

# DATA MINING TOR, SOCIAL NETWORKS, OSINT WITH AIL PROJECT

E.102

CIRCL COMPUTER INCIDENT RESPONSE CENTER LUXEMBOURG

MISP PROJECT

<https://www.misp-project.org/>

MARCH 23, 2022



# INTRODUCTION

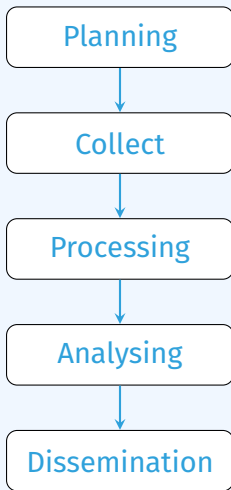
- **Deep Web** is the part of World Wide Web not indexed or directly accessible by standard web search-engines;
- This can be content hidden from **crawlers** by requiring a specific access and this can includes private social media, password-protected forums or content protected by different measures such as paywalls or specific security interface to access the information;
- A large portion of content accessible via Internet is part of the deep web<sup>1</sup>.

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<sup>1</sup>also called invisible web, hidden web or non-indexed web

- **Darknet** is an overlay network running on top of Internet requiring specific software to access the network and its services;
- Tor, I2P and Freenet are the most commonly used ones. Many are used for hidden services access and some for proxy access to the Internet;
- There are **legitimate use-cases** for such network but also many **illegal or criminal usage**.

# LIFECYCLE OF COLLECTION AND ANALYSIS



# COLLECTING, PROCESSING AND ANALYSING CONTENT - WEB PAGES

- Building a search engine on the web is a challenging task because:
  - ▶ it has to crawl webpages,
  - ▶ it has to make sense of **unstructured data**,
  - ▶ it has to **index** these data,
  - ▶ it has to provide a way to retrieve data and structure data (e.g. correlation).
- Doing so on Tor is even more challenging because:
  - ▶ services don't always want to be found,
  - ▶ parts of the dataset have to be discarded.
- in each case, it requires a lot of bandwidth, storage and computing power.

# COLLECTING, PROCESSING AND ANALYSING CONTENT - STRUCTURED DATA

- Some data are structured and are easy to process:
  - ▶ metadata!
  - ▶ API responses.
- Some even provide cryptographic evidences:
  - ▶ authentication mechanisms between peers,
  - ▶ OpenPGP can leak a lot of metadata
    - key ids,
    - subject of email in thunderbird,
  - ▶ Bitcoin's Blockchain is public,
  - ▶ pivoting on these data with external sources yields interesting results.

# **AIL DESIGN OBJECTIVES**



# OBJECTIVES OF THE SESSION

- Show how to use and extend an open source tool to monitor web pages, pastes, forums and hidden services
- Explain challenges and the design of the AIL open source framework
- Review different **collection mechanisms** and **sources**
- Learn how to create new modules
- Learn how to use, install and start AIL
- **Supporting investigation using the AIL framework** and including it in cyber threat intelligence lifecycle

# AIL FRAMEWORK

# FROM A REQUIREMENT TO A SOLUTION: AIL FRAMEWORK

## History:

- AIL initially started as an **internship project** (2014) to evaluate the feasibility to automate the analysis of (un)structured information to find leaks.
- In 2019, AIL framework is an **open source software** in Python. The software is actively used (and maintained) by CIRCL and many organisations.
- In 2020, AIL framework is now a complete project called **ail project**<sup>2</sup>.

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<sup>2</sup><https://github.com/ail-project/>

# CAPABILITIES OVERVIEW

- **Check** if mail/password/other sensitive information (terms tracked) leaked
- **Detect** reconnaissance of your infrastructure
- **Search** for leaks inside an archive
- **Monitor** and crawl websites

# SUPPORT CERT/CSIRTs AND LAW ENFORCEMENT ACTIVITIES

- Proactive investigation: leaks detection
  - ▶ List of emails and passwords
  - ▶ Leaked database
  - ▶ AWS Keys
  - ▶ Credit-cards
  - ▶ PGP private keys
  - ▶ Certificate private keys
- Feed Passive DNS or any passive collection system
- CVE and PoC of vulnerabilities most used by attackers

