

OSINT – Open Source Intelligence

- In this context:
 - Information that is available publicly or is not heavily restricted to only specific group of people
 - We will focus on the Internet and intelligence found there

- Techniques depends on target:
 - Human or a group of people
 - Organization
 - Website

OPSEC – Operations Security

- Shameful wiki copy/paste:
 - Operations security (OPSEC) is a term originating in U.S. military jargon, as a process that identifies critical information to determine if friendly actions can be observed by enemy intelligence, determines if information obtained by adversaries could be interpreted to be useful to them, and then executes selected measures that eliminate or reduce adversary exploitation of friendly critical information

Dorking – Google is your friend

- Basic dorks that everyone knows but nobody uses them:
 - "site:", "inurl:"
 - Reverse image search

- "site:"
 - Very helpful to narrow down search results to a particular site
 - Or to exclude them...

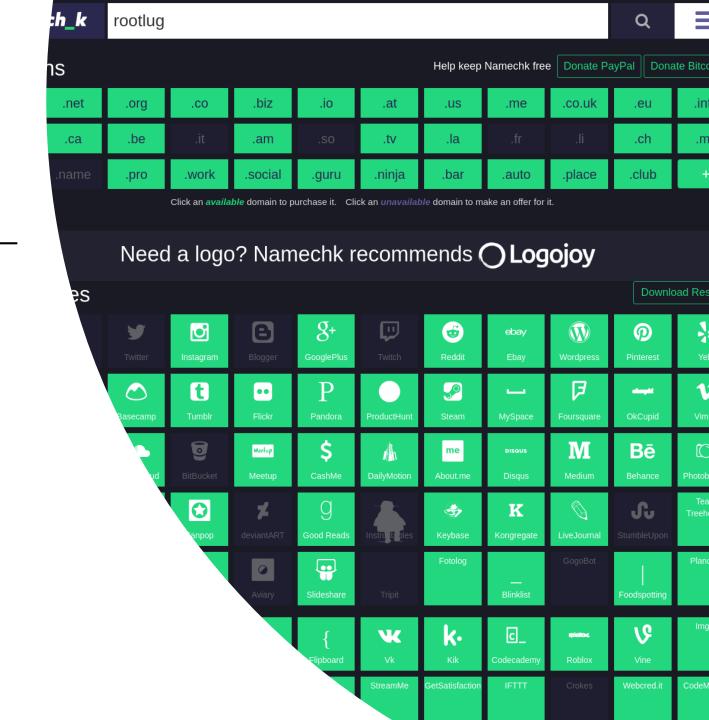
"muni.cz" site:pastebin.com

- https://pastebin.com/i80uCT42
 - LDAP debug logs
- https://pastebin.com/JbKpYx9W
 - [redacted] running sqlmap against "minotaur.fi.muni.cz"
 - ... and successfully found injection via parameter...
- https://pastebin.com/4yvCgWg3
 - CSIRT notification to some Croatia guys doing port scan on MUNI network
- ... + 99% of homeworks for PB162 (Java Introduction)
- What else? Try it ;)



Username checks

- namechk.com
- checkusernames.com



Mailtester.com



SMTP commands are your friends:

- VRFY
- EXPAND

Reverse image search

- Google images: images.google.com
 - Just drag & drop a picture
- TinEye: tineye.com
 - Long time elite
 - Can track original location





