

Cybersecurity

Come si protegge la propria azienda?



PMI e cybersecurity

Igor Falcomatà

Data

mercoledì, 19 aprile 2023 ore 09:00

Luogo

Camera di commercio di Bolzano, 3° piano

Costo

gratuito



CAMERA DI COMMERCIO,
INDUSTRIA, ARTIGIANATO
E AGRICOLTURA DI BOLZANO

Il vostro relatore..

- attività professionale (~25 years)
 - analisi delle vulnerabilità
 - simulazioni di attacco
 - consulenza
 - formazione
- vita privata:
 - fondatore sikurezza.org
 - Attivo in vari Linux User Group



Di cosa parleremo..

- Perché proprio a me?
- Perché le PMI?
- Fondamenta insicure
- Principali minacce
- Come approntare una corretta strategia di difesa?

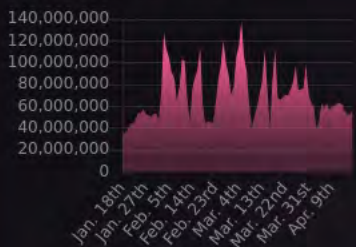
Perché proprio a me?

LIVE CYBER THREAT MAP

33,492,652 ATTACKS ON THIS DAY

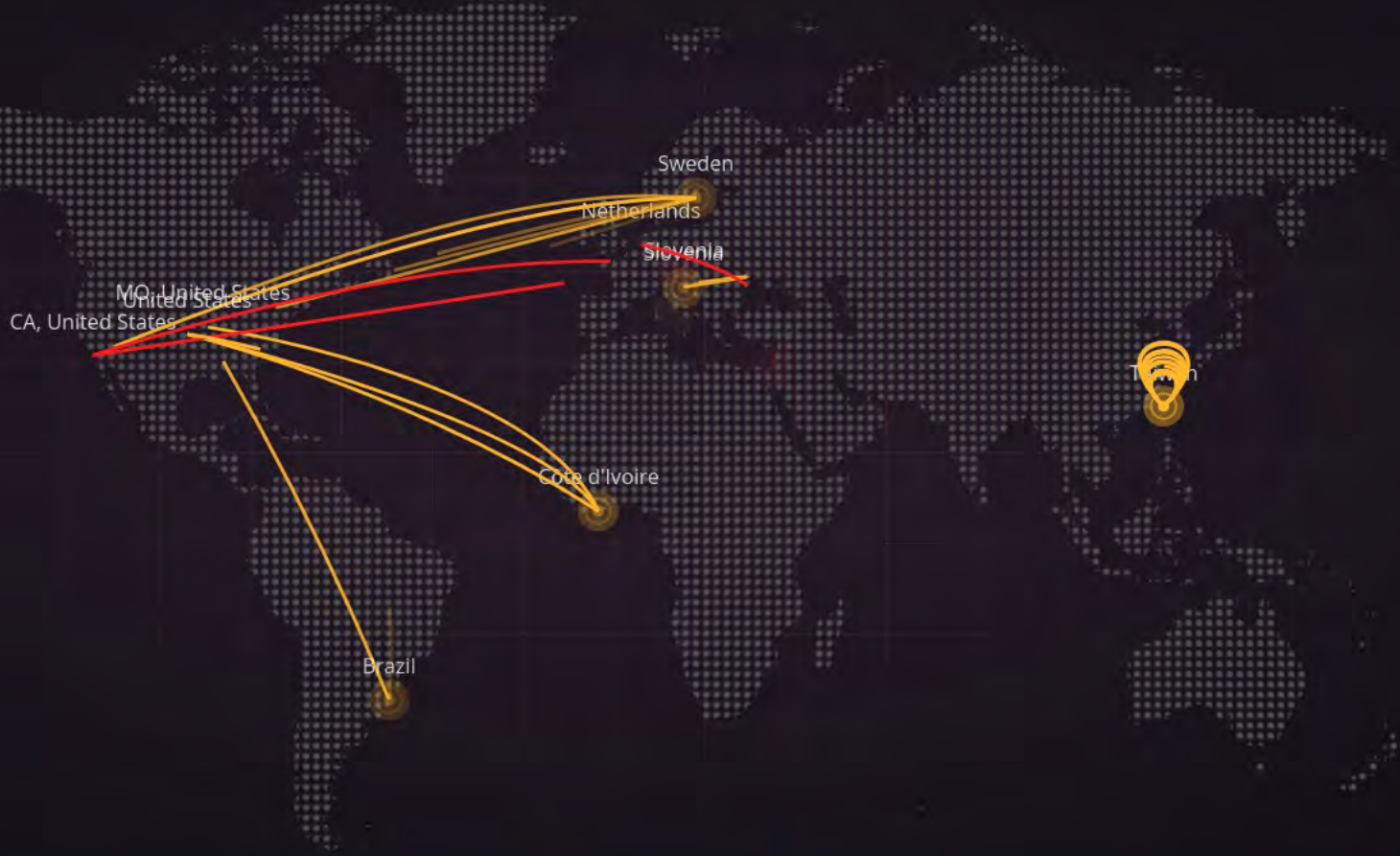
DON'T WAIT TO BE ATTACKED
PREVENTION STARTS NOW >

RECENT DAILY ATTACKS



ATTACKS Current rate **7**

- SSH Protection Violation
23:11:42 Taiwan → Taiwan
- SSH Protection Violation
23:11:42 Taiwan → Taiwan
- SSH Protection Violation
23:11:42 Taiwan → Taiwan
- Content Protection Violation
23:11:42 United States → Côte d'Ivoire
- SSH Protection Violation
23:11:42 Taiwan → Taiwan
- SSH Protection Violation
23:11:42 Taiwan → Taiwan
- SSH Protection Violation
23:11:42 Taiwan → Taiwan



Malware Phishing Exploit

TOP TARGETED COUNTRIES

Highest rate of attacks per organization in the last day.

- Mongolia
- Nepal
- Vietnam
- Taiwan
- Indonesia

TOP TARGETED INDUSTRIES

Highest rate of attacks per organization in the last day.

