ABSTRACT

Internet usage nowadays grow spread quickly, with this grow the internet user and internet application grow more and more. IPv4 is proofed became the backbone of internet addressing, but now it start to having a problem because the quick spread of internet users, so the IPv4 address become lack and decrease. Although IPv4 enough success for efficiency using NAT *(Network Address Translation),* but internet application nowadays using realtime application who NAT doesnt support that. Beacuse NAT restrict end to end application like Videoconference, streaming application, etc. Ipv6 usage is the best solution for internet application now and future

DHCP (Dynamic Host Configuration Protocol) are TCP/IP protocol who let computer configurated by other computer automatically. At the boot sequence, a computer who connected to the network who have a DHCP server instead will search for DHCP service dan negotiate for IP address and other parameter like DNS, default router, and the others. DHCPv6 sistem is a protocol make a network easily configured based on Ipv6 addressing it will became easier dan wirelless using of the network make user easy to join and get the Ipv6 address from the DHCPv6 server.

Delay proccess that happen in DHCPv6 system still higher than delay proccess in DHCPv4 system, but in DHCPv6 system it reliable and strong, we see that if we use a spoof packet request to the server , the system unchanged and the delay also not increase significantly. DHCPv6 application a new application implemented at Ipv6 system and in the future application developping is needed in goal to reach enough performance and reability of the system and ready to use.