Upload or enter Image URL



Searched over **23.3 billion images** in 0.5 seconds. for: avatar.jpg



JPEG, 140x139, 5.6 KB

Best match

Filter by domain/collection



JPEG, 128x128, 3.8 KB Compare Match

superuser.com

Filename: 7dd6cb972d169a35532e95436e2a8347

Found on: questions/tagged/connection

Page crawled on Jul 29, 2014

Found on: questions/tagged/ssh Page crawled on Jul 26, 2014

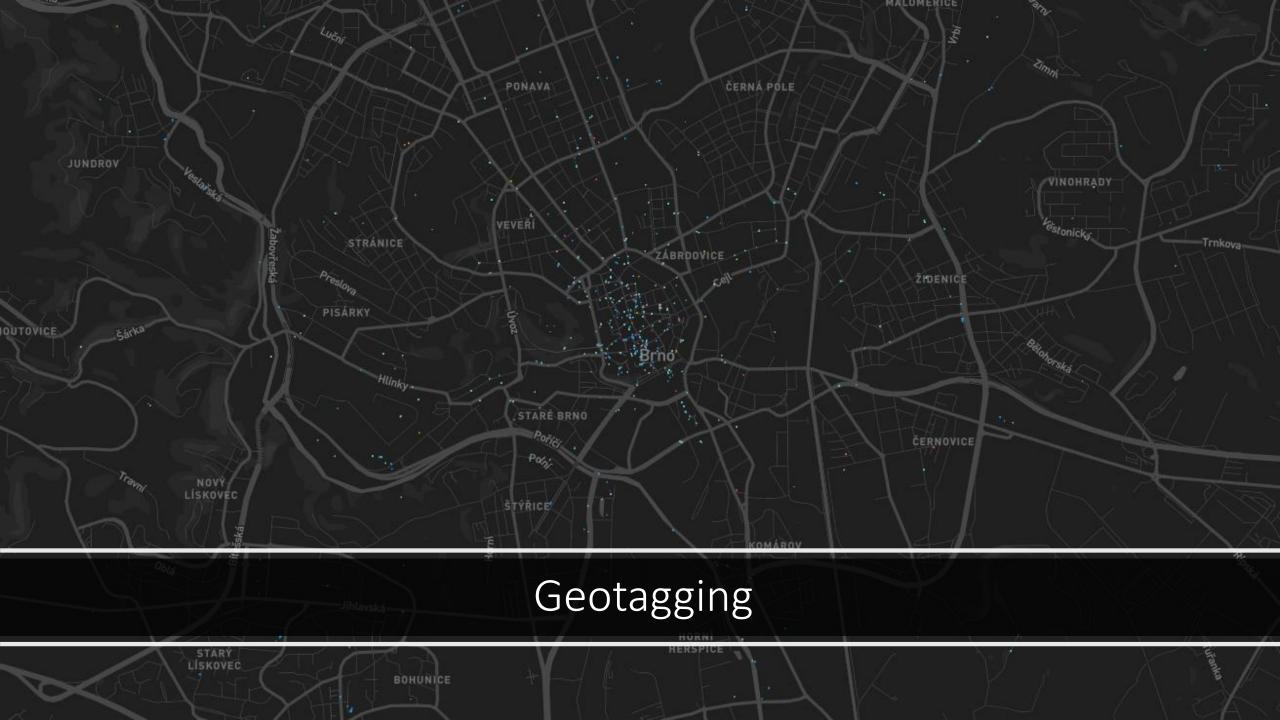
view all 3 matches

Facebook – link picture to a profile

https://scontent-vie11.xx.fbcdn.net/v/t31.08/22291334_1812769128750995_
4485931666373875347_o.jpg?oh=
ecbfb7f4a79f21be8a116eb31a7b45
59&oe=5A446272

• facebook.com/1812769128750995





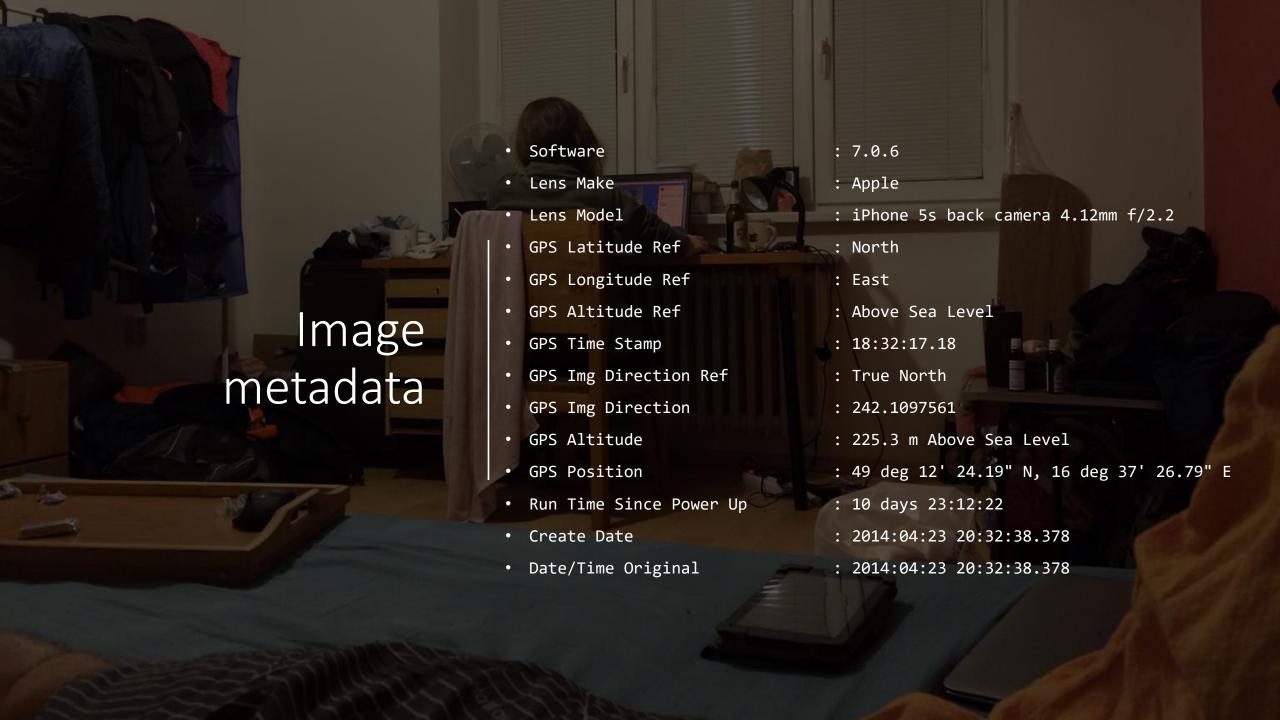
Twitter Geo-location

- Almost every mobile phone has a GPS
 - Most social networks attach GPS coordinate to the message
 - Some are publicly available
- Modern browsers have also basic geo location features
 - No built-in GPS so less accurate
 - Still accurate enough mostly to hundred few meters
- Tools:
 - https://www.mapd.com/demos/tweetmap/
 - Creepy (https://twitter.com/cree py)

