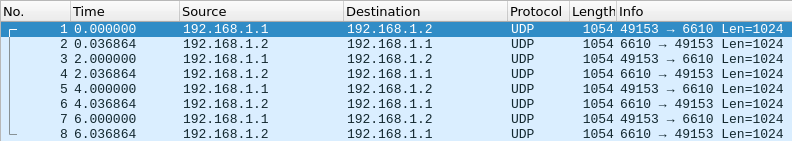
Q1-1: How many packets did the client send in total?

5 packets

Q1-2a: Open the PCAP files using Wireshark. From the timestamps of packets at the client, what is the round trip time (RTT) as seen by the client?



RTT: 0.036864 seconds

Q1-2b: What is the relationship between the RTT and the P2P link delay?

RTT is a measure from the source to destination and back. P2P Link Delay is one-way, so RTT should be twice as long as P2P Delay.

Q1-3a: What is the data (content) in the payload of each packet?

1024 bytes of 0

Q1-3b: How many bytes did each layer (UDP, IP, PPP) add to the payload?

PPP : 2 bytes

IP: 20 bytes

UDP: 8 bytes

Q1-4: This is impossible, because the server only responds after it receives the packet from the client. This is also a 2-node network, not a shared medium.

Q2-1: What is the configured application data rate at the client?

100Mbps

Q2-1b: What is the final (total) average throughput (printed as Average throughput after every simulation) achieved? Is there a difference? If yes, why?

Average throughput: 32.3634 Mbit/s

Yes there is a difference, this is because of the channel and the use of TCP which uses handshakes and congestion control which add latency to the transmission. This configuration appears to be using 16-QAM with an MCS index of 3 or 4. The maximum distance is somewhere greater than 150m. At 150m the average throughput is 4Mbits/s.

Q2-2: When does throughput drop to 0?

165m apart i.e. AP (0,0,0) -> STA (165,0,0)

Q2-3:



Q2-4: