ABSTRACT

At this time network infrastructure Telkom University (Tel-U) is simple and frequent to attack or disruptions especially on backbone network. This is because the network backbone Tel-U only have 2 routers that support entire layer WAN and one path connected from the International network (IX) and the National Network (IIX).

For development of backbone network Tel-U in the future use 4 routers as the core backbone network are already equipped with security such Firewall and routing used BGP routing (iBGP and eBGP). For setting network path using metrics and controls router services wear Access Control List (ACL). Then added with several the option features such as IP sec VPN. This backbone network will be implemented in simulation by using GNS3 to help SISFO (as a network admin Tel-U) in the testing of this new backbone network (equipped with routing, path and security).

With this backbone network uses BGP routing configuration, metrics path and security (Firewall and ACL). Backbone network Tel-U can be reliable in handling some of some attacks and interference in the network path.

Keywords : Backbone, Firewall, Routing BGP, Metrics, ACL, dan IP sec VPN.