OSINT

Beware your data is out there

CELFOCUS HACKATHON – 17/06/2024

$whoami

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- Certified Ethical Hacker
- Degree at University of Minho

Disclaimer & Laws

Disclaimer
Boring but necessary

- Information in this presentation is intended for educational and awareness purposes only.

- **Live presentation**. Not a controlled environment and some contents may be inappropriate for some users.

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- This presentation **is not related** to my work or employer.

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Avoid illegal activities

- Some links, websites, software or other items listed may or **may not be legal**, illegal, a felony, misdemeanor, or worse, in your country.
- Please make sure that you are **allowed** to browse the websites, download links and software **BEFORE USING!**
- Ignorance about laws or rules is **no excuse** for illegal activities or wrongdoing.
- Illegal activities may get you in **trouble or arrested**.
- **Always check what is legal, and what laws apply.**

Laws
Portuguese Law and Organizations

- Laws
  - Diário República Eletrónico (link)
  - ANACOM (link)
- Organizations
  - CNCS – Centro Nacional de Cibersegurança (link)
    - Incident Notification (link)
    - CERT.PT (link)
  - Unidade Nacional de Combate ao Cibercrime e à Criminalidade Tecnológica (UNC3T) (link)
  - Ministério Público (link)

Awareness

Awareness
Internet knows and doesn’t forget

- Posted information privately can get publicly and world available by someone else
- When information is posted
  - Shows when and where (habits & routines)

- Internet has memory
  - Arquivo.pt (link)
    - Example (link)
  - Internet Archive - Wayback Machine (link)
    - Example (link)

Awareness
Profile

- Mobile number (Same number longevity)
  - Sync.Me (link)
- Username
  - WhatsMyName (link) ➡
- Email (Username reuse)
  - Gmail (link)
- Social media (Username reuse)
  - Facebook (link)
  - LinkedIn (link)
  - Tinder (link) (link) ➡

