

# A CTI doctrine for CTI production

# 00. ABOUT US.



**Fabien Gainier**  
Head of Commons studio

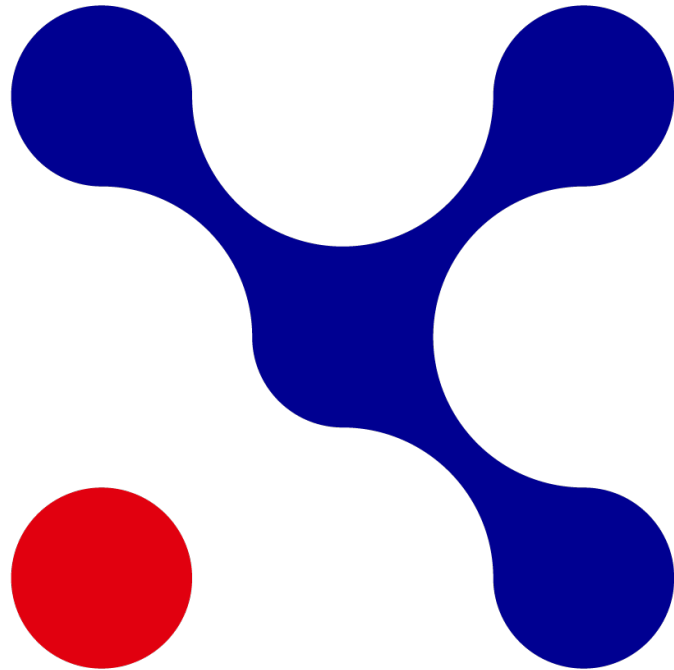


**David Bizeul**  
Chief Scientific Officer,



# CAMPUS CYBER PROJECT

# GOALS



**DEVELOPPEMENT OF SOVEREIGN CYBER SOLUTIONS**

**REINFORCE THE SYNERGIES BETWEEN THE CYBER ACTORS**

**INCREASE ATTRACTIVITY**

## IN FEW WORDS



**39% public / 61% private**

**A 26 000m<sup>2</sup> facility**

**187 Members - 46 Partners - 134 Residents**

# COMMONS STUDIO

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## COMMONS STUDIO.

+ **EXPLORE**

+ **PRODUCE**

+ **SHARE**

### **Explore complex issues<sup>1</sup>**

Identify and anticipate future developments in the cyber market.

Explore by reducing investment risks through pooling.

### **Raise innovation by pooled assets<sup>2</sup>**

Deliver proof of concept, prototype, guideline, doctrine.

### **Lever ecosystem impact with common spread<sup>3</sup>**

Spread European ecosystem points of view.

Foster development of European standard.

Increase the interoperability of European solutions.

