# Velcome to Semstorff Slot



22

#### Cyberdefense, operational resilience, and crisis preparedness in a time of hybrid warfare



#### What's on the agenda?

13:15-13:30:	Presentation of the Program, Speakers, and Orange Cyberdefense. - Sanne Aagaard, Marketing Manager, Orange Cyberdefense Denmark - Christian Juhl, Sales Director, Orange Cyberdefense Denmark
<b>13:30-14:10</b> :	Threat Intelligence – Introduction to Today's Threat Landscape. - Peter Larsson, CTO, Orange Cyberdefense Sweden
14:10-15:10:	Vestas' Journey From Attack to Enhanced Security. - Morten Duus, SVP, CISO, Vestas
15:10-15:30:	Coffee break and networking
15:30-16:10:	Cyber Attack Readiness – Fail to Prepare, Prepare to Fail. - Hampus Glantz, CSIRT Technical Leader, Orange Cyberdefense Sweden
16:10-16:50:	Maintain Operational Resilience. - Bo Drejer, GRC Manager, Orange Cyberdefense Denmark - Mats Lindblad, GRC Manager, Orange Cyberdefense Sweden
16:50-17:50:	The Hostage Negotiator: My life in a War Room. Go Behind the Scenes of a Hostage Negotiation. - Michael Andersen, Data Hostage Negotiator, Psychologist, and Leadership Philosopher
17:50-18:00:	The professional program ends
<b>18:00-18:30</b> :	Before-dinner drink and networking
18:30-21:00:	3-course gourmet dinner
21:00	The bar in the basement is open

# A part of Orange

- 137.000 employees
- 296 billion customers
- world wide
- Global revenue:
- €44 billion in 2023



# A part of Orange

Orange Cyberdefense HQ at La Défense in Paris



# We are Orange Cyberdefense

We are the leading security services provider, supporting your business globally.



# **Orange** Cyberdefense's Local Offices



# Orange Cyberdefense Denmark



We build a safer digital society



## Hello Management





Hugues Foulon CEO Orange Cyberdefense Kaja Narum EVP Nordic Orange Cyberdefense Mårten Toll-Söderblom Managing Director Denmark Orange Cyberdefense

# Some of our partners







#### Our core business

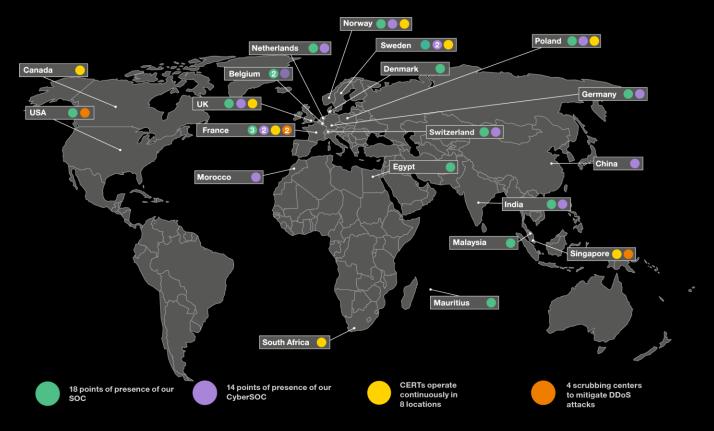
Solution Sales

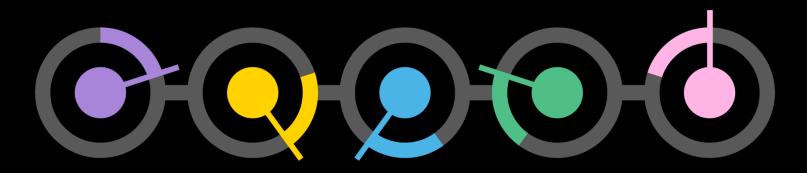
#### Consulting & GRC

Managed Security Services



## **Global** protection with local presence





**ANTICIPATE** the latest cyber threats and prevent digital risk.

- Vulnerability Intelligence
- Threat Advisory

- **IDENTIFY** your risks and prepare your security strategy.
- Advisory Consulting
- Cybersecurity Training
- Ethical Hacking
- Penetration Testing
- Vulnerability Scanning

#### PROTECT with the right

your organization technology and expertise.

- Cloud Security
- Data-centric Security
- Endpoint Security
- Identity and Access Management
- Infrastructure Security
- Network Security
- OT/ICS Security
- Security Intelligence

#### DETECT cyber attack through analysis of alerts and behavior anomalies.

- Cybercrime Monitoring
- Threat Detection
  - Endpoint
  - Log
  - Network
  - XDR

RESPOND to cyber attacks with proper containment and remediation plans.

- Compromise Assessment
- Digital Forensics
- Emergency Response
- Incident Response
- Threat Response
  - Isolation
  - Takedown

# The measurable impact of Orange Cyberdefense

#### INTERCEPTION BEFORE IMPACT

>80%

We intercept **over 80%** of incidents we detect and respond to before they have impact to your confidentiality, integrity and availability.

# $<\!\!30$ Min.

#### FASTER DETECTION AND RESPONSE

We reduce your mean-timeto-respond from 145 hours<sup>1</sup> (~6 days) to less than 30 minutes for critical security incidents.

#### ENHANCED DETECTION

>38%

We feed high confidence threat intelligence with over 38% unique<sup>3</sup> intelligence into your security platforms to block attacks before breaches can occur.

#### IMPROVED ROI<sup>-</sup>

We support you consolidating your service and solution stack and reducing complexity leading to improved Return on Investment.



# Decoding Today's Cyber *Thread*



#### A critical analysis of ongoing operations

Peter Larsson – CTO, Orange Cyberdefense Sweden

Diana Selck-Paulsson – Lead Security Researcher, Orange Cyberdefense Group

# Agenda

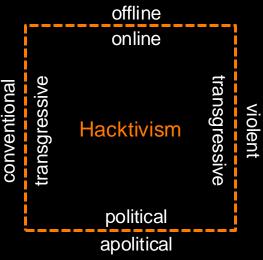
- Several forms of cybercrime
- What's & Who's
- Research Findings
- Defenders

#### Cyber Threat Against Denmark

Threat assessment by the Centre for Cyber Security

- The threat of cyber crime against Denmark remains VERY HIGH. Cyber crime affects all levels of society.
- The threat of cyber espionage against Denmark is VERY HIGH. Organizations with access to information on matters of Danish foreign and security policy are often singled out as potential targets of cyber espionage. Danish critical infrastructure and the Danish Defence are also prime targets for foreign cyber espionage. [...]primarily comes from **Russia** and **China**.
- The threat of cyber activism against Denmark is HIGH. The cyber activist attacks that have regularly struck Danish targets emphasize that cyber threats against Danish companies and public authorities have become the norm. [...] primarily comes from pro-Russian cyber activists, with some of them being linked to the Russian state.
- The threat of destructive cyber attacks is MEDIUM. (2023: LOW) Several foreign states have the capabilities to launch destructive cyber attacks against Denmark. The threat of destructive cyber attacks can increase with little or no warning if foreign states decide to strike Danish targets.
- The threat of cyber terrorism is **NONE**. [...] there are no actors with the capability
- and intent to conduct cyber terrorism against Denmark.

