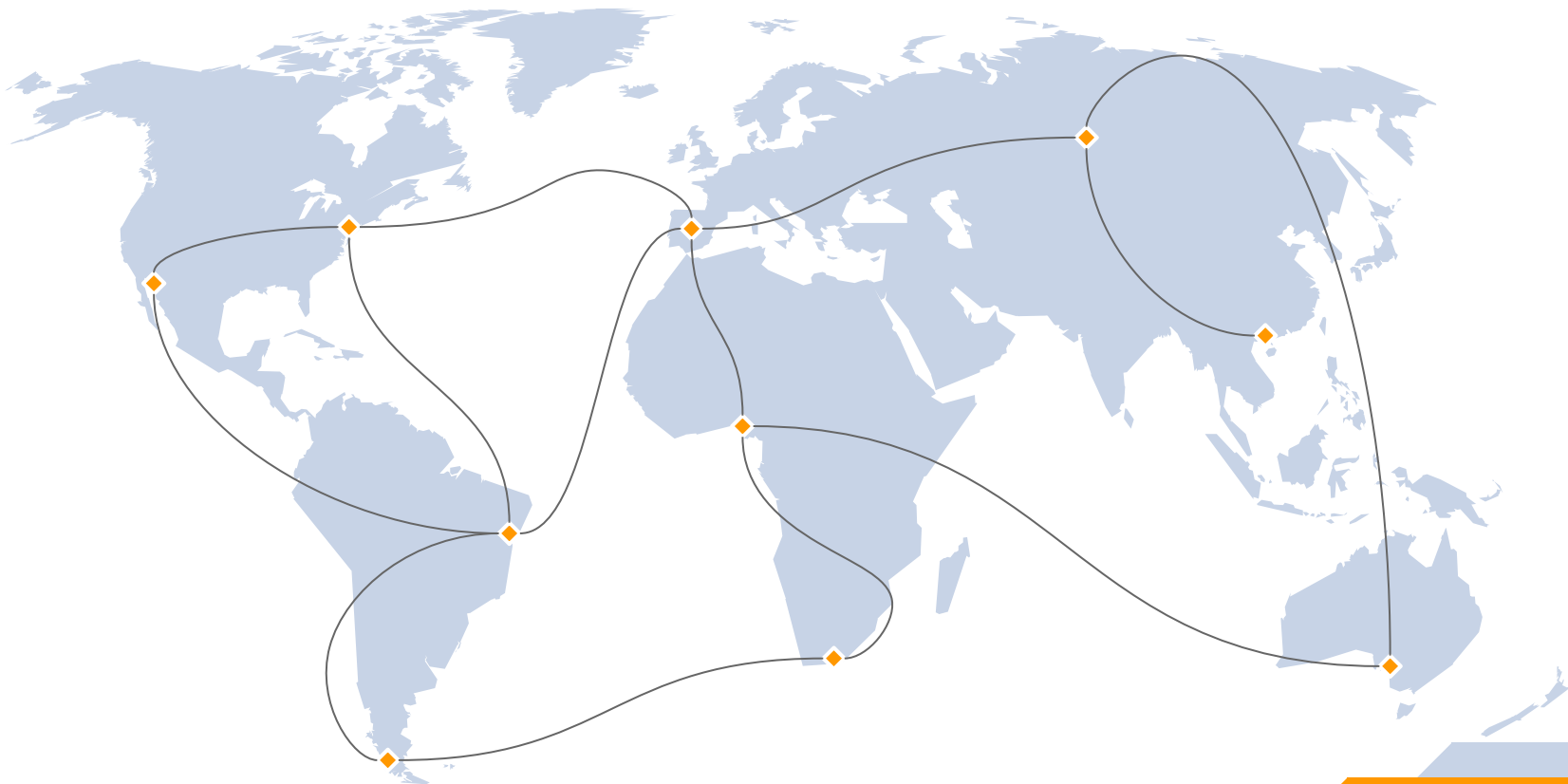


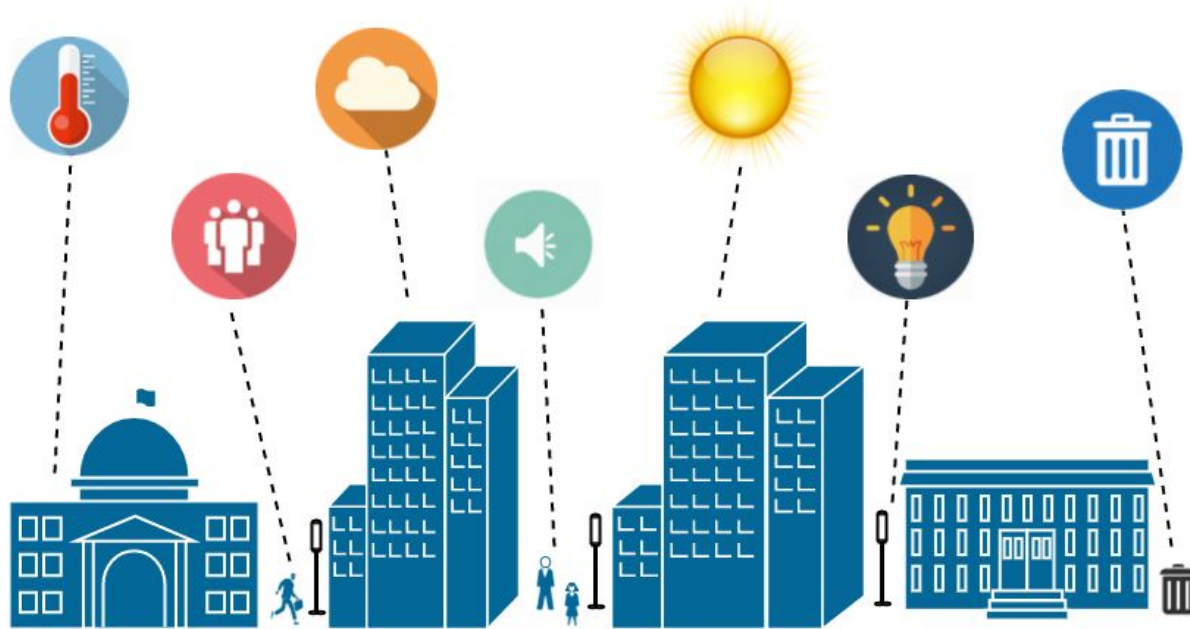
# IoT network monitoring in a vulnerable environment

*Técnicas de Percepção de Redes*

