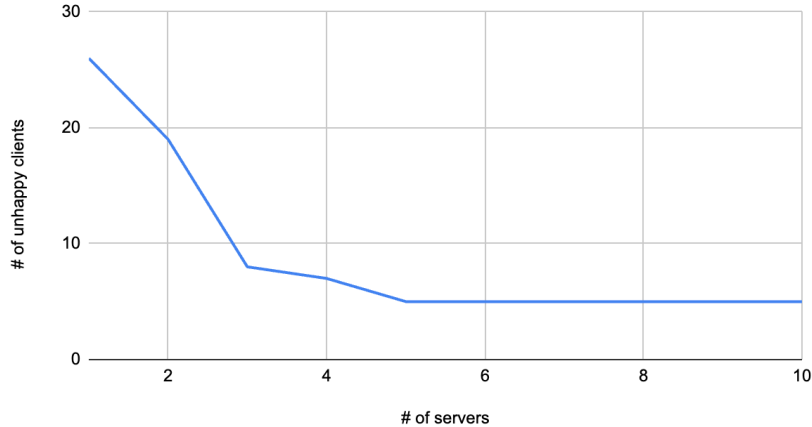


of unhappy clients vs. # of servers



The approximate time used for this plot was 8 pm.

The curve starts high with a steep decline as the number of servers increases from 1 to 5, mirroring an exponential decay. From 5 servers onwards, the curve flattens out and the # of unhappy clients stays constant. The "knee" of the curve appears to be between 3 and 5 servers, where the number of unhappy clients drops significantly as you add each server. The plot suggests that increasing the number of servers up to 5 substantially impacts reducing the number of unhappy clients. Beyond 5 servers, there is minimal to no improvement, indicating that adding more servers beyond this point yields diminishing returns in terms of client satisfaction. From this plot, it also appears that 5 servers can be a good balance for this load. At this point, the system seems to be sufficiently scaled to handle the requests while keeping the number of unhappy clients low. Additional servers do not significantly reduce unhappy clients, suggesting that the system may be reaching a point where the workload is effectively distributed among the available servers. Since additional servers will also require additional botting time, we should minimize the unnecessary server openings. Therefore, maintaining the server count at 5 would likely be the most cost-effective while still delivering decent performances.