ABSTRACT

A collective usage of network connection in a Local Area Network requires the existence of a dependable router and gateway. Linux as one of the dependable operating system to be operated as a router and gateway, already have support for achieving Quality o Service (QoS). One of the most important part of QoS implementation in Linux is Traffic Control (TC), that can be used to build a complex combination of queuing disciplines, classes, and filters regarding the network condition to be handled. One of the aims in traffic control usage is the allocation of existing bandwidth in server to the clients in a fair way and in the same proportion, without wasting any redundant bandwidth. The queuing discipline that was used is Hierarchical Token Bucket (HTB).

Bandwith utilizing on large network, need a bandwidth management to offer guarantee to every client in Local Area Network (LAN) to gain equitable bandwidth allocation matching with the one which defined. In order to create a good bandwidth management, needed a making of bandwidth allocation rule and monitoring bandwidth utilization in real-time.

Based on the result of the experiments with process loaning of bandwidth, seen that queue discipline of HTB can give guarantee usage of bandwidth and division of idle bandwidth allocation to every client which is connected to server, minimum as according to value of rate value and of ceil given. Result with process without loaning of bandwidth, seen queue discipline of HTB can give guarantee usage of bandwidth allocation to every client client which is connected to server, minimum as according to value of rate value and of ceil given.

Keywords : *HTB, Quality of Service, linux traffic control, LAN, real-time monitoring.*