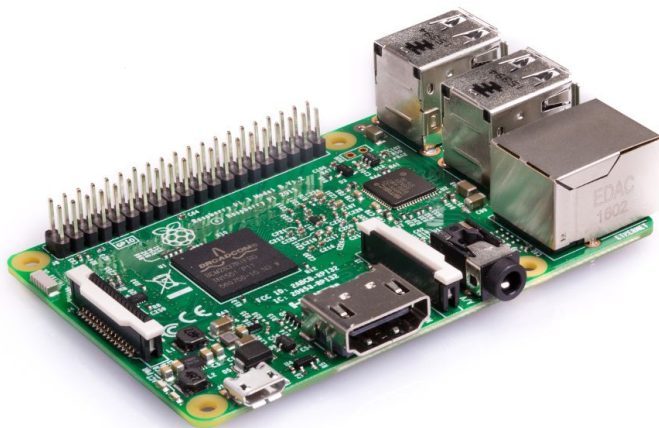
# Devices communicating all over the world



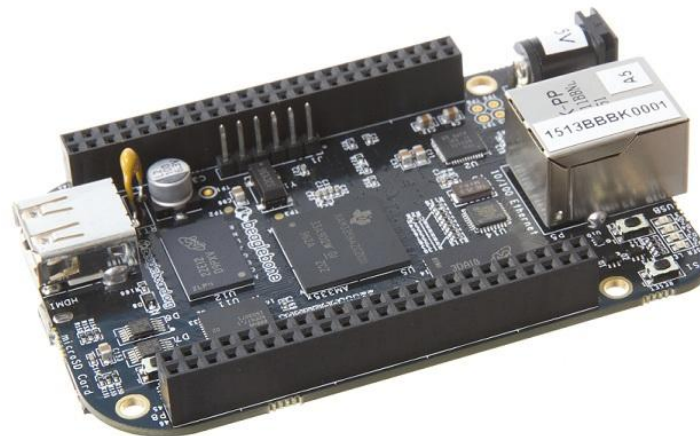
# IoT devices are everywhere...



