

Research on security solutions using Firewall in LAN environment

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Abstract: In the context of increasingly complex network security environments, firewalls, as a key technology for ensuring the security of local area networks (LANs), hold significant research value. This study aims to explore and evaluate the application effectiveness and security of various firewall solutions in LANs. By combining theoretical analysis with empirical research, optimization strategies suitable for different scenarios are proposed, and a comprehensive security protection system is constructed. The expected research outcomes will provide a scientific basis for enhancing the overall defense capability of LANs and promote the practical application of related technologies.

Keywords: Network security, firewall, local area network, security protection, optimization strategy