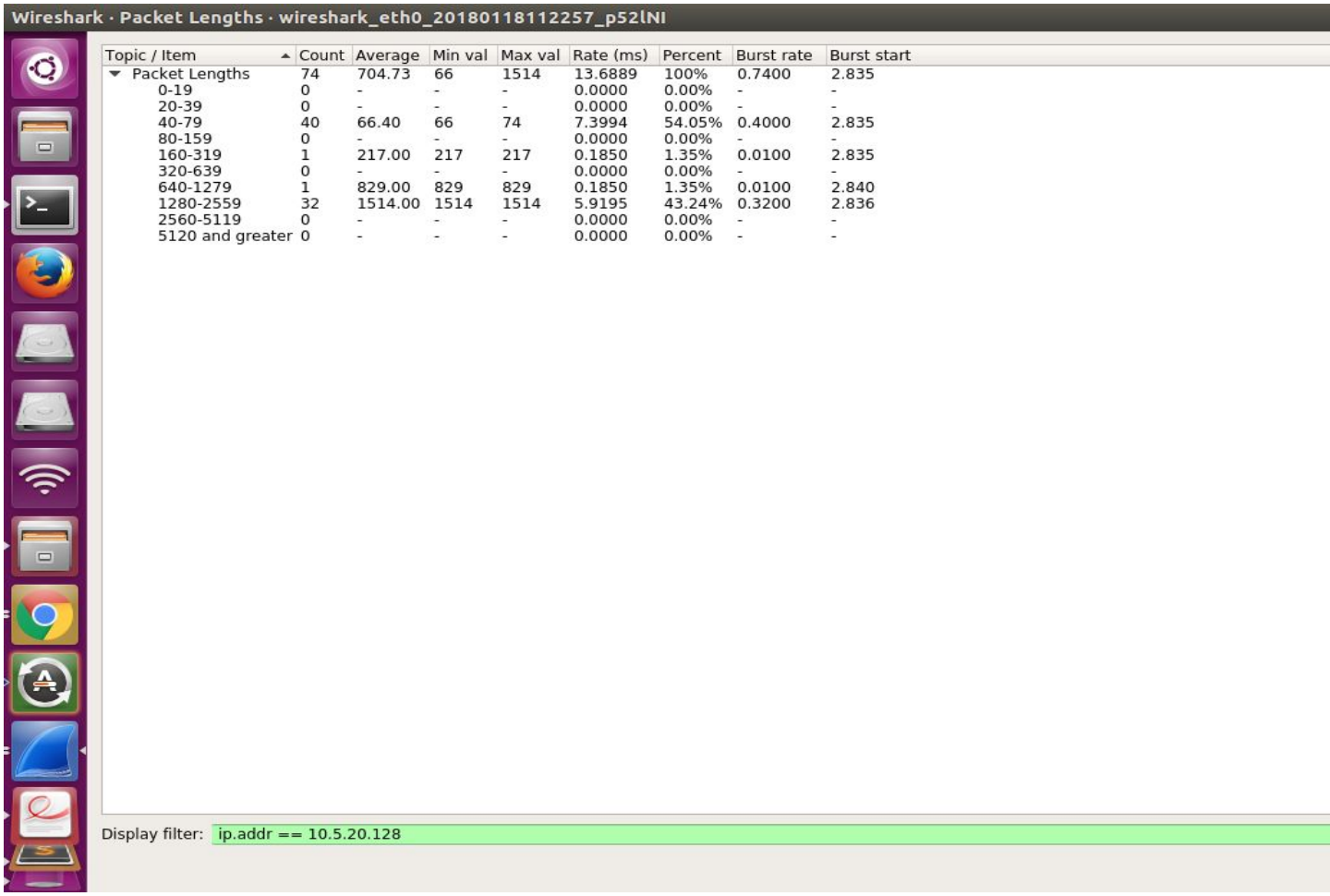
Assignment 1
REPORT

By : Shikha Panwar
Hardik Tharad

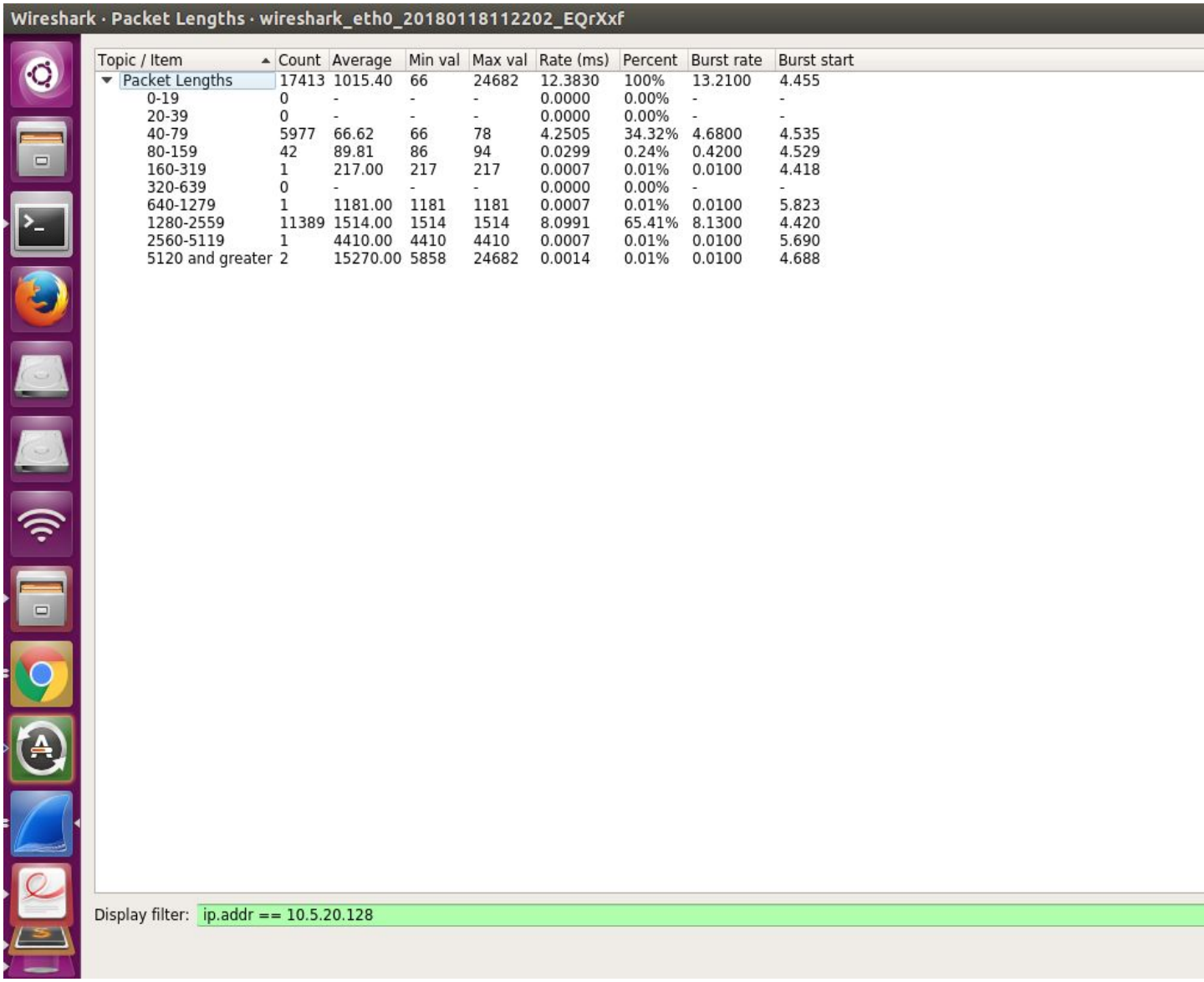
1) a) UDP :- (i) Application Layer :- None
(ii) Transport Layer :- User Datagram Protocol (UDP)
(iii) Network Layer :- IPv4