- Education
- Healthcare
- Government

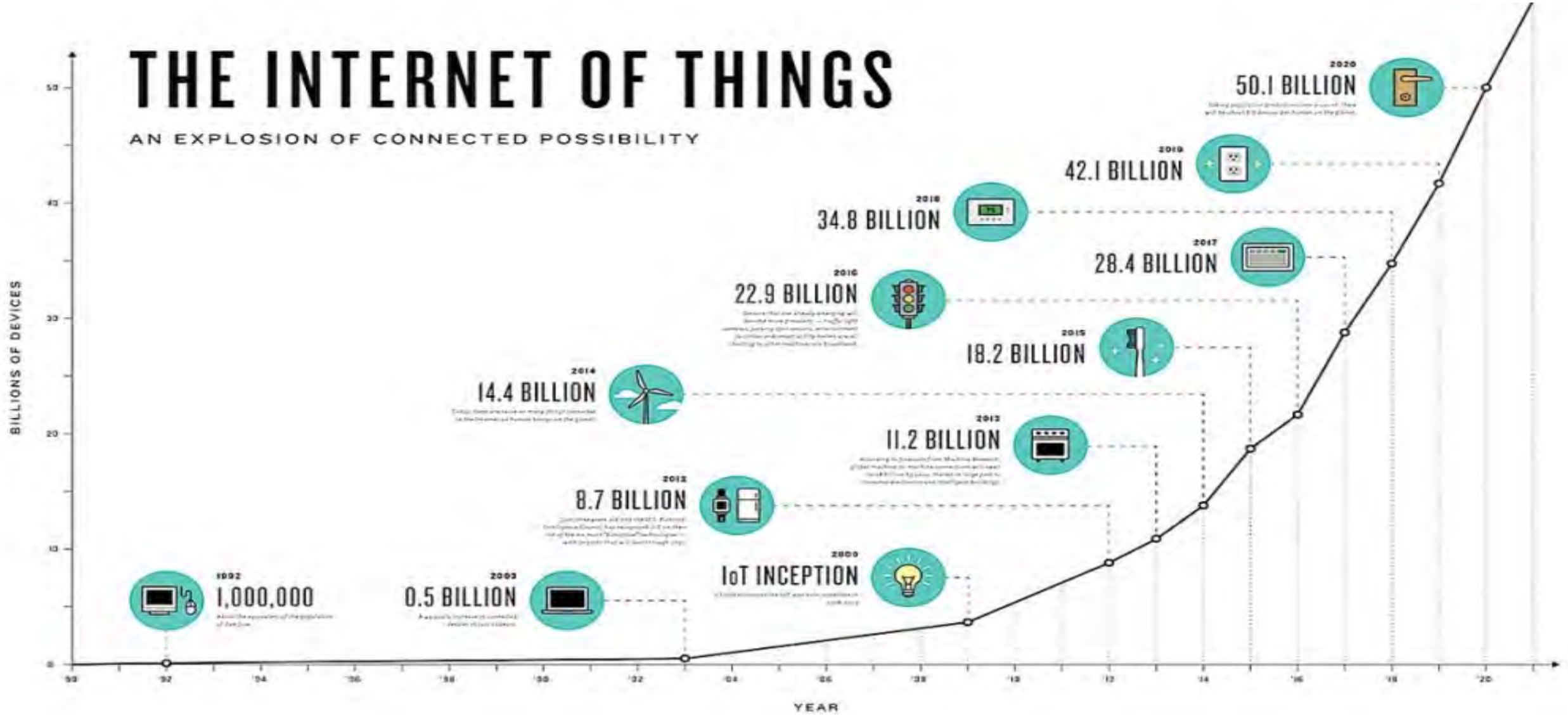
TOP MALWARE TYPES

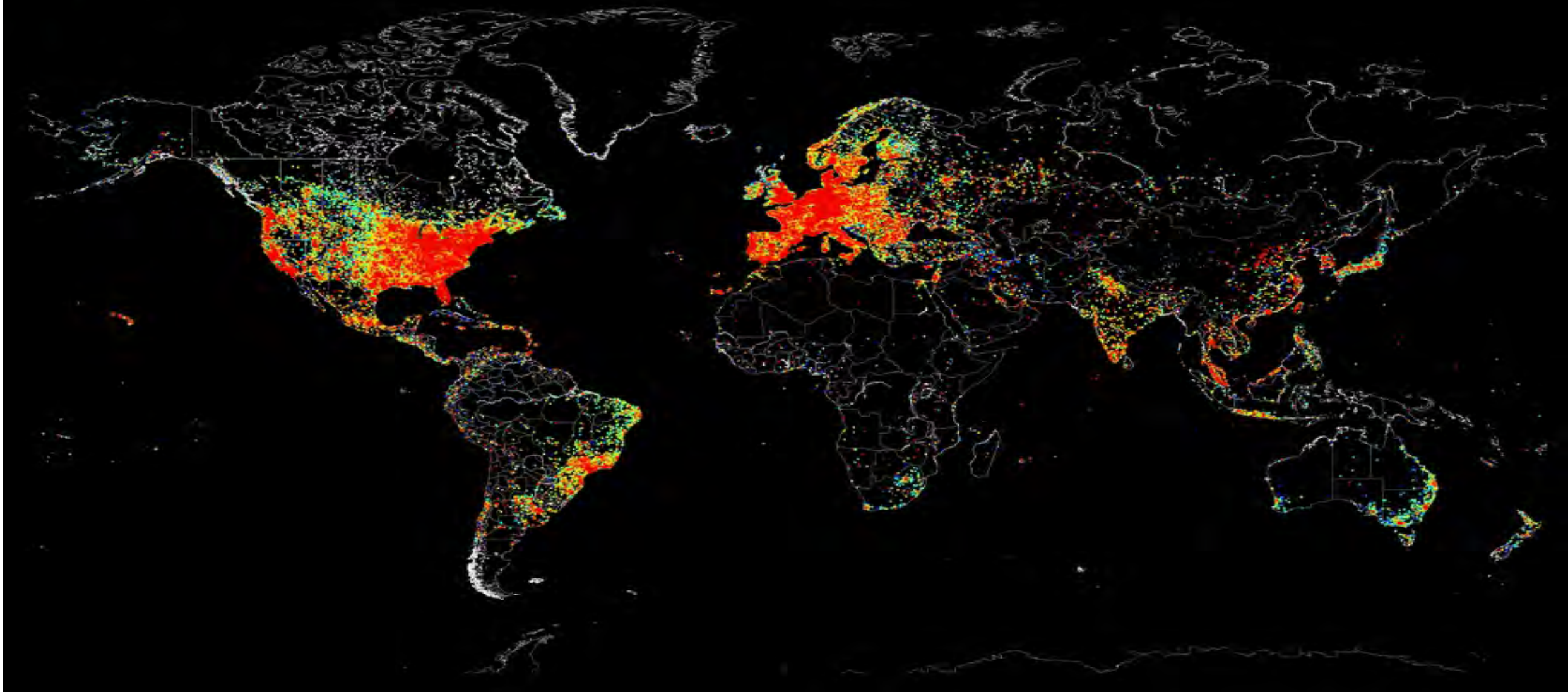
Malware types with the highest global impact in the last day.

