Cyber Threat Landscape

Bjørn Rasmussen CTO Norway Our research on Cy-X / Ransomware and Hacktivism



Cyberdefense

Today's itinerary (travel time ~50 mins)

Introduction

Speaker bio
Our research & intelligence org

Hacktivism
Geopolitics in cyberspace

Cy-X
Cyber extortion
(ransomware)

Crossover
Cy-X and Hacktivism commonalities





\$whoami

CTO for Orange Cyberdefense Norway

GIAC certified CTI analyst

12+ years police & military service

NATO military operations

Afghanistan & Balkans Combat engineer

Norwegian NCIS investigator
 National Cybercrime Centre
 Investigating organized crime
 and cyberattacks



Threat research and intelligence are part of our DNA.

Our cybersecurity experts, researchers and analysts monitor the latest threats and vulnerabilities, allowing you to stay ahead of threats and focus efforts where it matters.



250+

experts dedicated to R&D and threat research.

20%

of pentesters' time is dedicated to research.

50

days in advance our intel entries can be seen versus other sources.

80+

published papers and presentations at cyber conferences last vear.

2.500 30

unique threat intelligence entries not known to any other source.

CVEs assigned to us by MITRE.





A word on terminology

Cyber extortion (Cy-X)

Ransomware

Software family: many variants VS

Tools: who's responsible?

Technical focus: "how"

Cyber extortion

Criminal act

Legal framework: Victim, offender, rights

Human focus: "who", "why"

"Hack & leak" attacks: extortion without ransomware?

BLUF: The nature of the problem

Cyber extortion as Routine Activity Theory¹

Cybercrime as a service

- Evolution: 7-8 years from "shotgun" to "big game hunting"
- Politization: Victimology, recruitment

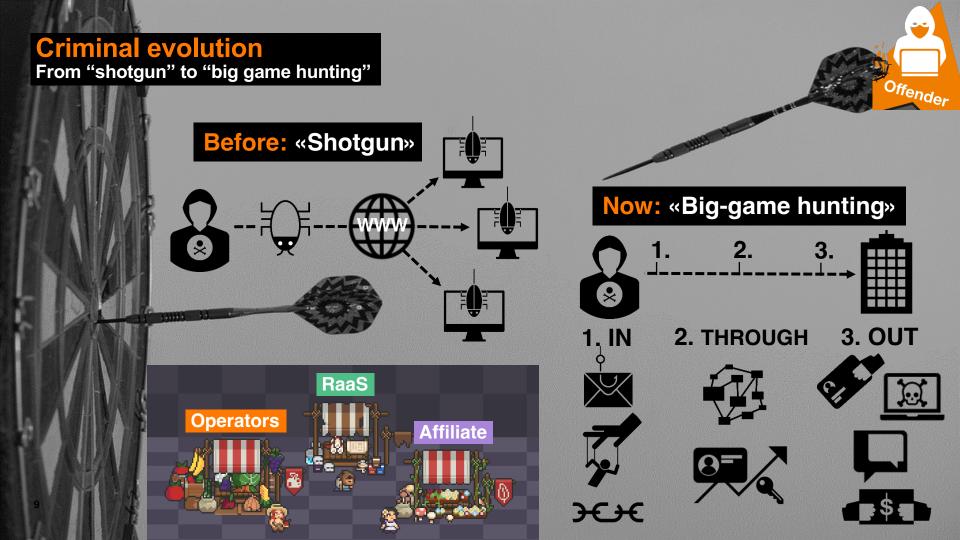
Target-rich environment

- Value: Ransom payments record high
- Inertia: Speed of digitization
- Visibility: Attack surface management
- Access: Internet is the new LAN, identity is the new perimeter



Deterrence

- Law enforcement action takes time
- Security standards not enforced
- Private cybersecurity is costly (SMBs)



Target-rich environment

Ransom payment statistics



Crime Report

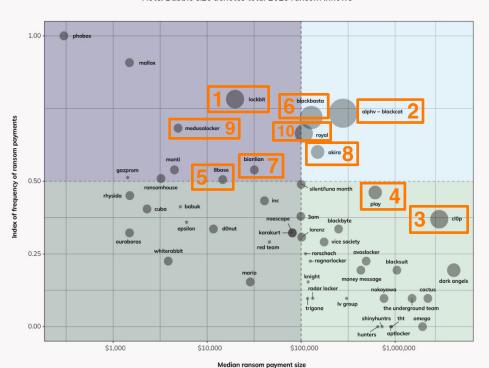
go.chainalysis.com/crypto-crime-2024.html

The latest trends in ransomware, scams, hacking, and more

Total value received by ransomware attackers 2019 - 2023 \$1.3B \$1.0B \$1.1B \$983M \$905M \$0.8B \$567M \$0.5B \$0.3B \$220M \$0.0B 2019 2020 2021 2022 2023

Top 50 ransomware strains by median payment size and payment frequency

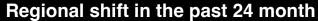
Note: Bubble size denotes total 2023 ransom inflows



Target-rich environment

Distinct victims per country 2022 vs. 2023 comparison



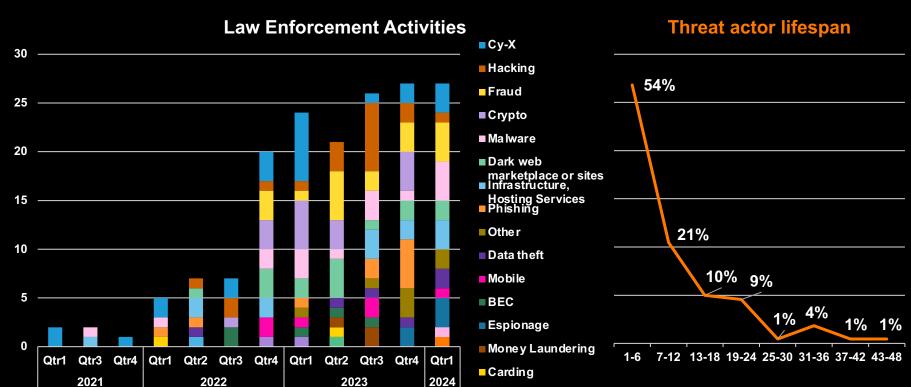




Deterrence

Why is disruption of Cy-X ecosystem so difficult?

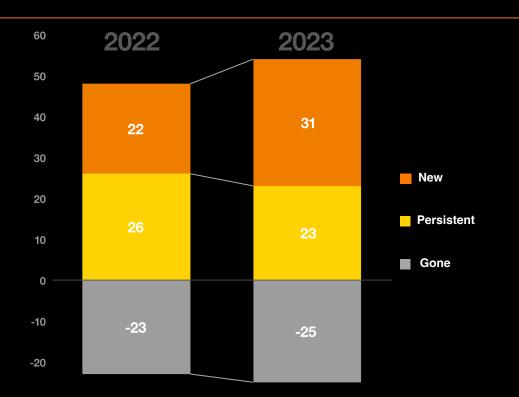


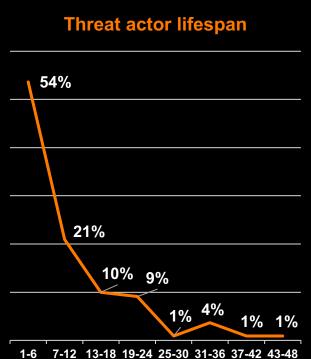


Deterrence

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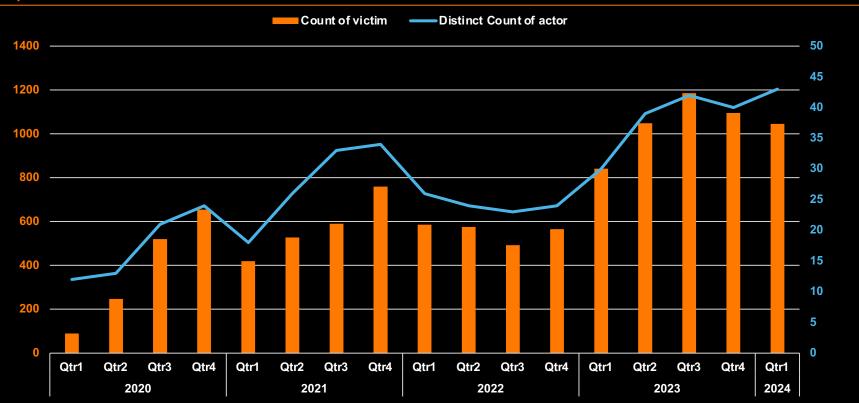




Cyber Extortion Development

Global victims and offenders over time

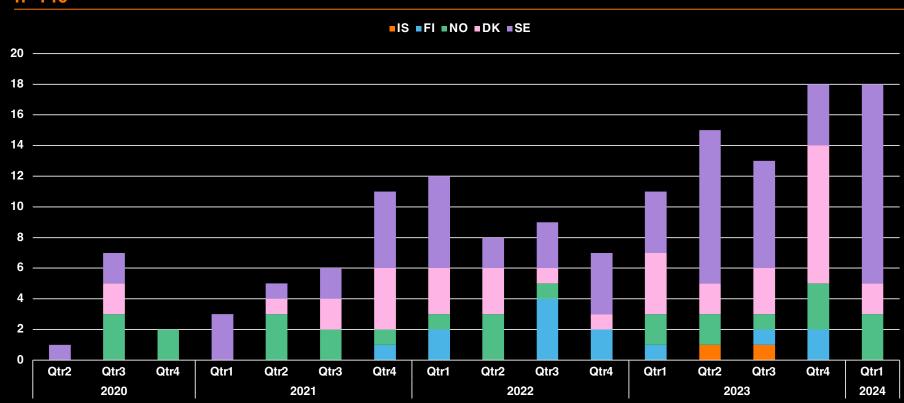




Cyber Extortion Development

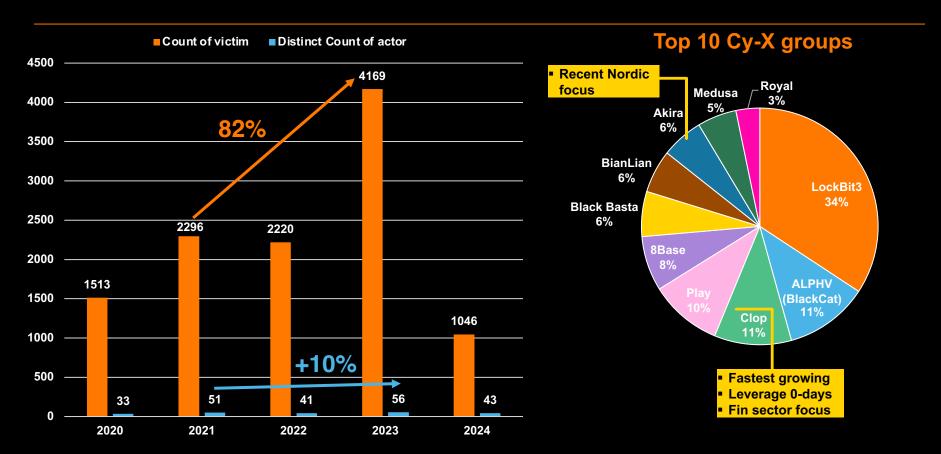
Impact to the Nordic countries

n=146



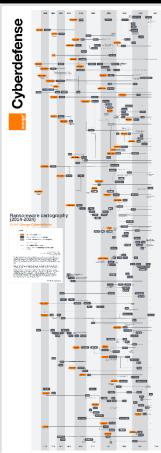
Cyber Extortion Development

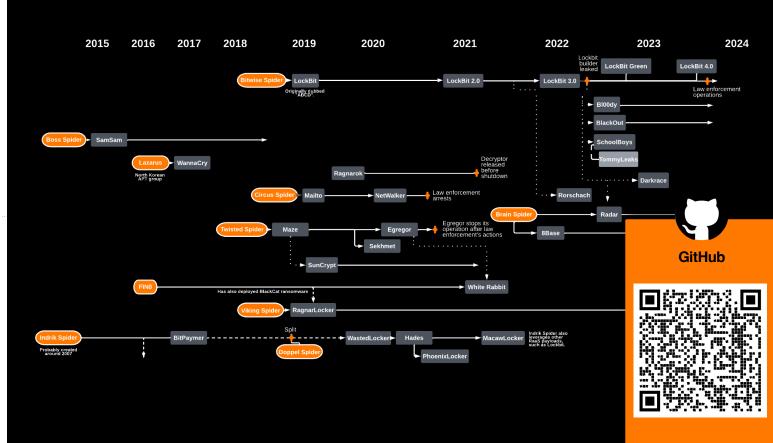
Global year by year comparison



Cyber Extortion Ecosystem

Our CERT "Ransomware map"







Hacktivism | A state-sponsored activity

'It's Our Home Turf.' The Man On Ukraine's Digital Frontline



Source: Time magazine (2022)

"Ukraine's cyber response plan was carefully crafted by its Minister of Digital Transformation – Mykhailo Albertovych Fedorov – who coordinated one of the most successful, multifaceted information operations campaigns ever witnessed in history."

