

ABSTRACT

Security is an important aspect in implementation of network services. The open port cause *server* can accessed by anyone , so *users* who are not interested can access *server* network service. Network services contained on the *server* is vulnerable to being hacked. Therefore, at the development of network services on the *server* we need *firewall* and adequate security which aims. To reduce hacking on the network service that have been built on the *server*. Network service on the research will be built on the Linux operating system Ubuntu 14.04. Security port of network service, using method of port knocking to authenticate before access *server* and combined with features *firewall IP filter* and *packet timeout* on the Mikrotik router. Where this method will choose the IP allowed to access *server*. The methods will be implemented on the *firewall* Mikrotik router, so that in the development of network services on the *server* is more secure and reduce hacking. In this study the authors use the waterfall method in order to facilitate the work in progress. The results of this study are establishment of the security system on the services the network services on the *server* using port knocking method with *firewall* in Mikrotik router. With this research expected can be a security solution *server* network services are susceptible to be hacked.

Keywords : Mikrotik, Port knocking, Network Security, *IP filter*, *Packet timeout*