

ABSTRACT

Mohammad Alhaadi Nor Pratama, 20120648

Development of a Network Security Sistem with DNS Adguard on Debian Linux and Internet Access Control Based on Implementation Time on the Mikrotik Routerboard

Thesis. Computer Sitems Faculty of Computer Science and Information Technology. Gunadarma University. 2024

Keyword: DNS AdGuard, Network Security, Internet Access Control, Debian Linux, Mikrotik Routerboard

(xiv + 84 + attachment)

This research aims to develop a network security system with AdGuard DNS on Debian Linux and control time-based internet access using the Mikrotik Routerboard. The main challenges are rising network security threats and the need for efficient internet access management in a variety of environments, including families,, education, and offices. The aim of this study is to improve network security and efficiency by blocking harmful content and advertisements,ining user privacy, and regulating internet access at a specific time. Technologies used include DNS AdGuard on Debian Linux to strengthen protection against network security threats and RouterOS Mikrotik devices to manage internet access based on time. These technologies include content filtering features, network traffic distribution (load balancing), and the ability to block unwanted sites to enhance network performance. Research results show that the combination of AdGuard DNS and Mikrotik Routerboard is an effective solution to enhance network security and efficiency. The system is capable of blocking harmful content and advertising, improving user privacy, and adjusting internet access as needed, thus creating a more secure, controlled, and optimal network.