Source: Darkowl.com



Hacktivism | Pro-Russian Hacktivism in DK

Hvis danske myndigheder tror, at vi vil stoppe vores cyberangreb, så tager de fejl. Så længe de støtter Zelenskyjs kriminelle regime, vil vi fortsætte med at teste deres internetinfrastruktur til det yderste.

NoName057(16)

Pro-russisk hackergruppe

NoName057(16) har taget ansvaret for en række af de DDoSangreb, der bl.a. ramte Forsvarsministeriets, Københavns lufthavns, Movias, DOT's, Trafikstyrelsens og en række kommuners hjemmesider i slutningen af februar 2024. Angrebene kommer i kølvandet på regeringens udmelding om, at Danmark garanterer økonomisk støtte til Ukraine de næste 10 år.



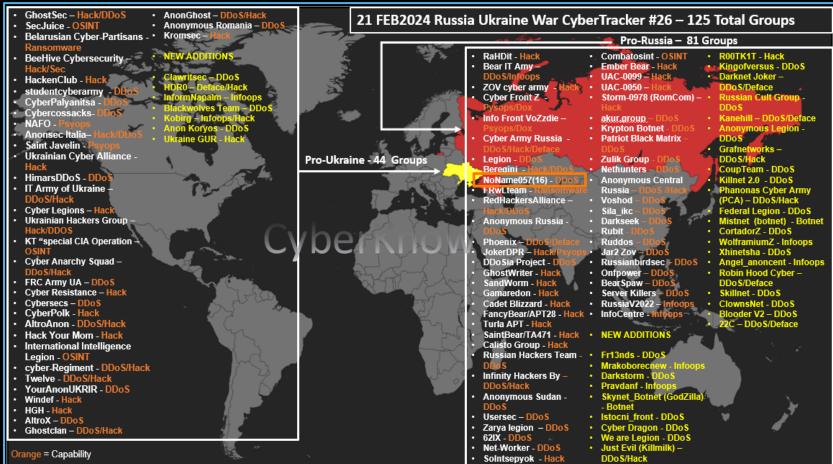
At the moment Denmark can't help itself and "lift" its websites after our

cyberattack :

We continue to cause material damage in Denmark and this time the logistics industry a has fallen under our spite:

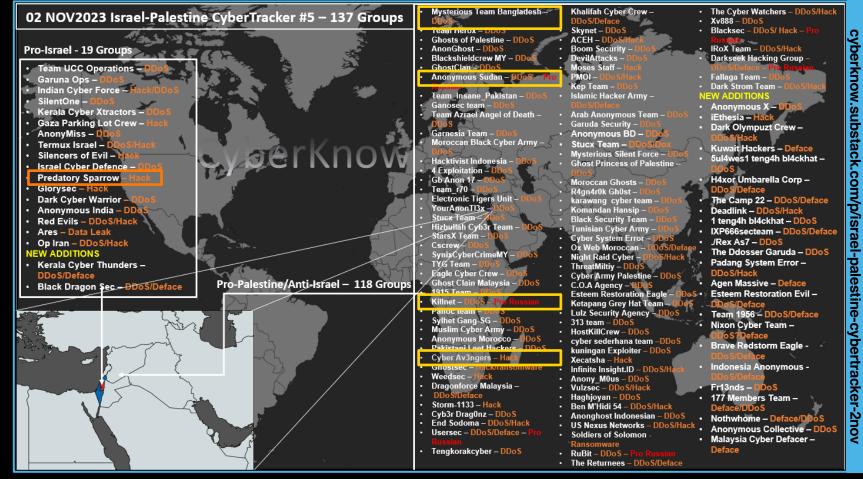
- Movia is Denmark's largest transportation company https://check-host.net/check-report/15e66aedka47
- DOT service that provides customer service, coordinated traffic information, coordinated schedules and ticketing https://check-host.net/check-report//15e66c4ckb0f