## Many different devices...

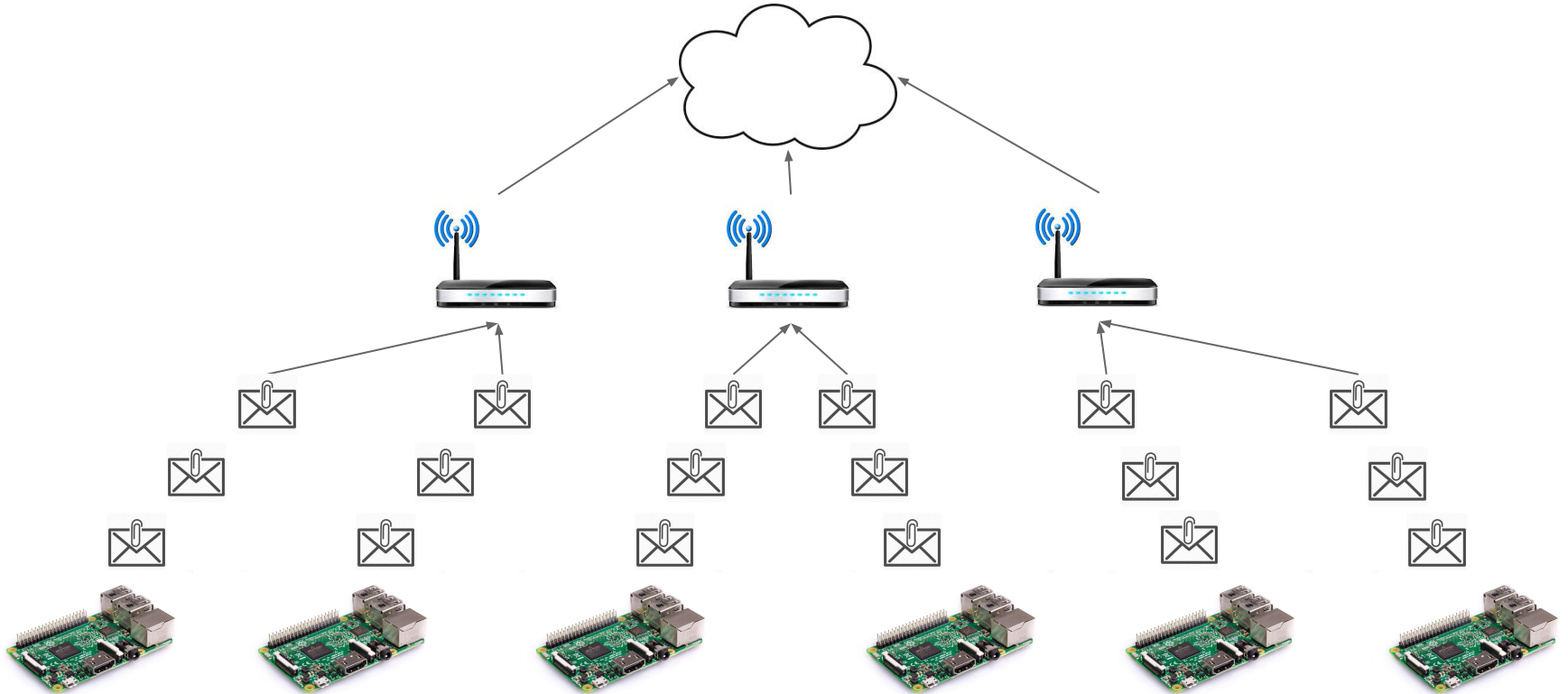


Raspberry Pi



BeagleBone

# IoT network architecture