# SUPPORT CERT/CSIRTs AND LAW ENFORCEMENT ACTIVITIES

- Website monitoring
  - ▶ monitor booters
  - ▶ Detect encoded exploits (WebShell, malware encoded in Base64...)
  - ▶ SQL injections
- Automatic and manual submission to threat sharing and incident response platforms
  - ▶ MISP
  - ▶ TheHive
- Term/Regex/Yara monitoring for local companies/government

- Example: <https://gist.github.com/>
  - ▶ Easily storing and sharing text online
  - ▶ Used by programmers and legitimate users
    - Source code & information about configurations



# SOURCES OF LEAKS: PASTE MONITORING

- Example: <https://gist.github.com/>
  - ▶ Easily storing and sharing text online
  - ▶ Used by programmers and legitimate users
    - Source code & information about configurations
- Abused by attackers to store:
  - ▶ List of vulnerable/compromised sites
  - ▶ Software vulnerabilities (e.g. exploits)
  - ▶ Database dumps
    - User data
    - Credentials
    - Credit card details
  - ▶ More and more ...

# WHY SO MANY LEAKS?

- Economical interests (e.g. Adversaries promoting services)
- Ransom model (e.g. To publicly pressure the victims)
- Political motives (e.g. Adversaries showing off)
- Collaboration (e.g. Criminals need to collaborate)
- Operational infrastructure (e.g. malware exfiltrating information on a pastie website)
- Mistakes and errors

# ARE LEAKS FREQUENT?

Yes!

and we have to deal with this as a CSIRT.

- **Contacting companies or organisations** who did specific accidental leaks
- **Discussing with media** about specific case of leaks and how to make it more practical/factual for everyone
- Evaluating the economical market for cyber criminals (e.g. DDoS booters<sup>3</sup> or reselling personal information - reality versus media coverage)
- Analysing collateral effects of malware, software vulnerabilities or exfiltration

→ And it's important to detect them automatically.

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<sup>3</sup><https://github.com/D4-project/>

## ■ Monitored paste sites: 27

- ▶ *gist.github.com*
- ▶ *ideone.com*
- ▶ ...

	2016	2017	08.2018
Collected pastes	18,565,124	19,145,300	11,591,987
Incidents	244	266	208

**Table:** Pastes collected and incident<sup>4</sup> raised by CIRCL

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<sup>4</sup><http://www.circl.lu/pub/tr-46>

# CURRENT CAPABILITIES

- Extending AIL to add a new **analysis module** can be done in 50 lines of Python
- The framework **supports multi-processors/cores by default**. Any analysis module can be started multiple times to support faster processing during peak times or bulk import
- **Multiple** concurrent **data input**
- Tor Crawler (handle cookies authentication)

# AIL FRAMEWORK: CURRENT FEATURES

- Extracting **credit cards numbers, credentials, phone numbers, ...**
- Extracting and validating potential **hostnames**
- Keeps track of **duplicates**
- Submission to threat sharing and incident response platform (**MISP** and **TheHive**)
- **Full-text indexer** to index unstructured information
- **Tagging** for classification and searches
- Terms, sets, regex and YARA **tracking and occurrences**
- Archives, files and raw **submission** from the UI
- PGP, Cryptocurrency, Decoded (Base64, ...) and username Correlation
- And many more

- Search and monitor specific keywords/patterns
  - ▶ Automatic Tagging
  - ▶ Email Notifications
- Track Term
  - ▶ ddos
- Track Set
  - ▶ booter,ddos,stresser;2
- Track Regex
  - ▶ circl\.lu
- YARA rules
  - ▶ <https://github.com/ail-project/ail-yara-rules>

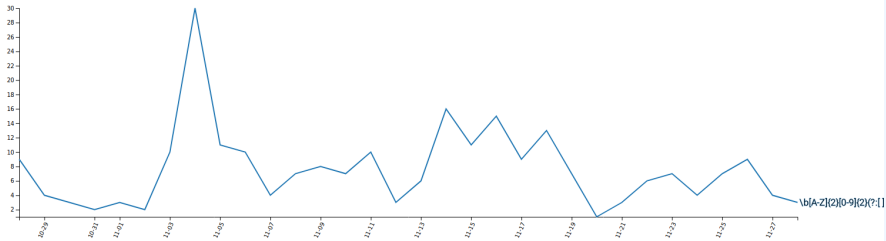


# TERMS TRACKER

82a87a6a-88f1-4ab1-ba53-1bf15211b4b8



Type	Tracker	Date added	Level	Created by	First seen	Last seen	Tags	Email
regex	\b[A-Z](2)[0-9](2)(?-[ ]?[0-9](4))(4)(?[ ]?[0-9](3))(?[ ]?[0-9](1,2))?b	2019/09/12	1	admin@admin.test	2018/08/31	2019/11/28		