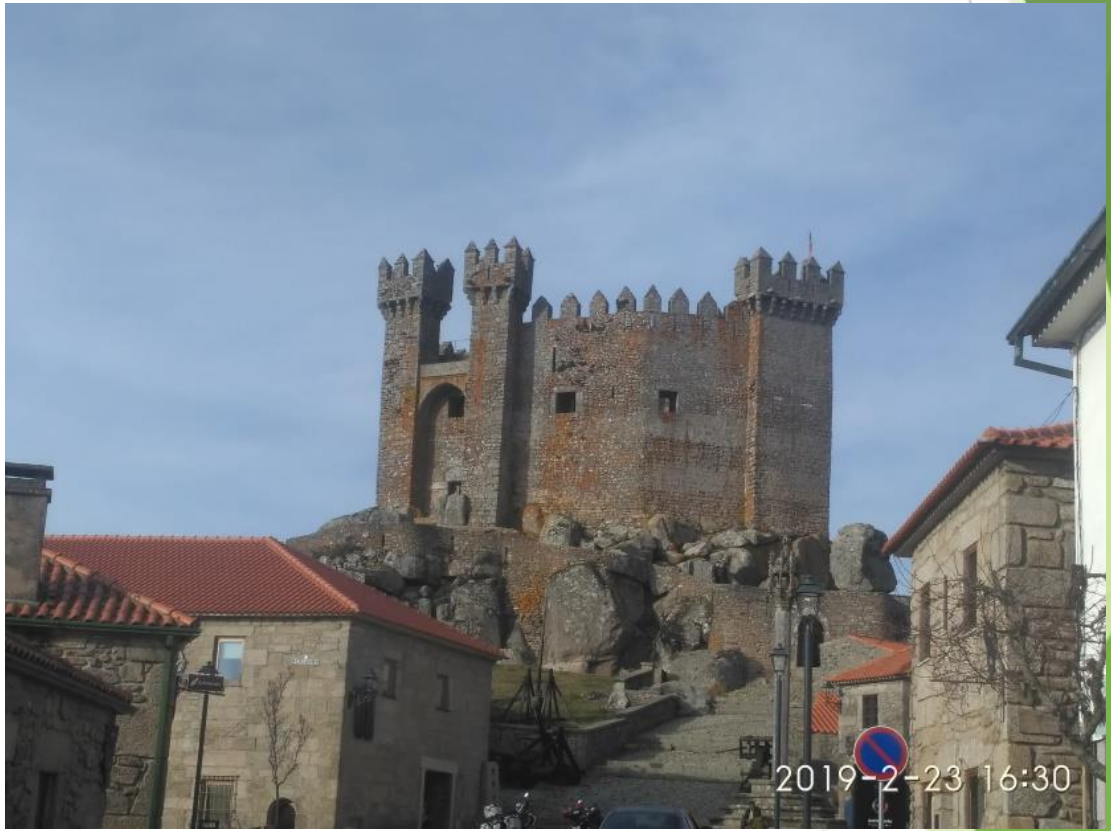
Awareness
Maps

- Never been there. Know it like the back of my hand.
- Street view
  - Google Street View (link)
- Map/ Satellite view
  - Google Maps (link)
  - Overpass Turbo (link)
    - Wizard: plant:source=nuclear
  - World Imagery Wayback example (link)
- Tips, Tricks and Techniques (link)

Awareness
Photos

- Photo analysis
  - Location
  - Date it was taken
  - Identifying elements in the photo

- Image search
  - Identify the castle (link) ➡

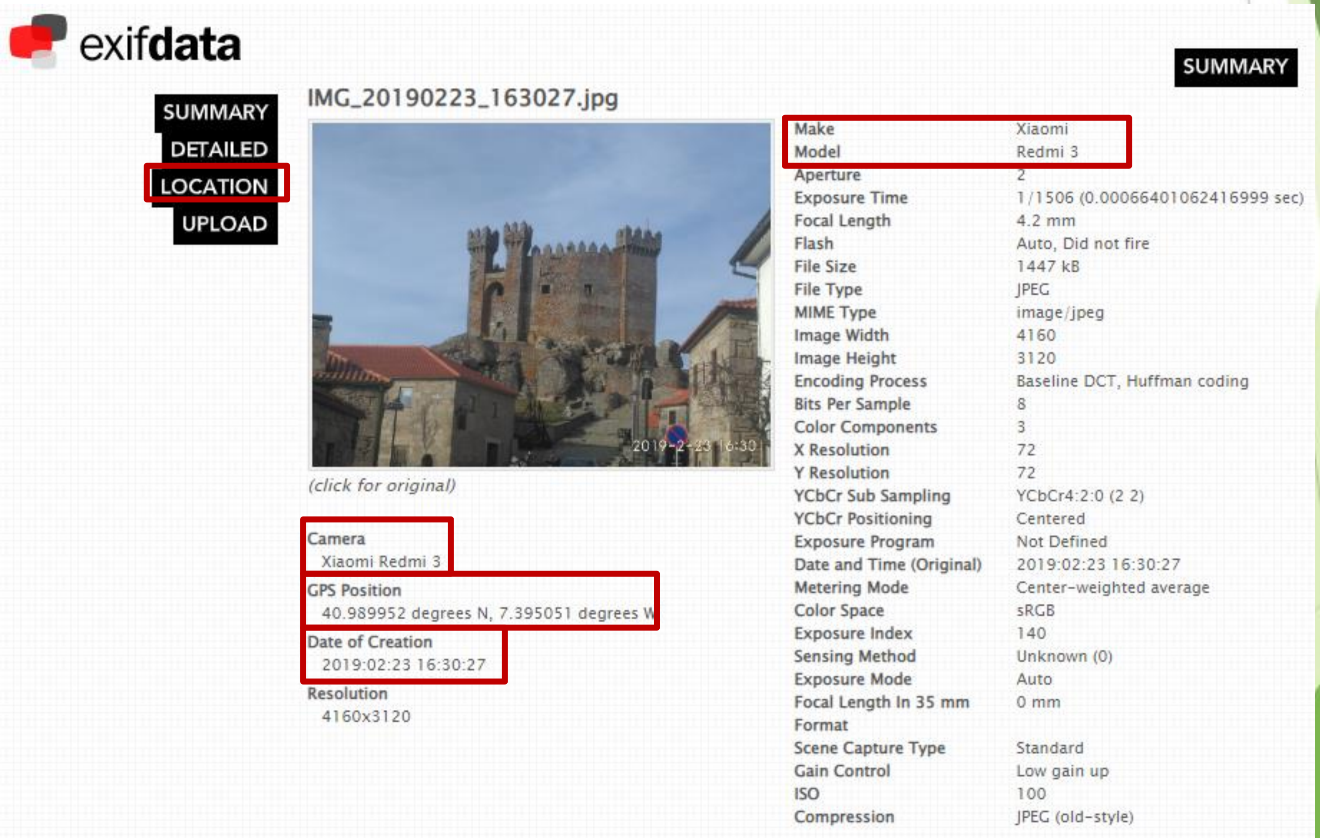


Awareness
Photos

- A picture is worth a thousand words.

