

Abstract

The Internet provides a powerful, cost effective, reliable, and survivable communication over the world for different services like finance, education, military, and so on. The Internet has been rapidly increased, it has been growing at unprecedented rates. As the Internet become huge, its network performance becomes subjected to a lot of problems that decrease the communication performance like congestion, interference, reordering and so on.

In this thesis, we focus on measuring the impact of packets and ACKs reordering on the performance of TCP variants namely TCP Reno, TCP Newreno, TCP SACK, and TCP Vegas, we also analyze the performance of these protocols when their dupthresh values are increased in order to prevent false fast retransmissions and unnecessary cwnd reductions. Then we evaluate the performance of the recent packet reordering tolerance algorithms like Eifel, Door, TCP-RR, and TCP-PR that mitigate and prevent the bad effect of packet reordering on TCP performance.