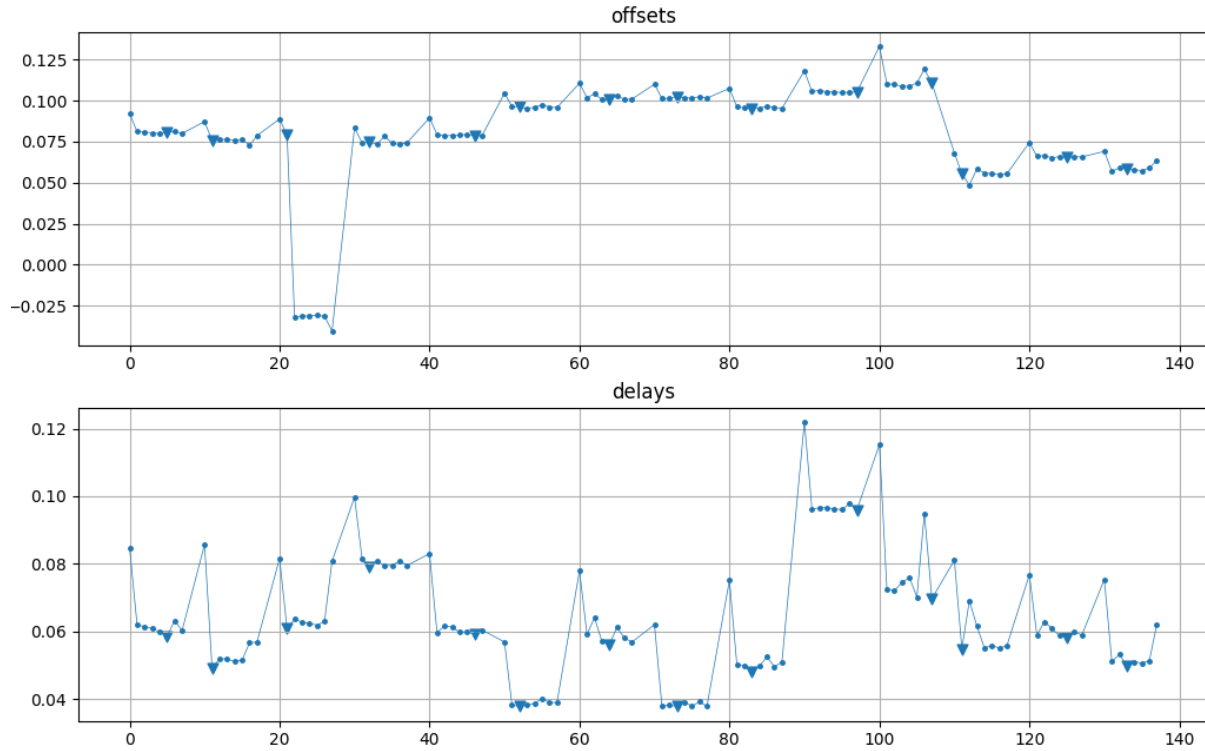# CSCI 5673 Assignment 3 Report

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Public server offsets and delays

In this scenario, we might observe higher delays and offsets between different message pairs within a burst, as the packets need to travel over the internet and traverse multiple network links, which can introduce varying amounts of delay and jitter. The differences between different bursts might also be higher, as the network conditions might change over time due to factors such as network congestion or routing changes. And from the graph we can see that the delays can be all over the place and cannot be relied upon.

Server hosted on a different machine on the same LAN
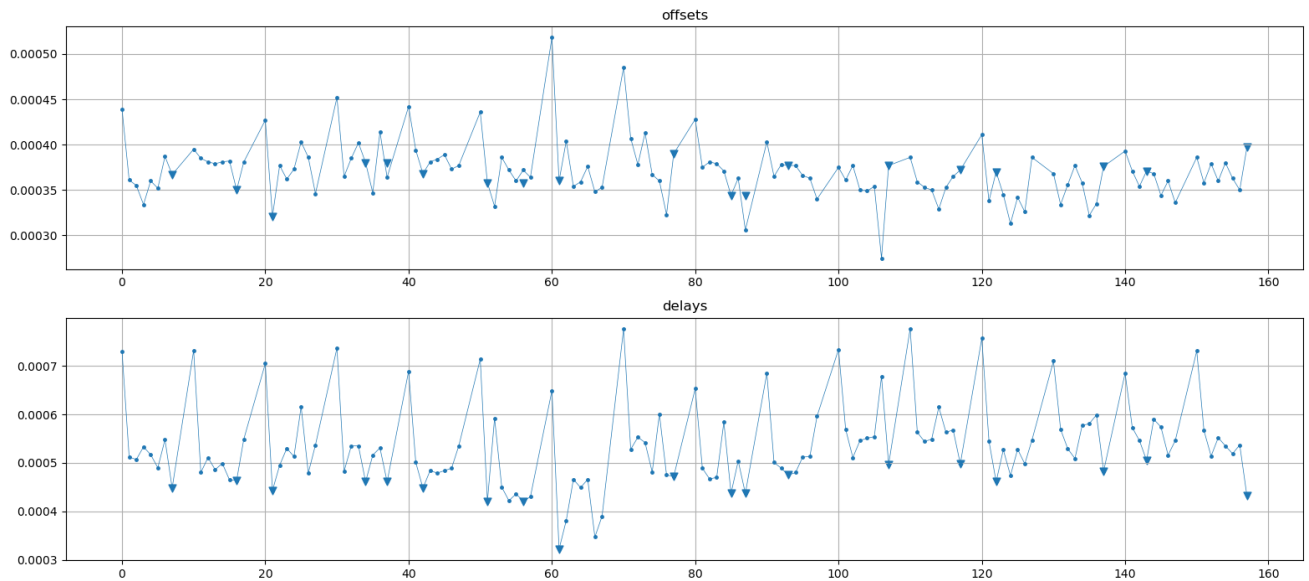
In this scenario, we can expect to see very low delays and offsets between different message pairs within a burst, as the packets are traveling over the same LAN and don't need to traverse any long-distance network links. The differences between different bursts might be minimal as well, as long as the network conditions remain stable. And when we compare the graphs from the other scenario, we can clearly see the difference in the order of magnitude. The delays have greatly reduced as they are "close" over the network.

Overall, the differences you observe between the two scenarios can be attributed to the physical distance between the client and server, as well as the number and quality of network links traversed by the packets. The closer the client and server are, the lower the delays and offsets we can expect to observe, while the more network links the packets need to traverse, the higher the variability we can expect to see in the measurements.