- File analysis
  - Metadata
  - GPS (link) ⇨
  - Google Maps (link) ⇨

- Tools
  - CleanUp (link)
  - AperiSolve (link) ⇨



IMG_20190223_163027.jpg

(click for original)

Camera
Xiaomi Redmi 3

GPS Position
40.989952 degrees N, 7.395051 degrees W

Date of Creation
2019:02:23 16:30:27

Resolution
4160x3120

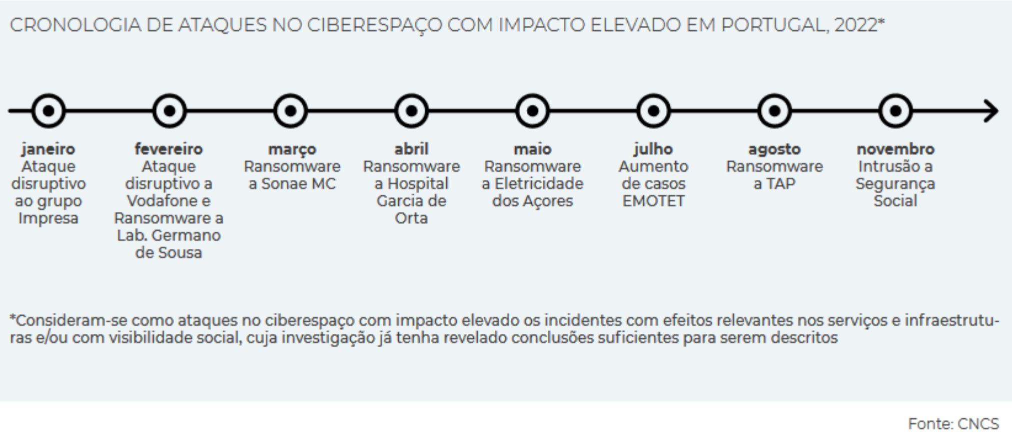
Make	Xiaomi
Model	Redmi 3
Aperture	2
Exposure Time	1/1506 (0.00066401062416999 sec)
Focal Length	4.2 mm
Flash	Auto, Did not fire
File Size	1447 kB
File Type	JPEG
MIME Type	image/jpeg
Image Width	4160
Image Height	3120
Encoding Process	Baseline DCT, Huffman coding
Bits Per Sample	8
Color Components	3
X Resolution	72
Y Resolution	72
YCbCr Sub Sampling	YCbCr4:2:0 (2 2)
YCbCr Positioning	Centered
Exposure Program	Not Defined
Date and Time (Original)	2019:02:23 16:30:27
Metering Mode	Center-weighted average
Color Space	sRGB
Exposure Index	140
Sensing Method	Unknown (0)
Exposure Mode	Auto
Focal Length In 35 mm Format	0 mm
Scene Capture Type	Standard
Gain Control	Low gain up
ISO	100
Compression	JPEG (old-style)

Awareness
When companies are hacked

- When companies are hacked, private data is exposed. Private data becomes “public”.

- Troy Hunt
  - HaveIBeenPwned (link) ⇨
  - Pwned websites (link) ⇨
  - Domain search (link)

- CNCS Report
  - Cybersecurity in Portugal 2024 (link)
  - Cybersecurity in Portugal 2023 (link)



