ABSTRACT

Bandwidth management is able to offer guarantee to every user in Local Area Network (LAN) to gain equitable bandwidth alocation with defined bandwidth alocation. Each users in LAN has bandwidth alocation itself with the result that there will not be happened big bandwidth utilizing by a user in limited bandwidth utilizing. In order to create a good bandwidth management, used combinations between delay pools facilities from squid proxy server and Hierarchical Token Bucket (HTB) queuing discipline. There are three computers on the network , with one user on each computer. The bandwidth allocation for each user is determine by squid with delay pools facility. The maximum bandwidth allocation for user one and user two is 16Kbps, but 32Kbps for user three. The HTB is used for divide the bandwidth allocation by the types of protocol like HTTP and FTP. The HTB will share the unused bandwidth so there will be no unused bandwidth. The minimal amount of bandwidth allocation for HTTP protocol is 48kbps and the maximal amount is 64kbps, on the other hand the maximal amount of bandwidth allocation for FTP is 16kbps.

The experiments were used to proof the delay pools facility from squid which able to give the equal bandwidth allocation for each user. The HTB can also give the bandwidth allocation depends on the protocol type. The bandwidth sharing between HTTP and FTP is proofed.

Keyword : Bandwidth management, Local Area Network (LAN), delay pools, squid proxy server, Hierarchical Token Bucket (HTB).