# Cyber Activism / Hacktivism



https://www.alexandrasamuel.com/dissertation/ pdfs/Samuel-Hacktivism-entire.pdf

#### Cyber Warfare & The Most Active Countries



#### People's Republic of China "Panda"

+/- 136 APTs identified, most notable: APT1, Comment Crew, Comment Panda, Byzantine Candor, APT2, Putter Panda, Group 36, SearchFire, MSUpdater, 4HSCrew, SULPHUR, TG-6952, APT31, Storm-0558

Threat level:





#### Russian Federation "Bear"

+/- 49 APTs identified, most notable: APT28 (Fancy Bear, Pawn Storm, Sofacy, Strontium), CyberBerkut, CyberCaliphate, Sandworm, APT29 (Cozy Bear, Office Monkeys, Duke, CozyDuke, CozyCar, Nobellium), Turla APT (Snake, White Bear, Uroburos, Waterbug, Energetic Bear, Berserk Bear, Venomous Bear)

Threat level:



#### Democratic People's Republic of Korea "Chollima"

+/- 12 APTs identified, most notable: Bureau 121, Lab 110, Unit 180, Unit 91, 128 Liaison Office, 413 Liaison Office

Threat level:



#### Islamic Republic of Iran "Kitten"

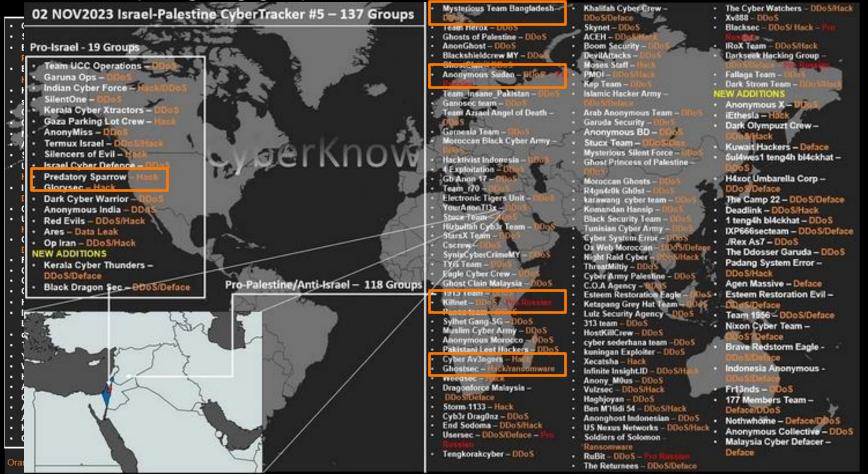
+/- 42 APTs identified, most notable: APT33, APT35 (Charming Kitten), APT39, G0069, G0077, APT34 (OilRig, Shamoon, DarkHydrus, Helix Kitten)

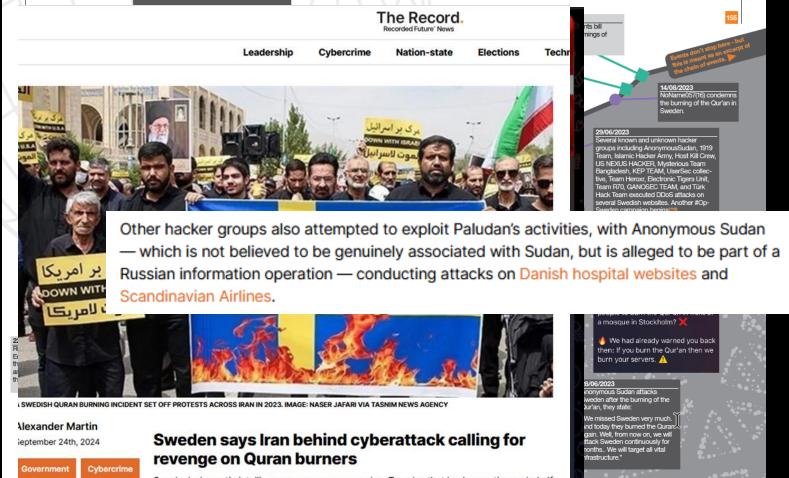
Threat level:



© Orange Cyberdefense 2023/2024

#### Hacktivism | Ongoing geopolitical conflicts





lews Technology

© Orange Cyberdefense 2023/2024

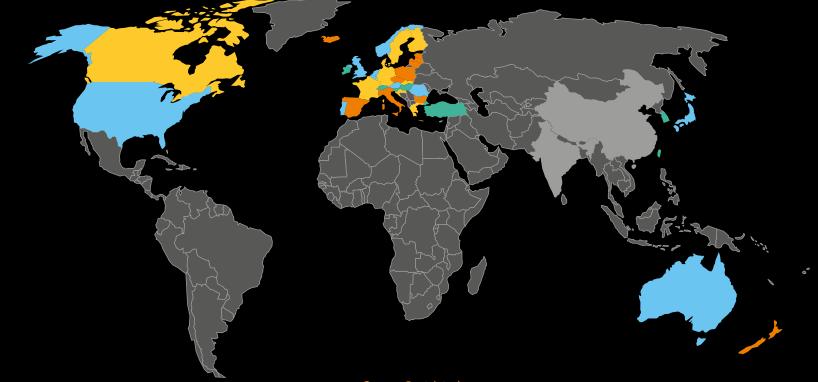
Sweden's domestic intelligence agency announced on Tuesday that hackers acting on behalf of the Iranian government were behind a cyberattack last year aimed at provoking divisions in the country following a stunt by a far-right political figure.

igital world

www.orangecyberdefense.com

## NoName057(16): victim rank vs. donations (Map) Difference in terms of the relation of attacks by NoName057(16) to donations of the victim country for Ukraine

1. Under-attacked/involved 2. Over-attacked/involved 3. Proportionate/involved 4. Proportionate/uninvolved 5. Under-attacked/heavily involved



#### NoName057(16)'s Manifesto

Манифест NoName057(16)

NoName057(16) . January 22, 2024



Мы не первый год отстаиваем интересы России на информационном фронте. Мы видим, как растут недовольства адекватных граждан иностранных государств, власти которых наплевали на проблемы своих соотечественников и тратят огромные средства на спонсирование украинских террористов. Видим мы и тотальную цензуру, которая не дает говорить правду жителям этих стран. Там стало недопустимо позитивно высказываться в адрес России. От свободы слова на Западе не осталось абсолютно ничего. 'This is not the first year that we have been defending Russia's interests on the information front. We see how the discontent of adequate citizens of foreign countries is growing, whose authorities do not care about the problems of their compatriots and spend huge amounts of money on sponsoring Ukrainian terrorists. We also see total censorship, which prevents the residents of these countries from telling the truth. There it has become unacceptable to speak positively about Russia. There is absolutely nothing left of freedom of speech in the West[...].

Our project has long gone beyond the concept of a hacker group. We believe that you don't have to be a hacker to be a warrior - we have tasks for all volunteers, regardless of their competencies. Western elites have become a symbol of total unprincipled lies. The goal of the West is only endless power over the world and, as a result, its oppression. We must fight this! There is power in truth, that's what we stand for!

#### Our values:

Internationalism - we firmly believe in the greatness of Russia in the international arena. Our Motherland is a bastion of justice, rebelling against the lies and hypocrisy of the collective West. The fighters of our cyber army may live in different countries, but they must respect Russia.

Justice - one of our slogans is: <u>"Justice has no name.</u>"NoName". We are ready to come to the aid of our like-minded people anywhere in the world and make every effort to restore justice and punish their offenders. We help those who are weaker and learn from those who are stronger.

Unity - it doesn't matter to us what skin color, eye shape, language or place of residence our fighters have. One thing is important - that they are our like-minded people and share the traditional values of Russia. The word "Russian" has ceased to be a nationality. "Russian" is now an ideology. The ideology of a just world order and freedom.

We remain ready to cooperate with other pro-Russian hacker groups and free shooters who share our values listed in the Manifesto.'

#### Cyber Activism/Hacktivism

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.



Denmark has guaranteed aid to Ukraine for the next ten years.

Denmark and Ukraine have signed an agreement on long-term support for Kiev. Copenhagen promised that Ukraine could receive F-16 fighter jets as early as summer.

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

Orange Restricted

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

February 24

← → C S moviatrafik.d

The request is blocked

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

# FBI dossier reveals Putin's secret psychological warfare in Europe

Russian information warriors identified Germany as a particularly easy target for Moscow's influence, U.S. law enforcement said.



POLITICOPRO

Free article usually reserved for subscribers



Social Design Agency agit sous les ordres du chef de cabinet adjoint de Vladimir Poutine, Sergueï Kirienko (à droite), selon le

#### Varning för ryska cyberangrepp mot Nato- och EU-länder

Kriget i Ukraina. Tysk underrättelsetjänst varnar för en rysk cyberenhet med nära kopplingar till makten i Kreml.

Sedan Rysslands invasion av Ukraina har ryska hackare anklagats för allt fler angrepp mot it-system i väst. Gruppen "UNC2589", som kopplas till en enhet inom den ryska underrättelsetjänsten GRU, ligger bakom en rad cyberangrepp mot flera Nato- och EU-länder, meddelar den tyska underrättelsetjänsten BFV på X.

