IoT Cybersecurity

(MITM) Attack with ESP8266

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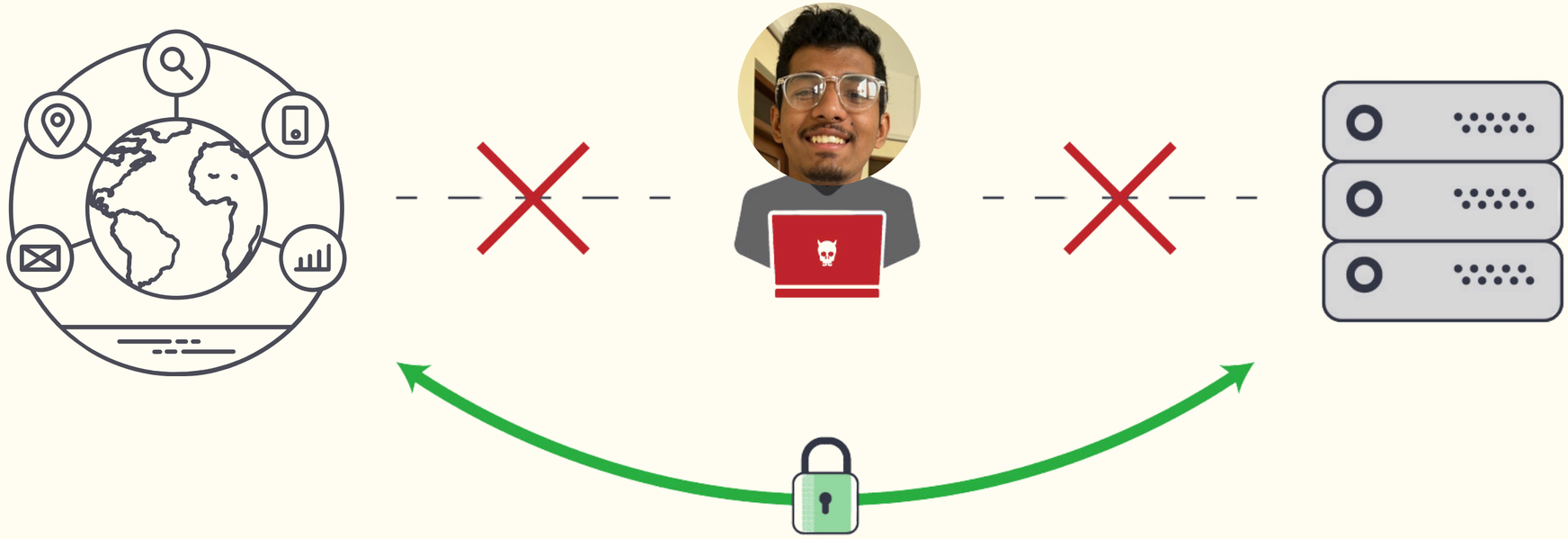
MITM Attacks

A MITM attack is where a malicious actor intercepts communication between two parties.

