

Packet Sniffer

Packet Sniffer

Plot of packet counts:

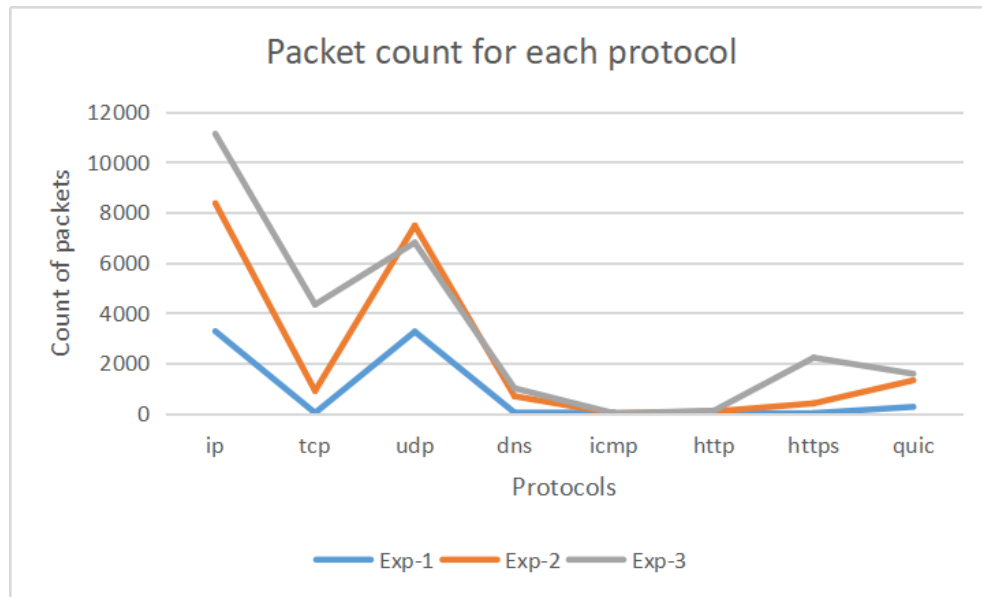


Fig. 1: Packet count for each protocol for various experiments

Analysis:

When comparing across results, it was clear that experiment 3 was going to have the most amount of traffic because we were constantly refreshing the page, trying to search for websites to load data from. For this reason, it was also clear that it would need the most amount of reliable transport, so the TCP amount was the highest. It also used the most HTTPS because it was sending those types of requests to many different types of websites. It was odd for it to have the most amount of QUIC protocols which are common for videos, but the reason we gave to this was because since we loaded a couple article type websites, we also loaded many advertisements/videos that were common at the side of those websites.

It was also obvious that experiment 2 was going to be higher than experiment 1 in the amount of packets for every protocol because we were adding an extra step to the process of watching the video. Loading the youtube website and also buffering the video at the beginning was going to increase the amount of packets needed by the user. Even though experiment 1 was run in the highest resolution, it still could not catch up to the amount of packets needed when loading a fresh video. Just loading a single video, it beat experiment 3 in the amount of UDP packets, and if left to run a little bit longer or maybe have had the resolution at the highest quality, it would've also beat experiment 3 in the amount of QUIC packets. We also found that HTTP was extremely low because most websites just use HTTPS instead.