Geotagging

- Ooops...
 - https://www.schneier.com/blog/archives/2015/06/us identifies a.html
 - https://www.techlicious.com/blog/isis-terrorist-selfie-bombing/
 - https://twitter.com/ davidthomson/status/559302457357258753





Metadata on social networks

http://www.embeddedmetadata.org/social-media-test-results.php

Social Media site/system	Summary		olays ectly?	Displays 4Cs?		ave A bedd			ownlo bedd	
Dropbox - www.dropbox.com Tested in late 2015	No embedded metadata shown. Embedded metadata only preserved in the downloaded image file but not in the SaveAs. Compared to 2013: also SaveAs files preserved metadata then = decline	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
	No embedded metadata shown. SaveAs file preserved Copyright Notice and Creator in IIM, anything else is stripped off. Surprise: 2 IIM fields contain data generated by Facebook. Compared to 2013: at least 2 fields in IIM survive now = slight improvement	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	IPTC	IPTC IIM	IPTC XMP
Flickr FREE account- www.flickr.com Tested in late 2015	Some embedded metadata fields are shown, all correctly, but not all rights-relevant 4Cs. Embedded metadata is stripped off SaveAs files but preserved in downloaded files. Compared to 2013: plus = any downloaded file preserves metadata now; minus = even high resolution SaveAs file does not preserve it now.	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
	Some embedded metadata fields are shown, all correctly, but not all rights-relevant 4Cs. SaveAs works only for downscaled files - only Exif metadata is preserved. Downloaded files preserved all metadata. Compared to 2013/Google+ photos: SaveAs file gets IIM and XMP metadata stripped off now = decline	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
instagram - instagram.com Tested in late 2015	Tested using the Instagram iOS app v 6.4.1: No embedded metadata fields are shown. No retrieval of image files possible. Compared to 2013: then SaveAs was possible - with stripped off metadata.	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
LINKED IN 2015 - www.linkedin.com Tested in late 2015	No embedded metadata shown. Only embedded Exif fields are preserved in SaveAs files. Compared to 2013: not tested then.	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
	No embedded metadata shown. Embedded metadata preserved in high resolution/original size images, but IIM and XMP metadata is stripped off in downscaled images. Compared to 2013: the loss of IIM and XMP metadata in downscaled images was not tested then.	Exif	IPTC	IPTC	Exif Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
Tumblr - www.tumblr.com Tested in late 2015	No embedded metadata shown. Only the embedded Exif fields are preserved in the SaveAs image files, IIM and XMP metadata is stripped off. Compared to 2013: in SaveAs files all metadata were preserved then = decline	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP
Twitter - www.twitter.com Tested in late 2015	No embedded embedded metadata shown. Only downscaled images are available for SaveAs and the metadata are stripped off such files. Compared to 2013: no change	Exif	IPTC	IPTC	Exif	IPTC IIM	IPTC XMP	Exif	IPTC IIM	IPTC XMP

pipl.com

ntense.feel@gmail

- Search engine specifically created to aggregate social profiles
- Alternative with API access: fullcontact.com



Martin Čarnogurský (intense.feel@gmail.com

SPONSORED:

Contact Info | Email Report

AREER: IT Security Analyst & Developer at Honeywell Tech

PLACES: Slovakia Brno, Czech Republic

Billo, Czecii kepublic

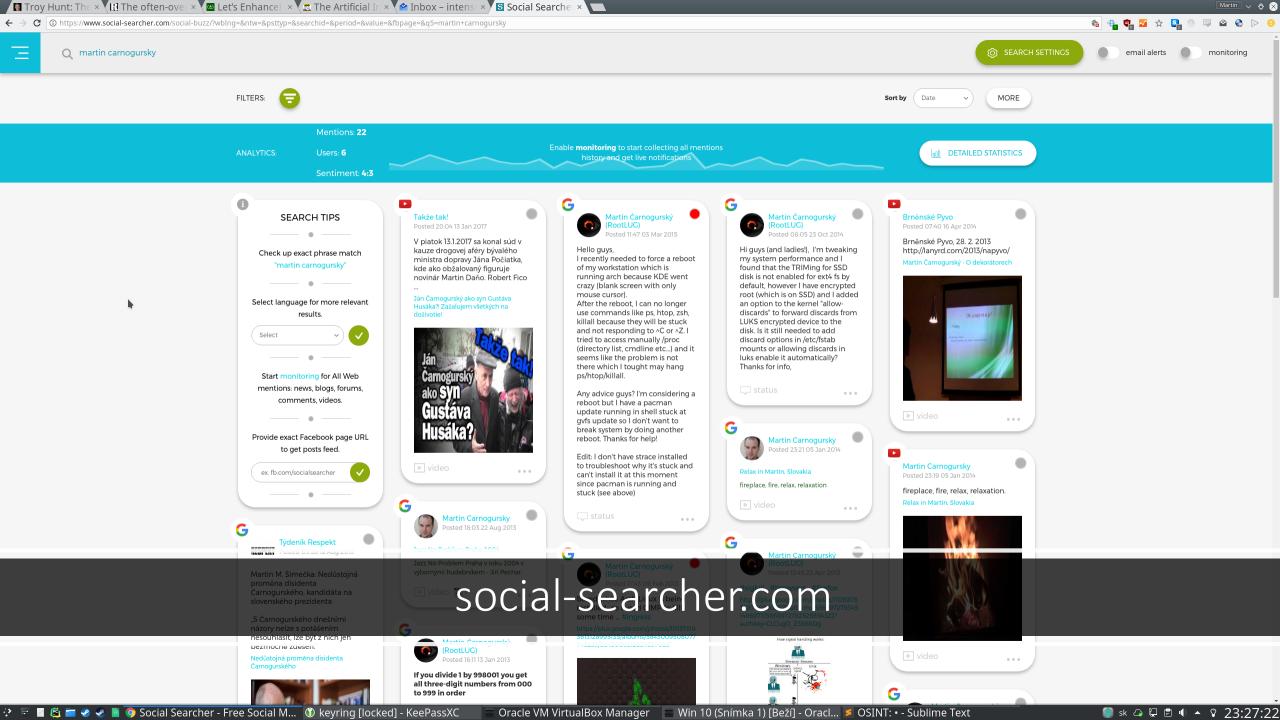


Martin Čarnogurský, Brno, Czech Republic, Slovaki linkedin.com/in/martin-Alarnogurský-4747834a

in Professional Profile & Networking - Linkedin



intense.feel@gmail.com - intense en.gravatar.com/7dd6cb972d169a35532e95436e2a8347 Globally Recognized Avatars - Gravatar



Schrödinger intel

- Information online is created and deleted
- When deleted is it gone?
 - Retention policy
 - "Backups made by big brother" / "3-letter agencies"
 - Someone in this world might still have a copy...
- TL;DR no OSINT?

- The Internet Archive project comes to our rescue!
 - Makes snapshots of online publicly accessible websites / documents
 - Some are made automatic, some manuály requested

Schrödinger intel – use case

- 1st October 2017 Mass shooting in Las Vegas
- His wife had a facebook profile
 - Deleted by her (obviously...)
 - ... so is it gone?
- Nope https://archive.is/kMdJb





Bypassing social media ACL

- Use mobile phones!
 - Android can be run inside emulator

- Still works for a huge number of social networks:
 - Signal, telegram, snapchat ...
 - Twitter accounts with "find by email" disabled
 - Facebook phone number <-> profile pairing

Have I been pwned?

- https://haveibeenpwned.com/
- Track publicly disclosed breaches
- Coinhive hacked:
 - https://www.theregister.co.uk/2017/10/24/c oin hive hacked password reuse/
- Password keyring ... anyone?

(';--have i been pwned?)

Check if you have an account that has been compromised in a data breach



pwned?

Oh no — pwned!

Pwned on 4 breached sites and found no pastes (subscribe to search sensitive breaches)

Notify me when I get pwned



eaches you were pwned in

ach" is an incident where a site's data has been illegally accessed by hackers and then released publicly. Review the f data that were compromised (email addresses, passwords, credit cards etc.) and take appropriate action, such as a passwords.

000webhost: In approximately March 2015, the free web hosting provider <u>000webhost</u> suffered a <u>major data breach</u> that exposed over 13 million customer records. The data was sold and traded before 000webhost was alerted in October. The breach included names, email addresses and plain text passwords.

ompromised data: Email addresses, IP addresses, Names, Passwords

c: In mid-2012, Dropbox suffered a data breach which exposed the stored credentials of tens of their customers. In August 2016, they forced password resets for customers they be at risk. A large volume of data totalling over 68 million records was subsequently included email addresses and salted hashes of passwords (half of them SHA1, half

ail addresses. Passwords

a huge list of email address and password pairs appeared in a be list contained 593 million unique email addresses, many

Linkedin Leakedin

Leakedin.com



Home About

out D

Disclaimer

Abuse

Stories About Data Leaks and Related Stuff

phpMyAdmin SQL Dump

Posted by PasteMon on November 11th, 2016

149 voted 🕜 vote

Detected 1 occurrence(s) of '^- phpMyAdmin SQL Dump':

-- phpMyAdmin SQL Dump
-- version 4.6.4
-- https://www.phpmyadmin.net/
-- Đ૪Đ¾ÑÑ,: localhost:8889
-- Ď∀Đ¾ÑÑ,: localhost:8889
-- Ď∀Đ¾ÑÑ,: localhost:8889
-- Ď∀Đ¼ÑÑ,: localhost:8889
-- Ď∀Đ¼ÑÑĐ¾Đ-Đ'ĐĐĐÑ: ĐĐ¾Ñ 11 2016 Đ²., 10:08
-- Ď∀Đ¼ÑĒÑĐ,Ñ ĎĐ¼ÑĒĐ²ĐµÑĒа: 5.6.28
-- ϵÑĒÑĐ,Ñ PHP: 7.0.10

