

ABSTRACT

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DESIGN AND IMPLEMENTATION OF PUBLIC INTERNET ACCESS GATEWAY OF PT LIPPO KARAWACI TBK.

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In information era, the internet has become essential need in business and industry. The internet possesses some distinct characteristics: fast, up-to-date, and heterogenous. However, as public medium, the internet raises some potential security issues: confidentiality, authenticity, and access rights. Gateway is a demarcation point between company's internal network and the internet which handles security issues, limits access, and manages information flows.

The public internet gateway in PT Lippo Karawaci, Tbk., Panama, uses Microsoft Windows 2000 Server Service Pack 4 and Kerio WinRoute as its gateway software. These software were relatively old and did not meet new internet-related policy of the company.

This paper focuses on design and implementation new Panama. sAs Microsoft partner, company wants to deploy Microsoft Internet Security and Acceleration 2004 (ISA Server 2004) as its gateway software. ISA Server 2004 is an integrated solution of multi-layer firewall, proxy, and web caching software. PRTG (*Paessler Route Traffic Grapher*) is used for gathering real time network traffic to internal network and to the internet. GFI WebMonitor, an add-in of ISA Server 2004, is used for monitoring web browsing activity of the employees. Quality of Service (QoS) minimizes the negative effects of improper internal network topology design.

The design of Panama incorporates company's policy, internal network topology, and 90% internet usage for web browsing as main considerations. The implementation of Panama is using Microsoft Windows 2003 Server with Service Pack 2 and Microsoft Internet Security and Accelerator 2004 with Service Pack 2. New QoS mechanism must be implemented in order to minimize the negative effect due to QoS Packet Scheduler ineffectiveness. A router can be placed between Panama and internal network to provide second line of defense and eliminate internal broadcast effect to Panama.

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