University of Victoria
CSC 361: Computer Communications and Networks
Dr. Kui Wu

ASSIGNMENT P3
IP DATAGRAM ANALYSIS: REQUIREMENT 2

Due: April 1st, 2018

William H. Grosset
V00820930

GROUP 1

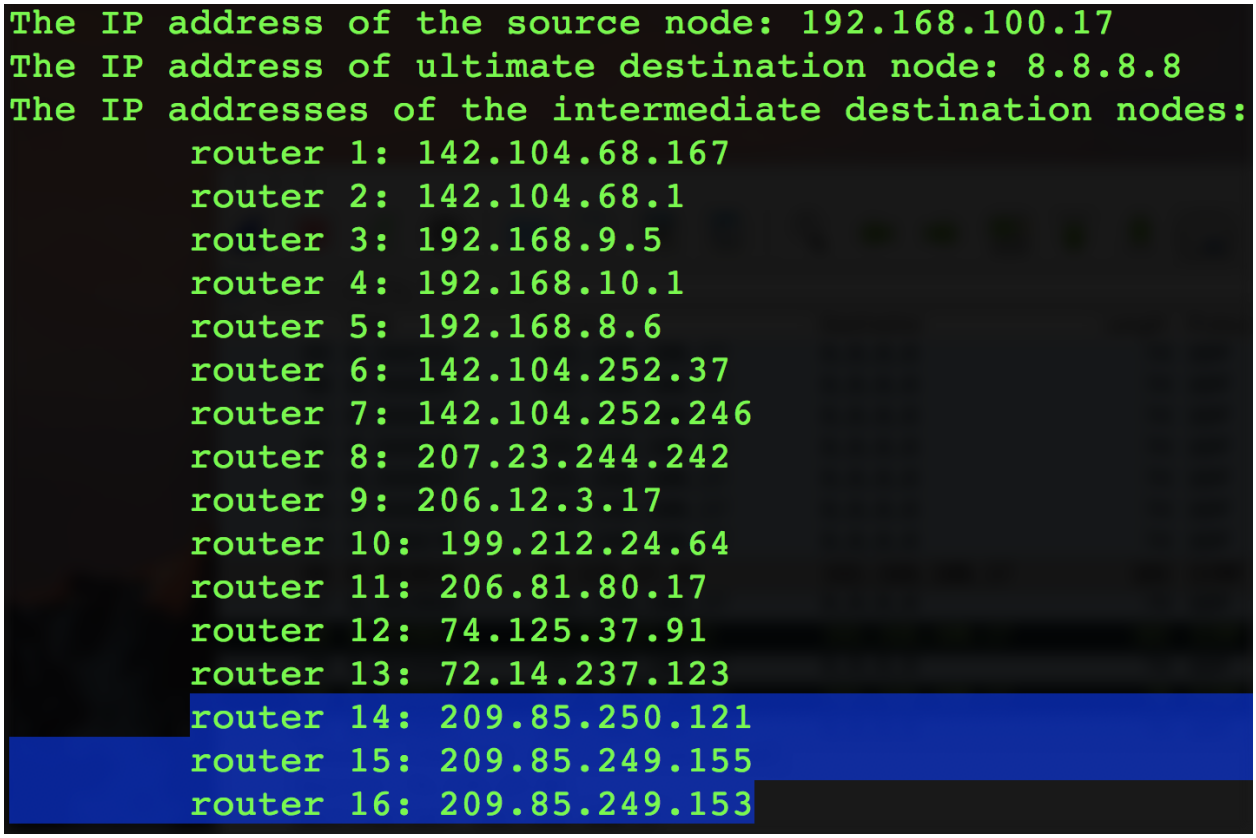
1. Determine number of probes per TTL used in each trace file:

For each TTL and trace file, the number of probes used is 3.

2. Determine whether the sequence of intermediate routers is the same in each file:

No, the sequence of intermediate routers is unique to each trace file.

3. If the sequence of intermediate routers is different in the five trace files, list the difference and explain why:



Intermediate routers 14-16 between the 5 trace files are different. The difference is due to the state of the network when the traceroute program was run. The network and ordering of routers will be different based off the load and congestion of the network at that given time.

GROUP 2

1. Determine number of probes per TTL used in each trace file:

For each TTL and trace file, the number of probes used is 3.

2. Determine whether the sequence of intermediate routers is the same in each file:

Yes, the sequence of intermediate routers is the same in each file.

3. If the sequence of intermediate routers is the same in the five trace files, draw a table to compare the RTTS of different traceroute attempts. From the result, which hop is likely to incur the maximum delay? Explain your conclusion:

	Avg RTT in Trace 1	**Avg RTT in Trace 2**	**Avg RTT in Trace 3**	**Avg RTT in Trace 4**	**Avg RTT in Trace 5**
1	3.3	2.7	7.9	3.4	1.7
2	15.8	17.1	11.8	13.2	16.2
3	18.9	20.1	22.6	21.7	21.6
4	22.8	19.4	19.5	19.8	18.6
5	26.5	21.6	20.3	35.8	20.7
6	24.3	20.0	21.8	22.7	43.5
7	18.4	51.7	22.8	18.3	26.9
8	23.0	108.7	20.6	24.6	25.6

Hop 8 is most likely to incur the maximum delay due to having the largest average compared to hops.