-- ŊL_MODE -- "NO_AUTO_VALUE_ON_ZERO";
-- ¬NO_AUTO_VALUE_ON_ZERO";
-- ¬NO_AUTO_VALUE_ON_ZERO";
-- ¬NO_AUTO_VALUE_ON_ZERO";
-- ¬NO_AUTO_VALUE_ON_ZERO";

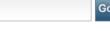
stebin.com/raw.php?i=CZRc09n1

steMon Tags: pastebin.com, phpMyAdmin SQL Dump Comments Off on phpMyAdmin SQL Dump

with Interesting Data

1th, 2016

`qin|password|email|uid) \|':





TOP-5 LEAKS

VISA Credit Card (424)
Simple Password (278)
MasterCard Credit Card (274)
Tracking Number (207)
Email Addresses List (203)

Apache Configuration Directive API

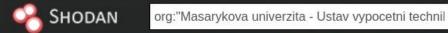
TAG CLOUD

Key Certificate Cisco Configuration with Enabled Password Command Line Password CVE Reference Default Credentials Default Security Password Dropbox Shared File E-mail Headers Email/Password Dump Email Addresses List Exploit Hacked Data Hacking Notification HTTP POST HTTP Proxies List IP Addresses List Leaked Data MD5/SHA1 Hash MD5/SHA1 Hashes MySQL Access Control MySQL Connect Information MySQL Table with Email/Password Dump MySQL Table with Interesting Data MySQL Table with Passwords MySQL URI Nmap

Scan Report Obfuscated

~d_date





Images

Share Search

Maps

Exploits

TOTAL RESULTS

Windows 8

OpenSSH

TOP PRODUCTS

Explore

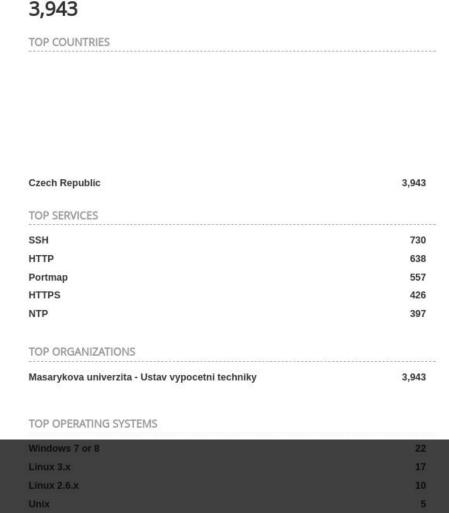
Download Results

re Downloads

Reports

Enterprise Access

Contact Us



RepearExplorer Galaxy

147.251,253.166

Masarykova univerzita - Ustav vypocetni techniky

Ⅲ Create Report

Added on 2017-11-01 22:04:55 GMT

Czech Republic, Brno
Details

SSL Certificate

Issued By:

|- Common Name: TERENA SSL CA 3

|- Organization: TERENA

Issued To:

|- Common Name: galaxy-elixir.cerit-

SC.CZ

|- Organization: Masarykova

univerzita

Supported SSL Versions

TLSv1, TLSv1.1, TLSv1.2

Diffie-Hellman Parameters

Fingerprint: RFC3526/Oakley Group

14

HTTP/1.1 200 OK

Date: Wed, 01 Nov 2017 22:04:55 GMT Server: Apache/2.4.10 (Debian)

Last-Modified: Tue, 26 Sep 2017 08:38:20 GMT

ETag: "1383-55a1398f0aa16"

Accept-Ranges: bytes Content-Length: 4995 Vary: Accept-Encoding

Cache-Control: no-cache, no-store, must-revalidate

Pragma: no-cache

...

217.69.96.68

nimon1 ics muni cz

Masarykova univerzita - Ustav vypocetni techniky

Added on 2017-11-01 21:56:58 GMT

Czech Republic

Details

SSH-2.0-OpenSSH_5.3 Key type: ssh-rsa

Key: AAAAB3NzaC1yc2EAAAABIwAAAQEA3oGWXsB9WzzNKaG2V6b9qYi1CyybYv+FCwv09ozCDk/CtNeL 6nK+RyVhKUulfy57riAY4eggXsEw4M6l+maUWy8/iuuw7ycjS1drj3Zas96Af63/IGBN4V0Drxtx fny+tKhj2QMi3lriwddD8R5SgH2uJGgce/iIWSf3vN05tJbrZiYwSSwALeHEJubJ3Kq+JimJjmKq

oJkeDPqRE21tBLp60A8gS66...

Masaryke Shodan.io

Czech Republic, Brnd

Details

3

505

SSH-2.0-OpenSSH_6.6.1p1 Ubuntu-2ubuntu2.

key type: ssn-rsa

Key: AAAAB3NzaC1yc2EAAAADAQABAAABAQC7hlOcVhUAGJn+D1GN/O59B2UMlwnYH35peZe6R73rB49B

VZOQ/WNIYBKRQVDAOZ0IIMJRUES8/3/JJUDDSSKUM9DDIYOX/ENWFP/R3VYLK0XJKJAEOEFRVY6K C5PphSjTRjf1Snq92GeheICxAw64DcOMBhe+3cg3mX/zylI+MRUW06YV5wdx1qv18AbzqH5Kld1B

C...

