

ABSTRACT

Multi-protocol Label Switching (MPLS) has become an attractive technology of choice for Internet backbone service providers. MPLS features the ability to perform traffic engineering and provides support for Quality of Service (QoS). To deliver reliable service, MPLS requires a set of procedures to provide protection for the traffic carried on Label Switched Paths (LSPs). In this case Label Switched Routers (LSRs) supports recovery mechanism when failure happened in the network, especially failure which happened at Label Switched Paths(LSPs)

So to fix that problem, in this Final Project is designed a simulation of MPLS network that have link failure by using NS-2.26 to studied about performance from usage of fast reroute one to one backup and Haskin recovery mechanism. Simulation used mesh topology and 5 scenarios of link failure with parameter of comparisson are packet loss, recovery time, and service disruption time with various bit rate for each recovery mechanism. Then, recovery performance of fastrerote mechanism and haskin are compared from trace.files which are saved at NS-2.26 file, so that we know which mechanism is better to handle link failure.

The result of simulation is numeric data from each parameters and bitrate. Fastreroute One-to-One Backup recovery mechanism has low packet loss and servicedisruption time average than haskin recovery. while both of their recovery time are similar. Finally, Fastreroute One-to-One Backup mechanism is quickest way to handle protection methode of recovery.

Key words : MPLS, Recovery Mechanism, NS-2.26, Parameter, Bitrate