ABSTRACT

Today, the need to access the internet is rapidly increasing, either to find any information, articles, new knowledge or merely for chatting. Along with the increase of the internet user number and in order to make an optimal network beside IP management, routing management is required as well. The device used is called router. Mikrotik RouterOS is an operating system that is able to make the computer to be the network router or often known as PC router. The operating system consists of various complete features for wiredline and wireless, including bandwidth management. With various facility, the built-up Mikrotik RouterOS equipment available in the market relatively high price.

One of the alternatives is making a PC router using a computer with low specification. This PC equipment is installed with a Mikrotik made router software and it is capable to be used properly.

This final project implements bandwidth management on LAN network by using Mikrotik as the operating system. By distributing the bandwidth based on client need, it is expected for the system to be capable in optimizing the network use appropriately as the portion and each client's need. In this implementation is done to three kind of application, that is VoIP,video call and transfer file with scenario using background traffic and also without background traffic. The result shows that Mikrotik is capable to fix up QoS for transfer file application using background traffic with upturn for throughput 23%. Whereas for VoIP and video call application, Mikrotik is incapable to fix up significant without using background traffic. In scenario with background traffic, Mikrotik is capable to have MOS until 3.59 for VoIP and 2.07 for video call.

Keyword : bandwidth management, Mikrotik RouterOS, QoS, LAN.