Scans.io DNS set: 250G of (OSINT) porn

- https://scans.io/study/sonar.fdns v2
- DNS ANY responses aggregated from full IPv4 scan and other sets
- Around 250G uncompressed
- JSON data per line
- Pro tip: use jq for advanced parsing/filtering

```
A Hydra scansio → zcat 20170908-fdns.json.gz|head
{"timestamp":"1504976471","name":"reseauocoz.cluster007.ovh.net","type":"cname","value":"cluster007.ovh.net"}
{"timestamp":"1504937052","name":"ghs.googlehosted.com","type":"cname","value":"googlehosted.l.googleusercontent.com"}
{"timestamp":"1504925049","name":"isutility.web9.hubspot.com","type":"cname","value":"a1049.b.akamai.net"}
{"timestamp":"1504927264","name":"sendv54sxu8f12g.ihance.net","type":"a","value":"52.52.146.241"}
{"timestamp":"1504927264","name":"sendv54sxu8f12g.ihance.net","type":"a","value":"54.241.184.45"}
{"timestamp":"1504975181","name":"shops.myshopify.com","type":"cname","value":"shops.myshopify.com"}
{"timestamp":"1504976736","name":"www.triblocal.com.s3-website-us-east-1.amazonaws.com","type":"cname","value":"s3-website-us-east-1.amazonaws.com"}
{"timestamp":"1504920966","name":"*.2925.com.dycdn.com","type":"a","value":"121.201.116.57"}
{"timestamp":"1504870958","name":"*.2bask.com","type":"a","value":"176.31.246.156"}
{"timestamp":"1504974204","name":"*.5thlegdata.com","type":"a","value":"199.34.228.100"}
```

Subdomain mapping

- MUNI.cz : 31225 domains! (unfiltered)
- Tools:
 - Sublist3r
 - SDBF (Smart DNS brute forcer)
 - Massresolver / massdns
 - Scans.io FDNS dataset

crtsh.com

Certificate transparency project

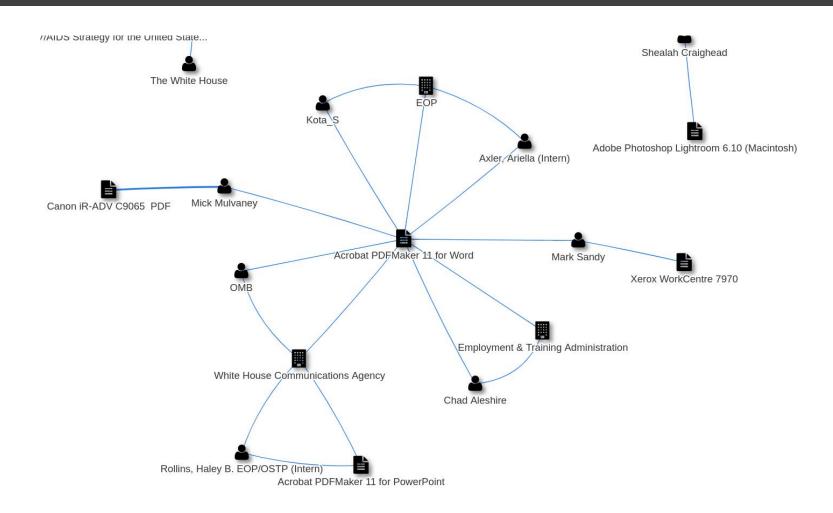
ore Identity	Issuer Name
0-09 acrab.ics.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
0-09 collector-itoa.csirt.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
0-09 collector-test.csirt.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
i-29 infinity.ncbr.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
0-06 proxy-west-life.ics.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-03 cp-test.ics.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
I-05 oidc.ics.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
0-01 took95.ics.muni.cz 0-27 scienceslam.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3 C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
0-30 tutor.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-29 092.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-29 006.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-29 057.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-29 030.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
9-29 36.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-29 52.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
0-29 81.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
-29 78.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
-29 00.minotaur.fi.muni.cz 29 077.minotaur.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
27 crocs.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3 C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
'5 theia.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
4 stream4flow.ics.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
minos.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
gamu.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
www.gamu.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
ollector2.csirt.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
ollector.csirt.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
ia.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
a.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
\.fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
fi.muni.cz	C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3 C=US, O=Let's Encrypt, CN=Let's Encrypt Authority X3
r2.csirt.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
csirt.muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
\uni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
muni.cz	C=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
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	=NL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	VL, ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	ST=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	*T=Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3 *Noord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	nord-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	'1-Holland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	Volland, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	"and, L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	1 L=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	=Amsterdam, O=TERENA, CN=TERENA SSL CA 3
	nsterdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
	rdam, O=TERENA, CN=TERENA SSL High Assurance CA 3
	m, O=TERENA, CN=TERENA SSL High Assurance CA 3
	⊃=TERENA, CN=TERENA SSL High Assurance CA 3

Organizations: file search

- "filetype:" dork
 - "site:whitehouse.gov filetype:pdf"
- Apart from content, file metadata is a very valuable intelligence
 - Software being used
 - Usernames
 - Emails
 - Internal file shares...