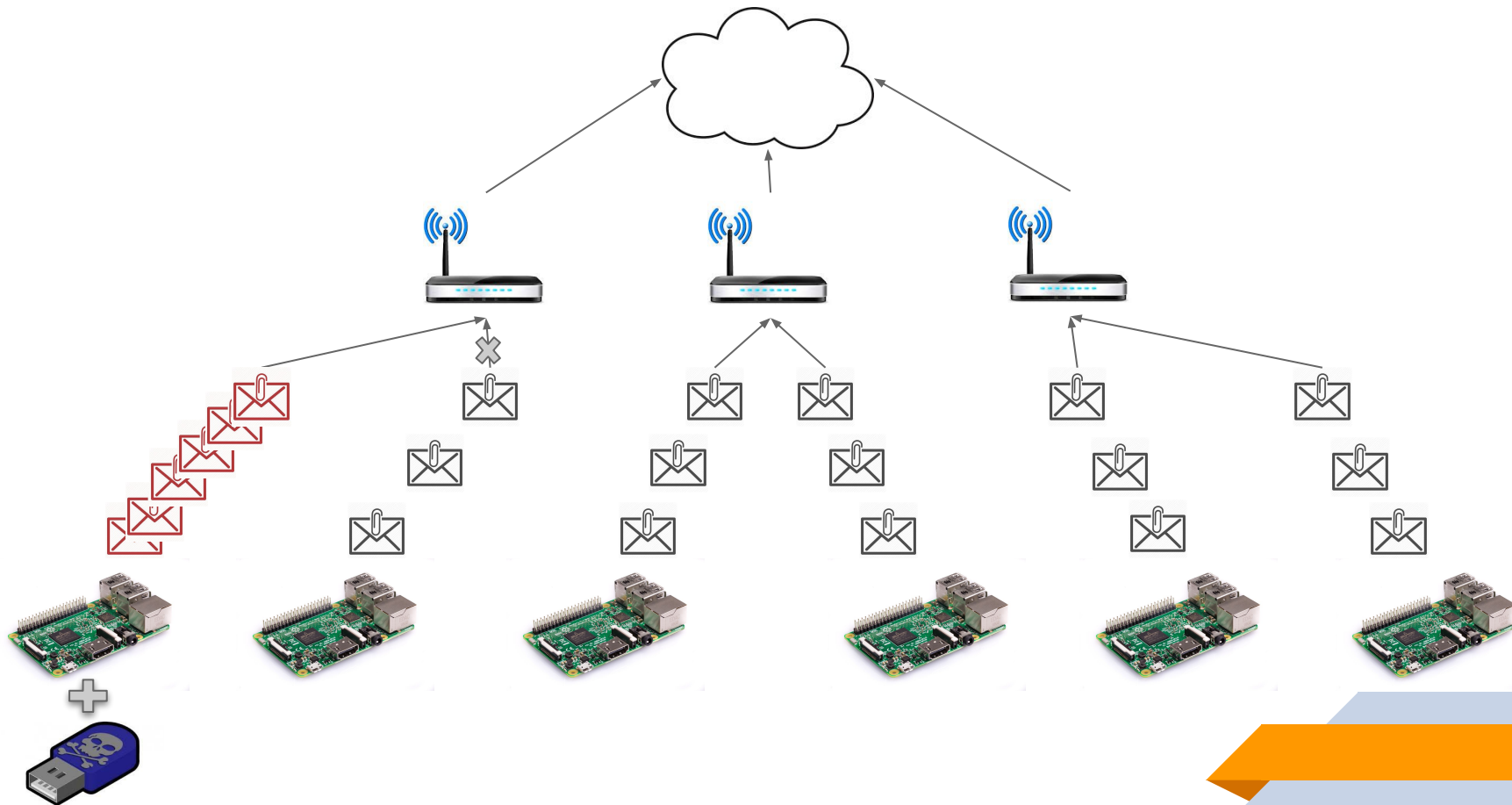




## IOT NETWORK PROBLEM #1

- A hijacked device starts disrupting the network with bogus information.

