ABSTRACT

Network security is a form of prevention or detection of interference and unauthorized access to a computer network system. At present, the network security system in the core business of PT. Royal Lestari Utama (RLU) uses a traditional firewall that cannot detect data packets based on behavior and content so that network security on the internal and external networks of PT. RLU is very risky. Where this time the attacks carried out increasingly varied such as Distributed Denial of Service and wannacry ransomware. Next Generation Firewall can inspect data packets based on behavior and content so that suspicious data packages can be detected through the Intrusion Prevention System, Anti-Bot, Antivirus, and Anti-Spam & Email Security features. The waterfall approach is a model used to ensure success in repairing network security issues at PT. RLU The research conducted is Analysis of Performance Next Generation Firewall and Mikrotik RB1100 as Firewalls for Network Security (Case Study of PT.RLU). The results of this study aim to prevent the risk of data loss, material loss, and paralysis of public services. And to be efficient and effective in scanning variations of attacks without affecting network performance. The implication of the results found is expected to be able to solve the problem faced perfectly.

Keywords: *Network Security, Waterfall, Next Generation Firewall*