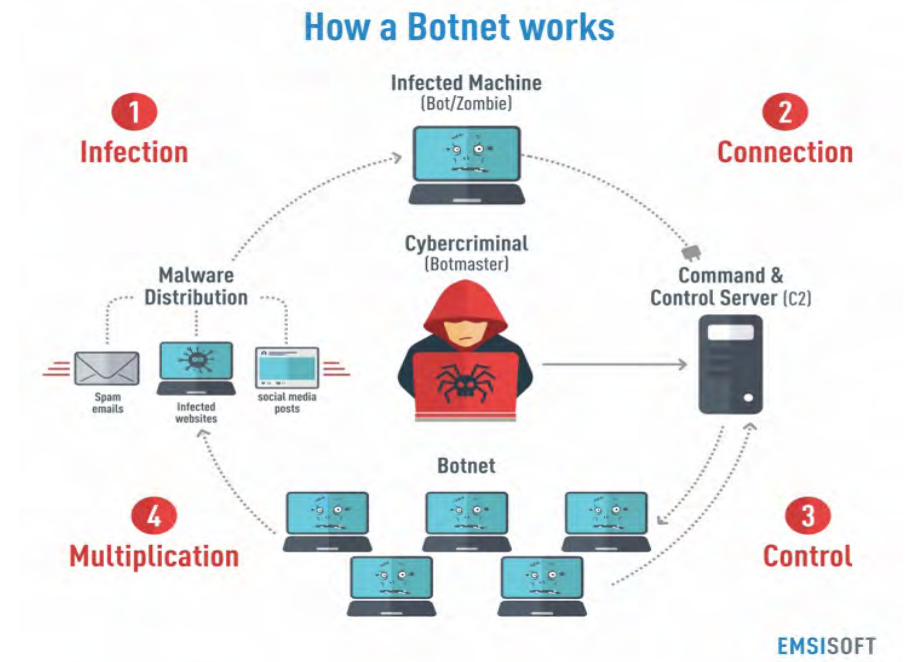
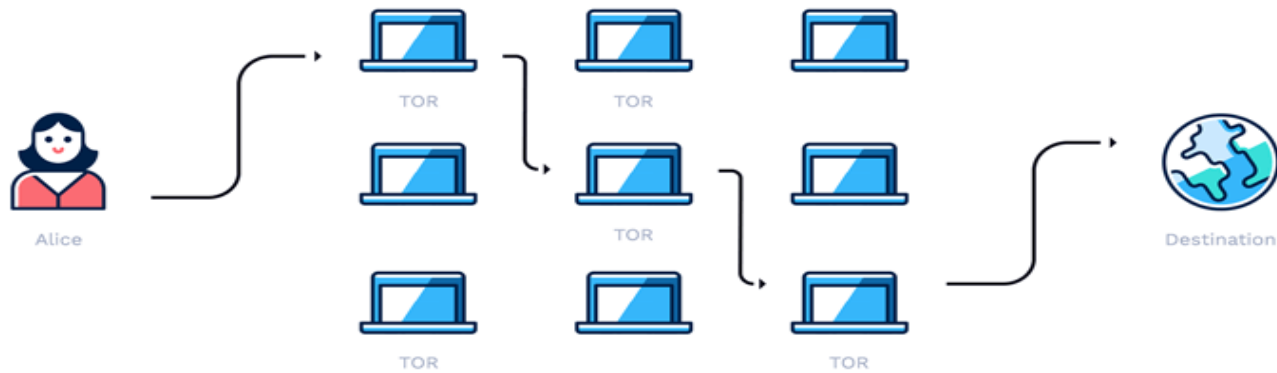
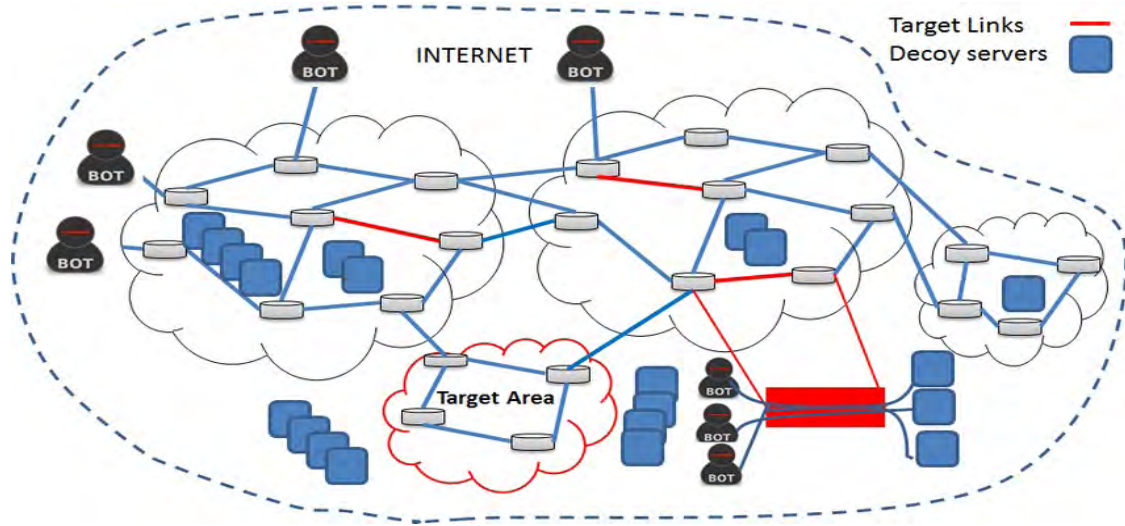
- Phishing
- Botnet
- Adware

THE INTERNET OF THINGS

AN EXPLOSION OF CONNECTED POSSIBILITY







Lasell University student bought Tesla after stealing \$547,000 in credit card scam, police say

WBZ NEWS

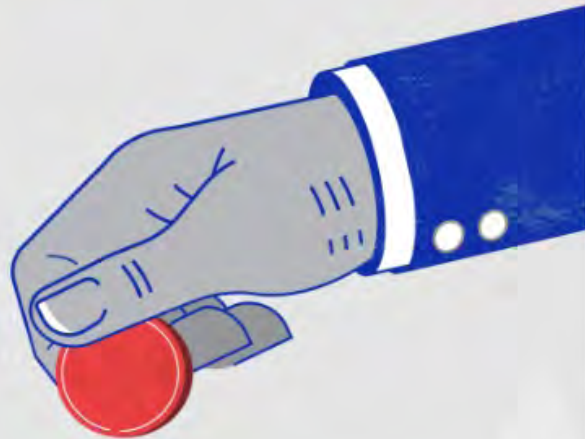
BY WBZ-NEWS STAFF

UPDATED ON: MARCH 10, 2023 / 6:07 AM / CBS BOSTON



Gestisci i Cookie





EUROPOL SPOTLIGHT

**CRYPTOCURRENCIES:
TRACING THE
EVOLUTION OF
CRIMINAL FINANCES**

Cybercriminals

Cybercriminals make extensive use of cryptocurrencies that consequently have to be laundered, invested or cashed out. Proceeds from cybercrime activities normally do not require a conversion as they are often already in cryptocurrencies. Cybercriminals extensively use obfuscation techniques and services to hinder transactions traceability.

CASE EXAMPLE

Money laundering network for cybercriminals

A complex investigation involving 20 countries resulted in the dismantling of a criminal network laundering tens of millions of euros in stolen funds that was advertising its services in online forums. Against the payment of a transaction fee (up to the 50% of the transaction), the network opened and maintained hundreds of corporate and personal bank accounts worldwide to receive and transfer money from cybercriminals who stole it from accounts of victims. Laundered funds were then returned to their cybercriminal clientele.

Source: Europol 2020, [20 arrests in QAAAZZ multi-million money laundering case](#)



Il Muling

Se qualcuno ti chiede di trasferire del denaro utilizzando il tuo conto corrente in cambio di un compenso, potresti diventare complice di un reato finanziario, senza neanche saperlo

Le truffe online sono in continua evoluzione. Sempre più spesso, i malfattori chiedono aiuto ai titolari di un conto bancario che, ignari di commettere un reato e dei pericoli che corrono, si trasformano in "money mule". Se qualcuno ti chiede di trasferire del denaro utilizzando il tuo conto corrente in cambio di contanti, allora ti sta chiedendo di essere un money mule (mulo di denaro). In tal caso, sarai complice di un reato finanziario senza neanche saperlo.



Financial and cybercrimes top global police concerns, says new INTERPOL report

19 October 2022

[Home](#) > [News and Events](#) > [News](#) > [2022](#) >

Financial and cybercrimes top global police concerns, says new I...

INTERPOL's inaugural Global Crime Trend report leverages data from the organization's 195-country membership to map out current and emerging threats worldwide.