# IoT network problem #1



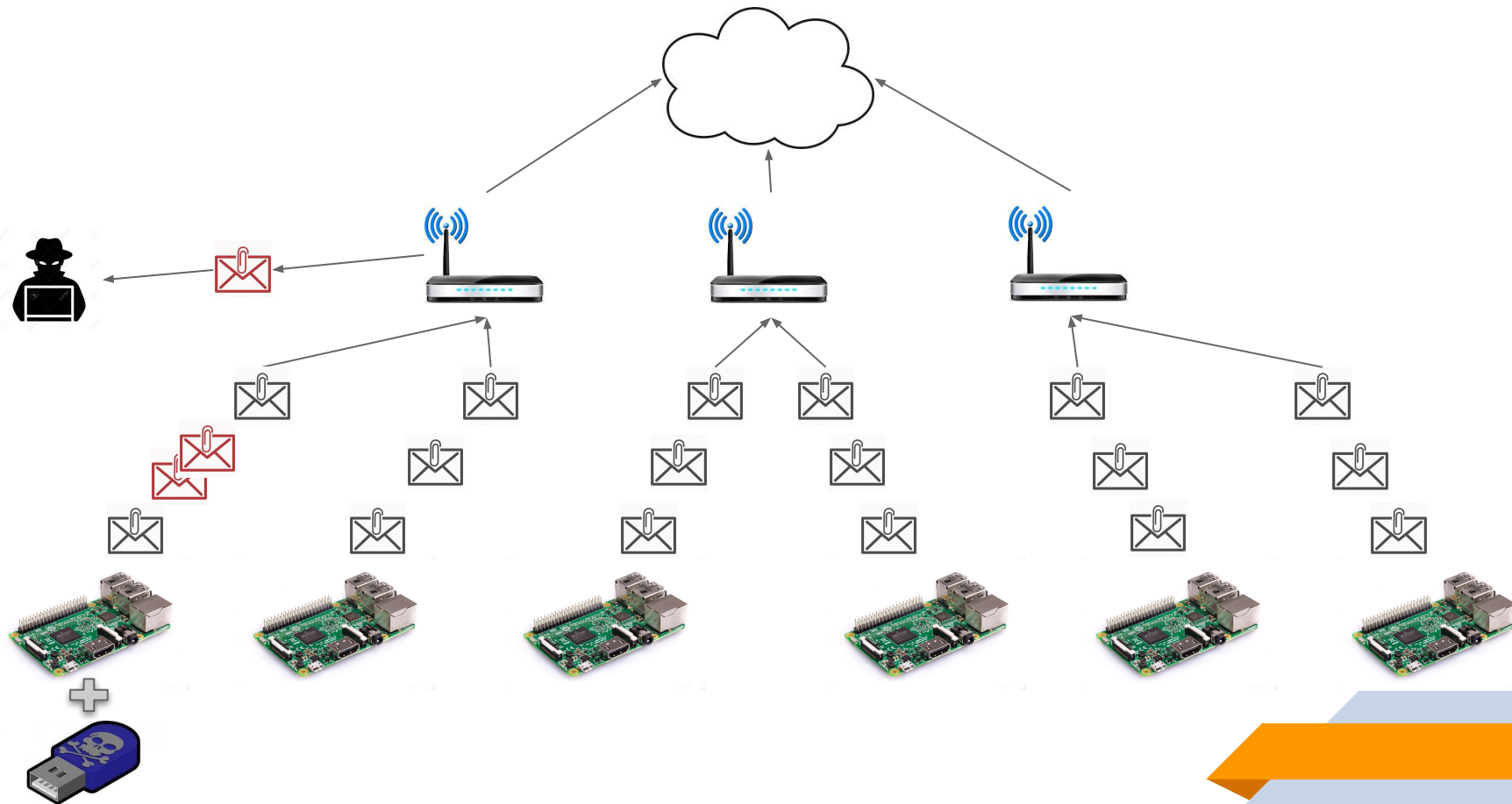


## IOT NETWORK PROBLEM #2

- A hijacked device sends confidential information to the attacker.