Hacktivism I Ongoing geopolitical conflicts

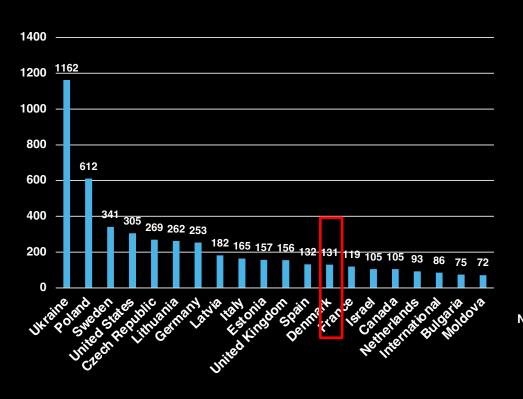


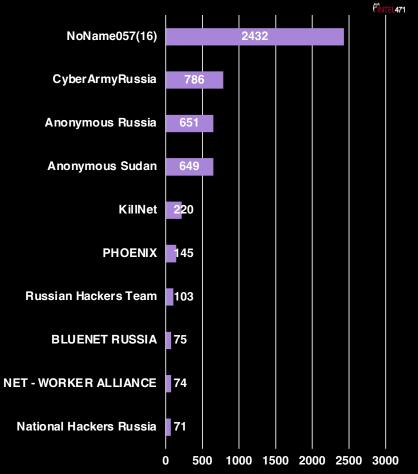
cyberknow.substack.com/p/cybertracker-update-26-russia-ukraine

Hacktivism I Ongoing geopolitical conflicts



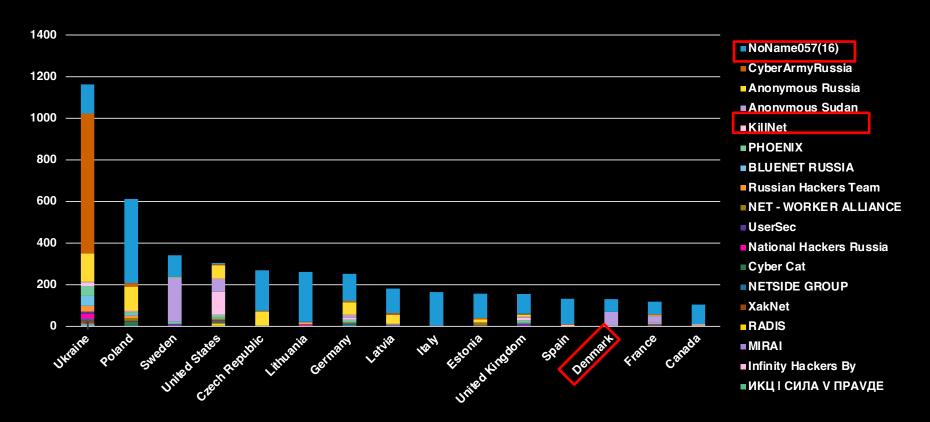
Hacktivism | Pro-Russian activity





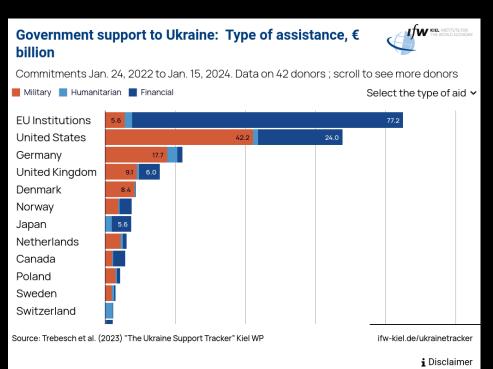
Hacktivism I Who attacks the Nordics and why

