CS3205: Introduction to Computer Networks

Assignment 1

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1 Part 2: tcpdump

(a) `ping 139.130.4.5`

While recording the network activity in Wireshark, 4 ping requests were sent to `139.130.4.5`.

- `8` packets were exchanged in total, `4` requests were sent and `4` replies were received.

Ping count	request time stamp	reply time stamp	time elapsed	RTT
1	0.000 s	0.294 s	0.294 s	294 ms
2	1.000 s	1.318 s	0.318 s	318 ms
3	2.000 s	2.342 s	0.342 s	342 ms
4	3.000 s	3.367 s	0.367 s	367 ms

It can be observed that the time elapsed between request and reply agrees with RTT.

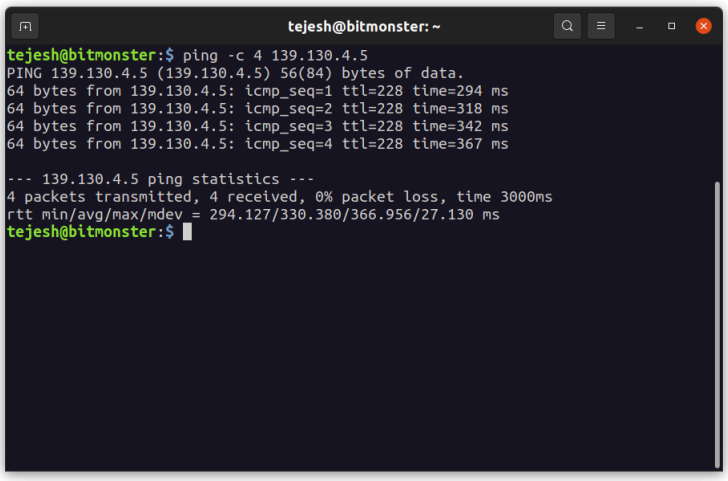

Figure 1: Ping results

(b) load the url https://www.w3.org/TR/PNG/iso_8859-1.txt

1. The number of packets exchanged in various time intervals is presented below:

time interval (s)	0-1	1-2	2-3	4-5	5-6
packets exchanged	8	47	30	18	0

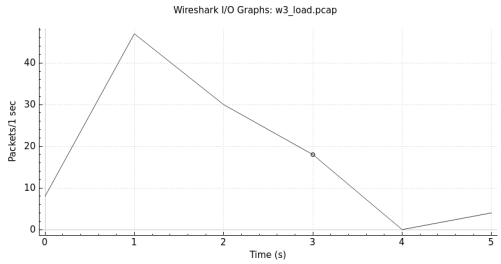

Figure 2: packets/sec

In total 103 packets are exchanged in the first 5 seconds.

2. Using a filter, the number of incoming and outgoing packets are also analysed, the following results are obtained.

   The number of outgoing packets are recorded as follows, in total : 55 packets are sent.

time interval (s)	0-1	1-2	2-3	4-5	5-6
packets exchanged	5	28	14	8	0

   The number of incoming packets are recorded as follows, in total : 48 packets are received.

time interval (s)	0-1	1-2	2-3	4-5	5-6
packets exchanged	3	19	16	10	0

3. From the pcap file, the total size of incoming data is found out to be `24085 Bytes` and total size of outgoing data is found out to be `5957 Bytes`. pcap file is attached along with the submission.

(c) watch a youtube video and record throughput

The following throughput graph is obtained.

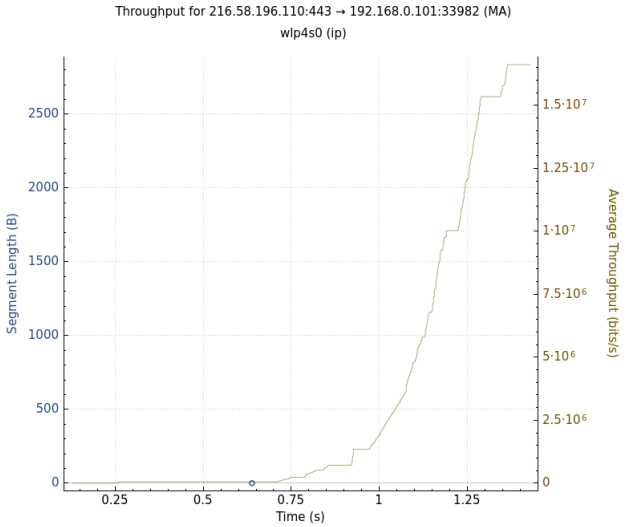

Figure 3: throughput