b) TCP :- (i) Application Layer :- HTTP/1.1
(ii) Transport Layer :- TCP
(iii) Network Layer :- IPv4

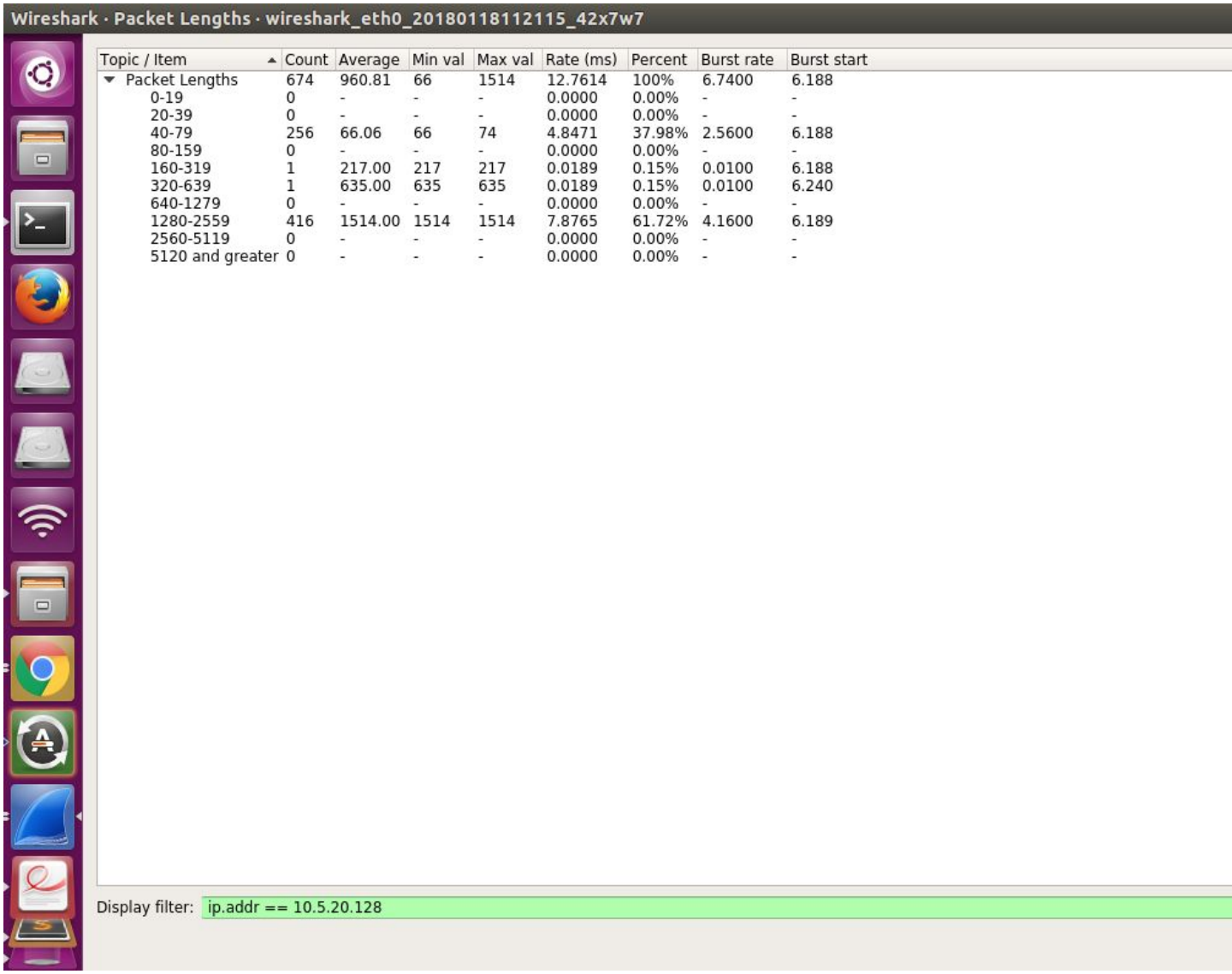
2) pic1.jpg :- Packet Details :-