CRONOLOGIA DE ATAQUES NO CIBERESPAÇO COM IMPACTO ELEVADO EM PORTUGAL, 2022*

janeiro Ataque disruptivo ao grupo Impresa

fevereiro Ataque disruptivo a Vodafone e Ransomware a Lab. Germano de Sousa

março Ransomware a Sonae MC

abril Ransomware a Hospital Garcia de Orta

maio Ransomware a Eletricidade dos Açores

julho Aumento de casos EMOTET

agosto Ransomware a TAP

novembro Intrusão a Segurança Social

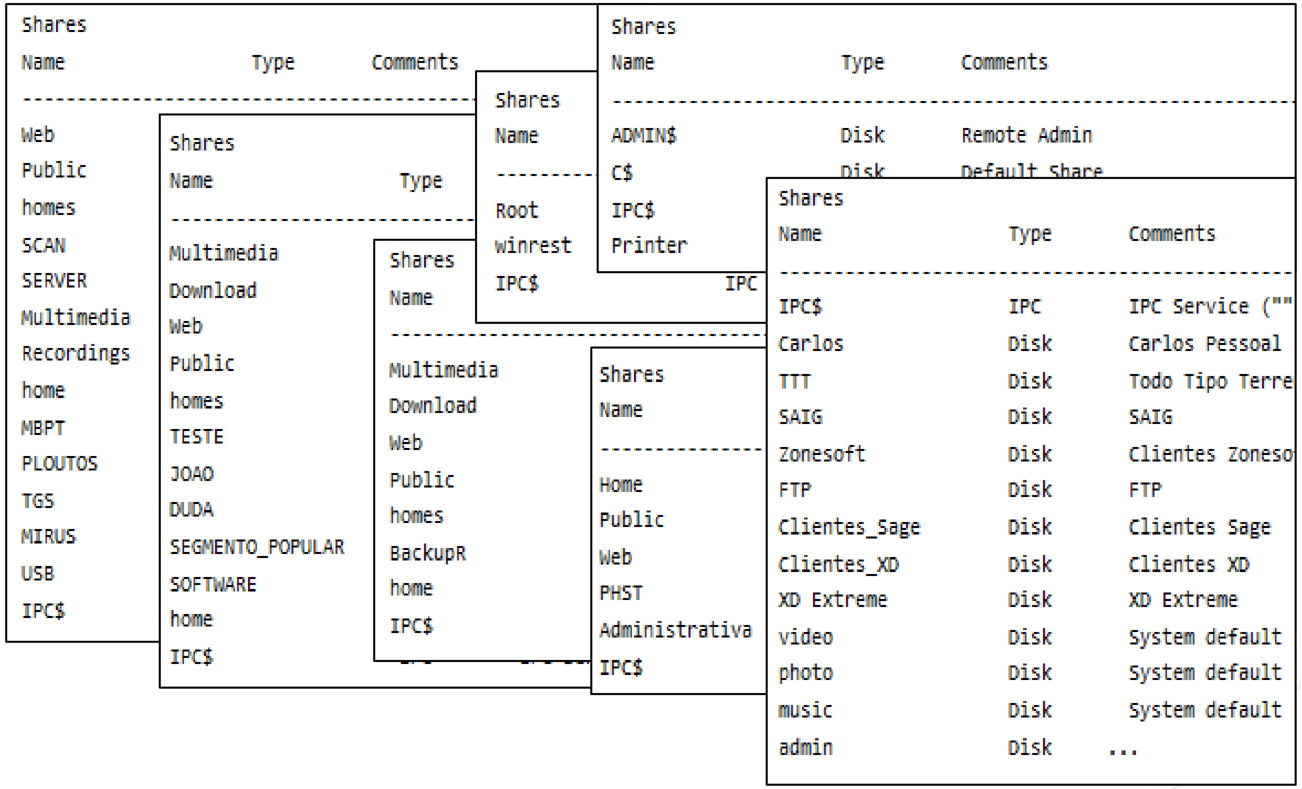
*Consideram-se como ataques no ciberespaço com impacto elevado os incidentes com efeitos relevantes nos serviços e infraestruturas e/ou com visibilidade social, cuja investigação já tenha revelado conclusões suficientes para serem descritos

Fonte: CNCS

Awareness
IOT Search engines

- Shared folders accessible to 8 thousand million people (link)

  - Contabilidade – 6
  - Clientes – 3
  - Faturacao – 1
  - Faturacao – 2
  - Primavera – 6
  - SAGE – 13
  - Winrest – 148



```
Shares
Name                    Type       Comments
-------------------------------------------
Web
Public
homes
SCAN
SERVER
Multimedia
Recordings
home
MBPT
PLOUTOS
TGS
MIRUS
USB
IPC$
```

```
Shares
Name                    Type
-----------------------------
Multimedia
Download
Web
Public
homes
TESTE
JOAO
DUDA
SEGMENTO_POPULAR
SOFTWARE
home
IPC$
```

```
Shares
Name
--------------------------------
Multimedia
Download
Web
Public
homes
BackupR
home
IPC$
```

```
Shares
Name
---------
Root
winrest
IPC$                    IPC
```

```
Shares
Name                    Type       Comments
-------------------------------------------
ADMIN$                  Disk       Remote Admin
C$                      Disk       Default Share
IPC$
Printer
```

```
Shares
Name
--------------
Home
Public
Web
PHST
Administrativa
IPC$
```

```
Shares
Name                 Type       Comments
----------------------------------------
IPC$                 IPC        IPC Service (""
Carlos               Disk       Carlos Pessoal
TTT                  Disk       Todo Tipo Terre
SAIG                 Disk       SAIG
Zonesoft             Disk       Clientes Zoneso
FTP                  Disk       FTP
Clientes_Sage        Disk       Clientes Sage
Clientes_XD          Disk       Clientes XD
XD Extreme           Disk       XD Extreme
video                Disk       System default
photo                Disk       System default
music                Disk       System default
admin                Disk     ...
```

