UNIVERSITI TEKNOLOGI MARA

IMPLEMENTATION OF HIGH AVAILABILITY CONCEPT BASED ON TRAFFIC SEGREGATON OVER MPLS-TE

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ABSTRACT

This paper presented performance analysis of High Availability Concept Based on Traffic Segregation over Multi-Protocol Label Switching (MPLS) Traffic Engineering (TE). Recent years have seen the widespread deployment of Virtual Public Network (VPN) over MPLS where the main objective of VPN is to give an organization or group of business the benefits of private network at a much lower costs than traditional point-to-point private link. Hence, enterprise benefited from the VPN in reducing cost, increasing scalability and increasing productivity without costing the security of their network. The basic requirement of today systems on the design enterprise network is High Availability. Even though many approaches have been proposed, deployment of high availability in load balancing and redundancy on existing service provider backbone network is still a challenging task. The focus of this paper, ensuring the traffic immediately segregates and transparent to customer when the network edge device or access circuit was failures. We also evaluate and configure Virtual Router Redundancy Protocol (VRRP) to support high availability by providing two gateways at customer edge router, where one router elected as primary gateway, and another as a standby gateway. In this situation, the backup link does not fully utilize. Thus, by using traffic diversity concept, Policy Based Routing (PBR) will handle traffic segregation to utilize the traffic at both links. This paper will discusses and analyzes implementation of high availability concept based on traffic segregation over MPLS-TE.

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