



# INTERNET OF THINGS (IoT) DEVICE ATTACKS

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# WHAT EXACTLY IS IT?

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An Internet of Things (IoT) device attack is a compromise of the devices in a Internet of Things (IoT) system. A cybercriminal can launch an IoT attack to steal information. They can take over an automated or IoT system, and shut it down.

# MAIN CAUSES OF THE ATTACKS

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Lack of updates

01



Inadequate device  
management features

02



Unencrypted data  
storage and exchange

03



04

Outdated hardware



05

Insecure network ports

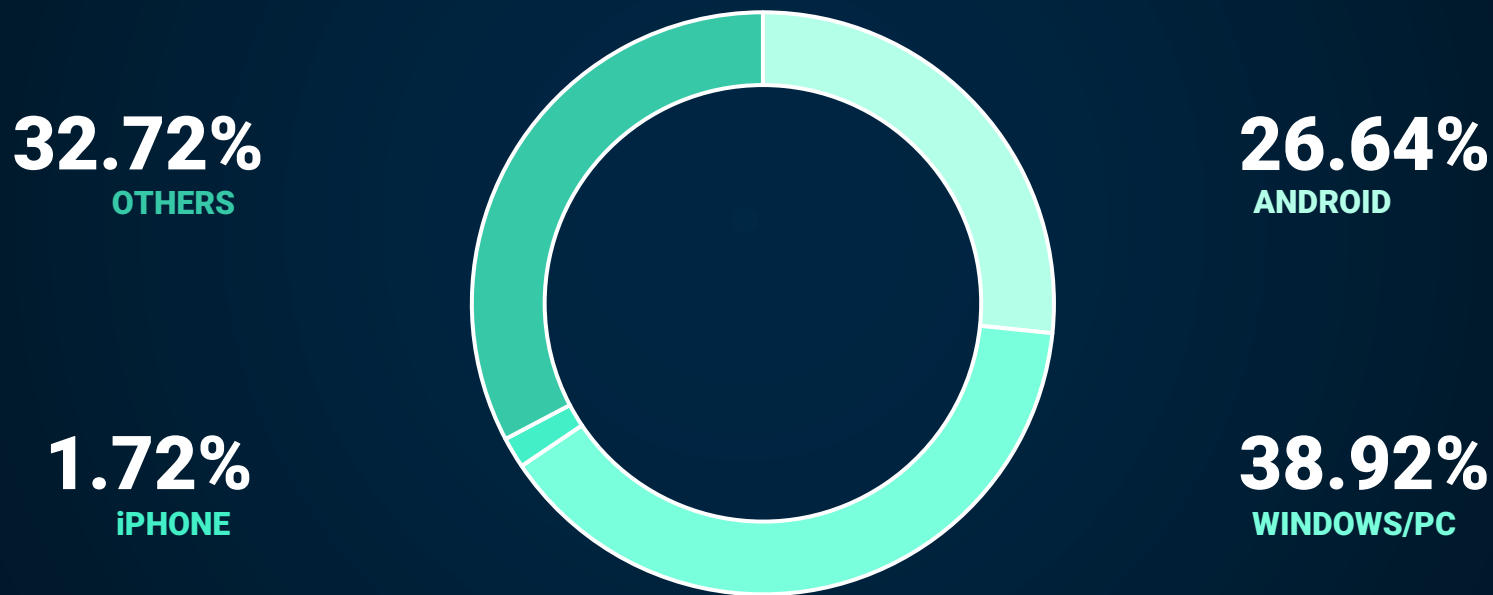


06

Weak password protection

# INFECTED IoT DEVICES IN 2020

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Infected IoT devices in 2020 increased by **100%** from 2019

# NATURE OF THREATS

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## **STEALING OF SENSITIVE DATA**

e.g. attacking the IoT  
in a hospital to  
access the medical  
records of patients