## COMMONS STUDIO IN FIGURES.

### + **24 Commons**

Produce or in production

### + **14 Workgroups**

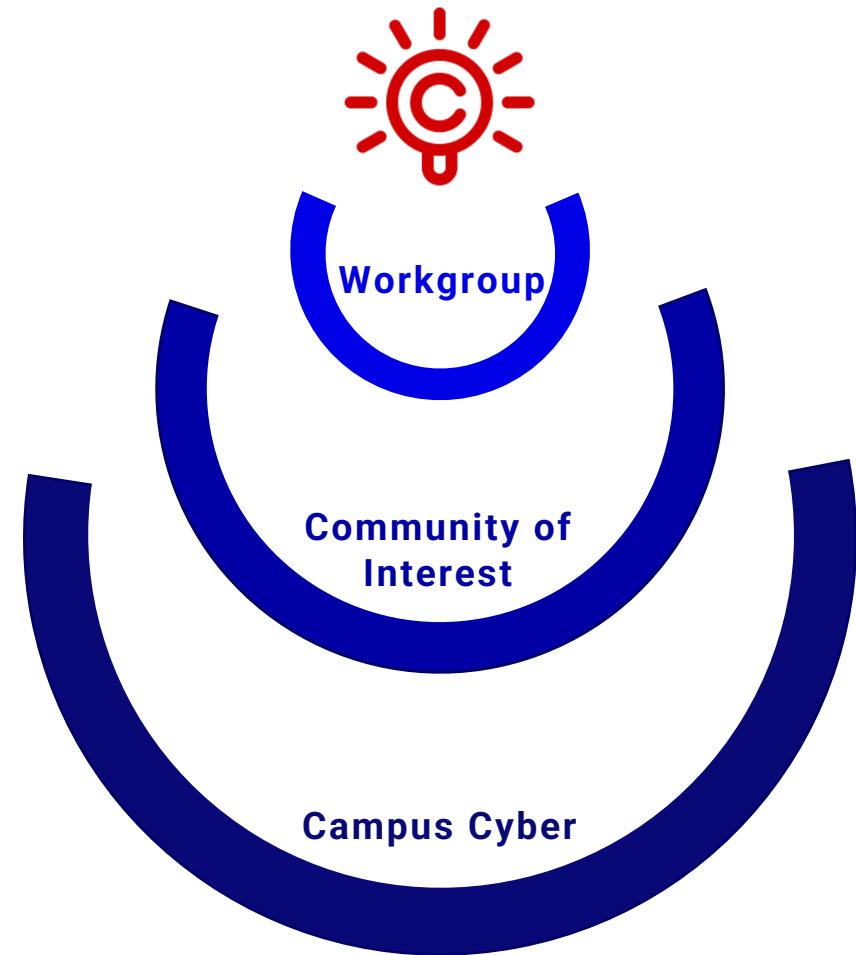
12 still on going from 10 to 20 members

### + **650 People involved**

From 20 to 80 specialists by community

### + **200 Organisations**

Involved in the studio





## **COMMUNITY OF INTEREST.**

**+ IA AND CYBERSECURITY**

**+ CRYPTO-ASSETS SECURITY**

**+ CYBER4TOMORROW**

**+ TRAINING AND CRISIS CYBER**

**+ CTI**

**+ POST QUANTUM CRYPTOGRAPHY**

**+ SECURITY AND DETECTION IN CLOUD**

**+ FINANCIAL AND INSURANCE**

**+ MONITORING AND DETECTION IN MOBILITY**

**+ DRONES ET ROBOTS SECURITY**

**+ AGILE SECURITY**

**+ VULNERABILITY MANAGEMENT**

**+ TRAINING**

## 09. COMMONS STUDIO WIKI.

Wiki of the cyber commons studio for the dissemination of knowledge (wiki.campuscyber.fr)

The screenshot shows the homepage of the Wiki du Campus Cyber. At the top left is the Campus Cyber logo. The navigation bar includes links for DÉCOUVRIR, GROUPE DE TRAVAIL, COMMUNS, and PROJETS, along with settings and user icons. A large blue banner displays the title 'WIKI DU CAMPUS CYBER' and statistics: 5 Groupes de travail, 13 Communs, 13 Cas d'usage, 2 Groupes de travail proposés, and 3 Projets. Below this is a section titled 'Actualités du Campus Cyber' with three news items:

- 15.09.2022**: Le Campus Cyber lance le Challenge Ultra-Solutions
- 12.04.2022**: Le studio des communs lance son 3ème cycle de Groupe de Travail (GT) et précise son fonctionnement
- 18.03.2022**: Insider / Horizon Cyber 2030

# CTI WG

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# AGENDA.

01. GOAL.

02. USE CASES.

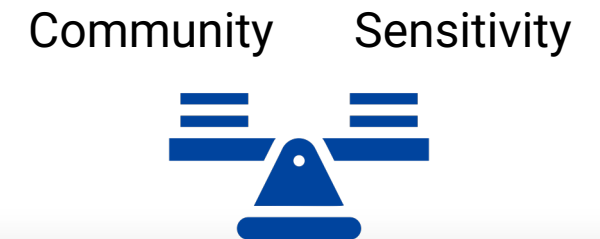
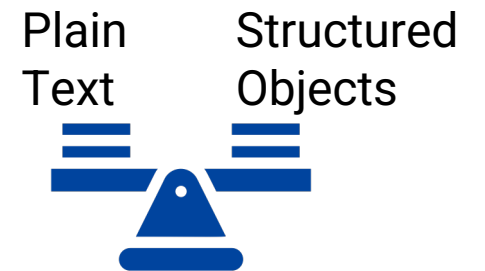
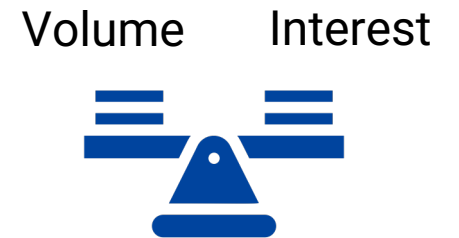
03. DOCTRINE.

