

## ABSTRACT

Internet technology which is based on TCP/IP protocol has been used widely on our daily routines. Along with the widespread of TCP/IP protocol based internet usage, the benefit of using TCP/IP has increased.

TCP/IP protocol architecture basically does not include the discrimination between services. All the services run on best-effort method. This will give rise to network congestion and thus disrupt other services which use a low bandwidth and small delay.

Internet Engineering Task Force (IETF) has proposed a *draft* and RFC to enhance the quality of TCP/IP protocol. One of them is the *Differentiated Services (Diffserv)* architecture. The basic concept of *Diffserv* is creating a priority discrimination between services based on their aggregate transfer rate. This transfer rate is further classified into different service levels. Because of this implementation arranged by modular, so *Diffserv* architecture can be made by these modules.

Router in the network of *Differentiated Services* will control all of traffic that passing through it. For testing purposes, there will be 3 kinds of traffic of streaming video that classified into the AF (*Assured Forwarding*), EF (*Expedited Forwarding*) and flood stream that will be classified into the BE (*Best Effort*).

This final assignment will research about how application of QoS from the services of streaming and used the architecture of *Diffserv* and the matter that included. In this study will make model of traffic included with each of class of services to get parameter of performance network such as *Throughput, delay, jitter and packet loss*. The Implementation of the *Differentiated Services* resulting and improved performance on the network parameters.