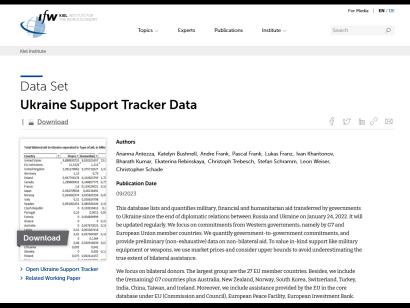


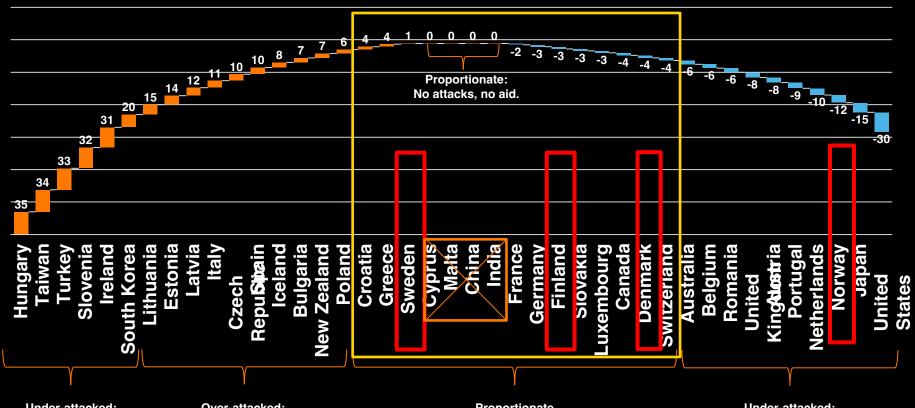


Hacktivism I Who attacks the Nordics and why

Ukraine support tracker







Under-attacked: Never attacked once despite giving aid Over-attacked:
Suffered more attacks than logical relative to the levels of aid provided

Proportionate Levels of attack and levels of aid correlate Under-attacked: Suffered attacks, but low in proportion to the aid provided A timeline of recent geopolitical events, showing pro-Russian hacktivist activity impacting the Nordics between January August 2023

20/07/2023

Iraq expelled the Swedish ambassador in response to another planned Qur'an burning in Stockholm!1

21/08/2023 Swedish Security Services raises terror threat level

22/07/2023

in Denmark.

Sweden[12]

Several Qur'an

burnings took place

28/06/2023 NoName057(16) reacts

to the burning and

attacks Sweden as a

direct consequence

Denmark presents bill banning the burnings of scriptures [121]

25/08/2023

tell is empty. All demons are her-

terrorists, we could not pass by a killed the website of the financial

Victory will be ours

NoName057(16) condemns the burning of the Qur'an in

After 29th of June

Physical world

The repercussions of the Qur'an burnings have extended beyond Sweden, as several countries, including Iraq, Kuwait, the United Arab Emirates, and Morocco, have summoned Swedish ambassadors in pro-

29/06/2023

Turkey's president condemns Qur'an burning in Sweden, signaling that this would pose another obstacle to Sweden's bid for membership[113

refugee in Sweden burns pages of the Qur'an

16/06/2023 Sweden releases

official press release on the 12th regarding a support package for Ukraine [112]

Sudan joins the pro-Russian . KillNet collective

30/01/2023 Anonymous Sudan begins DDoS-ing Danish institutions because of the burning of the

23/01/2023

Anonymous Sudan declares cyber war on Sweden because of the burning of the Qu'ran

03/02/2023

28/06/2023

Iragi police officers

trying to disperse a

protest outside the

Swedish Embassy

in Baghdad

Salwan Momika, an Iraqi

9/02/2023

18/06/2023 NoName057(16) ataid given to Ukraine^{III}

Sweden plans to become a nny for Ukrainians During February & March Anonymous Sudan attacks nilitary assistance to Ukraine, Swedish and Danish instituaining for pilots, as well as creat tions because of the Qur'an uipment supplied to the Ukraini burning by Palludan (who is Swedish and Danish citizen

& done similar demon-

Sweden in the past)

strations in Denmark and

ind all this with the money of honey

We go to Sweden and kill the site of the Swedish port of Helsingborg:

29/06/2023

Several known and unknown hacker groups including AnonymousSudan, 1919 Team, Islamic Hacker Army, Host Kill Crew. US NEXUS HACKER, Mysterious Team Bangladesh, KEP TEAM, UserSec collective, Team Heroxr, Electronic Tigers Unit, Team R70, GANOSEC TEAM, and Türk Hack Team executed DDoS attacks on several Swedish websites. Another #Op-Sweden campaign begins | 118|

Why did the Swedish police allow people to burn the Qur'an in front of a mosque in Stockholm?