Enligt BFV är gruppens uppgift att spionera och utföra sabotage, bland annat genom offentliggörande av stulen data.

Gruppen uppges lyda under ryska GRU:s enhet 29155, som bland annat misstänks för inblandning i förgiftningen av dubbelagenten Sergej Skripal och hans dotter i brittiska Salisbury 2018.

Den tyska varningen skickas ut i samarbete med amerikanska federala polisen FBI, it-säkerhetsmyndigheten Cisa och underrättelsetjänsten NSA. Enligt de amerikanska myndigheterna har den ryska gruppen utfört cyberattacker mot länder världen över sedan minst 2020. (TT)



FalconFeeds.io 🤡 @FalconFeedsio · 15h Alert: New Hacktivist Alliance

> A new alliance has been identified between Doubleface and Russian Cyber Army Team.

#### #cti #threatintel #infosec #Cyberattack





Information warfare?

#### **Hybrid Warfare?**



#### E-crime / cybercrime?

#### Hacktivism?

#### Cyber Vigilantism?

Faketivism?

## **Faketivism**

INTRODUCED IN THE CROWDSTRIKE 2016 GLOBAL THREAT REPORT, FAKETIVISM REFERS TO ACTIVITY BY ENTITIES THAT CHARACTERIZE THEMSELVES AS HACKTIVIST GROUPS BUT MORE LIKELY REPRESENT A FRONT FOR A GOVERNMENT OR OTHERWISE PROFESSIONAL ENTITY.

IN AN EFFORT TO APPEAR GENUINE, FAKETIVISTS - AKA INAUTHENTIC PERSONAS -OFTEN ADOPT THE EXISTING IMAGERY, RHETORIC, TTPS AND SOMETIMES NAMES OF ESTABLISHED HACKTIVISTS. THEY OFTEN SURFACE IN DIRECT RESPONSE TO GEOPOLITICAL EVENTS, OFTEN HAVE LITTLE OR NO ESTABLISHED ACTIVITY HISTORY, AND ALMOST ALWAYS OPERATE IN DIRECT ALIGNMENT WITH STATE GOVERNMENT INTERESTS. THESE PERSONAS PROVIDE STATE BACKERS WITH A LAYER OF DENIABILITY BUT CAN ALSO SERVE INFORMATION OPERATIONS GOALS.

# Cy-X / Ransomware



# Cy-Xplorer 2024

When bits turn to blackmail: navigating the ecosystem of cyber extortion and ransomware



Cy-X trends – past 24 months Victims and actors count observed on double-extortion leak sites over time

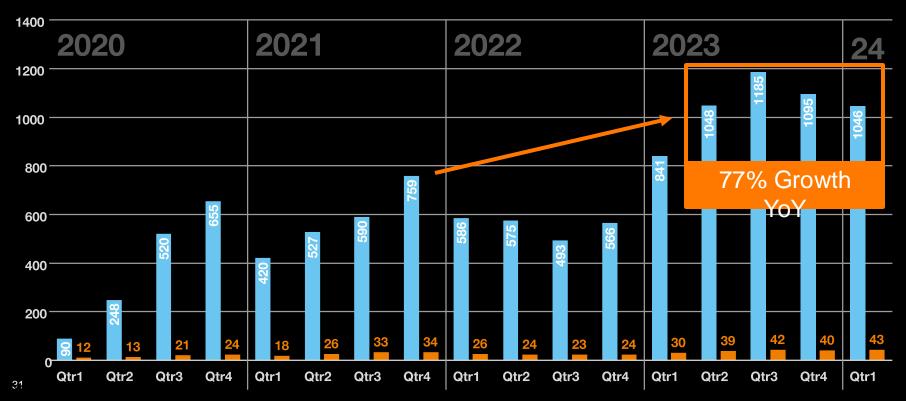
2023 77% Growth YoY 575 566 Qtr2 Qtr1 Qtr2 Qtr3 Qtr4 Qtr1 Qtr3 Qtr4 Qtr1

Victims count No. of actors

#### Cy-X over time

Victims and actors count observed on double-extortion leak sites over time

Victims count No. of actors



#### Shift in victims by industry

#### Industry breakdown: comparison between the last and prior year

Manufacturing +85% Professional, Scientific, and Technical Services .99% +160Health Care and Social Assistance Wholesale Trade Finance and Insurance Educational Services +57% Information +142% Construction **⊦63% Retail Trade** 19% Transportation and Warehousing +42% Administrative and Support and Waste +71% Management and Remediation Services Public Administration +43% Other Services (except Public Administration) +68% Real Estate and Rental and Leasing +133% Accommodation and Food Services +73% Mining, Quarrying, and Oil and Gas Extraction +113% Arts, Entertainment, and Recreation -65% Management of Companies and Enterprises +75% Utilities -3% Agriculture, Forestry, Fishing and Hunting +58% 32 200 400 600 800 1000

Last 12 months Prior 12 months

REQUE

#### Based on our principles, we will not attack the following targets:

- Medicine (hospitals, hospices).
- Education (schools, universities).
- Non-profit organizations.
- Government sector.

We only attack companies that can pay the requested amount, we do not want to kill your business. Before any attack, we carefully analyze your accountancy and determine how much you can pay based on your net income.

You can ask all your questions in the chat before paying and our support will answer them.

#### We provide the following guarantees for our targets:

- We guarantee decryption of one test file.
- We guarantee to provide decryptors after payment, as well as support in case of problems.

Orai

• We guarantee deletion of all uploaded data from TOR CDNs after payment.

Medical facilities have been an increasing target in recent years, causing security vendors to fear that coronavirus-related threats could bring ransomware attacks. That could drive an overtaxed system to its knees.

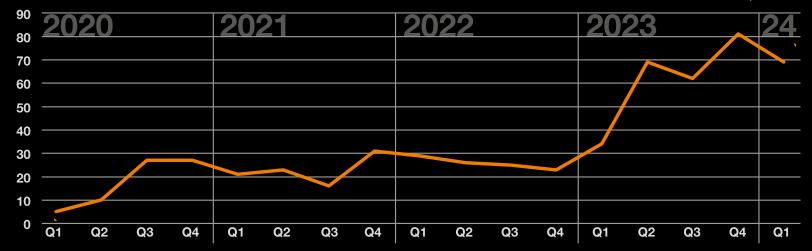
Before pledging this measure of restraint, Maze has been making a name for themselves wreaking incredible havoc on many organizations, including healthcare. If ransoms weren't received, they upped the threats by threatening to embarrass their victims by releasing and making public sensitive data they had stolen. But now, they are saying they will refrain from this activity, promising to "stop all activity versus all kinds of medical organizations until the stabilization of the situation with virus," according to an announcement on its website.



#### Healthcare

34

No. of Cy-X victims



Subindustry	% of victims
Ambulatory Health Care Services	37.37%
Hospitals	16.73%
Offices of Physicians	9.61%
Social Assistance	7.47%
Nursing and Residential Care Facilities	7.12%





Top 10 countries targeted\*



Top 10 countries where negotiation started\* Victims 'checked' manually by admin as **Important\*** 

#### Case study

In one particular case in December 2022, a children's hospital was targeted by the group. After a complaint, LockBit released a statement on their leaksite which said "We formally apologise for the attack on \*\*\*\*\*\* and give back the decryptor for free. The partner who attacked this hospital violated our rules, is blocked and no longer in our affiliate program". This was a lie.