CYBERSECURITY STATISTICS IN 2022





**As of January 2021,
Google registered
over 2 million phishing
websites. Compared
to January 2020, this
was a 27% increase.⁴**





As of January
Google regi
over 2 millic
websites. C
to January 2
was a 27% i


In 2020,
86% of breaches
were financially motivated
and 10% were motivated
by espionage.³



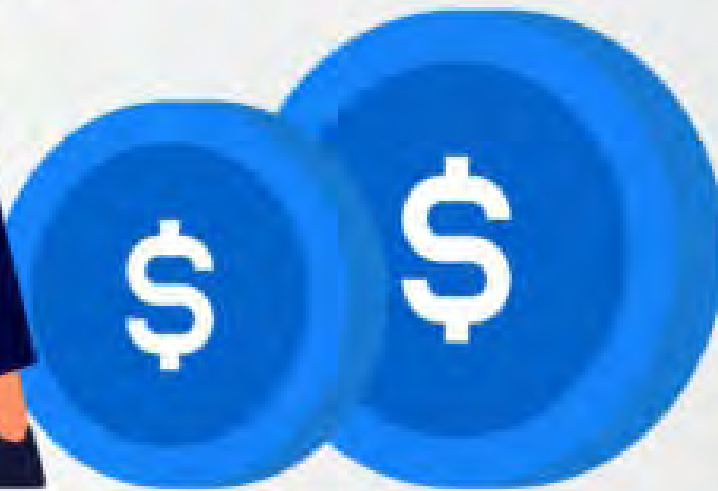


As of January
Google regi
over 2 millic
websites. C
to January 2
was a 27% i

86%
were
and



In 2021, the
ransomware
industry is worth
\$14 BILLION.⁵



..attacchi “semplici”..



(non “spie”, CIA, Mission Impossible..)

'Tox' Offers Free build-your-own Ransomware Malware Toolkit

May 29, 2015 Swati Khandelwal



SHARE



"Ransomware" threat is on the rise, but the bad news is that Ransomware campaigns are easier to run, and now a Ransomware kit is being offered by hackers for free for anyone to download and distribute the threat.

Ransomware is a type of computer virus that infects a target computer, encrypts their sensitive documents and files, and locks the out until the victim pays a ransom amount, most often in Bitcoins.

Sometimes even the best security experts aren't able to unlock them and end up paying off ransom to



Popular This Week

NSA: Ransomware Gangs Are Getting Rich Enough to Buy Zero-Day Exploits

NSA Director of Cybersecurity Rob Joyce also doubles down on the agency's findings that sanctions on Russia have made life harder for ransomware hackers.



By [Michael Kan](#) June 9, 2022



(Photo by Nicolas Armer/picture alliance via Getty Images)

The US National Security Agency (NSA) is highlighting a disturbing trend of ransomware gangs using their profits to buy zero-day exploits and to fund research into software vulnerabilities they can use to hack more targets.

Perché le PMI?

- Minori difese (e budget)
- Awareness carente (board, utenti, ..)
- Debito tecnologico
 - aziende manufacturing (non IT, non finance, ..)
 - staff IT sottodimensionato
 - scarse/nessuna competenza specifica cybersecurity
 - dipendenza totale da fornitori (spesso “verticali”)

Fondamenta insicure

Fondamenta insicure

- Ethernet (1982)
- TCP/IP (1983, 1987)
- SMTP (1983, 1995)
- DNS (1985)
- FTP (1971)
- HTTP (1991, 1997)



sei stato nominato senatore a vita

Buongiorno Igor,

volevo comunicarti che ho deciso di nominarti Senatore a Vita. Quando hai tempo passa da me per un caffè al quirinale, così vediamo come organizzare la cerimonia.

Cordiali saluti,
Presidente della Repubblica

Palazzo del Quirinale, 00187 Roma - Piazza del Quirinale -
Tel. 06.46991; Fax 06.46993125
Ind. internet: www.quirinale.it

New Contact

Display name:

Email:

Phone:

Address:

Skype:

Facebook:

[Show additional fields](#)

Save

Cancel

Fondamenta insicure

- Ethernet (1982)

```
root@kali:~# arpspoof -i eth0 -r -t 10.10.10.15 10.10.10.1
0:c:29:7e:37:58 0:c:29:53:2a:eb 0806 42: arp reply 10.10.10.1 is-at 0:c:29:7e:37:58
0:c:29:7e:37:58 0:c:29:2b:29:7f 0806 42: arp reply 10.10.10.15 is-at 0:c:29:7e:37:58
0:c:29:7e:37:58 0:c:29:53:2a:eb 0806 42: arp reply 10.10.10.1 is-at 0:c:29:7e:37:58
0:c:29:7e:37:58 0:c:29:2b:29:7f 0806 42: arp reply 10.10.10.15 is-at 0:c:29:7e:37:58
0:c:29:7e:37:58 0:c:29:53:2a:eb 0806 42: arp reply 10.10.10.1 is-at 0:c:29:7e:37:58
0:c:29:7e:37:58 0:c:29:2b:29:7f 0806 42: arp reply 10.10.10.15 is-at 0:c:29:7e:37:58
0:c:29:7e:37:58 0:c:29:53:2a:eb 0806 42: arp reply 10.10.10.1 is-at 0:c:29:7e:37:58
```

- FTP (1971)
- HTTP (1991, 1997)

Principali minacce

Top Cybersecurity Threats in 2022

Ransomware

This form of cyberattack has been around for decades, and hackers continue to evolve their delivery methods.

Supply Chain Attacks

Hackers use this infiltration method to access source codes, build codes, and other infrastructure components of benign software apps.

Cloud-Based Threats

With so many businesses using the cloud and cloud networks becoming more intricate, their infrastructure has become "low-hanging fruit" for digital threat actors.

Social Engineering

Essentially, any hacking technique that plays on a user's human nature or emotion can fall under the umbrella of social engineering.

Insider Threats

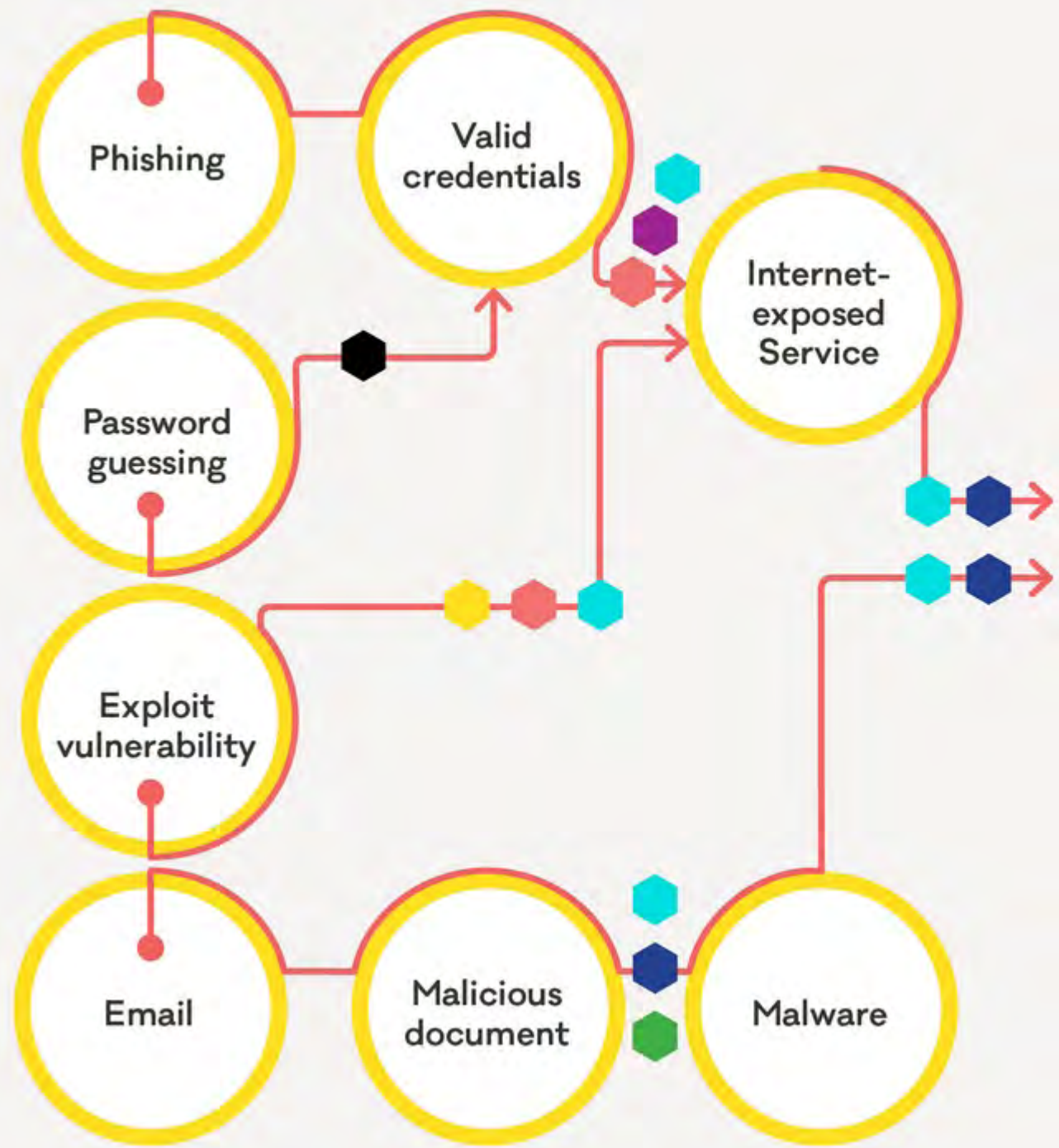
Once internal system users are compromised, they can become an even greater threat to the system than external attackers.