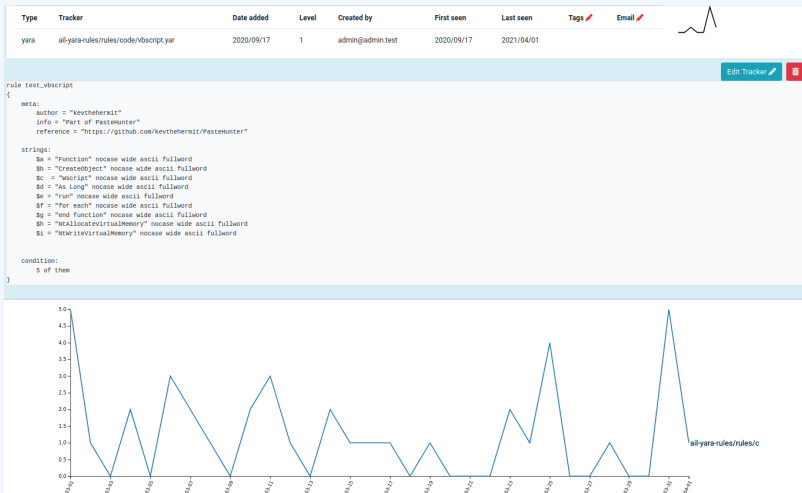
yyyy-mm-dd




yyyy-mm-dd


Search Tracked Items


# YARA TRACKER





## ■ Create and test your own tracker



 Tags (optional, space separated)

 E-Mails Notification (optional, space separated)

 Tracker Description (optional)

 – Select a tracker type –

 Add Tracker

  Show tracker to all Users

## ■ Attacker also share informations

### ■ Recon tools detected: 94

- ▶ sqlmap
- ▶ dnscan
- ▶ whois
- ▶ msfconsole (metasploit)
- ▶ dnmap
- ▶ nmap
- ▶ ...

# RECON AND INTELLIGENCE GATHERING TOOLS

```
#####
=====
Hostname      www.pabloquintanilla.cl      ISP      Wix.com Ltd.
Continent     North America              Flag
US
Country       United States              Country Code    US
Region Unknown              Local time     19 Nov 2019 07:59 CST
City Unknown              Postal Code    Unknown
IP Address    185.230.60.195             Latitude       37.751
                                   Longitude     -97.822
=====
#####
> www.pabloquintanilla.cl
Server:       38.132.106.139
Address:      38.132.106.139#53

Non-authoritative answer:
www.pabloquintanilla.cl canonical name = www192.wixdns.net.
www192.wixdns.net      canonical name = balancer.wixdns.net.
Name: balancer.wixdns.net
Address: 185.230.60.211
>
#####
Domain name: pabloquintanilla.cl
Registrant name: SERGIO TORO
Registrant organisation:
Registrar name: NIC Chile
Registrar URL: https://www.nic.cl
Creation date: 2018-11-21 14:34:34 CLST
```

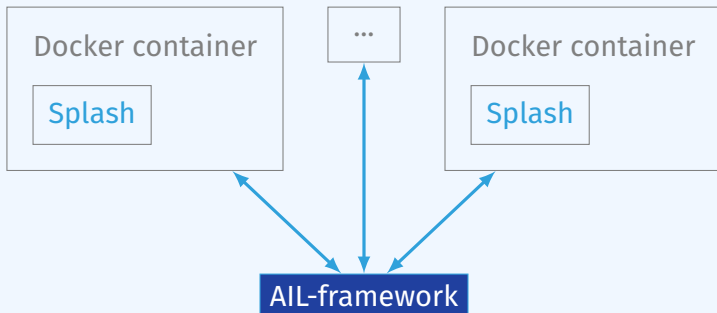
- Search for encoded strings
  - ▶ Base64
  - ▶ Hexadecimal
  - ▶ Binary
- Guess Mime-type
- Correlate paste with decoded items