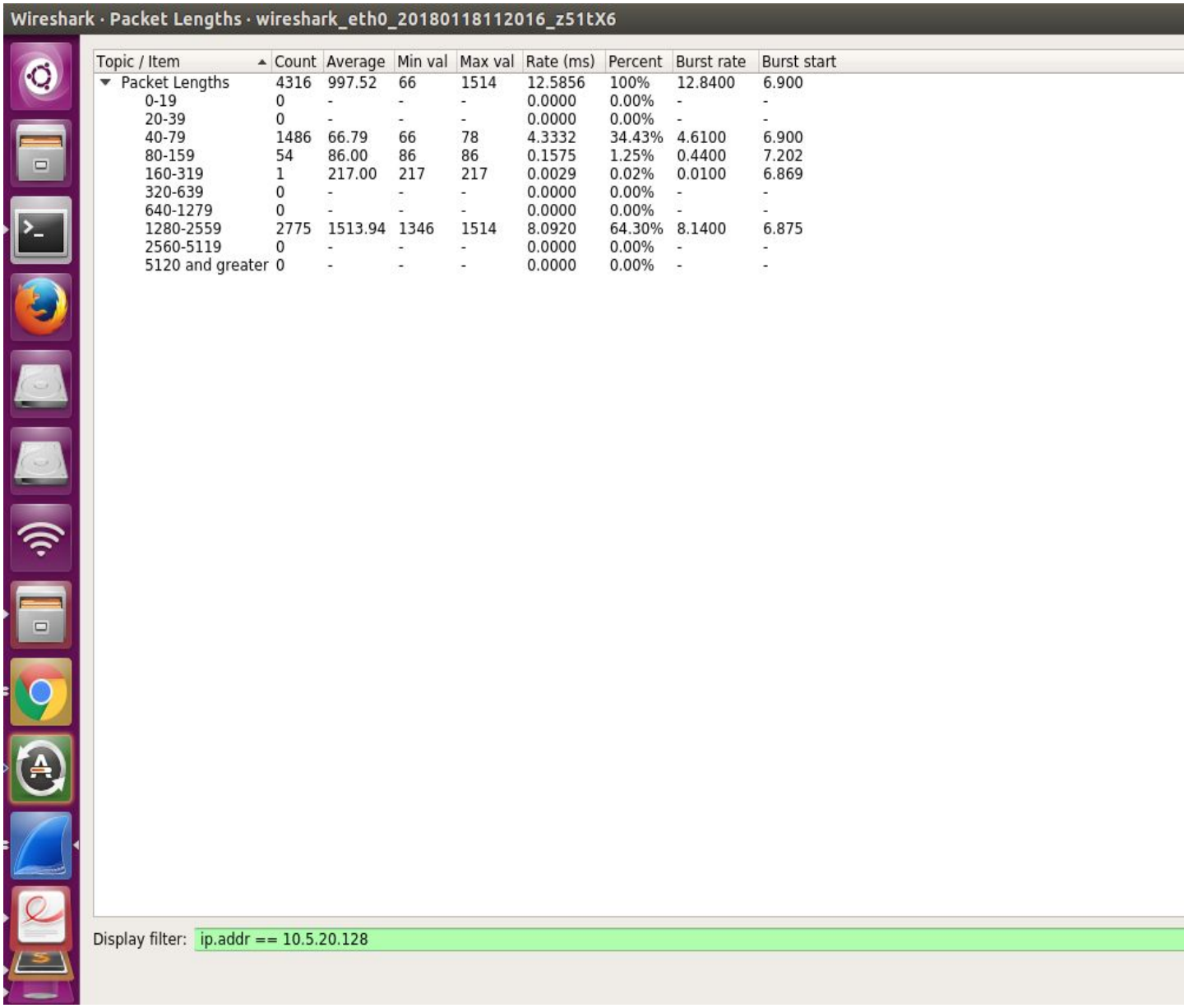
pic2.jpg :- Packet Details:-



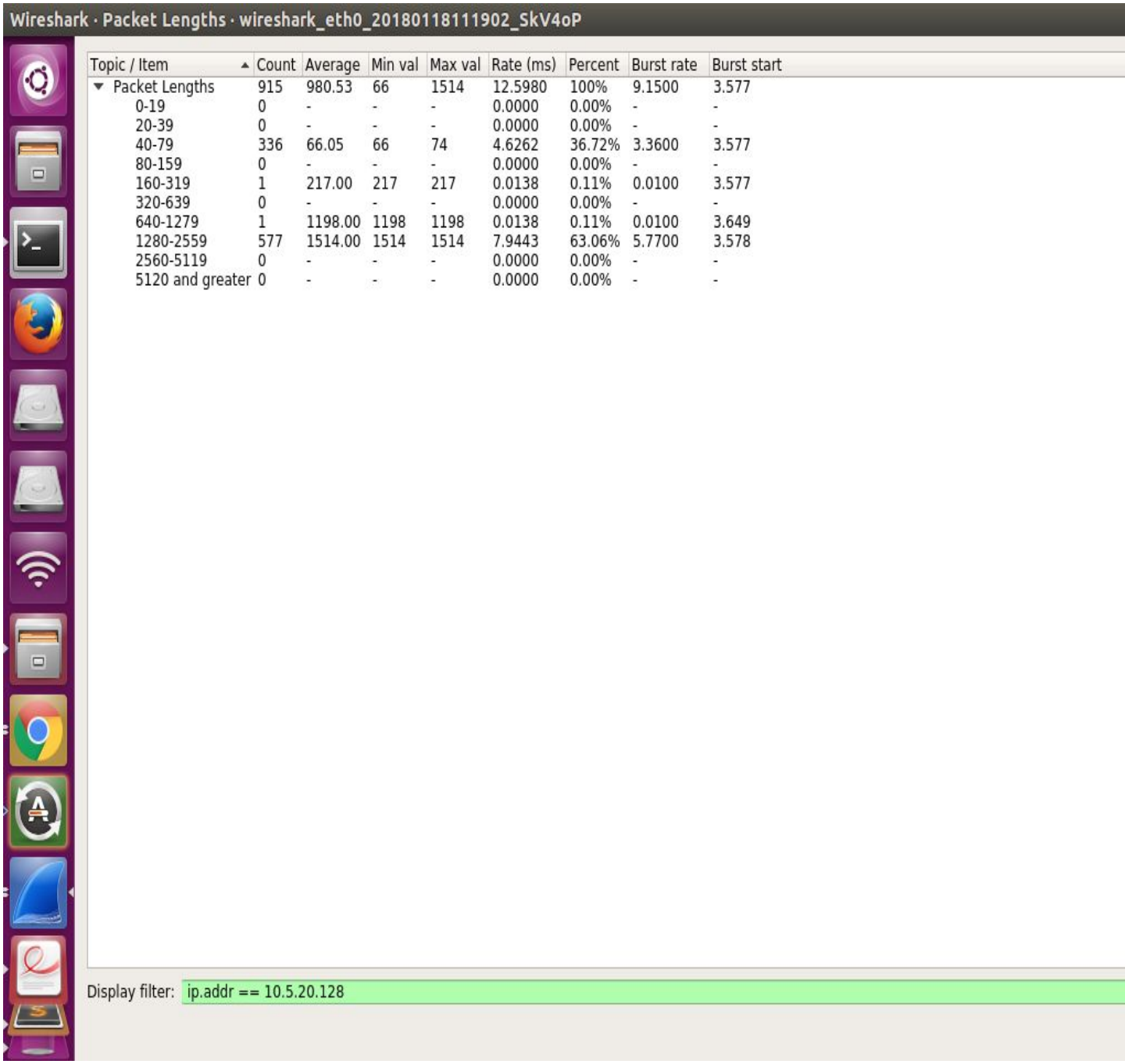
pic3.jpg :- Packet Details :-



pic4.jpg :- Packet Details :-