More awesome reading: https://blog.sweepatic.com/metadata-hackers-best-friend/

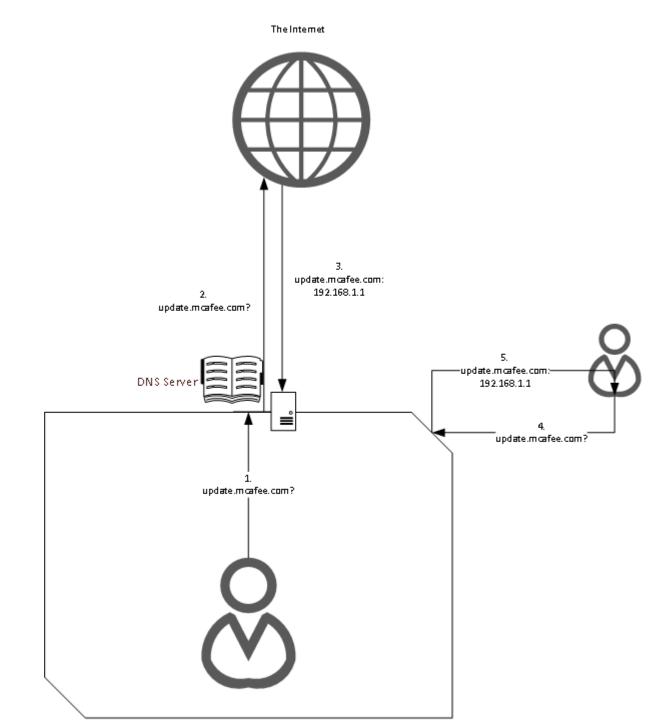
Metadata analysis



CIA Director: "We kill people based on metadata" https://goo.gl/BqLMWb

DNS Cache snooping

- Abuse DNS cache leaks:
 - nslookup -norecurse somedomain dns_server
 - dig @dns_server somedomain A +norecurse



Anti-OSINT: Welcome to the dark side

Delete	Delete information • Relative, can be sometimes recovered as shown earlier
Understand	Understand the process of collecting OSINT and break/manipulate it
Create	Create miss information
Track	Track OPSEC leaks

Anti-OSINT: Delete

- Self explanatory
 - Or restrict who have an access to your information

- Europe is your friend Right to be forgotten
 - Request removal of your information
 - https://www.google.com/webmasters/tools/legal-removal-request?complaint type=rtbf

Anti-OSINT: Understand

• Workflow:

- Take an information (for example e-mail) and reverse search to expand collected intel
- Combine & repeat

Solution?

- Don't use the same e-mail everywhere
 - WTF? Do I need new email for every website where I register?
 - Solution: e-mail proxies
 - Blur by Abine (https://dnt.abine.com)

Anti-OSINT: Create

- Create conflicting information
 - Different birth dates
 - Different residencies
 - Information that lead to someone else

Anti-OSINT: Track

- Force OPSEC leaks:
 - URL shorteners: can be used to track who opened the URL
 - Friend requests
 - Canary tokens
- Abusing big brother: Google adwords
 - Trigger Advertisement when someone search for you
 - Provides demographic information about triggers
 - Can be applied to other (social) advertisement networks