# DECODER:

estimated type	hash	first seen	last seen	nb item	size	Virus Total	Sparkline
application/x-dosexec	<a href="#">c11c2be8d9ba4e86c8effaa411aa6b867ba75abe</a>	2019/11/28	2019/11/28	1	191	<a href="#">Send this file to VT</a>	
application/x-dosexec	<a href="#">a50cba731204ecce193b40178399a250b5ce6f67</a>	2019/11/28	2019/11/28	1	32768	<a href="#">Send this file to VT</a>	
application/x-dosexec	<a href="#">cc5f2f0da71f443ec12ae1b3cb6ab8bd80f22c4</a>	2019/11/28	2019/11/28	1	203	<a href="#">Send this file to VT</a>	
application/x-dosexec	<a href="#">eed67e8fa9cb9a43fea21ae653983a8e0a174f63</a>	2019/11/26	2019/11/28	6	83	<a href="#">Send this file to VT</a>	

# CRAWLER

- Crawlers are used to navigate on regular website as well as .onion addresses (via automatic extraction of urls or manual submission)
- Splash ("scriptable" browser) is rendering the pages (including javascript) and produce screenshots (HAR archive too)





## How a domain is crawled by default

1. Fetch the first url
2. Render javascript (webkit browser)
3. Extract all urls
4. Filter url: keep all url of this domain
5. crawl next url (max depth = 1)

# CRAWLER: COOKIEJAR

Use your cookies to login and bypass captcha

Edit Cookiejar



Description	Date	UUID	User
3thxemke2x7hcibu.onion	2020/03/31	90674deb-38fb-4eba-a661-18899ccb3841	admin@admin.test

Edit Description

Add Cookies

```
{
  "domain": ".3thxemke2x7hcibu.onion",
  "name": "mybb[lastactive]",
  "path": "/forum/",
  "value": "1583829465"
}
```

```
{
  "domain": ".3thxemke2x7hcibu.onion",
  "name": "loginattempts",
  "path": "/forum/",
  "value": "1"
}
```

```
{
  "domain": ".3thxemke2x7hcibu.onion",
  "name": "sid",
  "path": "/forum/",
  "value": "047ab0cd97ff5bcc77edb6a"
}
```

```
{
  "name": "remember_token",
  "value": "12158cddd1511d74d341f23"
}
```

```
{
  "domain": ".3thxemke2x7hcibu.onion",
  "name": "mybb[announcements]",
  "path": "/forum/",
  "value": "0"
}
```

# CRAWLER: COOKIEJAR

3thxemke2x7hcibu.onion :



First Seen Last Check Ports

2020/03/09 2020/03/30 [80]

infoleak:automatic-detection="onion"

infoleak:automatic-detection="base64"



manual

Show Domain Correlations 139

Add to MISP Export

Decoded 1

Screenshot 138

Crawled Items

Date: 2020/03/23 - 13:10:40 PORT: 80

Show 10 entries

Search:

Crawled Pastes



Full resolution

Shere Khan

Portal Search Member List Help

Welcome back, zulepori. You last visited: 03-20-2020, 01:35 PM Log Out

User CP

View New Posts

View Today's Posts

Private Messages (unread: 2, Total: 0)

You have 2 unread private messages. The most recent is from Jack3 titled KEY FOR PRIVATE SECTIONS

Shere Khan - Official Forum

Private Messages

Home

User CP Home

Messenger

Compose

Inbox

Unread

Read Items

Receipts

Trash Can

Tracking

Sort Folders

Your Profile

Set Profile

Change Password

Change Email

Change Avatar

Change Signature

Sort Options

Miscellaneous

Group Memberships

Buddy/Ignore List

Manage Attachments

Saved Drafts

Subscribed Threads

Forum Subscriptions

View Profile

Inbox | Compose Message | Manage Folders | Empty Folders | Download Messages 1% of PM space used.