pic5.jpg :- Packet Details :-

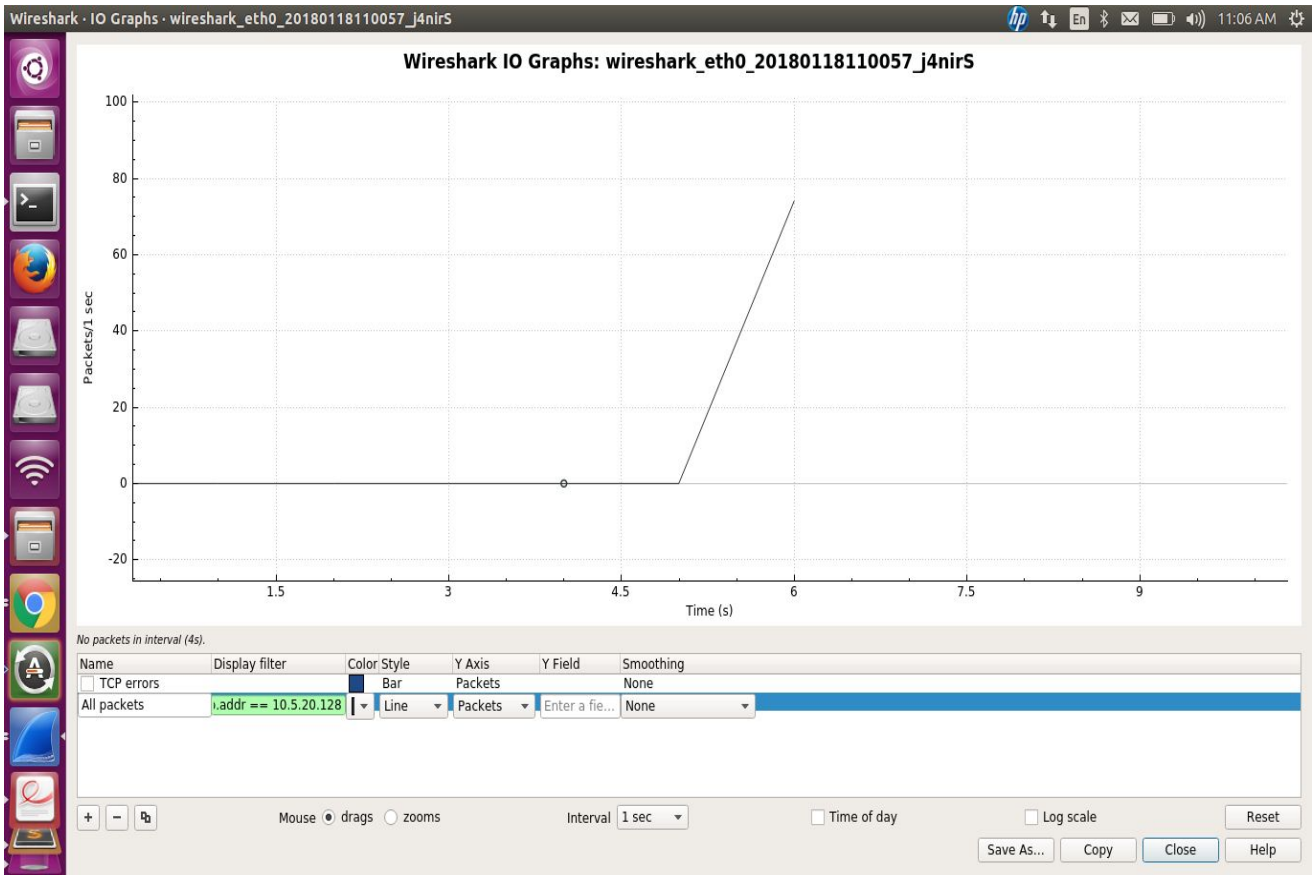


b) UDP :- **27 packets of equals size (1512 bytes)**

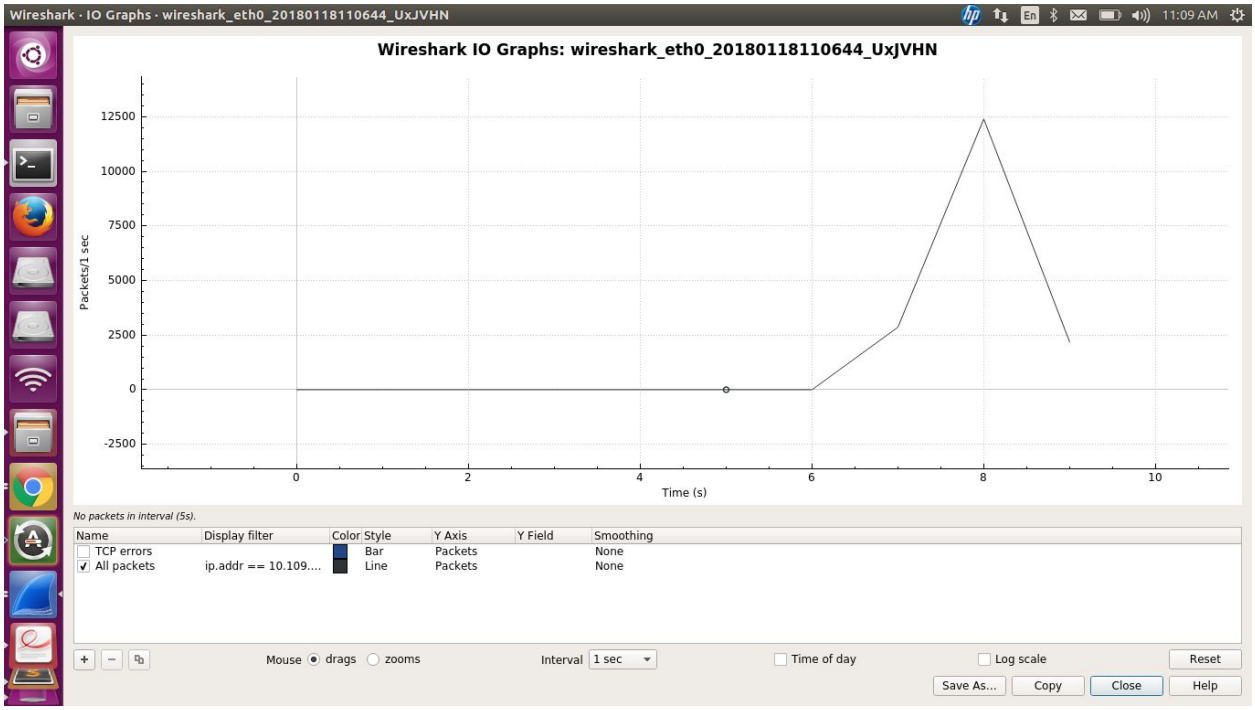
c)

