

ABSTRACT

In the network of technology system, addressing protocol is the based to design of a network. In terms of the TCP / IP addressing protocol, we know two addressing protocol namely IPv4 and IPv6. IPv6 (Internet Protocol version 6) is a TCP / IP protocol that is an improvement from the previous protocol the IPv4. However, in the process of migration from IPv4 to the IPv6 which isn't easy. Because there is a renewal in the terms of configuration if we want to use IPv6 as a base of network addressing that we make, include routing techniques. In this final project, will be design of network topology are combined with OSPFv3 routing techniques. Which is OSPF routing technique that specifically designed for IPv6 addressing system and methods of VLAN or Virtual Local Area Network is a network model that is not limited to a physical location such as a LAN, as the resulted the network can be configured without having to follow the physical locations of equipment. The results of the draft will be implemented using GNS3 network emulator and tested in terms of Quality of Service (QOS) with the Packet loss, delay, jitter and throughput parameter. And as a comparison the same topology will also be tested from the Quality of Service (QOS) but with different routing techniques. So the result of that research will showing the specify quality of VLAN network which is integration with OSPFv3 and the comparison based on QOS parameter with EIGRPv6 and RIPng routing technique. And then the result is prove that VLAN network with EIGRPv6 is the best from all. Continued with OSPFv3 and the last is RIPng.

Keywords: IPv6, OSPFv3, VLAN, QOS