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# The Tipping Point: Exploring the Surge in IoT Cyberattacks Globally

Research revealed a sharp increase in cyberattacks targeting IoT Devices. Let's dig into it.



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A graphic of a globe with glowing blue data lines and nodes, representing a global network or data flow.

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# Why?



**FARM/ANIMALS - WOODVILLE PORK FARM - FIRE (12,000 PIGS DIED) - 05/17/2021**  
Waseca, Minnesota 56093  
**Description** FIRE - LATE AT NIGHT - UNKNOWN REASON - 12,000 PIGS DIED  
<https://bringmethenews.com/minnesota-news/thousands-of-pigs-killed-in-fire-at-minnesota-farm>  
Directions [From here](#) - [To here](#) Built with ZeeMaps

**HACKED - IOWA GRAIN NEW COOPERATIVE - 09/21/2021**  
Superior, Iowa  
**Description** HACKED \* HAS 60 LOCATIONS - THIS CAN CRIPPLE THE GRAIN, PORK, & CHICKEN SUPPLY CHAINS  
<https://www.feedandgrain.com/news/iowa-grain-co-op-contains-cyberattack>  
Directions [From here](#) - [To here](#) Built with ZeeMaps

**FOOD PANTRY - CO-OP - FIRE - 01/20/2021**  
Kitikmeot Region, Nunavut, Canada  
**Description** FIRE - EARLY AM - UNKNOWN REASON \*\*\* ONLY PLACE FOR: GAS, WOOD, CABLE, ATVS, SNOWMOBILES, FURNITURE, APPLIANCES \* ONE OF ONLY 2 BUILDINGS ON THE ISLAND  
<https://www.gofundme.com/f/iglulik-food-bank-fire-relief>

Fire destroys Azure Standard Headquarter Facility

**Explosion at Armorock Plant in Boulder City, Nevada – 6 Injured**  
by [Eric Rhine](#) | Jul 12, 2022 | **Industrial Accident** **Personal Injury**



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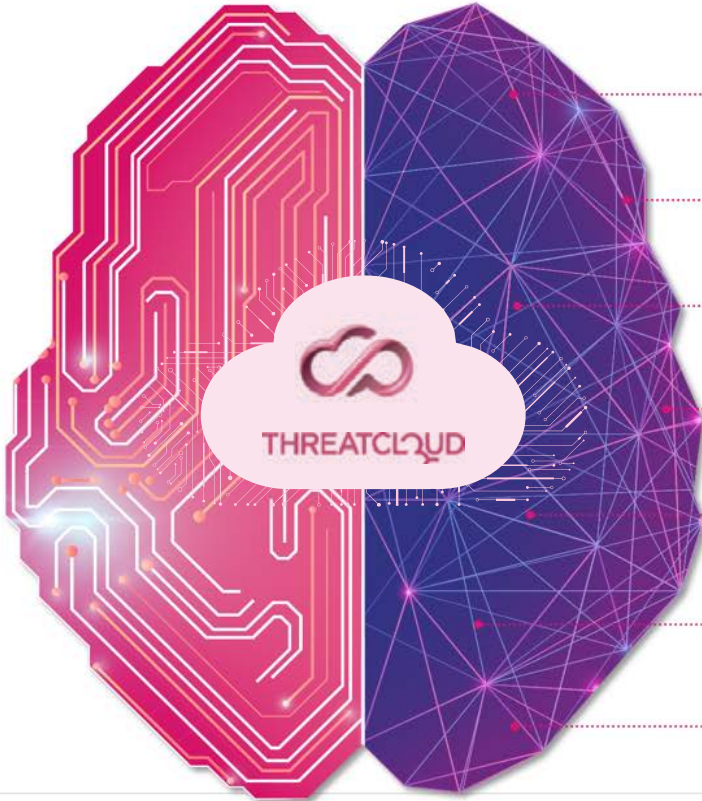
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# Sources:



