ABSTRACT

The growth of computer network technology that is increasingly large and complex so that need for a computer network technology that is more flexible and easy to configure. SDN is one solution to the needs of current networks. SDN (Software Defined Network) is offers a different network concepts with traditional networks. In traditional network control plane and data plane are in one device, it is different from the concept by SDN, which in SDN control plane and data plane designed separately. SDN concept has simplified the concept of existing networks because network control on a controller is programmable, it led to the network easily manageable and more flexible.

In this final project, the authors apply routing services using shortest path Jonhson algorithm on SDN network and analyze the performance of the network to determine the value of the parameter of quality of service. Johnson algorithm applied used on networks created in mininet emulator. In this network will be using the OpenFlow protocol.

The results of performance testing on the network SDN when have applied the service routing algorithms Johnson shows that the larger the network, than the longer the convergence time required, routing is flexible because routing can adjust to the changes that occur in the network, and the value of QoS produced still exist as ranges ITU-T G.1010 standard