Inbox Enter Keywords Search PMs (Advanced Search)

Message Title Sender Date/Time Sent (asc)

KEY FOR PRIVATE SECTIONS Jack3 3 hours ago

Verification Jack3 03-09-2020, 11:55 AM

Move To Inbox or Delete the selected messages

Jump to Folder: Inbox Get

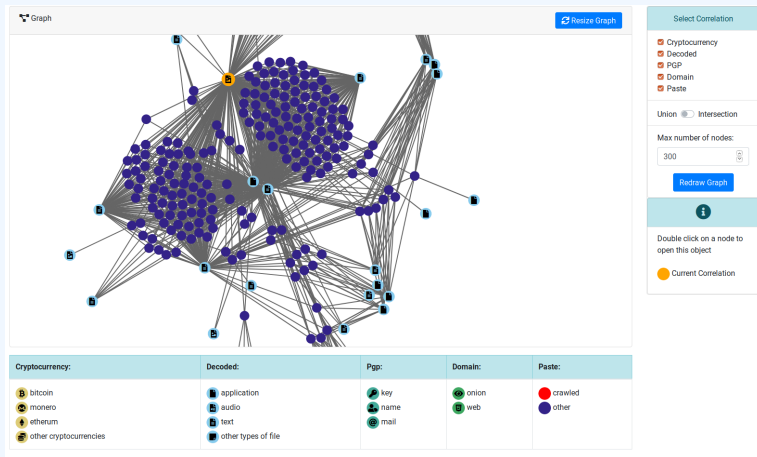
Forum Team Contact Us Shere Khan - Hacking group Return to Top Lite (Archives) Mode Mark all forums read RSS Syndication

Powered by MyBB, © 2002-2020 MyBB Group.

Current time: 03-23-2020, 01:51 PM

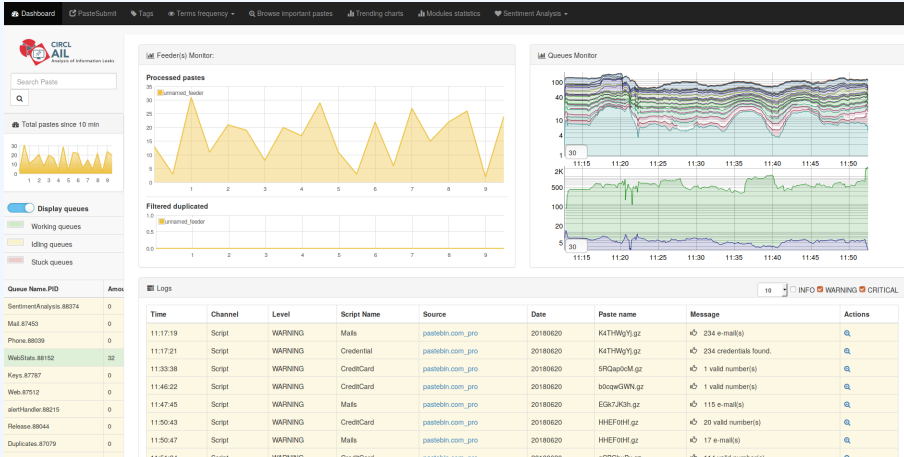
<http://3thxemke2x7hcibu.onion/forum/private.php>

# CORRELATIONS AND RELATIONSHIP



**LIVE DEMO!**

# EXAMPLE: DASHBOARD



# EXAMPLE: TEXT SEARCH

**Q 1 Results for "gandcrab"**

**Index:** 2019-05-20 - 1365.328591 Mb

Show 10 entries

Search:

#	Path	Date	Size (Kb)	Action
0	<a href="#">crawled/2019/05/17/vs5e7g245s3pxjoc.onion374a1a89-4b16-4c3f-a460-4be8898da140</a> <a href="#">crawler</a> <a href="#">cve</a>	2019/05/17	15.44	<a href="#">i</a> <a href="#">Q</a>

Showing 1 to 1 of 1 entries

Previous 1 Next

**Totalling 1 results related to paste content**

# EXAMPLE: ITEMS METADATA (1)


infoleak:automatic-detection="phone-number"

infoleak:automatic-detection="mail"

infoleak:automatic-detection="base64"

+

Date	Source	Encoding	Language	Size (Kb)	Mime	Number of lines	Max line length
04/05/2019	pastebin.com_pro	text/plain	None	6.12	text/plain	1650	100

Create  Event

Duplicate list:

Show  entries

Search:

Hash type	Paste info	Date	Path	Action
[f]ish	Similarity: [19]%	2019-04-13	archive/pastebin.com_pro/2019/04/13/EbMVR87S.gz	
[f]ish	Similarity: [10]%	2019-04-11	archive/pastebin.com_pro/2019/04/11/2X5HRvix.gz	
[f]ish	Similarity: [23]%	2019-04-25	archive/pastebin.com_pro/2019/04/25/TS2b6M4c.gz	
[f]ish	Similarity: [14]%	2019-04-17	archive/pastebin.com_pro/2019/04/17/CuS93H7K.gz	
[f]ish	Similarity: [23]%	2019-04-20	archive/pastebin.com_pro/2019/04/20/AQd0qGVQ.gz	
[f]ish	Similarity: [20]%	2019-04-20	archive/pastebin.com_pro/2019/04/20/6DDc13b8.gz	
[f]ish	Similarity: [21]%	2019-05-05	alerts/pastebin.com_pro/2019/05/05/X8nJLzda.gz	
[f]ish	Similarity: [7]%	2019-04-13	archive/pastebin.com_pro/2019/04/13/Lyp4FVWW.gz	

Showing 1 to 8 of 8 entries

Previous **1** Next







# EXAMPLE: ITEMS METADATA (2)

## Hash files:

Show  entries



Search:

estimated type	hash	saved_path	Virus Total
 application/octet-stream	3975f058bb0d445b60c10a11f1a5d88e19e4fa84 (1)	HASHS/application/octet-stream /39/3975f058bb0d445b60c10a11f1a5d88e19e4fa84	<a href="#">Send this file to VT</a> 
 application/octet-stream	fed93c1753270fc849a4db37027b569cdd9a6108 (1)	HASHS/application/octet-stream /fe/fed93c1753270fc849a4db37027b569cdd9a6108	<a href="#">Send this file to VT</a> 

Showing 1 to 2 of 2 entries

Previous **1** Next

# EXAMPLE: ITEMS METADATA (3)


 Crawled Item 

Domain [2gtyctckj2y5e3ln.onion:80](#)


Father [crawled/2019/05/20/2gtyctckj2y5e3ln.onion954e1b05-aca-4586-a4bc-804bf27b54f7](#)

Url [http://2gtyctckj2y5e3ln.onion/index/forgot/password?tc=1](#)

Full resolution

 **Empire Market**

LOGIN REGISTER FORUMS VERIFY MIRROR

 MNEMONIC VERIFICATION - PASSWORD/PIN RESET

Please type your username and security mnemonic below that was provided to you at the time of registration.

# EXAMPLE: BROWSING CONTENT

## Content:

```
http://members2.mofosnetwork.com/access/login/  
somoextremos:buddy1990  
brazzers_glenn:cocklick  
brazzers61:braves01
```

```
http://members.naughtyamerica.com/index.php?m=login  
gernblanston:3unc2352  
Janhuss141200:310575  
igetalliwant:1377zeph  
pwilks89:mon22key  
Bman1551:hockey
```

```
MoFos IKnowThatGirl PublicPickUps  
http://members2.mofos.com  
Chrismagg40884:loganm40  
brando1:zzbrando1  
aacoen:1q2w3e4r  
1rstunkle23:my8self
```

```
BraZZers  
http://ma.brazzers.com  
gcjensen:gcj21pva  
skycsc17:rbcndnd
```

```
#####
```

```
>| Get Daily Update Fresh Porn Password Here |<
```

```
=> http://www.erq.io/4mF1
```

# EXAMPLE: BROWSING CONTENT

## Content:

Over 50000+ custom hacked xxx passwords by us! Thousands of free xxx passwords to the hottest paysites!

#####

>| Get Fresh New Premium XXX Site Password Here |<

=> http://www.erq.io/4mF1

#####

http://ddfnetwork.com/home.html

eu172936:hCS8gKh

UecwB6zs:159X0\$!r#6K78FuU

http://pornxn.stiffia.com/user/login

feldwWek8939:R0bluJ8XtB

dabudka:17891789

brajits:brajits1

http://members.pornstarplatinum.com/sblogin/login.php/

gigiriveracom:xxxjay

jayx123:xxxjay69

http://members.vividceleb.com/

Rufio99:fairhaven

ScHiFRvi:102091

Chaos84:HOLE5244

Riptor795:blade7


Dom180:harkonnen


GaggedUK:a1k0chan


http://www.ariellaferreira.com/

# EXAMPLE: SEARCH BY TAGS


### Search Tags by date range :

 2019-05-19

 2019-05-21



infoleak.automatic-detection="cve" infoleak.automatic-detection="bitcoin-address"







