

Requirement 2

For group1 trace files:

All files had 3 probes per ttl.

The sequence of routers are basically the same, but the router ips differ by a couple of digits, which indicates that the routers are on the same network. The reason for this difference is distinct and has to do with the network itself. Like congestion and traffic load. Additionally, group 1 trace 5 has only 15 routers, instead of 16. And after output from router 13, the output begins to look a little different. Here is the corresponding output for group 1, and you will notice a slight difference, in which I mentioned

Group 1 trace 1

router 1: 142.104.68.167
router 2: 142.104.68.1
router 3: 192.168.9.5
router 4: 192.168.10.1
router 5: 192.168.8.6
router 6: 142.104.252.37
router 7: 142.104.252.246
router 8: 207.23.244.242
router 9: 206.12.3.17
router 10: 199.212.24.64
router 11: 206.81.80.17
router 12: 74.125.37.91
router 13: 72.14.237.123
router 14: 209.85.250.121
router 15: 209.85.249.155
router 16: 209.85.249.153

Group 1 trace 2

router 1: 142.104.68.167
router 2: 142.104.68.1
router 3: 192.168.9.5
router 4: 192.168.10.1
router 5: 192.168.8.6
router 6: 142.104.252.37
router 7: 142.104.252.246
router 8: 207.23.244.242
router 9: 206.12.3.17
router 10: 199.212.24.64
router 11: 206.81.80.17

router 12: 72.14.237.123
router 13: 74.125.37.91
router 14: 209.85.249.109
router 15: 209.85.250.57
router 16: 209.85.246.219

Group 1 trace 3

router 1: 142.104.68.167
router 2: 142.104.68.1
router 3: 192.168.9.5
router 4: 192.168.10.1
router 5: 192.168.8.6
router 6: 142.104.252.37
router 7: 142.104.252.246
router 8: 207.23.244.242
router 9: 206.12.3.17
router 10: 199.212.24.64
router 11: 206.81.80.17
router 12: 74.125.37.91
router 13: 72.14.237.123
router 14: 209.85.245.65
router 15: 209.85.249.155
router 16: 209.85.247.63

Group 1 trace 4

router 1: 142.104.68.167
router 2: 142.104.68.1
router 3: 192.168.9.5
router 4: 192.168.10.1
router 5: 192.168.8.6
router 6: 142.104.252.37
router 7: 142.104.252.246
router 8: 207.23.244.242
router 9: 206.12.3.17
router 10: 199.212.24.64
router 11: 206.81.80.17
router 12: 74.125.37.91
router 13: 72.14.237.123
router 14: 209.85.246.219
router 15: 209.85.250.123
router 16: 209.85.245.65

Group 1 trace 5

router 1: 142.104.68.167
router 2: 142.104.68.1
router 3: 192.168.9.5
router 4: 192.168.10.1
router 5: 192.168.8.6
router 6: 142.104.252.37
router 7: 142.104.252.246
router 8: 207.23.244.242
router 9: 206.12.3.17
router 10: 199.212.24.64
router 11: 206.81.80.17
router 12: 72.14.237.123
router 13: 209.85.250.59
router 14: 209.85.249.153
router 15: 209.85.247.61

TTL	Average Rtt in trace 1	Average Rtt in trace 2	Average RTT in trace 3	Average RTT in trace 4	Average RTT in trace 5
1	11.366618	11.38501	11.686035	11.213949	11.298421
2	16.850667	15.933024	15.732422	15.420492	16.691243
3	16.008708	15.450277	16.314453	15.712728	17.484294
4	17.56193	17.711589	17.157959	16.688639	18.246826
5	18.360921	16.87793	17.914632	17.442627	19.010417
6	11.86141	11.640869	12.113363	11.519287	11.917725
7	13.507406	13.429443	14.406006	13.587809	13.538818
8	14.095703	50.241943	15.182129	14.006429	18.522461
9	18.234131	17.578125	18.864909	16.930745	16.708415
10	16.911621	19.223389	18.085449	18.18099	17.964681
11	19.428874	14.830566	20.102458	19.434001	19.327393

12	11.77002	16.794759	15.970947	14.241943	13.891927
13	17.624023	16.414307	9.567871	13.637939	19.36499
14	18.468262	17.418213	19.552002	19.006104	19.647705
15	19.821045	17.936035	19.802002	19.513916	19.891113
16	20.572021	18.701904	23.164795	20.806152	NONE

The biggest delay would be hop 8. With the average Rtt in trace 2 being 50.I sorted the RTT array by both order, then ttl. There could definitely be a discrepancy in other tables of RTTs