

Abstract

Transmission Control Protocol (TCP) is one type of protocol that allows a collection of computers to communicate and exchange data on a network. At this time electronic devices such as tablets, personal computers and smartphones can use more than one network at the same time, but because TCP currently only uses one path, we can only use one network. In this protocol, there are several new generations of network protocols that have been standardized. Multipath TCP is a development of TCP, and one of the new generation network protocols that can help us to use multiple channels in network usage. Besides that, it can use several paths on multipath TCP. Congestion control algorithms are supported namely LIA, CUBIC, and WVEGAS congestion control algorithms. The test conducted in this final project is to compare the performance of LIA, CUBIC, and WVEGAS congestion control to improve the quality of video streaming. From the test results, the results show that CUBIC has better quality than LIA and WVEGAS because in QoS testing video playback environment 1 CUBIC gets 217.1 Kb / s, environment 2 149.3 Kb / s, environment 3 1809 Kb / s and environment 4 1815 Kb / s. The image quality test results obtained in environment 1 3.1 respondent satisfaction scale, environment 2 2,833 respondents satisfaction scale, environment 3 3,733 respondents satisfaction scale, environment 4 3,333 respondents satisfaction scale. Sound quality test results obtained environment 1, 2,833 respondents, satisfaction scale, 2,266 environment scale respondents satisfaction, environment 4,166 respondents satisfaction scale, and environment 3,533 respondents satisfaction scale. It is buffering quality test results obtained environment 1 2,466 respondents satisfaction scale, environment 2,766 scale satisfaction respondents, environment 3 3,533 respondents satisfaction scale, environment 4 3,166 respondents satisfaction scale.

Keywords: congestion control, multipath TCP, quality of experience, video streaming.