TCP throughput

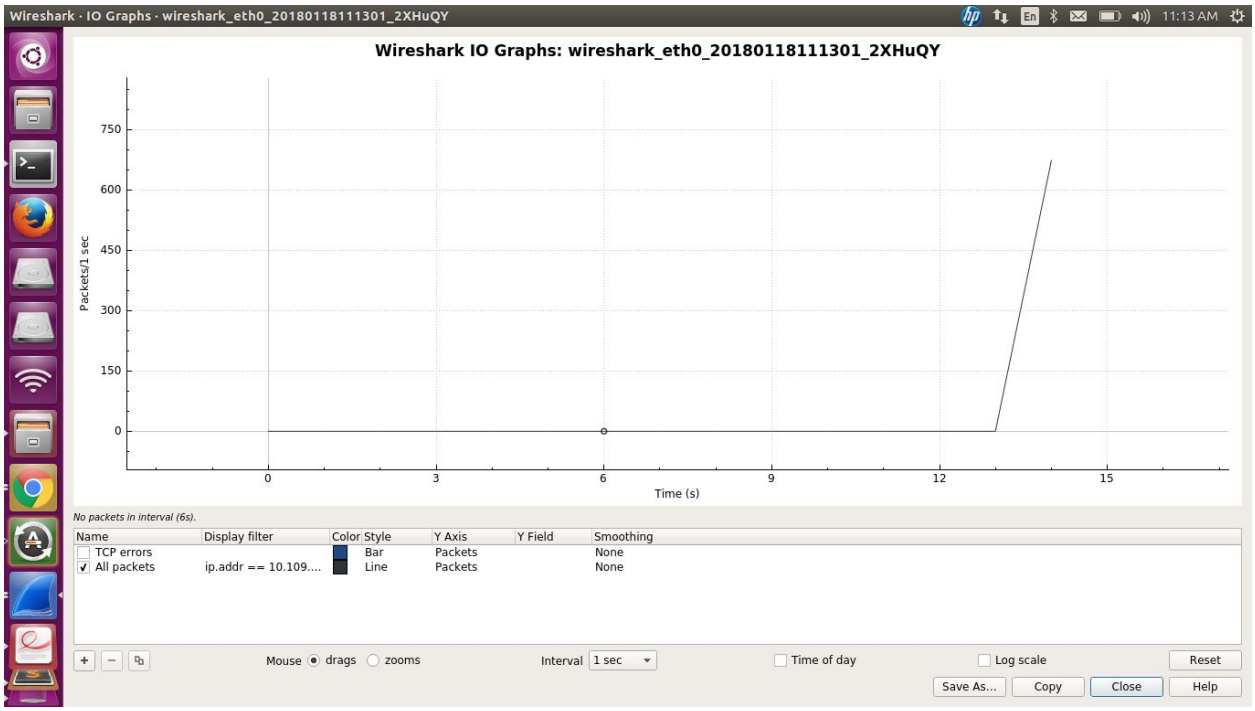
Pic 1



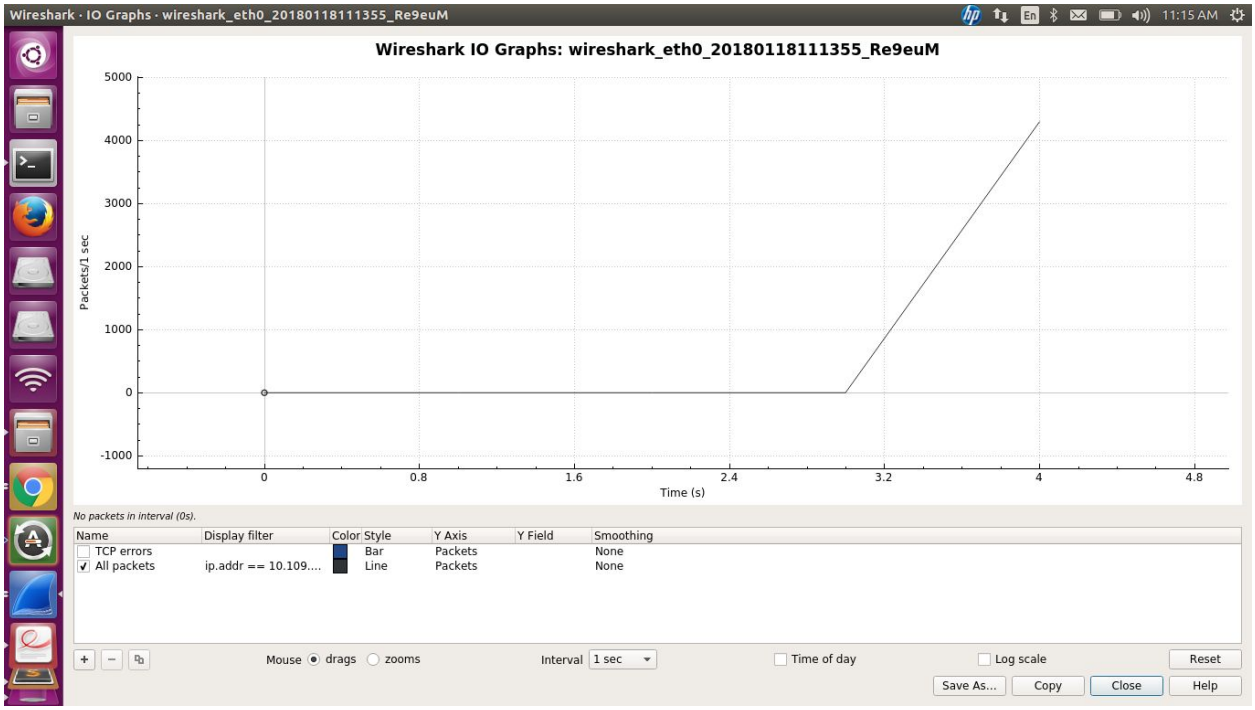
Pic 2


Wireshark · IO Graphs · wireshark_eth0_20180118110644_UxJVHN
11:09 AM
Wireshark IO Graphs: wireshark_eth0_20180118110644_UxJVHN
Packets/1 sec
12500
10000
7500
5000
2500
0
-2500
0
2
4
6
8
10
Time (s)
No packets in interval (5s).
Name
Display filter
Color
Style
Y Axis
Y Field
Smoothing
TCP errors
Bar
Packets
None
All packets
ip.addr == 10.109....
Line
Packets
None
Mouse
drags
zooms
Interval
1 sec
Time of day