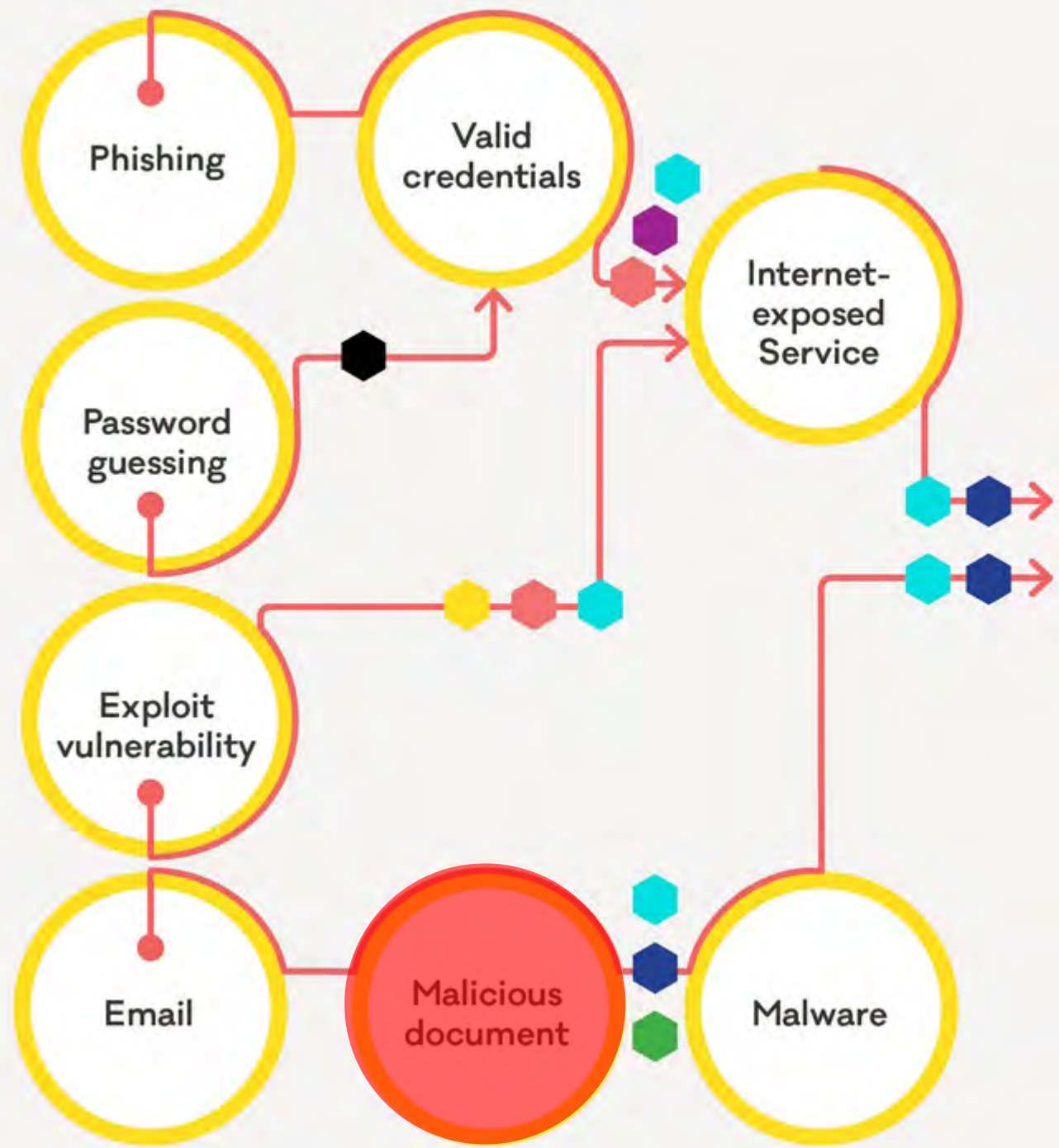
Mobile Devices

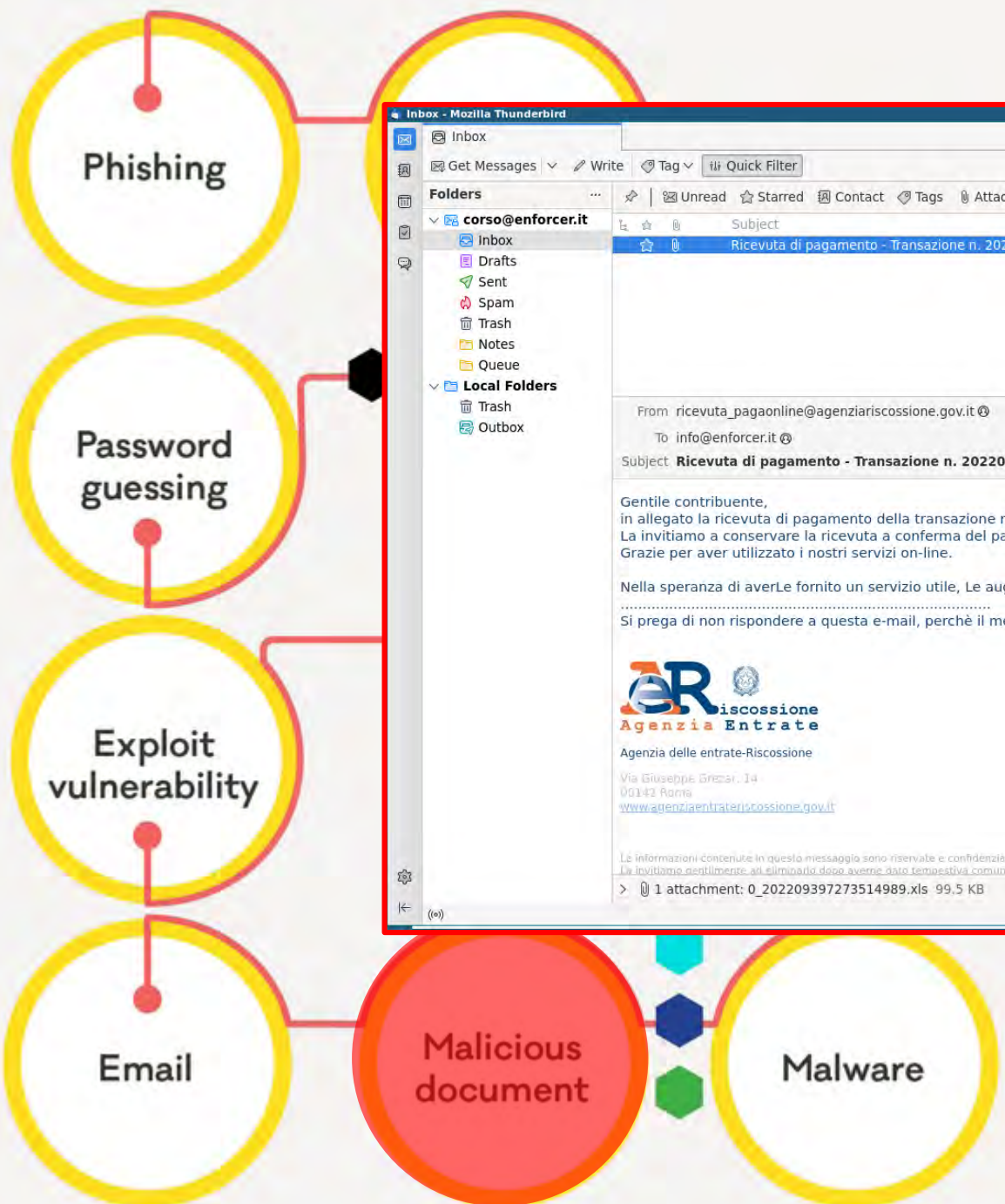
Since employees are now working from home and accessing sensitive company platforms and data from multiple scattered endpoints, hackers are presented with many more infiltration opportunities than ever before.