## Big data threat intelligence:

- 2,000,000,000**  
Websites and files inspected
- 73,000,000**  
Full content emails
- 30,000,000**  
File emulations
- 20,000,000**  
Potential IoT devices
- 2,000,000**  
Malicious indicators
- 1,500,000**  
Newly installed mobile apps
- 1,000,000**  
Online web forms

Counted  
**DAILY**



# Who?

150 Analysts and  
Researchers

Plays nicely with:

- Other security vendors
- Governments
- Law Enforcement
- CERTS



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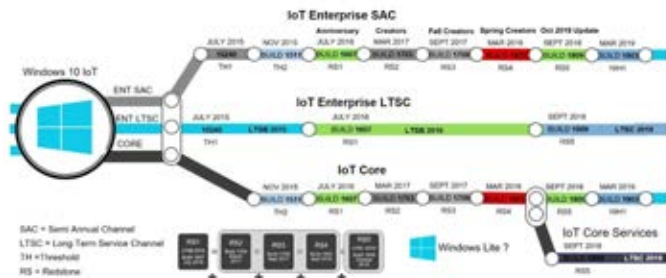
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# What Devices?



## Windows 10 IoT Road Map 2019



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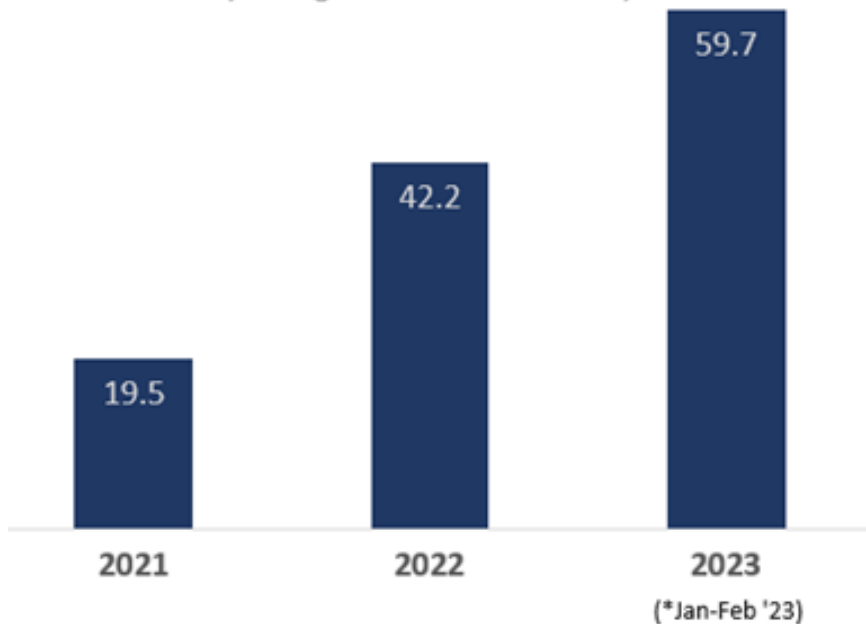
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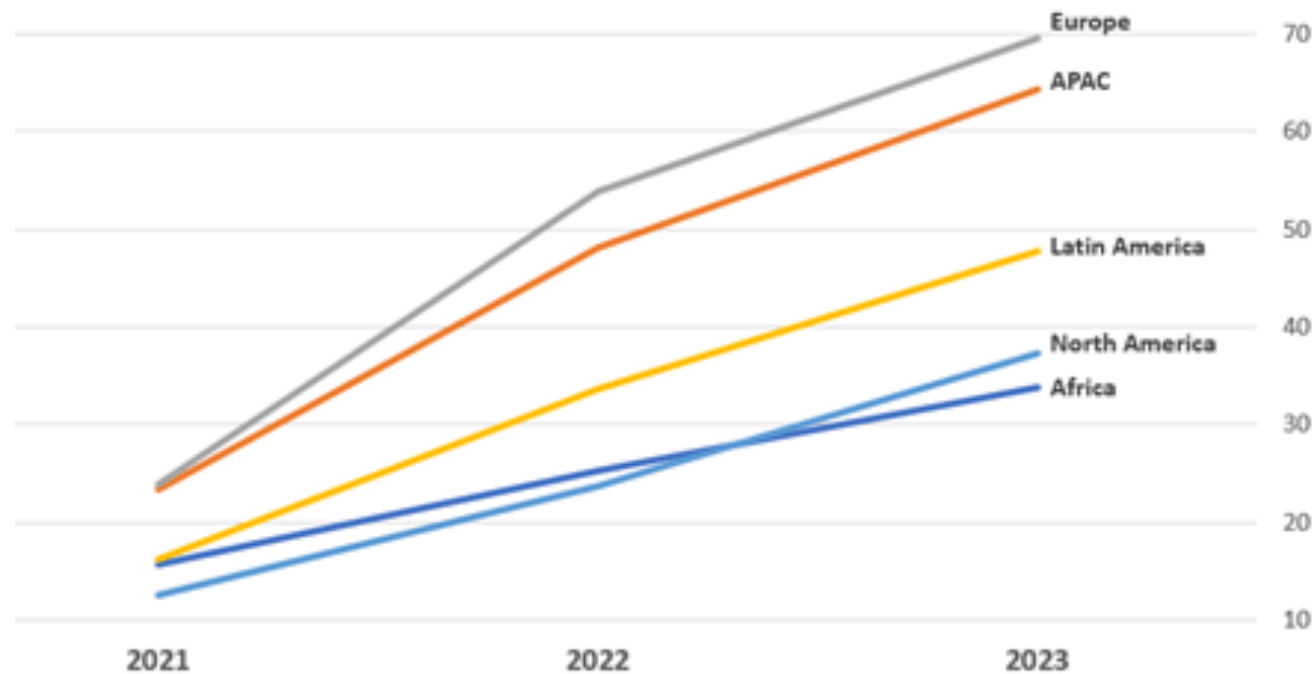
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# Findings: volume and region