OPEN SOURCE INTELLIGENCE TECHNIQUES

RESOURCES FOR SEARCHING AND ANALYZING ONLINE INFORMATION FIFTH EDITION

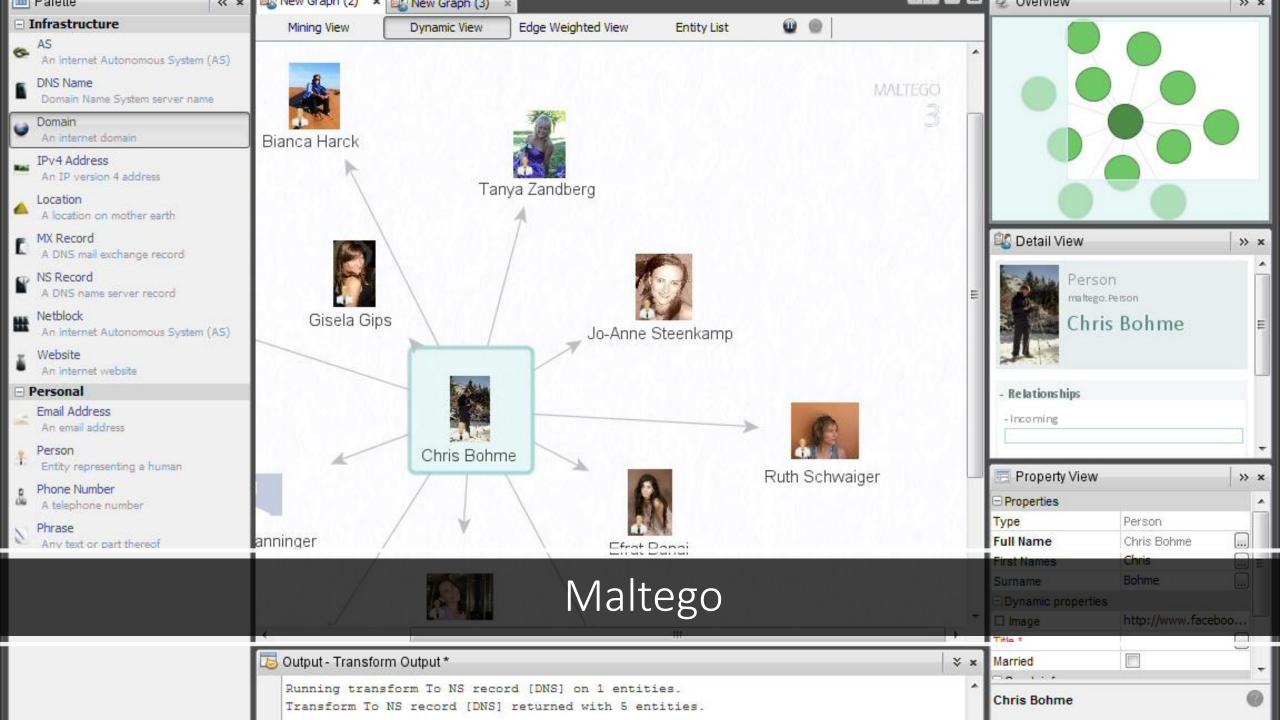


MICHAEL BAZZELL

Resources

- Grugq OSINT & OPSEC guru
 - https://medium.com/@thegrugq
- Krypt3ia blog & twitter
 - https://krypt3ia.wordpress.com/
- Michael Bazzell
 - https://inteltechniques.com/menu.html

Appendix: Tools



12	44.439716 26.14863	a1.booking.com	geocode
13	44.439716 26.14863	b1.booking.com	geocode
14	44.439716 26.14863	b2.booking.com	geocode
15	44.439716 26.14863	c.booking.com	geocode
16	44.439716 26.14863	cs.booking.com	geocode
17	44.439716 26.14863	/ wiki.booking.com	geocode
18	44.439716 26.14863	s1.booking.com	geocode
19	44.439716 26.14863	ssl.booking.com	geocode
/ 10	44.439716 26.14863	u.booking.com	geocode
/ 11	44.439716 26.14863	/ v.booking.com	geocode
1 12	44.439716 26.14863	w1.booking.com	geocode
/ 13	44.439716 26.14863	w2.booking.com	geocode
1 14	44.439716 26.14863	w3.booking.com	geocode
/ 15	44.439716 26.14863	Strada Vatra Luminoasă 108, Bucharest, Romania	reverse_geocode

15 rows returned
[recon-ng][booking.com][reverse_geocode] > clear
Command: clear

[recon-ng][booking.com][reverse_geocode] > show hosts

/ round	host] ip_address	/ region	country	atitude	longitude	modul
1 83	a1.booking.com	5.57.16.144	Slough, England	United Kingdom	l 51.5095	I -0.59541	/ resolve
1 73	admin.booking.com	/ 5.57.17.51	Amsterdam, Noord-Holland			1 4.88969	/ resolve
1 84	admin.c.booking.com	5.57.17.51	Amsterdam, Noord-Holland			1 4.88969	/ resolve
1 86	, autodiscover.booking.com	5.57.20.145		United Kingdom	- All the Armed Ar	1 0.11261	/ resolve
/ 85	autodiscover.itspublic.booking.com	5.57.20.145		United Kingdom	52.1721	/ 0.11261	/ resolve
1 87	b1.booking.com	5.57.18.140		United Kingdom	51.5095	1 -0.59541	/ resolve
/ 88	b2.booking.com	5.57.18.141	Slough, England	United Kingdom	51.5095	1 -0.59541	/ resolve
1 78	barcelo.partner.bookina.com	1 5.57.16.205	I Slough, England	United Kingdom	1 51 5095	1 -0.59541	I resolve
70	blog.booking.com	/ 87.233.215.183	Amsterdam, Noord-Holland	Nether lands	52.374	4.88969	resolve
89	bob.booking.com	148.251.235.184	Nuremberg, Bayern	Germany	49.4478	/ 11.0683	/ resolve
150	bookadmin.booking.com	Racon_n	Clough, England	United Kingdom	51.5095	-0.59541	reverse_re
	bookingbutton.booking.com		Slough, England	United Kingdom	51.5095	-0.59541	resolve
1 90	bugs.booking.com	/ 5.57.16.28	Slough, England	United Kingdom	51.5095	-0.59541	resolve
91	i c.booking.com	5.57.16.220	I Slough, England	United Kingdom	51.5095	1 -0.59541	resolve
1 120	/ client.perspagina.nl	54.229.233.23	Dublin, Dublin City	Ireland	53.344	-6.26719	/ resolve
121	/ client.perspagina.nl	176.34.142.255	Dublin, Dublin City	Ireland	53.344	-6.26719	/ resolve
/ 118	/ client.presspage.com	176.34.142.255	Dublin, Dublin City	Ireland	53.344	-6.26719	resolve
119	client.presspage.com	54.229.233.23	Dublin, Dublin City	Ireland	53.344	1 -6.26719	/ resolve