OSINT Time

“Information is not knowledge”

Albert Einstein

OSINT – Open-source intelligence
Digital Footprint

- Open-source intelligence (OSINT) is the collection and analysis of data gathered from open sources (overt and publicly available sources) to produce actionable intelligence. (Wikipedia)

- Gathering information from:
  - search engines (Google, …)
  - social media (Facebook, …)
  - government sites
  - maps
  - …

- And then extract/relate/infer new information with greater value/potential.

Who Am I?
Search, and then search again

- Starting with just a name
  - Pedro António Oliveira Vieira
- Google (link)
- Google “Improved Search” (link)
- Google “Improved Search” + empresa (link)
- LinkedIn (link)
  - Public profile was showing way too much (audit is needed)
- Certified **Ethical** Hacker (link)
- My github notes (link)

Search Engines
Internet is more than Google

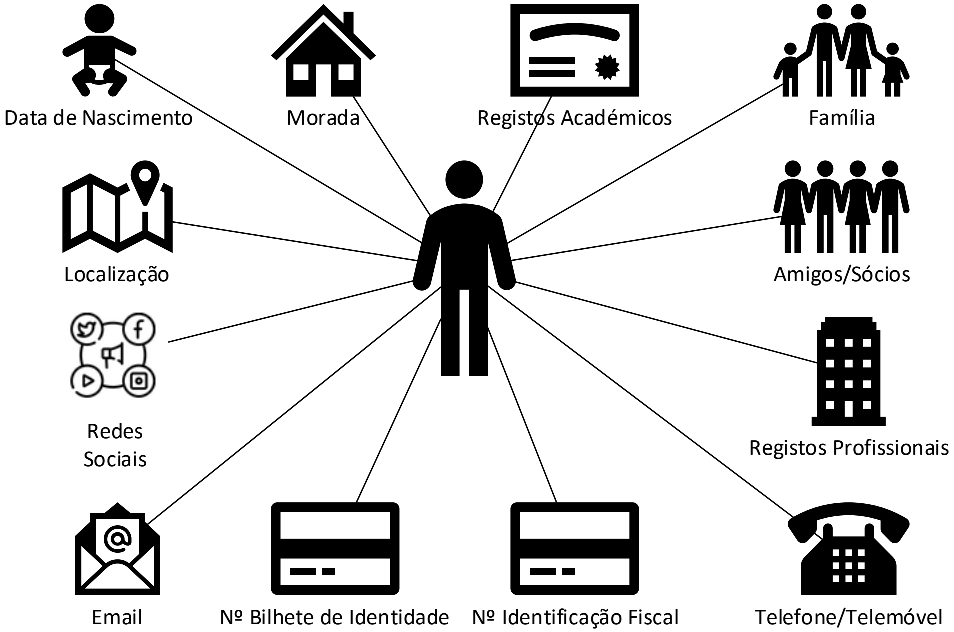
- Different search engine → different rules/crawlers → different results

- Google (link)
- Bing (link)
- Yahoo (link)
- DuckDuckGo (link)
- Baidu (China) (link)
- Yandex (Russia) (link)
- SAPO (Portugal) (link)

- You may ask to be removed from one search engine, not all ☹ (link)

Who are YOU?
Search, and then search again

- Search your name and analyze the results
  - As you saw the search can be improved



- That is typically information to **verify your identity** over a phone call.

True stories

True stories

Portugal

Store credit

- Buying a book for almost no money
- Customer Card
- Right intel: mobile number and full name
- Credito on card

Customer data

- Invoice request with NIF
  - Name
  - Address
- Updating customer data at the counter without documents

True stories

Message from Ella | Without Consent

Deutsche Telekom
Message from Ella | Without Consent

THANK YOU

Q&A