Republic of Iraq
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University of Babylon
College of Information Technology
Department of Information Security

MAC Spoofing Detection

A Project
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Abstract

This project aims to develop a robust MAC spoofing detection system leveraging Scapy, a powerful Python library for packet manipulation. MAC spoofing remains a significant threat to network security, enabling unauthorized access and potential data breaches. The proposed solution employs Scapy's capabilities to monitor network traffic in real-time, allowing for the detection of anomalous MAC address behavior indicative of spoofing attempts. By analyzing ARP packets and comparing MAC addresses with known device mappings, the system identifies discrepancies and flags potential spoofing incidents. Additionally, machine learning techniques will be integrated to enhance detection accuracy and adaptability to evolving attack strategies. The project will focus on scalability and efficiency to ensure minimal overhead on network performance. Evaluation will involve extensive testing in simulated and real-world environments to validate the effectiveness and reliability of the detection system. Ultimately, this project aims to contribute to the advancement of network security by providing a practical and efficient solution for mitigating MAC spoofing threats.