

## ABSTRACT

Nowadays, by its development, ISP needs a technology in order to support the performance of its connection. One of the ways is by setting multi connection to other providers, usually called by *multihoming*. Telecommunication world is supposed to moving into NGN that has IP-based system, then it makes the network routing on internet more complicated. Therefore a protocol is needed to manage routing table and to support multi homing too. BGP, by now also as *de facto standard* for internet routing protocol, is a protocol that be able to handle internet traffic filtering. By using BGP, network administrator is allowed to choose any network to join or leave the network.

In this final project, we will implement and analyze about *multi homing* with BGP protocol. Case study will be in CnC laboratory. This final project is also including preparation until implementation that will be explained step by step and presented as complicated as possible. The aim of this final project is to compare the delay, throughput, and packet loss of three methods which used for implementing multi homing, i.e.: balance, master-slave, and uplink-downlink.

From the result analysis, the conclusion is determining the best method that used for implementing multi homing with BGP protocol.

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