Log scale
Reset
Save As...
Copy
Close
Help

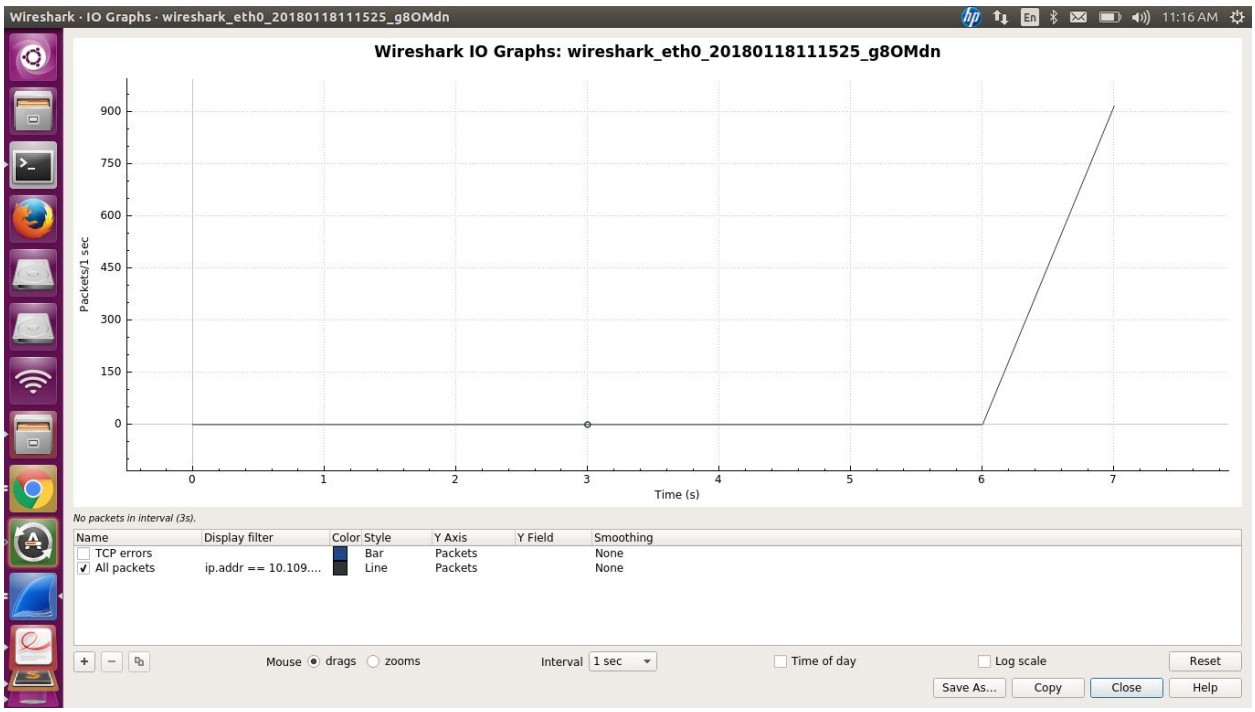
Pic 3


Wireshark · IO Graphs · wireshark_eth0_20180118111301_2XHuQY
11:13 AM
Wireshark IO Graphs: wireshark_eth0_20180118111301_2XHuQY
Packets/1 sec
750
600
450
300
150
0
0
3
6
9
12
15
Time (s)
No packets in interval (6s).
Name
Display filter
Color
Style
Y Axis
Y Field
Smoothing
TCP errors
Bar
Packets
None
All packets
ip.addr == 10.109....
Line
Packets
None
Mouse
drags
zooms
Interval
1 sec
Time of day
Log scale
Reset
Save As...
Copy
Close
Help