## IoT network problem #2

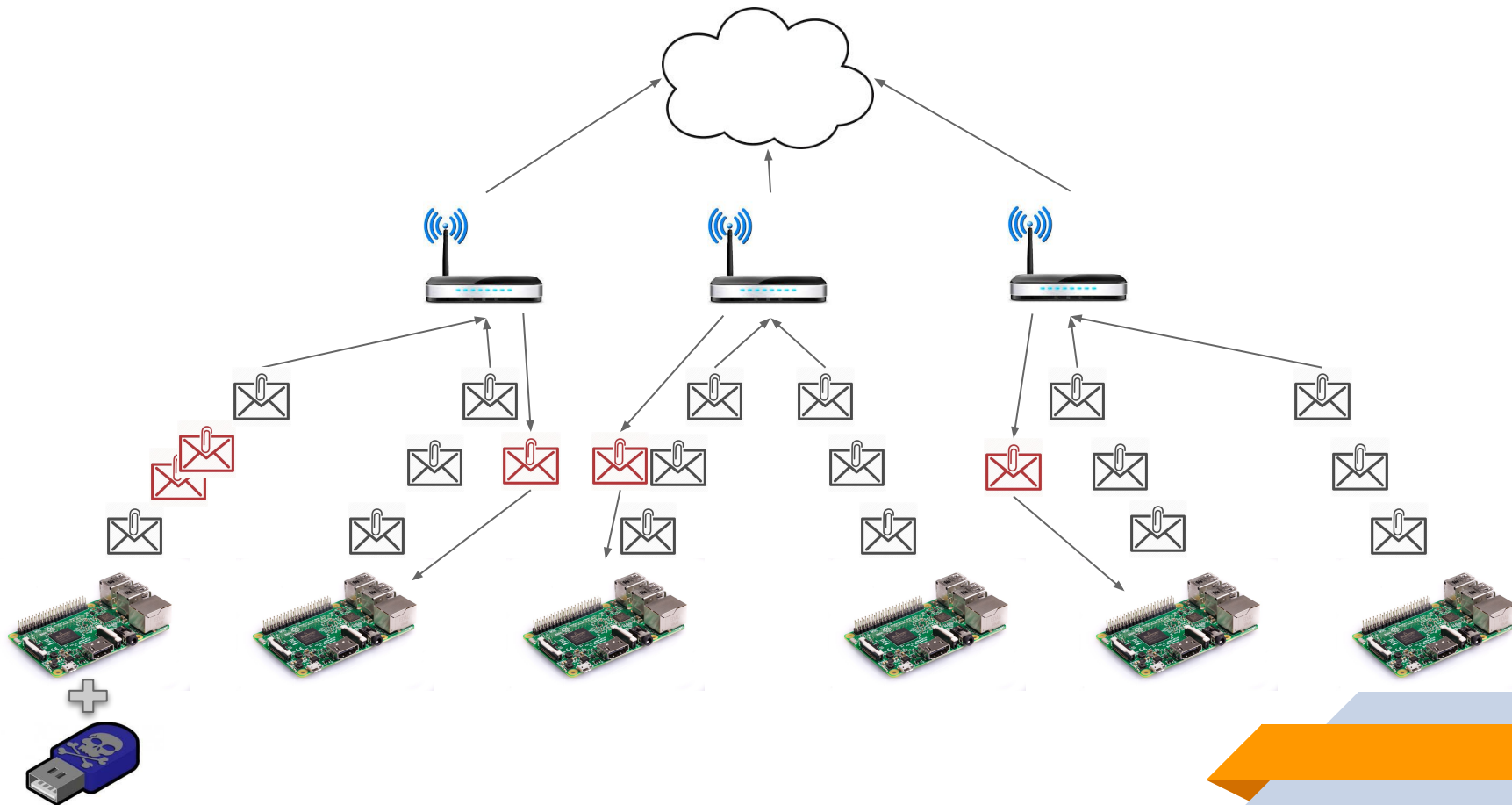




## IOT NETWORK PROBLEM #3

- A hijacked device tries to obtain information and/or compromise other devices.

## IoT network problem #3



A person with short brown hair, seen from the back, is looking at a wall covered in various design-related papers, sketches, and photographs. The papers include wireframes, color palettes, and conceptual drawings. The person is wearing a grey and black striped sweater. The overall scene suggests a creative or design workspace.

How can we **solve**  
these problems?



## POSSIBLE TECHNIQUES

- Monitor the duration of silence periods.
- Monitor upload/download packets size, its ratio and its information.
- Monitor the IPs a device communicates with.

# IoT network monitorization in an vulnerable environment

*Técnicas de Percepção de Redes*