Poor Post-Attack Practices

Collecting the right data and following the right post-attack procedure can help you extract the most intel from each attack.







Phishing

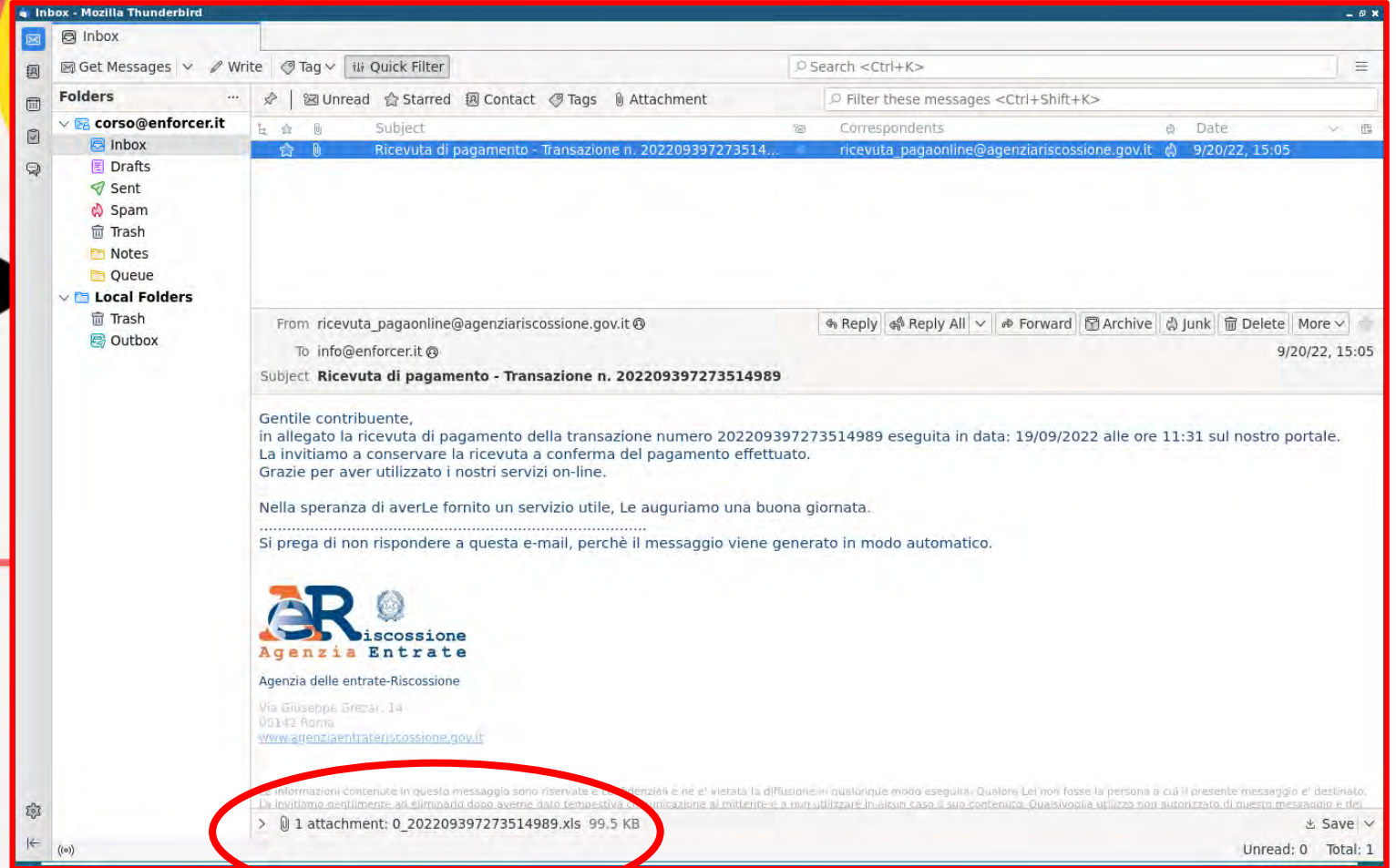
Password guessing

Exploit vulnerability

Email

Malicious document

Malware



Phishing

Password guessing

Exploit vulnerability

Email

Malicious document

The screenshot shows the Mozilla Thunderbird email interface. The left sidebar displays the folder structure for 'corso@enforcer.it', including 'Inbox', 'Drafts', 'Sent', 'Spam', 'Trash', 'Notes', 'Queue', and 'Local Folders' (Trash, Outbox). The main pane shows an email from 'ricevuta_pagaonline@agenziariscossione.gov.it' with the subject 'Ricevuta di pagamento - Transazione n. 202209397273514989'. A file opening dialog is overlaid on the email content, titled 'Opening 0_202209397273514989.xls'. The dialog text reads: 'You have chosen to open: 0_202209397273514989.xls which is: Microsoft Excel Worksheet (99.5 KB) from:'. Below this, it asks 'What should Thunderbird do with this file?' with three options: 'Open with LibreOffice 7.4 Calc (default)' (selected), 'Save File', and 'Do this automatically for files like this from now on.'. The dialog has 'Cancel' and 'OK' buttons at the bottom.

Phishing

Password guessing

Exploit vulnerability

Email

Malicious document

Game Over, You Lose!

The screenshot shows the Mozilla Thunderbird interface. The left sidebar displays the folder structure for 'corso@enforcer.it', including 'Inbox', 'Drafts', 'Sent', 'Spam', 'Trash', 'Notes', 'Queue', and 'Local Folders'. The main pane shows an email from 'ricevuta_pagaonline@agenziariscossione.gov.it' with the subject 'Ricevuta di pagamento - Transazione n. 202209397273514...'. A file download dialog is open, asking 'What should Thunderbird do with this file?' for '0_202209397273514989.xls' (99.5 KB). The dialog offers three options: 'Open with LibreOffice 7.4 Calc (default)', 'Save File', and 'Do this automatically for files like this from now on.'. The 'Open with' option is selected. The background features a diagram with nodes for 'Phishing', 'Password guessing', 'Exploit vulnerability', 'Email', and 'Malicious document'.