04. PLATFORM.

05. TAKE AWAYS.

# OBSERVATIONS 101

- Information overload everywhere
  - Even in cybersecurity
  - Even on cyber threat intelligence
- But lack of structure
  - Source and context is a value driver
  - Plaintext files often come from somewhere else
  - No TTP, IOCs in JPG format....
- People who know do not share (so much...)
  - Intelligence as a weapon
  - Intelligence as a business mode
  - Intelligence as a key advantage



# CTI AS A GROUP 101

- Federate people
  - Willing to share
  - Understanding the benefit of mutualization
- Agree on guidelines
  - Orientation (what to focus on)
  - Structure and format
  - Toolset that is relevant
- Run a proof of concept
  - Explain before starting
  - Provide attractive deliverables to start
  - Extend the network to maintain

Shared goals



Method alignment



Start when ready



# 01. GOALS (**why?**).

- + OPTIMIZE analyst time
- + STORE in a central repository
- + ENHANCE sharing of expert best practices
- + IMPROVE CTI quality for actionability

## 02. USE CASES (what?).

### 5 ACHIEVABLE use cases :

- Cyber Threat Intelligence in OSINT world
  - Blog posts consolidation as structured data
- Hot topics and CTI Focus
  - Exploited vulnerability
  - Geopolitical event and collateral damage
- Collaborative report
  - Shared analysis and write a joint paper as an industry position
- Incident sharing
  - Detailed information from a victim in order to protect its peers
- Sightings and measures
  - What is being observed, when and where

1

2

3

3

3



## 02. USE CASES (OSINT example).

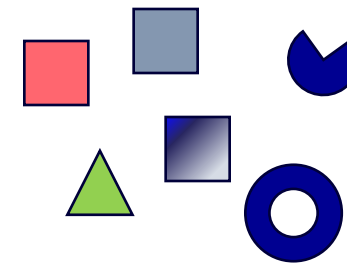
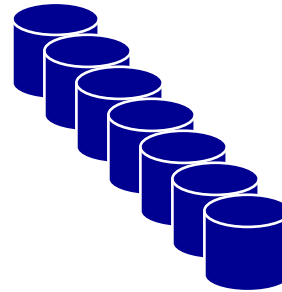
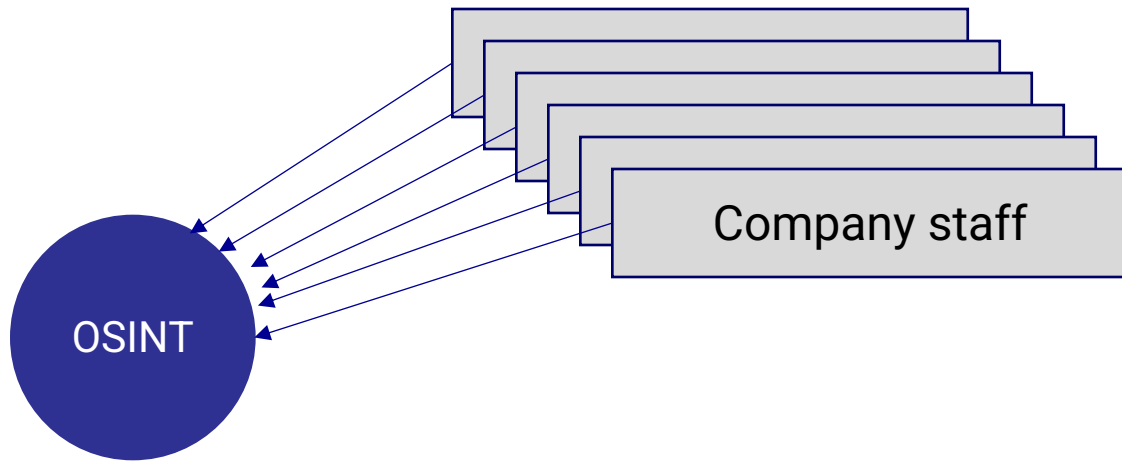
Scope

