

## ABSTRACT

IP network is used widely now, and applications that used ip network is very variant, from web until real time applications. For real time applications need a mechanism that can give Quality of Service for IP network. Where the Quality of Service will give guaranty in IP network paramaters, like bandwidth,delay , packet loss, and etc.

Diffrentiated service one of the mechanisms that give quality of service in IP network. In Differentiated service model , every packets that enter in differentiated domain will remark the field of Type of Service in IP header, changed become Differentiated Service Code Point (DSCP) field. The Process of remarking is done in edge router in differentiated service domain. The value of DSCP that will be gave is appropriate with Per Hop Behaviour given.

In differentiated service model need a server , that can configure the router ini differentiated domain dynamicly. Bandwidth broker is the server that can do the configuration based on Service Level Agreement (SLA) and Resource Allocation Request (RAR).

This final assignment implement Bandwidth Broker in diffserv IP network , that control the manajement of resource / bandwith. The implementation is done on EF\_BE architectur, where the Per Hop Behaviour is given only to Expedited Forwarding dan Best Effort.And also given the analysis of throughput and delay in IP network that used the Bandwidth Broker.

The Implementation of Bandwidth Broker give a mechanism of manajement resource / bandwidth dinamicly, that wiil be useful for network administrator in managing his network.