IoT Network Canary

```
sudo rm -rf / 569 Final Project
```

The Problem

- Rise of IoT device usage broadens the network threat vector
- 70% of devices connected to IoT were vulnerable to attack (HP, 2014 Study)

Lack of transport encryption,

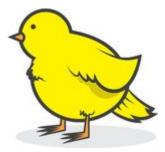
failure to properly authorize users,

- Often no convenient user interface for secure individual IoT devices



Our Solution: IoT Network Canary

- Design an application to both harden and monitor a network against Mirai-like worms
- Secure vulnerable devices before the attack arrives
- Detect and notify owners of attacks in real time
- A single device to secure all their IoT devices



Project Components

Honeypot & Notification Tool:

- Sits passively on the network and appears vulnerable
- Listens for brute force connection attempts
- If # of attempts for given IP exceeds user-set heuristic, alert email is sent to user's email

Network Hardening:

- Scans for devices with open ports on the network
- Leverage Ncrack: network authentication cracking tool
- If successful, user is given the option to change weak credentials

Current Implementation