**Sharp increase in cyber attacks targeting IoT devices**  
(by average weekly attempts per organization 2021-2023\*)

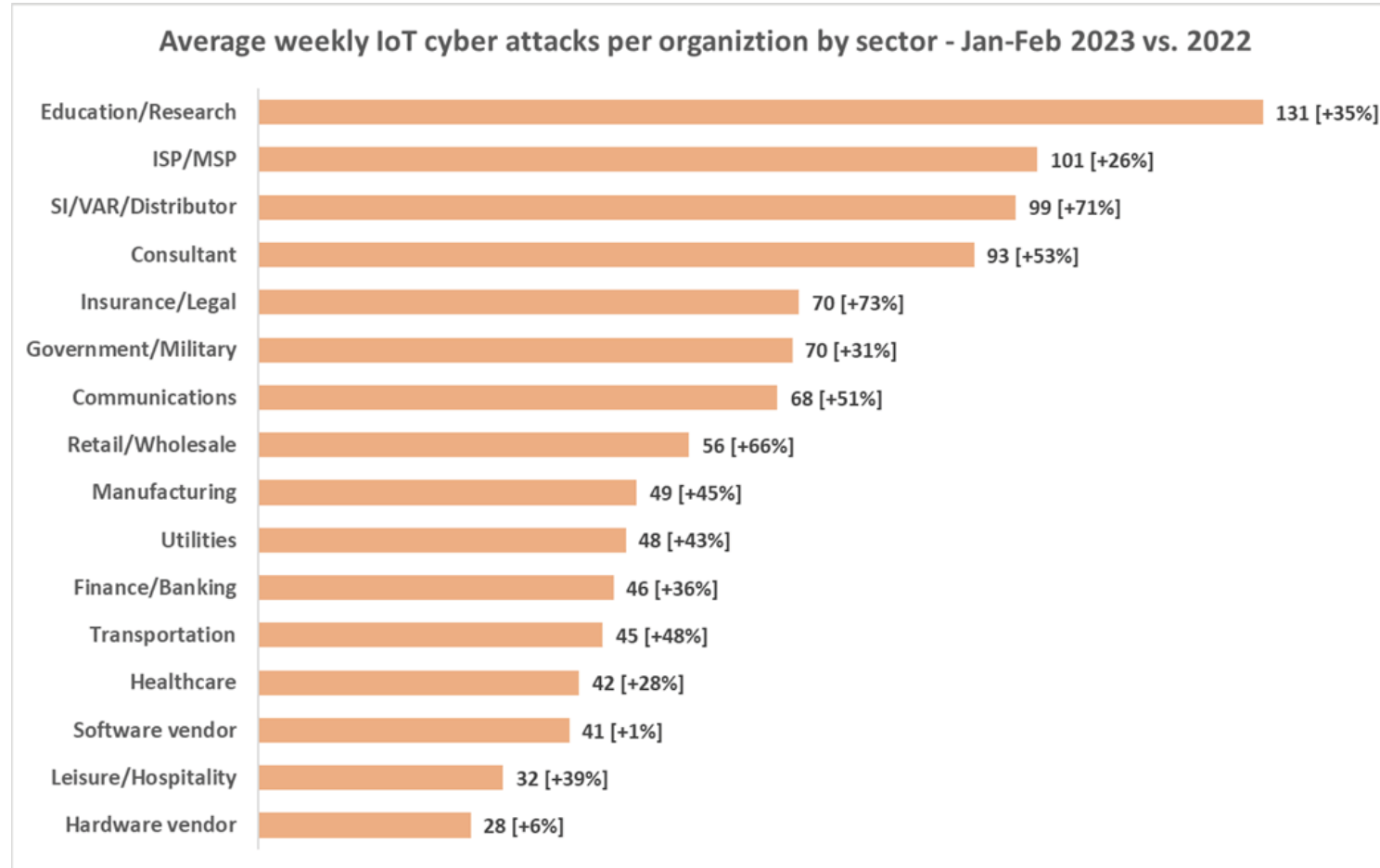


**Cyber attacks targeting IoT devices are growing across all regions**  
(by