We had already warned you back then: If you burn the Qur'an then we burn your servers. Λ

28/06/2023

Anonymous Sudan attacks Sweden after the burning of the Qur'an, they state:

"We missed Sweden very much." And today they burned the Quran again. Well, from now on, we will attack Sweden continuously for months.. We will target all vital

Digital world

22/01/2023

27/01/2023

the Qur'an in Copenhagen[117]

Rasmus Palludan,

right-extremist, burns

Turkey's president condemns the Qur'an burning and is not willing to support Sweden in it's effort to join NATO[10

22/01/2023

Right-wing politician Edwin Wagensveld in the Netherlands tore up and burned pages of the Qur'an

21/01/2023

Rasmus Palludan. right-extremist. burns the Qur'an in Stockholm

18/01/2023

creates their Telegram channel

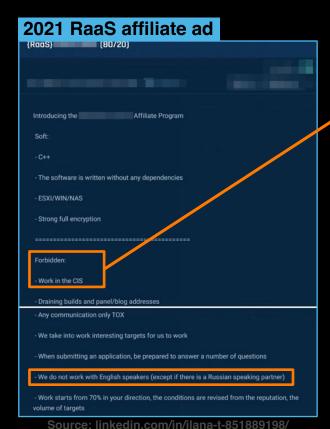
Anonymous Sudan begins DDoS-ing Swedish and Dutch institutions because of the burning of the Qur'an

Orange Cyberdefense 2023/2024

www.orangecyberdefense.com



Cy-X politization



Source: x.com/azalsecurity/status/1755300909087707334





Ransomware w/ hardwired geofencing...

2023 RaaS affiliate ad

Evidence of cooperation with other RaaS group (including, but not limited to, screenshots The best and quickest way to join is to pay a deposit (Returned to you after first getting pai

Rules

We are not allow to attack CIS as well as Cuba, North Korea, China and Romania.

Accounts that add false targets or have no activity for a certain period of time will be bann Repeated attacks on paid targets are not allowed, encryption of non-profit hospitals is not After the target pays, you must fulfill all the terms and agreements promised in the negotial

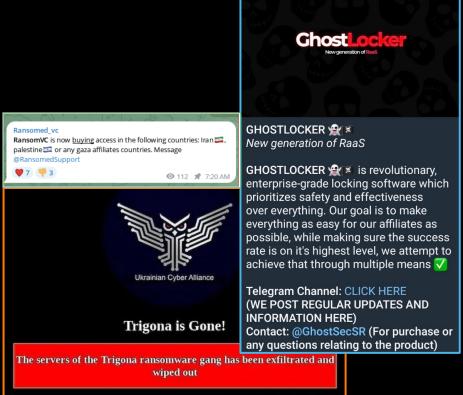
Hacktivism crossover to Cy-X

Strategy similarities

- Recruitment: Whether Cy-X affiliates on Darkweb forums, or political followers on Telegram
- Success rate: The success of their operations rely on how visible they are – to the victim and/or to the general public

Becoming very messy

- Ukraine Cyber Alliance trageted down Russian RaaS Trigona
- RansomVC looking to buy access in Iran or Palestine
- Anonymous Sudan has demanded ransom from DDoS victims (i.e. SAS in May 2023)
- GhostSec entering the RaaS ecosystem with their GhostLocker RaaS



Welcome to the world you created for others

Hacked by
Ukrainian Cyber Alliance,
disrupting russian criminal enterprises (both public and private)
since 2014

October 8
Channel created

Conclusion

The overall Cy-X and Hacktivism threat landscape has undergone massive growth in recent years

Evolution is rapid and difficult to predict

We see direct & indirect geopolitical influence, with clear political implications in the public messaging, victimology and recruitment

We see a entanglement of cyber & physical events in the targeting countries & governments

Organised cyberime play much more of an active role in information campaigns & cognitive attacks

- Spread Fear, Uncertainty & Doubt (FUD)
- Reputation as target

Offenders are getting better at crowdsourcing capabilities, sharing resources (such as infrastructure), adopting new tactics rapidly when the old ones fail

WHY AREN'T WE?

Orange Cyberdefense

Thank you



orangecyberdefense.com