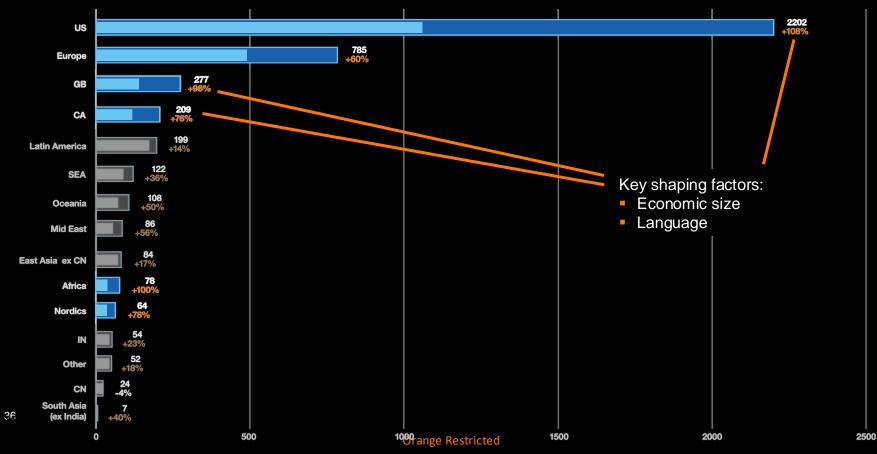
We now know which partner carried out this attack and **they remained an active LockBit actor** until our operation in February. In fact, we can see they were responsible for 127 unique attack builds, 50 negotiations, and recieved multiple ransom payments all after apparently being fired by LockBit. The 'free' decryptor provided to the hospital didn't work properly either.



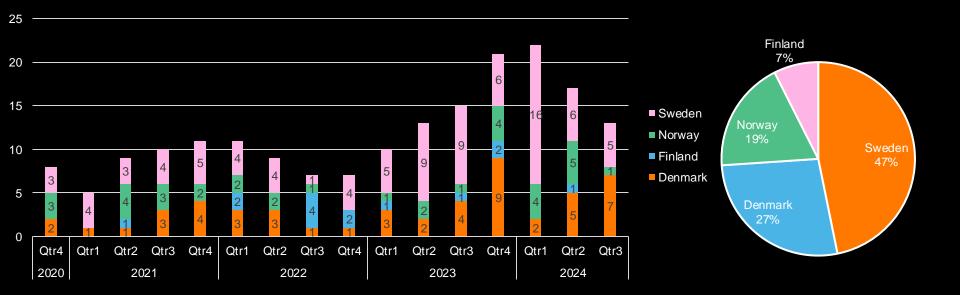
Data relates to June 2022 - Feb 2024

# Shift in victims by region Regional breakdown: comparison between the last and prior year

Last 12 months Prior 12 months

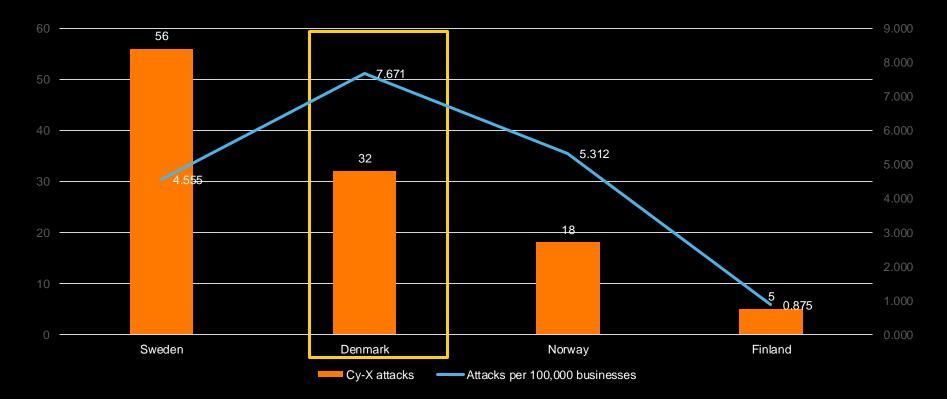


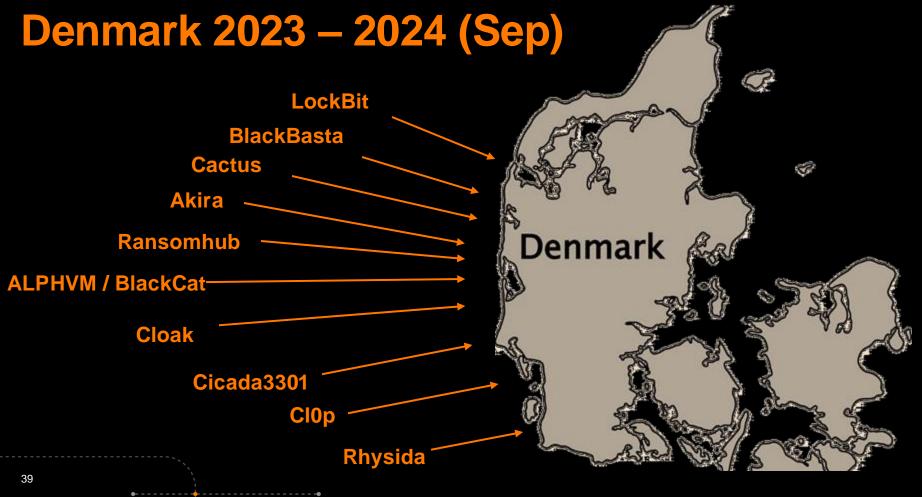
# **Profile : Nordics**



#### Orange Restricted

# Denmark in context – Attacks per 100,000 businesses





**Orange Restricted** 

# Why are we still struggeling with this?

Orange Restricted

October 8

Channel created

# **Hacktivism**

## Blurry lir

- -

- •

- •

# Hacke

ransomware Ghostlocker will be closed Though we will provide the entire code of V3 to Stormous and shift all buyers from GL to the new Stormous locker making it a clean exit without any exit scam. Five families will be taken over and Stormous will be in charge with the new associates involved in that organization resulting in our complete retirement from the "cybercrime" and ransomware scene!

The Five Families

May 15

5.8K subscribers

We'd like to announce GhostSec's leave from the "CyberCrime" Scene. We as Ghosts have obtained enough funding through our times to continue funding our operations for a while we deem the cybercrime and ransomware we once

promoted no longer necessary and will

All this means is that we will not be

once provided will be closed, The

shift back to pure hacktivism what does

providing services anymore therefore the

Ghostsec services channel and services

The Five Families

Forwarded from

GhostSec

this mean?

newest cyber attack to Israeli emalon.co.il. "emalon" in an travelling site that hacked by

ds.

are & vice versa

I DESTROYED ALL DATA 🛑 🍐 ≌rything 🔪 🍐



the following countries: Iran 📪, countries. Message

💿 112 📌 7:20 AM



Ukrainian Cyber Alliance

Trigona is Gone!

GHOSTLOCKER 👷 🚿 New generation of RaaS

Ghos

GHOSTLOCKER 🙊 \* is revolutionary, enterprise-grade locking software which prioritizes safety and effectiveness over everything. Our goal is to make everything as easy for our affiliates as possible, while making sure the success rate is on it's highest level, we attempt to achieve that through multiple means  $\checkmark$ 

Telegram Channel: CLICK HERE (WE POST REGULAR UPDATES AND INFORMATION HERE) Contact: @GhostSecSR (For purchase or any questions relating to the product)

ona ransomware gang has been exfiltrated and wiped out

#### ie to the world you created for others

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

Orange Rest

# What's it to us?

The Five Families 257 September 25 The Five Families Stormous X(V3.0) We would like to inform you that our official channel, which we used to announce our objectives, has been taken down by certain entities. We want to emphasize that this does not pose any problem for us or for our affiliates. From now on, we will rely entirely on our Tor sites to release data and announce our objectives. Telegram will merely serve as a gateway for certain individuals to access our goals or enter our RaaS service. New leak channel (Telegram): https://

#### .me/StmXRaaS

#### Telegram

StormouS.X Ransomware For more information about any of our victims:

Our blog : pdcizqzjitsgfcgqeyhuee5u6uki6zy5slzioinlh x6xjnsw25irdgqd.onion

STM X

Our recruitment channel: <u>https://t.me/</u> <u>StmXGhostLocker</u>

FF : https://t.me/FiveFamilies Orange Restricted



## September 25 Channel created

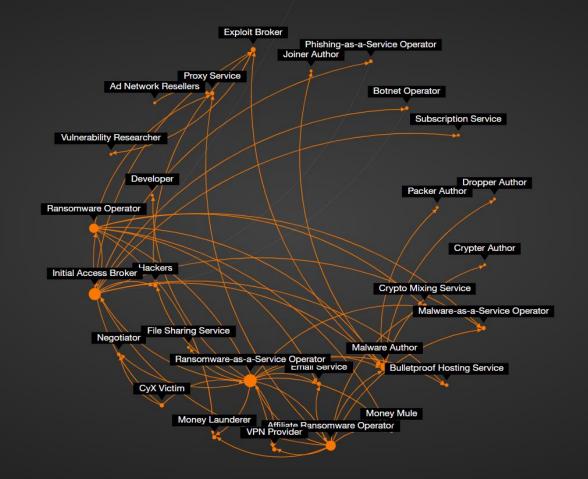
#### StormouS.X Ransomware

Hello, we apologize for the inconvenience caused by the shutdown of our previous channel by certain entities. However, this is not a problem and will not affect any of our operations. We will now focus entirely on our sites on the Tor network. Telegram will merely serve as a gateway for certain individuals to learn about our latest victims or access our RaaS services.

