ABSTRACT

The limitation of IPv4 in it's address number cause many technic is used, like NAT, in order to make host can connected with outside network by "borrow" global IP. Otherwise there is any application that can't be serviced by NAT, like video-conference, rtp/rtcp, etc. So to solve this problem is by using IPv6. The inclination of the user number increasing cause IPv4 can not handle too much addressing number. The solution of this limitation is IPv6.

IPv6 that will be used as replacement technology have been designed with variuos advantages and enhancement to cover the lack of IPv4. The number of wide addressing, more efficient header format and other vorious added features make IPv6 very suitable to be implemented. The use of IPv6 in 3G generation is absolute.

In this final project, we do the implementation and network performance analysis IPv6 addressing base for multimedia application that consist of web service,video streaming, and video conference. From result of the reseach, the used of IPv6 in E building network is better than IPv4, for example, packet gained interval delay for IPv4 ping is 0.452 ms and 0.17 for IPv6, based on the throughput comparizon, IPv6 is also higher 110% than IPv4 throughput. IPv6 usage is fastened the packet processing in the node side.

Keyword : IPv6, LAN, multimedia, streaming, conference