- Filter by title
- Microsoft Security Best Practices
 - Introduction
 - Governance, risk, and compliance
 - Security operations
 - Identity and access management
 - Network security & containment
 - Privileged administration
 - Ransomware and extortion
 - Human operated ransomware**
 - Rapidly protect against ransomware and extortion
 - Backup and restore plan for ransomware
 - Information protection and storage
 - Applications and services

Human-operated ransomware

10/15/2021 • 2 minutes to read •

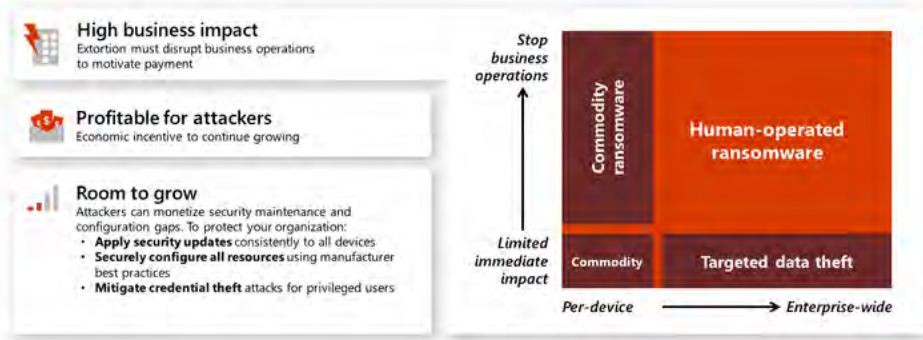
Human-operated ransomware is a large and growing attack trend that represents a threat to organizations in every industry.

Human-operated ransomware is different than commodity ransomware. These “hands-on-keyboard” attacks target an organization rather than a single device and leverage human attackers’ knowledge of common system and security misconfigurations to infiltrate the organization, navigate the enterprise network, and adapt to the environment and its weaknesses as they go.

Hallmarks of these human-operated ransomware attacks typically include credential theft and lateral movement and can result in deployment of a ransomware payload to high business impact resources the attackers choose.

These attacks can be catastrophic to business operations and are difficult to clean up, requiring complete adversary eviction to protect against future attacks. Unlike commodity ransomware that only requires malware remediation, human-operated ransomware will continue to threaten your business operations after the initial encounter.

This figure shows how this extortion-based attack that uses maintenance and security configuration gaps and privileged access is growing in impact and likelihood.



Is this page helpful?
Yes No

In this article
[Protect your organization against ransomware and extortion](#)
[Additional ransomware resources](#)

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Protect your organization against ransomware and extortion



ANDY GREENBERG

SECURITY 02.03.2020 04:56 PM

Mysterious New Ransomware Targets Industrial Control Systems

EKANS appears to be the work of cybercriminals, rather than nation-state hackers—a worrying development, if so.



PHOTOGRAPH: GETTY IMAGES





**of cyberattacks
IBM's X-Force
remediated in 2021
involved
manufacturing.**

Source: X-Force Threat Intelligence Index 2022

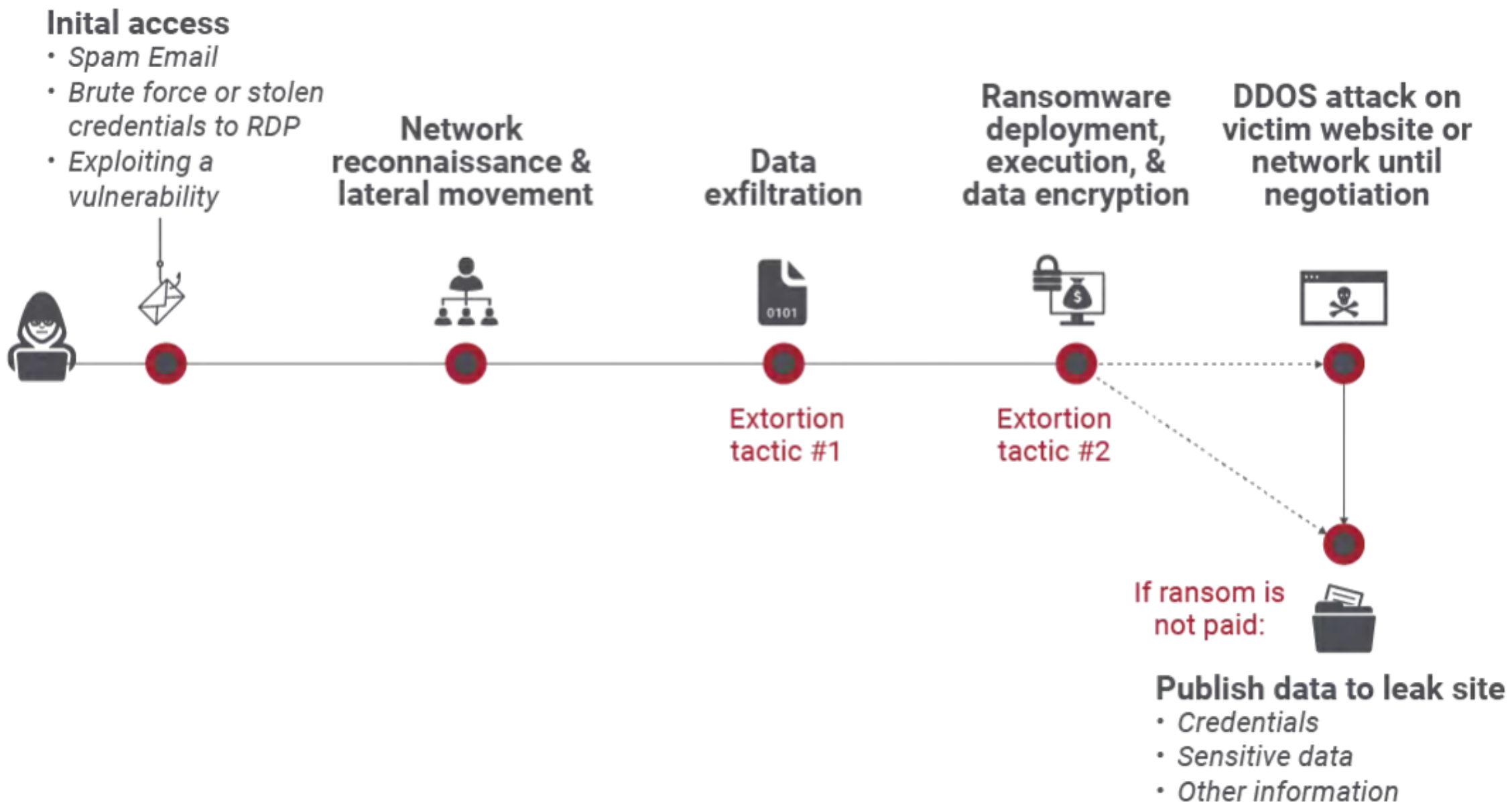


**of incidents at
operational technology
(OT)-connected
organizations in 2021
were in manufacturing.**



**of attacks on
OT-connected
organizations were
ransomware incidents.**

#ransomware #double-extortion



75% of cyber attacks committed in 2020 exploited vulnerabilities that had been **discovered at least two years prior** but went unaddressed.

*Source: Check Point Software,
Cyber Security Report 2021*





**of attacks on
manufacturing were
due to unpatched
vulnerabilities.**

Major Data Breaches

September 2022 Timeline

A data breach is a cybersecurity incident in which an unauthorized party steals or exposes protected information. This visual highlights the major data breaches of September 2022.



