ABSTRACT

Bandwidth management absolutely is needed for multiservice network, variant applications which can be served influence to the use of link in that network. Links must be able to handle user need even in congestion condition. It must be a guarantee that link still be alive properly eventhough network experiences heavy request services.

Bandwidth management holds important role in order to manage kind of application which can access remain link beside that it can give us warrant to application which has *bandwidth* allocation to keep sending data although there is congestion in network. Moreover in particular situation, if other application does not use their *bandwidth* allocation, Bandwidth Manager will shift that idle *bandwidth* to class which is experiencing backlog. The benefit is not only reducing the packet queue but also optimalizing the use of link.

Class Based Queuing (CBQ) and Hierarchical Token Bucket (HTB), as Bandwidth Manager, which can be got freely and can be used over Linux platform are suitable to analyze the pros and cons, if it is used appropriately and accurately that Bandwidth Manager can be implemented so that network will work optimum.

By adding leaf queueng on classess based on port is not fixing the bandwidth utility. First-In-First-Out (FIFO) which has been the default of leaf queueing on HTB, and can not be replaced by Stochastic Fair Queueing (SFQ) which divide coming traffic to some multiple traffic on it's algorithm. Traffic dividing should usefull if the SFQ qdisc is placed on higher classess (based on IP address) to serve many services such as HTTP, FTP, SMTP, etc.