#### Here are our complete sites :

## Our blog (Tor): http:// pdcizqzjitsgfcgqeyhuee5u6uki6zy5slz oinlhx6xjnsw25irdgqd.onion

## Data leak site (Tor) : http:// 6sf5xa7eso3e3vk46i5tpcqhnlayczztj7z jktzaztlotyy75zs6j7qd.onion/ <sub>© 477 19:17</sub>



# Action by law enforcement

Takedown and disruption by law enforcement

**Orange Restricted** 

# Focus of Law Enforcement

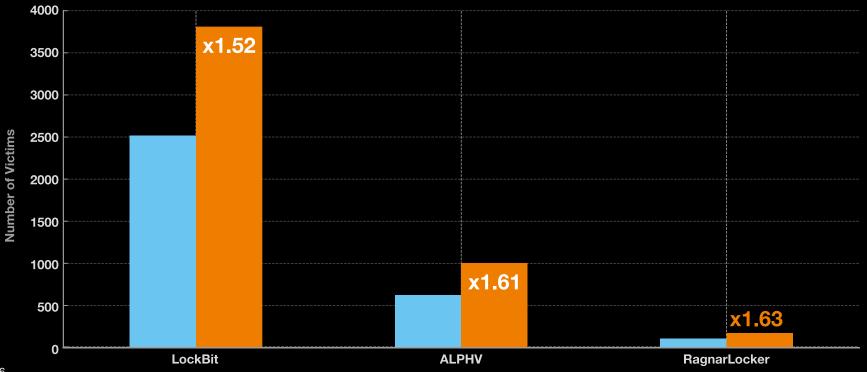
Types of cyber crime Law Enforcement activities targeted in recent years

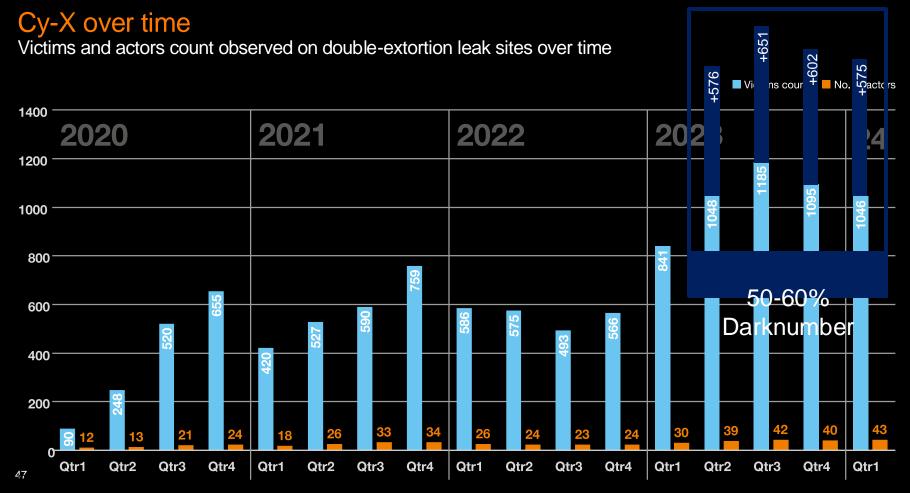


# Observed vs. Total reported victims

Dark figures: count of victims of example ransomware actors (observed vs. law enforcement)

Observed Victims





**Orange Restricted** 

# Orange Cyberdefense

Demotivate offenders:
Coordinated law enforcement effort
Reducing the flow of funds from victims
Targeted efforts to reduce criminals'

neutralization techniques

#### Attractiveness as victim:

- Visibility. A large attack surface
- Vulnerability. Poor cybersecurity practices
- **nertia**: 'Data' is easy to access and exfiltrate
- Value: The value of the data to the victim
- Access: The amount of time and space allowed to the attacker

# Get suitable guardians in place:

- Technical controls
- 'Social' guardians government, individuals, teams and groups

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Victim

Offender

Lack of

Guardian

Cv\_



# Good news!



# **AWARENESS!**

Downloadable on our website:

https://www.orangecyberdefense.com/global/white-papers/beating-ransomware

# Orange Cyberdefense's recommendations:

	$\mathbf{\hat{\mathbf{b}}}_{\mathbf{r}}$
_	-~

Prevention remains the best weapon to reduce the effects of an attack. This involves sensitizing as many people as possible to cyber threats and their consequences for the organization and employees: at all levels in the company, including senior leadership, but also at the level of each individual in their personal and professional digital usage. Security hygiene, in particular in the security of personal mobile devices and the general public is becoming a major issue for every-one, including businesses.



Cyber risk must be reinforced as the central element to an organization's risk management strategy, regardless of its size. Equally, the security function must be continuously assessed vs. the protection provided to the organization, its people, infrastructure, customer and partner data. This must be complemented by a planned cyber crisis management capability driven at the highest level of the organization.



A trusted partnership allows organizations to define and implement cyber risk management strategies adapted to the specific threats to their business interests. The intersection between cyber security and business expertise needs to be orchestrated at all levels in the organization – from individual employees to the CISO to the Board - to identify the company's critical assets, protect its vital interests and to build a tailor-made strategy that complies with regulations that will continue to impose themselves.

This partnership should increasingly allow the organization to dynamically adjust their security and comply with new regulatory requirements.

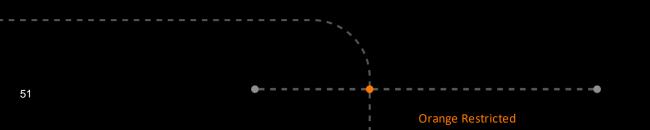


It is necessary to stay ahead of technological innovations to maintain an appropriate level of security. Artificial or post-quantum intelligence are both opportunities and risks for businesses: we need to build flexible local models to continually invest in innovative security services.



# Thank you

orangecyberdefense.com



# Cyber Attack Rediness

Fail to prepare, Prepare to Fail.





# About me...

- CSIRT Country Lead Nordics region at Orange Cyberdefense.
- At Orange Cyberdefense CSIRT since 2019
- Worked on multiple major cybersecurity incidents, including ransomware, network-wide compromises and business fraud.
- Loves Sailing and Motorbiking.



# By failing to prepare, you are preparing to fail.

Benjamin Franklin

# Cyberdefense

orange



#### BLOG

#### Active Exploitation of Two Zero-Day Vulnerabilities in Ivanti Connect Secure VPN

JANUARY 10, 2024

by Matthew Meltzer, Robert Jan Mora, Sean Koessel, Steven Adair, Thomas Lancaster

National Cyber Security Centre

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#### NEWS

# Exploitation of vulnerabilities affecting Ivanti Connect Secure and Ivanti Policy Secure

Organisations are encouraged to take immediate action to mitigate vulnerabilities affecting Ivanti Connect Secure (ICS) and Ivanti Policy Secure (IPS) gateways (CVE-2023-46805, CVE-2024-21887, CVE-2024-21888 and CVE-2024-21893), and follow the latest vendor advice. 81.05

## Cutting Edge: Suspected APT Targets Ivanti Connect Secure VPN in New Zero-Day Exploitation

TYLER MCLELLAN, JOHN WOLFRAM, GABBY RONCOME MATT LIN, ROBERT WALLACE, DIMITER ANDONOV JAN 12, 3924 1 THIN READ / LANT UPDATED JAN 21, 2024



# Detta vet vi: Hackerattacken mot Tietoevry

Ipp04wall 2004 01:35 Publiceral 2004 01:35



Fino: Johan Nilason/TT

orana

Över 100 myndigheter och en mängd företag drabbades av cyberattacken mot it-företaget

# Cyberdefense

# Riksdagen drabbad i hackerattacken mot Tietoevry

UPPDATERAD 25 JANUARI 2024 PUBLICERAD 23 JANUARI 2024

Även Riksdagen drabbades i lördagens cyberattack mot ITleverantören Tietoevry, rapporterar TV4. – Det är jätteallvarligt, det här är stort, säger Peter Hultqvist (S),

ordförande i försvarsutskottet till kanalen.