 Search Tags

Show

10

Search:

entries

Date	Path	# of lines	Action
2019/05/19	archive/pastebin.com_pro/2019/05/19/ej67tQ4b.gz <span>cve</span> <span>bitcoin-address</span>	71	 
2019/05/21	archive/pastebin.com_pro/2019/05/21/vM2SwyTe.gz <span>cve</span> <span>bitcoin-address</span>	69	 
2019/05/21	archive/pastebin.com_pro/2019/05/21/rsnHnp5L.gz <span>cve</span> <span>bitcoin-address</span>	71	 

Showing 1 to 3 of 3 entries

Previous

1

Next

**MISP**

- **Tagging** is a simple way to attach a classification to an event or an attribute.
- **Classification must be globally used to be efficient.**
- Provide a set of already defined classifications modeling estimative language
- Taxonomies are implemented in a simple JSON format <sup>5</sup>.
- Can be easily cherry-picked or extended

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<sup>5</sup><https://github.com/MISP/misp-taxonomies>

- **infoleak**: Information classified as being potential leak.
- **estimative-language**: Describe quality and credibility of underlying sources, data, and methodologies.
- **admiralty-scale**: Rank the reliability of a source and the credibility of an information
- **fpf**<sup>6</sup>: Evaluate the degree of identifiability of personal data and the types of pseudonymous data, de-identified data and anonymous data.

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<sup>6</sup>Future of Privacy Forum



- **tor**: Describe Tor network infrastructure.
- **dark-web**: Criminal motivation on the dark web.
- **copine-scale**<sup>7</sup>: Categorise the severity of images of child sex abuse.

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<sup>7</sup>Combating Paedophile Information Networks in Europe

# THREAT SHARING AND INCIDENT RESPONSE PLATFORMS



**Goal:** submission to threat sharing and incident response platforms.



1. Use infoleak taxonomy<sup>8</sup>
2. Add your own tags
3. Export AIL objects to MISP core format
4. Download it or Create a MISP Event<sup>9</sup>


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<sup>8</sup><https://www.misp-project.org/taxonomies.html>

<sup>9</sup><https://www.misp-standard.org/rfc/misp-standard-core.txt>


# MISP EXPORT

1Gt545E48EPsyTC8voKQDCFpTkwiuXduw :

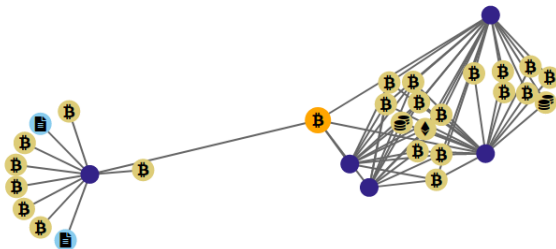
Object type	type	First seen	Last seen	Nb seen
cryptocurrency	 bitcoin	2020/01/17	2020/02/20	5

Expand Bitcoin address

 Graph

 Resize Graph

Add to  Export



# MISP EXPORT

nttfj36sp47cw2yecop572zjvjeazgazeunllouudplzqt2m  
5h465yd.onion :



First Seen	Last Check	Ports
------------	------------	-------

2020/02/19	2020/02/19	['80']
------------	------------	--------

infoleak:automatic-detection="onion"



Last Origin: [crawled/2020/02/19/dark.failc126d32a-3ed1-468f-ba24-f2e5956f4035](#)

Show Domain Correlations 4

Add to Export

Screenshot 4



EmpireMarket

[LOGIN](#) [REGISTER](#) [FORUMS](#) [V...](#)

[Login](#)

LOGIN TO EMPIRE MARKET

Welcome to Empire Market! Please log  
Registrations are free and open to every


Username

Password

What's th

[Login](#)

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 MISP Exporter

Select a list of objects to export

Object Type	Object ID	Lvl		
Object type... ▾		0		
Object type... ▾	1Gt545E48EPsyTC8voKQDCfPtkwiuXduw	✓ 1		
Domain ▾	nttfj36sp47cw2yecop572zvjهازgazieunlloudplzqt2m5h465yd.onion	✓ 0		

JSON Export ☒ Export to MISP Instance

Distribution:

Threat Level:

Analysis:

Event Info:

