Comparative study of congestion control techniques in high speed

Abstract :

Due to enhancement of broadband infrastructure, many multimedia applications such as streaming media, IPTV, video conference, online gaming and video surveillance are emerging. These video streaming generally require high bandwidth but are not responding to network congestion. And most of them prefer timeliness to reliability. TCP seems not suitable to real time applications because it rather focuses on ensuring data transmission. Currently most of the applications are using UDP, but UDP is lacking of congestion protocol and no guarantee of packet delivery. DCCP is a new transport protocol being standardized by IETF that provides unreliable congestion controlled flows of data packets. In this paper, we compare the behavior of congestion control of these transport protocol by manipulating the queue size, link capacity and packet delay. Network Simulator NS-2 was used to evaluate the network scenarios.