#### Nyheter / Cyberattack

# Ransomwareattack mot it-leverantör

Filmstaden, Granngården och Rusta har problem



Anna Sjögren, Ebba Torstensson

Publicerad 2024-01-20

🖈 Dela 🛛 Spara

lt-leverantören Tietoevrys svenska datacenter har utsatts för en hackerattack.

Det här slog ut Filmstadens försäljningssystem under lördagen. Men nu är problemet delvist löst.

– Nu går det att betala med Swish på plats, både i kiosken och för att köpa biljetter, säger Helena Eklund på Filmstaden strax efter 17:30. Ett Nato-medlemskap kan generera cybersäkerhetsattacker mot svenska verksamheter

25 January 2024 Cythersäkerheit Nyheter





# War story

- Real-world example.
- Client was an international Software Developer and retailer.
- Data Exfiltration.
- Started with an open server to the web...



# Proper planning and preparation prevents Piss Poor Performance.

**British Royal Marines** 

Cyberdefense

# The Morning started like this

## Genetic testing firm 23andMe admits hackers accessed DNA data of 7m users

S company says 'threat actor' responsible for security breach that ffected nearly half of its 14m reported users



D 23andMe, the genetics and ancestry firm, is based in California. Photograph: Alamy The genetic testing company 23andMe has said that nearly 7 million people have been affected by a security breach that put DNA ancestry information into the hands of hackers who broke into the site in early October. WhatsApp data leaked - 500 million user records for sale online

Apdated on Petroary 24, 2003 2-20 PM - 🖓 16

Avgeta Laplanyta, Chief Editor



b) 31...Marittada



Someone is allegedly selling up-to-date mubile phone numbers of nearly 500 million WhatsApp users. A date sample investigated by Cybernews likely confirms this to be true.

In November 16, an actor posted an ad on a well-known hacking community forum, claiming they were

# UNTIL FILES 5D19H02M22S

PUBLICATION

#### Deadline: 02 Nov, 2023 13-25-39 UTC

#### BOEING boei

#### boeing.com

Boeing, the 60 bition Company, together with its subsidiaries, designs, develops, manufactures, sells, services, and supports commercial jetimers, military aircraft, satellites, militalle defense, human space flight, and launch systems and services worldwide.

A tramendous amount of sensitive data was antitizated and ready to be published if Boeing do not contact within the deadline! For now we will not send lists or samples to protect the company BUT we will not keep it like that until the deadline.

#### ALL AVAILABLE DATA WILL BE PUBLISHED !

1993-008 1111 T. (1111-011)

1

60 198 02H 22k

LOCK



CONDITIONS FOR PARTNERS AND CONTACTS

# UNTIL FILES 13D 01:19:58 PUBLICATION

#### 10 Feb, 2022 11:20:00



justice.fr

The Misistry of Justice of France is a loop of the Possich generatures, which is responsible fire supervision of the judgistery, its manipummer and administrative participation as Vice President of the Judgist Council, supervision of the presentative office prior systems

ALL AVAILABLE DATA WILL BE PUBLISHED ?



## FOR JOURNALISTS FOR VICTIMS OUR BLOG

we are also here.		
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		d onton



#### Incinnati State

aufornen eine innetistate ei

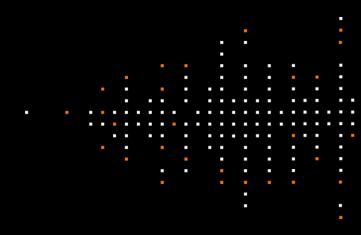
To take pride in offering students a one-mouse experience, this as regarded faculty and small channes. And two operate one files harpost cooperative learning programs among U.S. twocare sufficient, working with over 400 huminess and influency articles. Our workfully with over 400 huminess and influency articles. Our workfully with over 500 area for an one of the divergencements for aver 150 area for anomation.

#### eve documents >>>>



# Attack timeline





# April 13 13:38

### LATERAL MOVEMENT

Movement inside the network to several critical servers, such as **Domain Controllers.** 

# May 2-7

## **DISCOVERY:**

**Υ** 

Industry-recognised administration programs "Advanced Port Scanner" were downloaded and installed.

May 1-2

#### MALWARE EXECUTION:

Threat Actor executes the infamous commercial hacking toolkit "Cobalt Strike" to the network.

# May 8-9 RANSOMWARE DEPLOYMENT



# May 5

#### CONTINUED RECONNAISSANCE:

Threat Actor deploys the attack tool **Bloodhound** 

# CSIRT





# *Quis, quid, ubi, quibus auziliis, cur, quomodo, quando.*

Who was

involved?

For example:

Which user

accounts?

to give more

Who would be able

(technical) context?

# 

## What happened?

#### For example:

- Files encrypted
- Suspicious login
- Phishing email interaction
- Strange file execution
- Unauthorized traffic in firewall log
- What containment actions have you done?

When did it happen?

## For example:

- Date/time of first indication that something was wrong?
- When did you perform containment activity?
- How far back do your logs/data set go?

Where did it happen?

## For example:

- Which systems were involved?
- Domain controllers?
- Servers or workstations?
- Which operating systems?
- Microsoft 365 environment?
- Network/firewall traffic?

# Why did you realize it happened?

#### For example:

- I received a detection from CSOC.
- I noticed it myself while doing 'X'.
- I got a call from a user.
- I got a call from an MSP/3<sup>rd</sup> party.



# CSIRT





# April 13 13:38

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May 5

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May 8-9

**RANSOMWARE DEPLOYMENT** 

•**Q**•

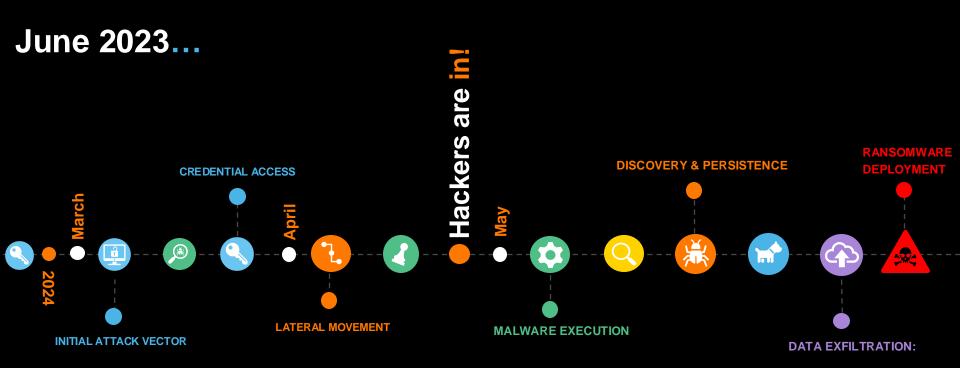
Threat Actor deploys the attack tool **Bloodhound** 

May 1-2

#### MALWARE EXECUTION:

Threat Actor executes the infamous commercial hacking toolkit "Cobalt Strike" to the network.

**L** 



# June 2023...

#### **CREDENTIAL ACCESS:**

Since at least July 2022, the credentials for a highly privileged user account had likely been compromised.

# March 27 18:18

#### FAILED INITIAL MALWARE EXECUTION:

Threat Actor failed to download and execute the infamous commercial hacking toolkit

#### "Cobalt Strike" to the

×

network.

# April 13 13:38

#### LATERAL MOVEMENT

Movement inside the network to several critical servers, such as **Domain Controllers.** 

# March 27 18:13

#### **INITIAL ATTACK VECTOR:**

RD Gateway open to internet – Successful authentication from Russian IP

# March 27 18:21

#### **CREDENTIAL ACCESS:**

Threat Actor are successful in dumping the LSASS processes containing a significant volume of credential material

# April 26 18:18

#### MALWARE EXECUTION:

Threat Actor installs " multi-stage" malware with the intent of creating persistence through **AnyDesk**, safely browsing the Dark Web through a custom **TOR** browser, and then deploying **Crypto** Miner software.

are

Hackers

**Orange Restricted** 

# May 1-2

#### MALWARE EXECUTION:

Threat Actor executes the infamous commercial hacking toolkit "Cobalt Strike" to the network.

