

ABSTRACT

Videostreaming is one of the famous information services and often accessed by many people nowadays. Video streaming allows us to get information in the form of video on a network without having to download it first. Video streaming is real time and greatly influenced by condition of the network. Therefore to get a good quality, the bandwidth requirements for video streaming service will be bigger than other services such as HTTP, FTP, POP3 and others. So that, one solution is to give a bandwidth management that is able to guarantee bandwidth for each users and for each application services on a network even in dense traffic.

Bandwidth management is about how or a technique of handling the bandwidth allocation in accordance with the needs of users and applications on a network. By bandwidth management, each user will get a fair and appropriate bandwidth allocation, so there is no bandwidth scrambling between users or applications that will affect the network itself. And also can be the ideal solution for handling a variety of applications including videostreaming services. This is very important thing, considering the bandwidth is one of the vital necessity in a network.

In this final project, implemented a using of Class Based Queuing (CBQ) algorithm on Linux operating system for bandwidth management on FTP, HTTP and especially Video Streaming service. The CBQ algorithm leafed with FIFO, SFQ and TBF which is type of classless queueing algorithms. Thus, from the analysis informed that CBQ-fifo and CBQ-sfq have a better performance than CBQ-tbf in all scenarios with throughput 17 % bigger for 1 client and 38 % bigger for 3 clients, delay 10 % smaller for 1 client and 29% smaller for 3 clients, same jitter for 1 client and 28 % smaller for 3 clients, and with 0 % packet loss for 1 client indeed for 3 clients.

Keywords: Bandwidth management, CBQ, FIFO, SFQ, TBF and Video Streaming.