average weekly attacks per organization, 2021-2023\*)  
\*Jan-Feb 2023





# Findings: sector



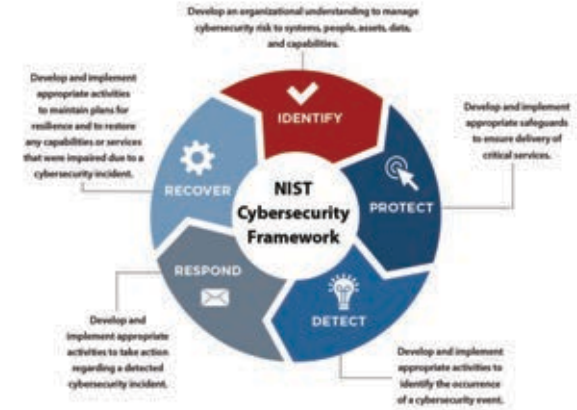
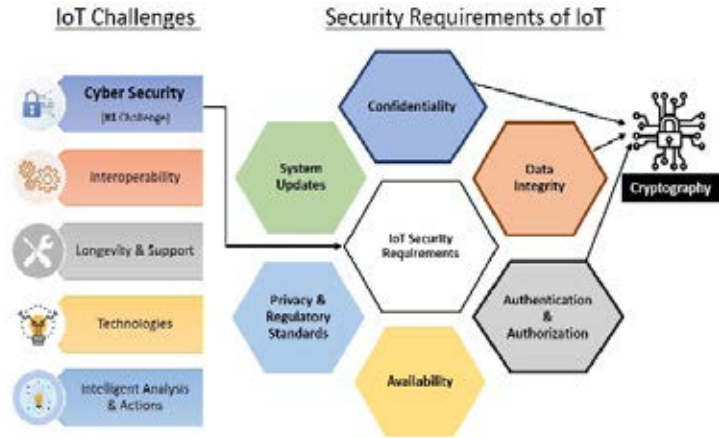
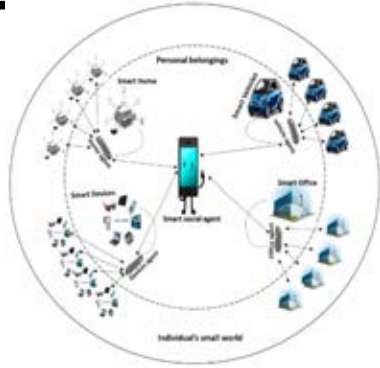
# Findings: why and how?