American
Airlines



September 20: American Airlines

The airline has notified that attackers compromised an undisclosed number of email accounts in July, the company secured the impacted accounts, hired a cybersecurity forensic firm to investigate, and offered affected customers free 2-year membership of Experian's IdentityWorks.



September 19: Kiwi Farms

Kiwi Farms – a forum accused of harassment campaigns targeting trans and non-binary people – confirmed to all its users that their passwords, emails, and device IPs may have been compromised due to someone hacking its proxy service and website. Each node on the forum was deleted.



September 19: Revolut

Revolut confirmed an unauthorized party obtained access to the personal data of 0.16% of their users (tens of thousands of customers), the company discovered the malicious access on September 10 and isolated the attack









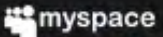

563
pwned websites

11,596,113,394
pwned accounts











114,135
pastes

207,750,231
paste accounts

Largest breaches

-  772,904,991 [Collection #1 accounts](#)
-  763,117,241 [Verifications.io accounts](#)
-  711,477,622 [Onliner Spambot accounts](#)
-  622,161,052 [Data Enrichment Exposure From PDL Customer accounts](#)
-  593,427,119 [Exploit.In accounts](#)
-  509,458,528 [Facebook accounts](#)
-  457,962,538 [Anti Public Combo List accounts](#)
-  393,430,309 [River City Media Spam List accounts](#)
-  359,420,698 [MySpace accounts](#)
-  268,765,495 [Wattpad accounts](#)

Recently added breaches

-  228,102 [Thingiverse accounts](#)
-  50,538 [Playbook accounts](#)
-  66,479 [Fantasy Football Hub accounts](#)
-  72,596 [Republican Party of Texas accounts](#)
-  125,698,496 [LinkedIn Scraped Data accounts](#)
-  266,399 [Ajarn accounts](#)
-  15,003,961 [Epik accounts](#)
-  20,154,583 [IndiaMART accounts](#)
-  878,209 [Imavex accounts](#)
-  6,137,666 [SubaGames accounts](#)

RaidForums Active Mirror, domain issues.

SELLING Italian insurance Companies (17 GB Data + 950MB Database) (900 Rows Sample)
by injection - October 09, 2021 at 03:18 AM

Pages (2): 1 2 Next »



Injection of work



Posts 87
Threads 22
Joined Aug 2020
Reputation 752

1 YEAR OF SERVICE



October 09, 2021 at 03:18 AM This post was last modified: 11 hours ago by injection. Edited 30 times in total.

#1

Hi Guys
(0_0)



Telegram ID: @injectionRF

"Due to the negligence of the server owner, all server information is sold. The last data date is today"

900 Rows

Sample of customers

updated

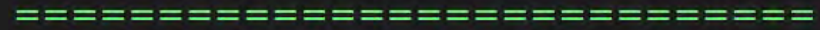
Download :::: >>>

Hidden Content

You must register or login to view this content.

Password: injectionRF

Source:Companies



GENERALI ITALIA

Reale Group

VITTORIA ASSICURAZIONI

Genertel

HELVETIA ASSICURAZIONI

DIDIEMME

Hackers Targeting Tech Supply Chains Spur Security Startup Boom



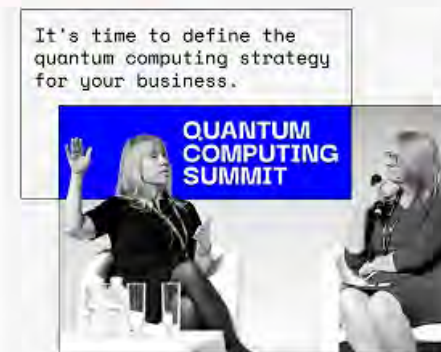
A growing number of startups are emerging to tackle one of the industry's hardest problems: cyberattacks on the digital supply chain.

[Bloomberg News](#) | Oct 19, 2022



(Bloomberg) -- Cyberattacks on the digital supply chain have become increasingly common, as hackers seek out weak links among makers of computer code and equipment to breach organizations that depend on the technologies.

In 2020, for example, hackers suspected of working for Russia's intelligence services used [tampered updates from software maker SolarWinds Corp.](#) to infiltrate nine US government agencies. Last year, hundreds of businesses were compromised with ransomware after the breach of another software provider, Kaseya Ltd. And several months later,



Come difendersi?

***"Security is a process
non a product"***

(Bruce Schneier, 1999)

Cybersecurity non è IT

- Definizione di un piano strategico
- Budget, staff, ruoli (CSO, CISO, ..)
- Assessment dei rischi (sul processo produttivo)
- Definizione di un piano operativo
- Formazione per IT, OT e tech
- Awareness per utenti
- Framework e processi continui
- Assicurazione del rischio residuo



“What Every CEO Needs to Know About Cybersecurity” (2015)

Five questions every CEO should ask about cybersecurity:

- 1. Is your board of directors fully engaged in cybersecurity?*
- 2. When did you and your board review your last risk assessment?*
- 3. What makes you a target for attacks?*
- 4. What data is leaving your company and is it secure?*
- 5. Have I provided my security organization all the tools and resources they need to help prevent a security breach?*

Riferimenti 1/2 (perdonate l'autoreferenzialità..)

- OT Security: sicurezza (informatica) negli impianti industriali
<https://www.youtube.com/watch?v=X-TZLuKuIF4> (video)
https://www.enforcer.it/dl/MIP-OT-Security_Falcomata_Giu2020.pdf (slide)
- Smartworking & Cybersecurity
<https://www.youtube.com/watch?v=gC0h86Ki0BY> (video)
https://www.enforcer.it/dl/MIP-Smartworking_Falcomata_Mag2020.pdf (slide)
- ESC18T16 IOT utile di sicuro. Ma sicuro?
<https://www.youtube.com/watch?v=FoTrXRgvKj0> (video)
https://www.enforcer.it/dl/ESC_2k18_IOT-Security.pdf (slide)
- RAI Report “Voglio piangere”:
<https://www.rai.it/programmi/report/inchieste/Voglio-piangere-2ceb55e0-37ff-4a7e-966f-8842231defbe.html>
- RAI Presadiretta "La guerra informatica"
<https://www.raiplay.it/video/2022/10/La-guerra-informatica---Presadiretta---Puntata-del-24102022-8291cbad-b764-42b6-8c2b-950da072bd9d.html>

- Framework Nazionale per la Cybersecurity e la Data Protection
<https://www.cybersecurityframework.it/>
- European Cybersecurity Skills Framework (ECSF)
<https://www.enisa.europa.eu/topics/education/european-cybersecurity-skills-framework>
- Cybersecurity Awareness Raising: The ENISA -Do-It-Yourself Toolbox
<https://www.enisa.europa.eu/topics/cybersecurity-education/awareness-raising-in-a-box>
- ISO/IEC 27001:2013 (e 27xxx)
<https://www.iso.org/standard/54534.html>
- CIS Critical Security Controls
<https://www.sans.org/critical-security-controls>
- The OWASP® Foundation:
<https://owasp.org/projects/>
- Communication network dependencies for ICS/SCADA Systems (ENISA)
<https://www.enisa.europa.eu/publications/ics-scada-dependencies>
- Guide to Industrial Control Systems (ICS) Security (NIST, SP-800-82 r2)
<http://nvlpubs.nist.gov/nistpubs/SpecialPublications/NIST.SP.800-82r2.pdf>
- Securing Industrial Control Systems-2017 (SANS Institute)
<https://www.sans.org/reading-room/whitepapers/analyst/securing-industrial-control-systems-2017-37860>