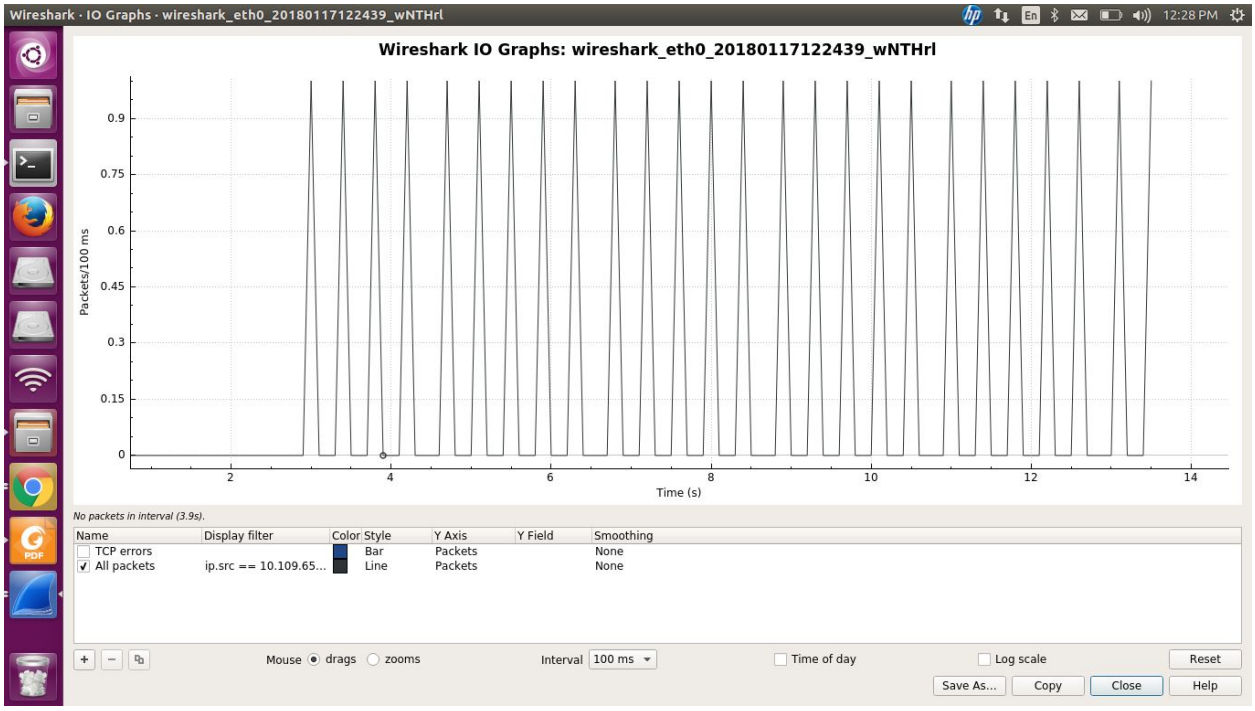
Pic 4


Wireshark · IO Graphs · wireshark_eth0_20180118111355_Re9euM
11:15 AM
Wireshark IO Graphs: wireshark_eth0_20180118111355_Re9euM
Packets/1 sec
Time (s)
No packets in interval (0s).
Name
Display filter
Color
Style
Y Axis
Y Field
Smoothing
TCP errors
Bar
Packets
None
All packets
ip.addr == 10.109....
Line
Packets
None
Mouse
drags
zooms
Interval
1 sec
Time of day
Log scale
Reset
Save As...
Copy
Close
Help

Pic 5


Wireshark · IO Graphs · wireshark_eth0_20180118111525_g8OMdn
11:16 AM
Wireshark IO Graphs: wireshark_eth0_20180118111525_g8OMdn
Packets/1 sec
Time (s)
No packets in interval (3s).
Name
Display filter
Color
Style
Y Axis
Y Field
Smoothing
TCP errors
Bar
Packets
None
All packets
ip.addr == 10.109....
Line
Packets
None
Mouse
drags
zooms
Interval
1 sec
Time of day
Log scale
Reset
Save As...
Copy
Close
Help

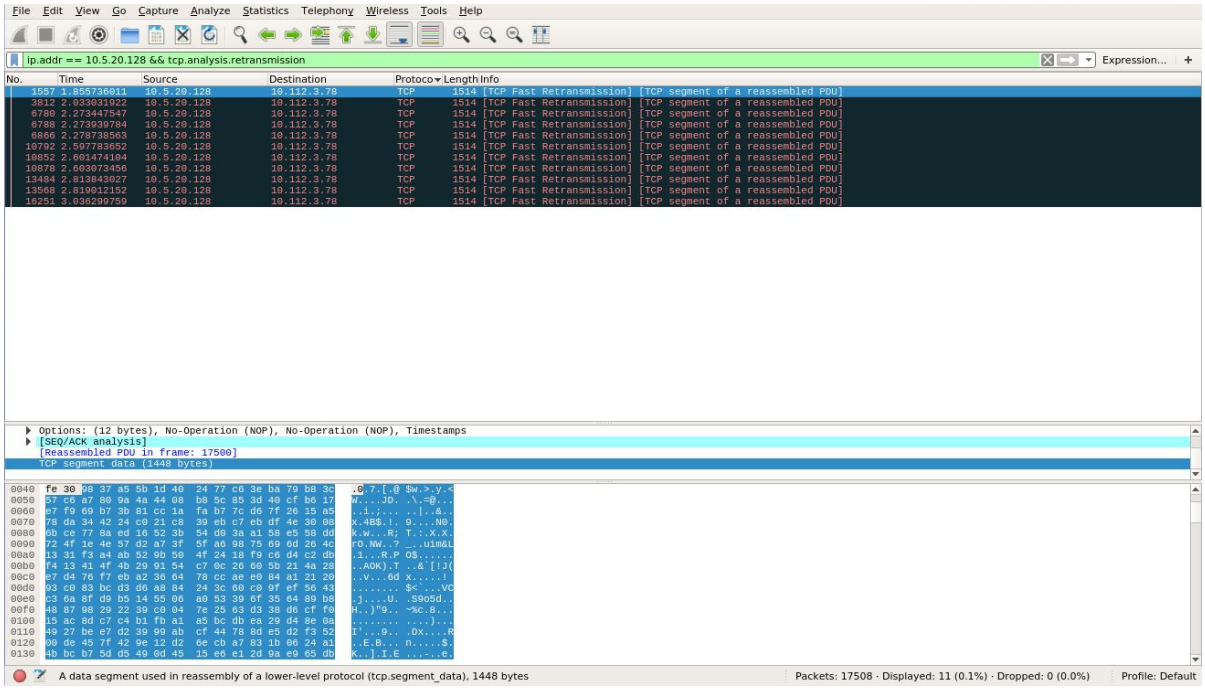
UDP traffic (28Kbps)