# May 2-7

## **DISCOVERY & PERSISTENCE :**

Industry-recognised data discovery, collection **"Velociraptor**", and administration programs **"ScreenConnect**" and **"Advanced Port Scanner**" were downloaded and installed.

# May 5

## DATA EXFILTRATION:

The attackers deployed the commercial file copying tool **Rclone**, exfiltrating data of approximately 1.2TB...

May 1 23:59

## CONTINUED DISCOVERY:

Data and Access Discovery through typed paths in Microsoft Windows Explorer. Results output to a text file.

# May 5

#### CONTINUED RECONNAISSANCE:

Threat Actor deploys the attack tool **Bloodhound** 

# Hackers are in and they have out data

Cyberdefense

orange

# War story - PAUSE

#### Situation:

Attackers have Access to the Network.

#### **Immediate Business Risk:**

Loss of data confidentiality for files, infrastructure, and User accounts.

#### Who is involved:

Incident has not been identified yet!



# Ransomware Deployment 9-10th May

01.

02.

#### LOCK FILE

#### ALL YOUR IMPORTANT FILES ARE ENCRYPTED!

Any attempts to restore your files with the thrid-party software will be fatal for your files! Restore you data posible only buying private key from us.

#### There is only one way to get your files back:

#### contact us

- 6 UTox 🖾 Email
- qTox ID:
- https://tox.chat/download.html
- Email: contact@contipauper.com

#### Through a C Tor Browser - recommended

- Download Tor Browser <u>https://www.torproject.org/</u> and install it.
- Open link in Tor Browser -
- This link only works in Tor Browserl
- · Follow the instructions on this page

#### ATTENTION

- Do not try to recover files yourself, this process
   can damage your data and recovery will become impossible
- · Do not rename encrypted files.

Do not waste time trying to find the solution on

 the Internet. The longer you wait, the higher will become the decryption key price

Decryption of your files with the help of third

- parties may cause increased price (they add their fee to our).
- Tor Browser may be blocked in your country or corporate network. Use
- https://bridges.torproject.org or use Tor Browser over VPN.
- Thanks to the warning wallpaper provided by lockbit, it's easy to use

## orange<sup>®</sup> Cyberdefense

# War story - Summary

#### Situation:

Local IT began restoring and, together with local resources and together with local resources, launched an investigation

#### **Immediate Risk:**

Release of data including proprietary, confidential and personal information. Reputational damage. Unknow to Local IT

#### Lessons Learned:

- Insufficient Incident Preparation and Planning
- Insufficient **Documentation**
- No Methodology
- Destroyed evidence through too quick recovery

# **Case Study**

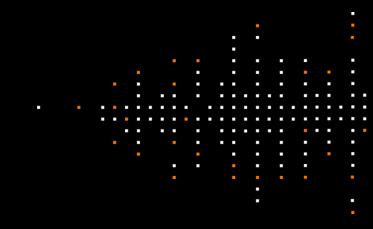
#### **Undisclosed Client**

- 4 emergency cases in the last 15 months
- Been on a journey and have learnt the hard way
- Grown their security team from 1-man band, to several security professionals, from CISO down
- Last IR engagement contained prior to calling our CSIRT details on the next few slides...



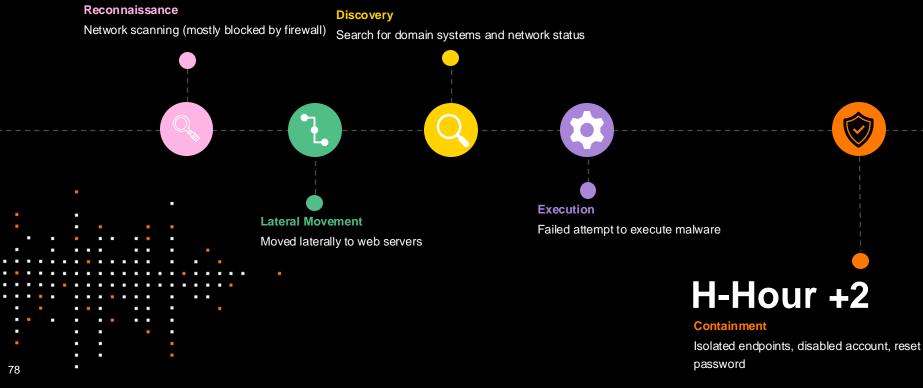
## Attack timeline





**Orange Restricted** 

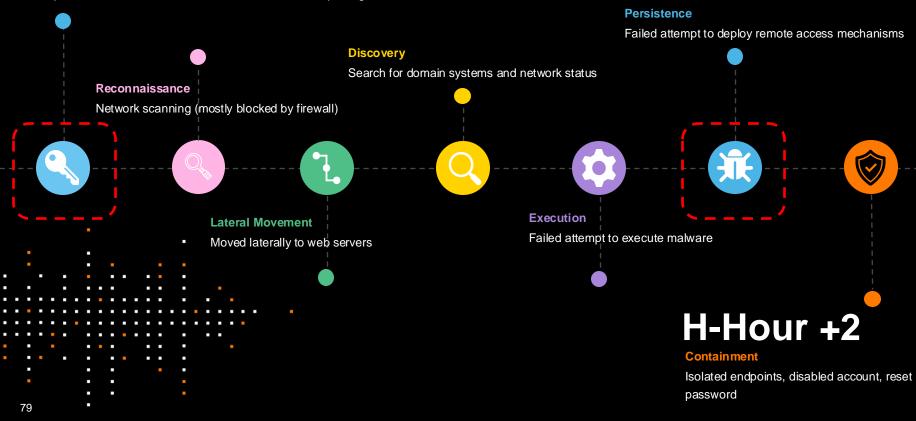
## June 2024...





#### **Exploit of VPN Vulnerability**

Exploit enabled attacker to access valid credentials of privileged account



# War story - Summary

#### Situation:

Local IT began quick isolation of affected systems, launched a formal investigation and called on their third-party Incident Response Team within hours.

#### **Immediate Risk:**

Potential lateral movement.

Lessons Learned:

- Swift actions taken by a mature team limited the impact
- Improved Documentation
- Clear Methodology in place

# Key Aspects of Incident Response

#### **Understanding Risk:**

External vs Internal Threat Actors. Risk strategies: Mitigate, Avoid, Transfer, Accept.

## Knowing the Phases of Incident Response (IR Life Cycle):

Preparation, Identification, Containment, Eradication, Recovery.

#### Being aware of Stakeholders:

Management, IT, Legal, HR, PR, third-parties, law enforcement, clients/customers.

#### Knowing your Documents:

Incident Response Plan, Play Books.

#### **Disaster Recovery:**

Recovery Objectives. CSIRT vs Cyber Insurance...





# **Be Brilliant at the Basics**

#### 4 P's (there are many more!)

#### Phishing

- MFA is not enough you need Conditional Access Policies and/or Passkeys ("Phishing-Resistant MFA")
- Are you aware of the current TTPs attackers are using to penetrate email security controls and deliver bait to your uses?
- And what will be next? Are you (and your users) keeping track of the ever-evolving threat landscape?

#### Patching

- You can't patch what you don't know about. How confident are you with your network visibility?
- When was your last Black Box penetration test?

#### Ports

Which access points do you have directly exposed to the internet?

#### Passwords

- Audit your company's passwords before the attackers do
- What is the oldest password on your domain? Go and find out!
- Your passwords are part of your identity don't treat them like a string of text





# Business Email Compromise

#### Would you click on this?

Sent from a colleague in reply to another email.

From	S Reply	* Reply All マ	→ Forward	More ~
Subject Re:			27/04/	2022, 17:27
То 📕				
[From External Sender]				
Greetings of the day! Sincerely hope you are doing v I am attaching herewith a draft copy of the binding		your referen	ce and op	inion:
https://ringsatu.co/mrql/temporaeveniet				
(**)				
vhordofonco				



orange

# Business Email Compromise

Would you click on these?