- **MVPower DVR Remote Code Execution:** This exploit impacts an average of 49% of organizations every week.
- **Dasan GPON Router Authentication Bypass (CVE-2018-10561):** impacts 38% of organizations weekly.
- **NETGEAR DGN Command Injection:** impacts 33% of organizations weekly
- **D-Link Multiple Products Remote Code Execution (CVE-2015-2051):** impacts 23% of organizations weekly.
- **D-Link DSL-2750B Remote Command Execution:** impacts 14% of organizations weekly.

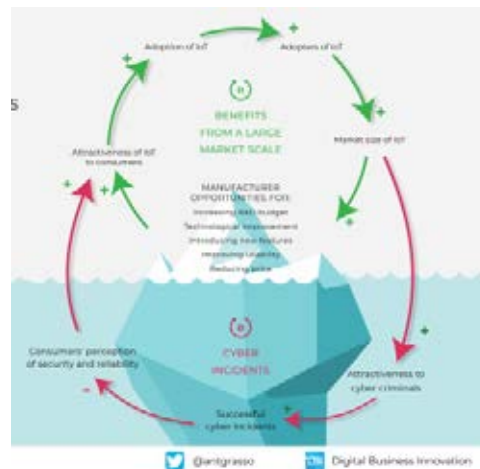
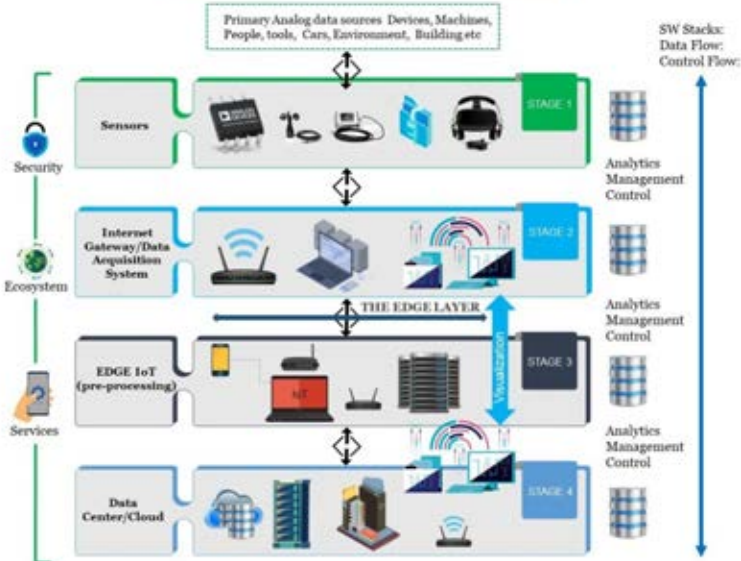
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- NETGEAR DGN Command Injection
  - Netgear R7000 and R6400 cgi-bin Command Injection (CVE-2016-6277)
  - FLIR AX8 Thermal Camera Command Injection (CVE-2022-37061)
  - Multiple IoT Command Injection



# Now what?



## The 4 stage of IoT solutions Architecture



## SecKit: A Model-based Security Toolkit for the Internet of Things

[Ricardo Neisse](#), [Gary Steri](#), [Igor Nai Fovino](#), [Gianmarco Baldini](#)



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# Now what?

- Purchasing IoT devices from reputable brands that prioritize security, implementing security measures inside the devices before distribution to market.
- Practicing password complexity policies and using multi-factor authentication (MFA) when applicable.
- Ensuring connected devices are updated with the latest software and maintaining good device health.
- Enforcing zero-trust network access profiles for connected assets.
- Separating networks for IT and IoT when possible.



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Discussion

Thank you!



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A graphic for 'Resilience Unlocked' featuring a globe on the right side with glowing blue circuitry lines overlaid on it.