

*We could not generate any plots of fairness and smoothness because of our buggy throughput implementation. However the following discusses what we expect to see in each graph based on our understanding of the alpha values, video CDN, and bitrate adaption.

Based on our understanding and seeing how we calculated the throughput, we know the alpha value corresponds to what we see in our graphs. If we want to see a more stable graph in terms of fairness and smoothness, without many spikes and drops, we would choose a low alpha value of 0.1, meaning we wouldn't drop the quality of the video. On the contrary, it would take long for the server to adjust and it would take a long time for the shape of the graph to change.

We know that an alpha value of 0.5 will change more than an alpha value of 0.1/ An alpha value of 0.5 is a balancing alpha value- it looks at the previous throughput value as well as the newly calculated throughput. If we see a drop or spike, we know it will be adjusted for very quickly, but also not adjusted for enough where it eliminates the rest of the values. It is the "best of both" with no extremes.

Finally, the greatest alpha value of 0.9 places most of the importance of the current throughput values, instead of the old ones like the alpha values of 0.5 and 0.1. This is the other extreme- we might be reacting too quickly to drops and spikes based on the throughput. We can expect there to be more dips and spikes because of the added emphasis on the new throughput values leading to more overreactions in the new calculated values.