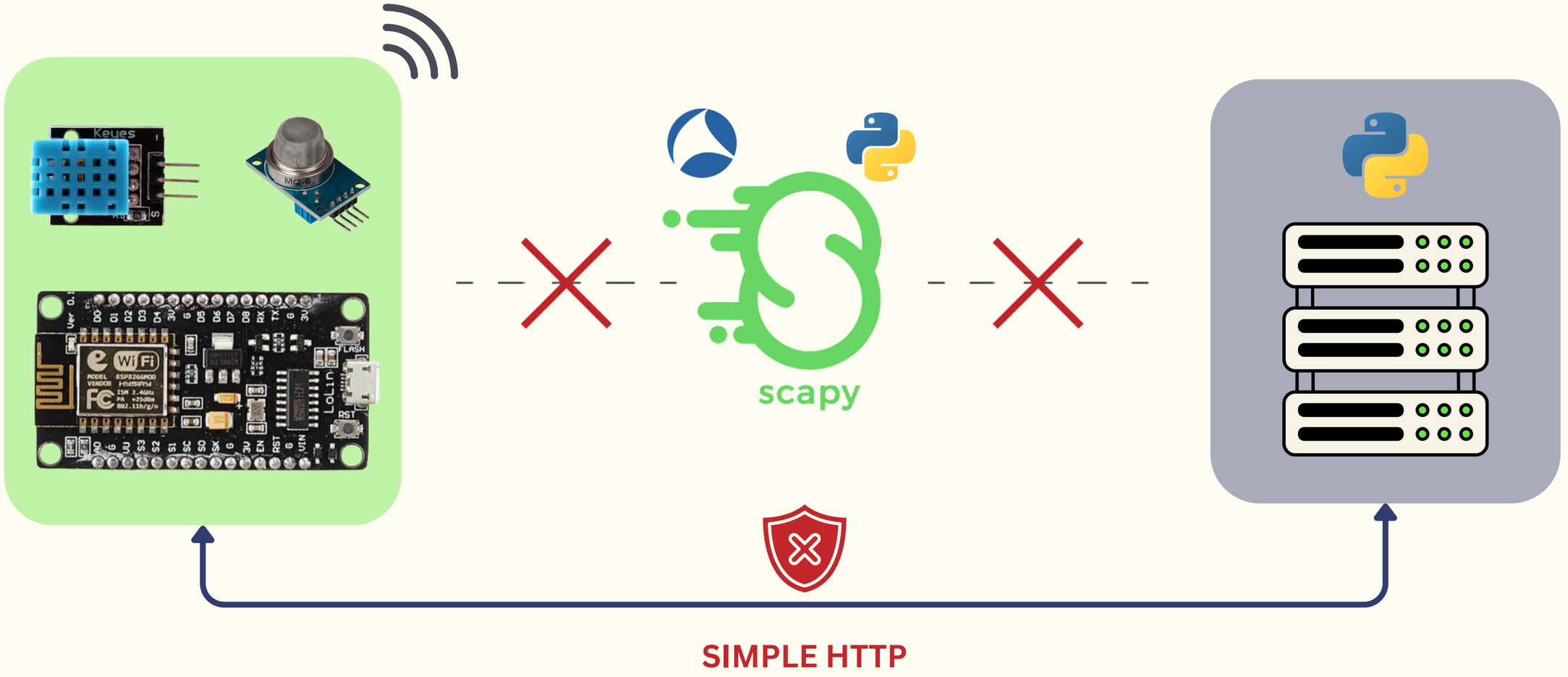


Interception

Data Manipulation

Impersonation

What are we doing today?



Tools, Components and Technologies Used

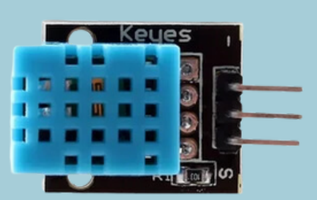
Simple IoT Beacon

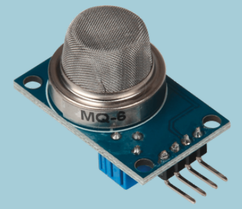
ESP8266 NodeMCU

DHT11 Temperature/Humidity Sensor

MQ6 Gas Sensor

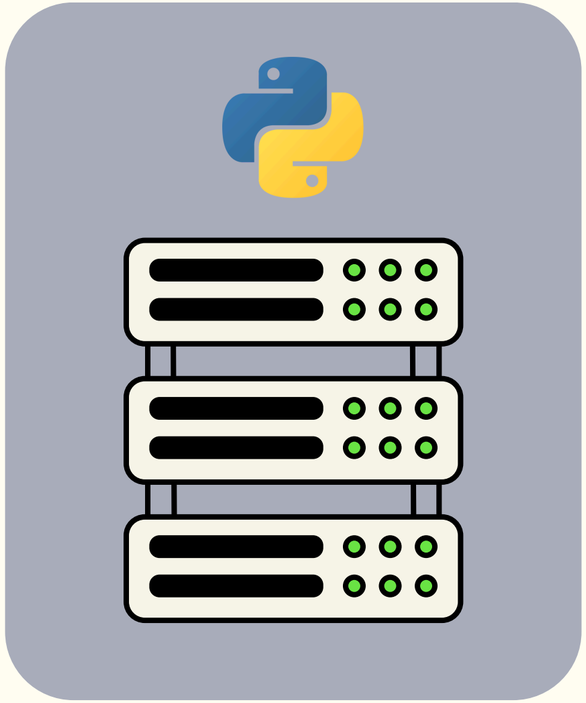
Arduino IDE





Tools, Components and Technologies Used

Simple HTTP Server



Python

http.server

Tools, Components and Technologies Used

Packet Interceptor

Python

Scapy

Network Setup

- **Legitimate Network**
  - **SSID: IoT_CyberSecurity**
  - **Password: 10072024**
- **Python Server**
  - **IP: 192.168.29.128**
  - **Port: 8000**

Prevent MITM

Use of HTTPS (TLS/SSL/CAs)

Intrusion Detection Systems

SFTP over FTP

Links

Repo

Find this PPT on

https://speakerdeck.com/sarthakskumar/hands-on-session-iot-cybersecurity

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Thank you :)

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