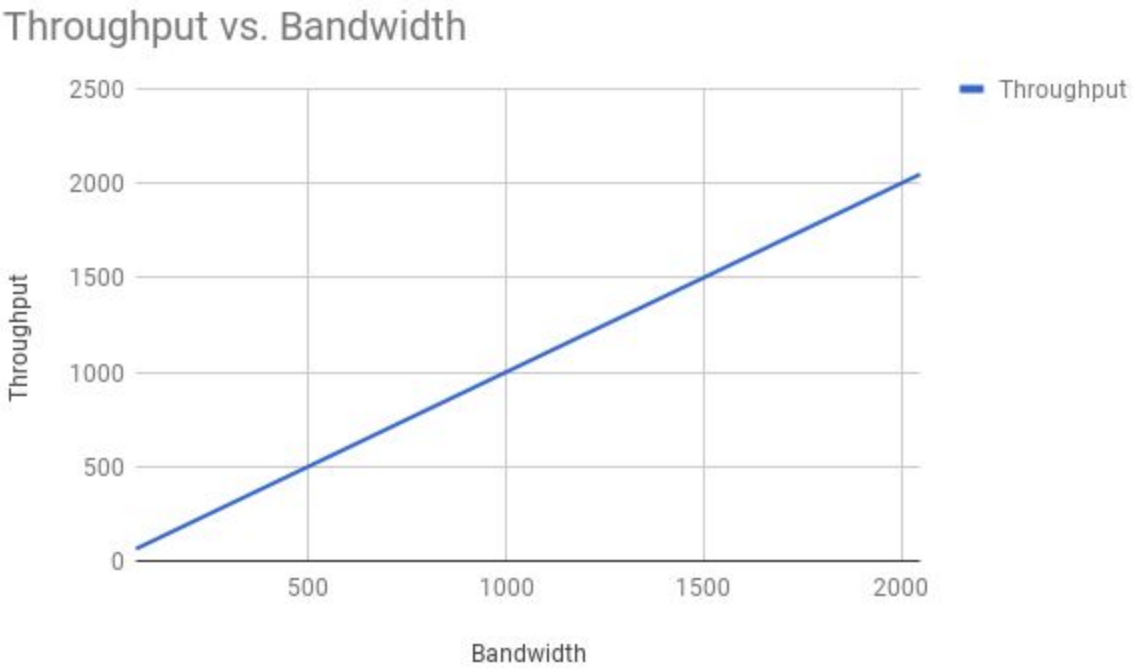
d)
(i) 64Kbps :- 64Kbps
(ii) 128Kbps :- 128Kbps
(iii) 256Kbps :- 256Kbps
(iv) 512Kbps :- 512Kbps
(v) 1024Kbps :- 1024Kbps
(vi) 2048Kbps :- 2048Kbps

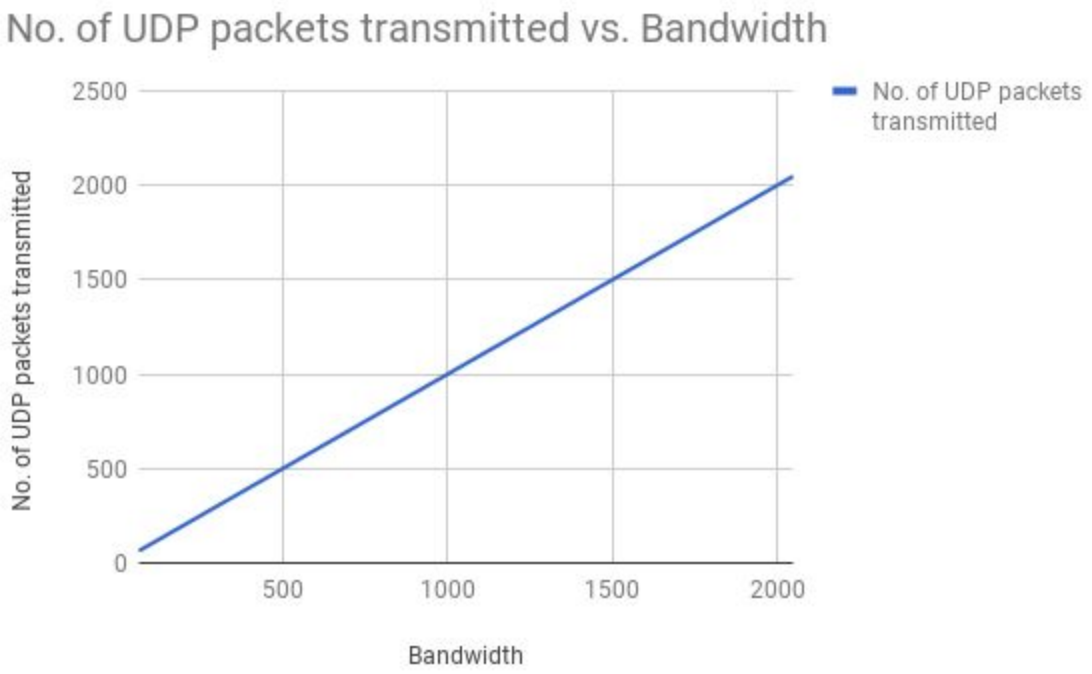
3) Analyze the number of TCP packets retransmitted

No. of packets retransmitted - **11 packets of size 1514 bytes each**



(4) Plot the following:-





Observations:- As we see both the graphs turns out to be straight line. However for very large values of bandwidth, the graph flattens out and is no longer linear.