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Study: (Morning)

Securing Networks with Raspberry pi Honeyots and Access control

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Abstract

The proliferation of IoT devices has led to an increased need for robust security measures. However, many IoT devices lack adequate access control mechanisms, leaving them vulnerable to unauthorized access and malicious attacks. Traditional access control solutions are often impractical for resource-constrained IoT devices, requiring a lightweight yet effective alternative.

To address this issue, a novel solution based on embedded access control using Raspberry Pi for IoT devices is proposed. By leveraging the processing power and versatility of Raspberry Pi, along with its GPIO pins for interfacing with sensors and actuators, a comprehensive access control system can be implemented directly on the IoT device itself. This approach ensures that access control mechanisms are tightly integrated into the device's firmware, providing a robust defense against unauthorized access and ensuring data integrity and confidentiality.

Converting Raspberry Pi into a honeypot has proven to be a transformative approach in bolstering network security. One of the standout values of this conversion lies in its affordability. Raspberry Pi's cost-effective nature allows organizations to implement advanced security monitoring without incurring substantial costs, making it accessible for both large enterprises and smaller businesses.