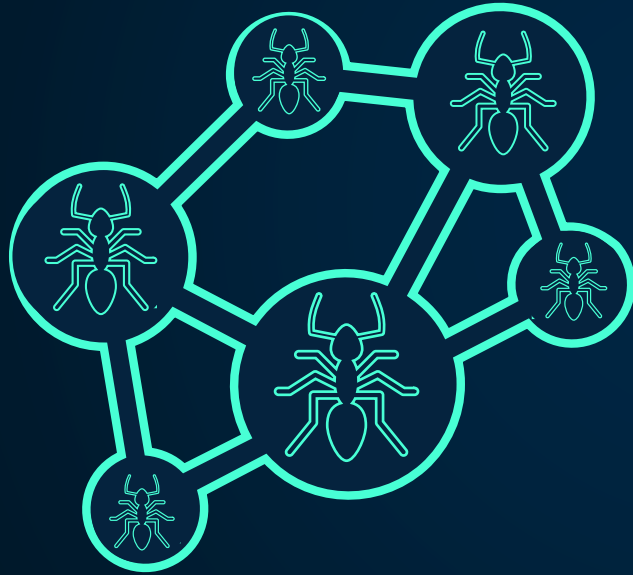
## **DISRUPTION OF FUNCTIONS IN A NETWORK**

e.g. DDoS attacks on  
a company's IoT can  
disrupt their  
operations



## **INJECTING FALSE INFORMATION**

e.g. manipulation of  
sensors in a factory  
leading to a large  
disruption in the  
factory's automation  
process



# THE MIRAI BOTNET

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At its peak on November 2016, **Mirai** a computer worm infected over 600000 IoT devices creating a botnet that had the ability to DDoS popular websites (Amazon, Paypal, Reddit, Twitter, and more..) and take them down leading to huge monetary losses for these platforms

# THREAT MITIGATION



**USE ANTIVIRUS & FIREWALLS  
FOR ALL OF YOUR IOT DEVICES**



**UPDATE YOUR IOT DEVICES  
REGULARLY**

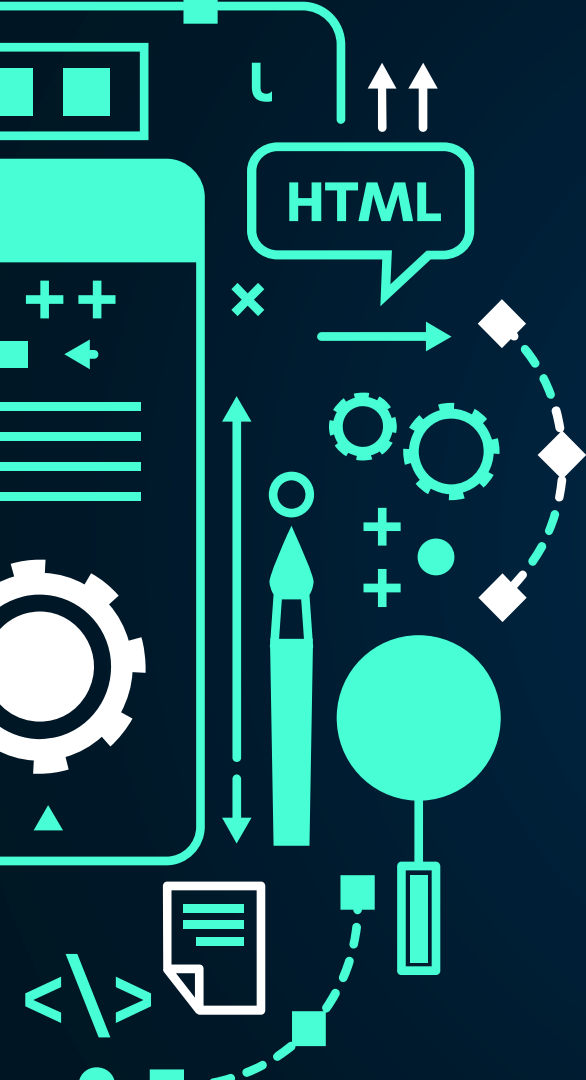


**USE MONITORING TOOLS TO  
DETECT THREATS**



**USE SECURE PASSWORDS FOR  
ALL ACCOUNTS AND DEVICES**





**THANK YOU**



# REFERENCES

## URLs

- <https://www.scarlettcybersecurity.com/what-is-an-iot-attack-the-ins-and-outs-of-iot-security#:~:text=An%20IoT%20attack%20is%20a,system%2C%20and%20shut%20it%20down.>
- [Infected IoT device numbers grow 100% in a year - Security Magazine](#)
- [IOT – Attacks and Challenges – Neliti](#)
- [The 5 Worst Examples of IoT Hacking and Vulnerabilities ... - IoT For All](#)
- [Inside the infamous Mirai IoT Botnet: A Retrospective Analysis](#)
- [Top IoT security issues and challenges \(2022\) – Thales](#)