Network Security and Cryptography

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Abstract*: In the digital age, the rise of internet technologies and the exponential growth of data exchange have necessitated advanced network security protocols to combat escalating cyber threats. Cryptography, a fundamental pillar of network security, provides robust mechanisms to safeguard data integrity, confidentiality, and authenticity. This review delves into contemporary network security frameworks, cryptographic methodologies, and key management practices. The paper highlights emerging trends and technologies designed to mitigate potential vulnerabilities, thereby fortifying digital communication channels against malicious actors*

Keywords: Network Security, Cryptography, Data Encryption, Cyber Threats, Key Management