

## **ABSTRACT**

Increasingly high demand for the development of the Internet network to make Internet network . Among them high speed internet access and secure network . Network security level become a necessity for attention , information leakage data passed over the network is a very avoidable , so it can be concluded fast internet access is also urgently need to secure an adequate network . MPLS ( Multi Protocol Label Switching ) is a method of forwarding that shorten the time reading a destination address so that the package faster packet is forwarded to the next hop . Because that appears too MPLS VPN , relying on scalability and traffic engineering as the security confidentiality [ 10 ] . What information peroutingan system , then we can use the Routing Protocol Authentication is an authentication method that is designed to provide authentication of each routing information inside the package . So as to prevent any attacks on peroutingan information package [ 2 ] .

In this thesis will discuss security issues in the integrity of the man-in - the-middle - attack , using the authentication system at each peer MPLS , Routing Protocol using authentication technology .

From the test it can be concluded that the information peroutingan very easy to obtain and thus require authentication on each of his header is then encrypted with the MD5 hash function . Given this authentication takes time to do the cracking that can send packets from the attacker to spoof the direction of the router so that the attacker identified as part of a network that is supposed to be . And MD5 itself is still able to protect the package , using the key or strong password and is kept confidential .

Keywords : MPLS , routing protocol authentication , man-in - the-middle , MPLSVPN