Received from SharePoint. "John has shared a file with you".





# Business Email Compromise

Data Security, Vulnerability Management, Email security

f ♥ ☎ in WhatsApp used in BEC scam to pilfer \$6.4M

Simon Hendery April 21, 2023





## FB Business Email Compromise Statistics

#### Between October 2013 and December 2022

Domestic and international incidents: Domestic and international exposed dollar loss: Between June 2016 and December 2021

Domestic and international incidents: Domestic and international exposed dollar loss: 277,918 \$ 50,871,249,501

241,206 \$ 43,312,749,946



June 9, 2023

Alert Number I-060923-PSA

Questions regarding this

PSA should be directed to

local EBI Field Office

Business Email Compromise: The \$50 Billion Scam

This Public Service Announcement is an update and companion piece to Business Email Compromise PSA 1-050422-PSA posted on www.ic3.gov. This PSA includes new Internet Crime Complaint Center complaint information and updated statistics from October 2013 to December 2022.



## **Preparation is crucial** to damage limitation of an incident



Cybersecurity is no longer a check-box exercise!













## Maintain Operational Resilience

Bo Drejer, GRC Manager, Orange Cyberdefense Denmark Mats Lindblad, GRC Manager, Orange Cyberdefense Sweden

Bernstorff Slot 3. October 2024

# Resilence



### What is this?



## "The ability to recognise risks & changes in an environment and adjust to them"



#### The swans



Unknown unknowns

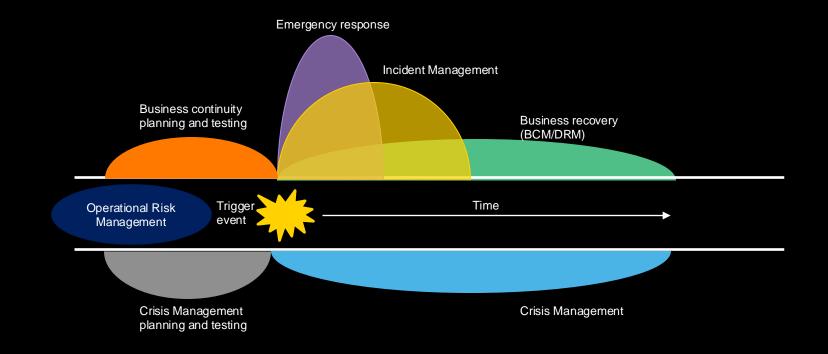


Known unknowns



Known knowns

#### **General Perspective - Resilience**



## **Strategic**

### **Tactictal**

### Operational



# 3 P'S



# Prioritization



# Preparedness



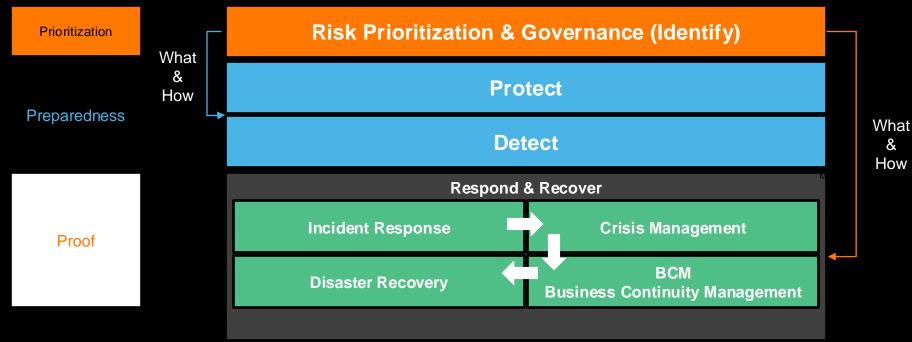
**Orange Restricted** 

# Proof



GRC - optimizing and operationalizing risk mitigation & investments Significant part of organizational resilience

#### Why - What - When







#### Security by Design Legislation & Directives



NIS2 er noget alle bør have på dagsordenen – og prioritere højt nu. I må ikke gå i stå, men skal fortsætte med implementeringen på trods af udsættelsen, så I kan blive compliant hurtigst muligt. Hvis I ikke er startet endnu, så kom i gang. Det er især vigtigt, hvis man har kunder eller samarbejdspartnere i andre EU-lande, hvor den nationale implemen-tering ikke er forsinket.

#### Security by Design Legislation & Directives



Første skridt hen imod NIS2-compliance er at få lavet en risiko-vurdering, som giver overblik. Det er en vigtig og værdifuld forudsætning for, at man kan foretage den nødven-dige optimering af ressourcer og prioritering af indsatsområder, hvilket er fundamentet for, at man kan arbejde målrettet med at styrke den operationelle cybersikkerhed.

# ...ensuring increased business resilience is now a board-level matter, too.

### The benefits of resilience



Anticipate threats faster



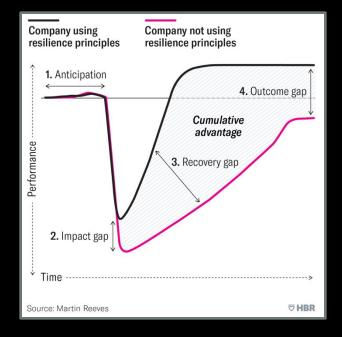
Better resistance to the initial shock



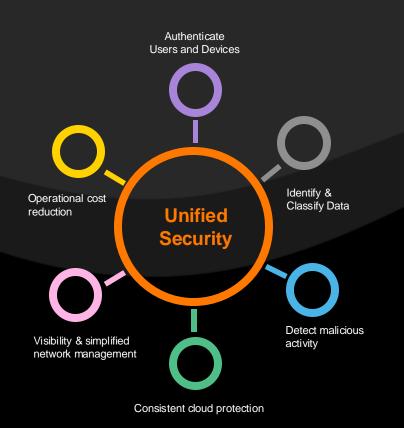
Rebound more quickly



Benefit from increased fitness post shock



Source: <u>A Guide to Building a More Resilient Business</u>, Harvard Business Review.



## Changing The Game With Holistic Architecture

Business driven security policies sets the scene

Business driven risk management defines access

Taking offset in identity visibility Individuals, Devices, Solutions

Dynamic access control based upon Type, Status, Verification, Location, Criticality, etc.

Business driven central control and visibility!

## **Important Questions**



Are our (critical) business risks adressed sufficiently?

Visibility of who and what has accesss to what? Visibility of what is implemented and if it is done

Do I have enough ressources for timely implementation?

Are we sufficiently efficient on detecting and blocking attacks in a timely fashion?

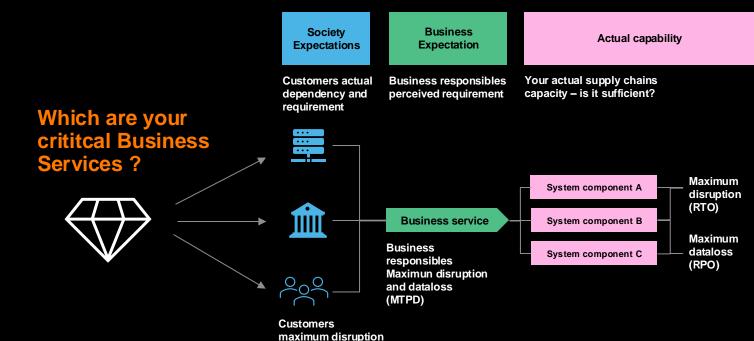
Is Crisis Management, Business Continuity, Disater Recovery adeqautely tested

Transparent prioritization, reporting and execution based upon business risk!

correctly?

## **Risk Prioritisation & Governance**

Which business functions are most critical?



and dataloss



## **Real world example**

Strengthening of operational capability: Prioritization, Protection and Recovery

- Technically mature customer
- Performed Top-Down BIA
- Production and distribution of most importance
- 90% of production & distribution depended on itinfrastructure
- → 4 months later they had trained and could document recovery of IT-infrastructure within 24 hours



#### Resilience anticipation – learnings matter!



### Tacoma Bridge

Orange Restricted

## GRC



Contact

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## orange<sup>®</sup> Cyberdefense