Publish Event ☐

Export Objects

# AUTOMATIC SUBMISSION ON TAGS

MISP Auto Event Creation Enabled



**MISP**  
Threat Sharing

✖ Disable Event Creation

The hive auto export Disabled



**TheHive**

☒ Enable Alert Creation

Metadata : 6 / 25

Show  entries Search:

Whitelist	Tag
<input checked="" type="checkbox"/>	infoleak:automatic-detection="api-key"
<input checked="" type="checkbox"/>	infoleak:automatic-detection="aws-key"
<input checked="" type="checkbox"/>	infoleak:automatic-detection="base64"
<input type="checkbox"/>	infoleak:automatic-detection="bitcoin-address"
<input type="checkbox"/>	infoleak:automatic-detection="bitcoin-private-key"

Showing 1 to 5 of 25 entries

Previous 1 2 3 4 5

Next

Metadata : 23 / 25

Show  entries Search:

Whitelist	Tag
<input checked="" type="checkbox"/>	infoleak:automatic-detection="api-key"
<input checked="" type="checkbox"/>	infoleak:automatic-detection="aws-key"
<input checked="" type="checkbox"/>	infoleak:automatic-detection="base64"
<input checked="" type="checkbox"/>	infoleak:automatic-detection="bitcoin-address"
<input checked="" type="checkbox"/>	infoleak:automatic-detection="bitcoin-private-key"

Showing 1 to 5 of 25 entries

Previous 1 2 3 4 5

Next

☒ Update Tags

**API**



AIL exposes a ReST API which can be used to interact with the back-end<sup>10</sup>.

```
curl https://127.0.0.1:7000/api/v1/get/item/default  
  --header "Authorization: iHc1_ChZxj1aXmiFiF1m"  
  -H "Content-Type: application/json"  
  --data @input.json -X POST
```

- AIL API is currently covering 60% of the functionality of back-end.

---

<sup>10</sup><https://github.com/ail-project/ail-framework/blob/master/doc/README.md>

# SETTING UP THE FRAMEWORK

## Setting up AIL-Framework from source

```
1 git clone  
  https://github.com/ail-project/ail-framework.git  
2 cd AIL-framework  
3 ./installing_deps.sh
```

# FEEDING THE FRAMEWORK

There are different way to feed AIL with data:

1. Setup *pystemon* and use the custom feeder
  - ▶ *pystemon* will collect items for you
2. Use the new JSON Feeder (twitter)
3. Feed your own data using the API or the `import_dir.py` script
4. Feed your own file/text using the UI (Submit section)

# VIA THE UI (1)

Files submission

Submit a file

Browse...

No file selected.

Archive Password

Optional

Tags :

Select Tags

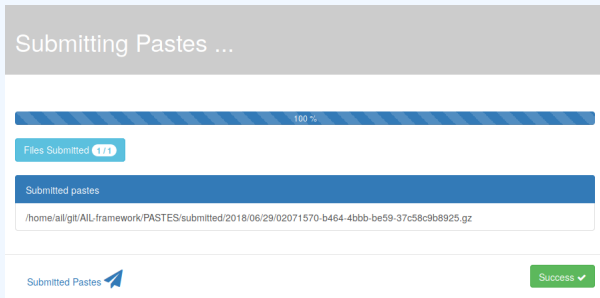
Taxonomie Selection ▼

Select Tags

Galaxy Selection ▼

Submit this paste

## VIA THE UI (2)



## api/v1/import/item

```
1 {  
2   "type": "text",  
3   "tags": [  
4     "infoleak:analyst-detection=\"private-key\""  
5   ],  
6   "text": "text to import"  
7 }
```



# FEEDING ALL WITH YOUR OWN DATA - import\_dir.py (1)

/!\ requirements:

- Each file to be fed must be of a reasonable size:
  - ▶ ~ 3 Mb / file is already large
  - ▶ This is because some modules are doing regex matching
  - ▶ If you want to feed a large file, better split it in multiple ones

## FEEDING ALL WITH YOUR OWN DATA - import\_dir.py (2)

1. Check your local configuration `configs/core.cfg`
  - ▶ In the file `configs/core.cfg`,
  - ▶ Add `127.0.0.1:5556` in `ZMQ_Global`
  - ▶ (should already be set by default)
2. Launch `import_dir.py` with the directory you want to import
  - ▶ `import_dir.py -d dir_path`