Resources

Distributed repositories

Mixed objects

Result



Expertise  
waste

## 02. USE CASES (OSINT example).

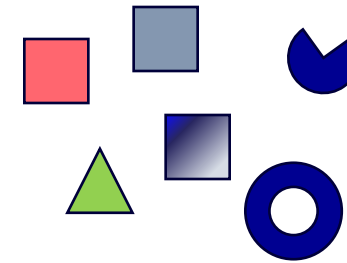
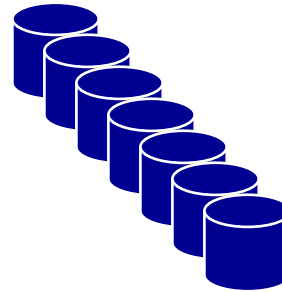
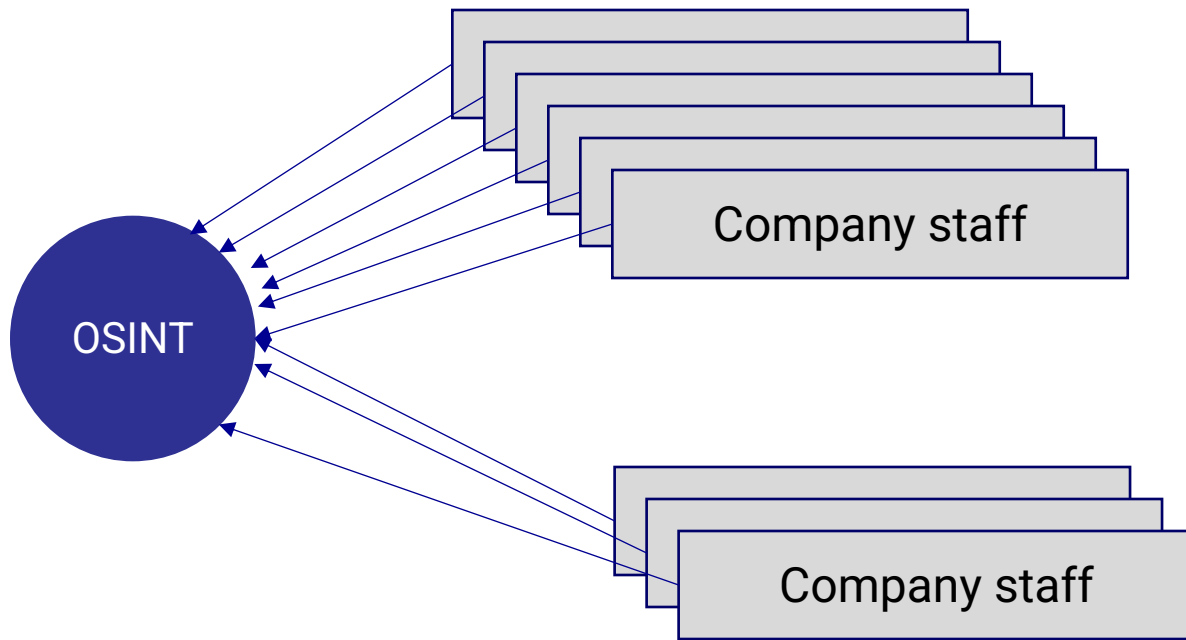
Scope

Resources

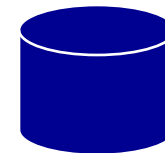
Distributed repositories

Mixed objects

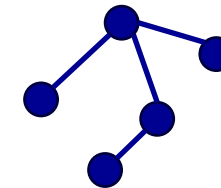
Result



Expertise waste



Central repository



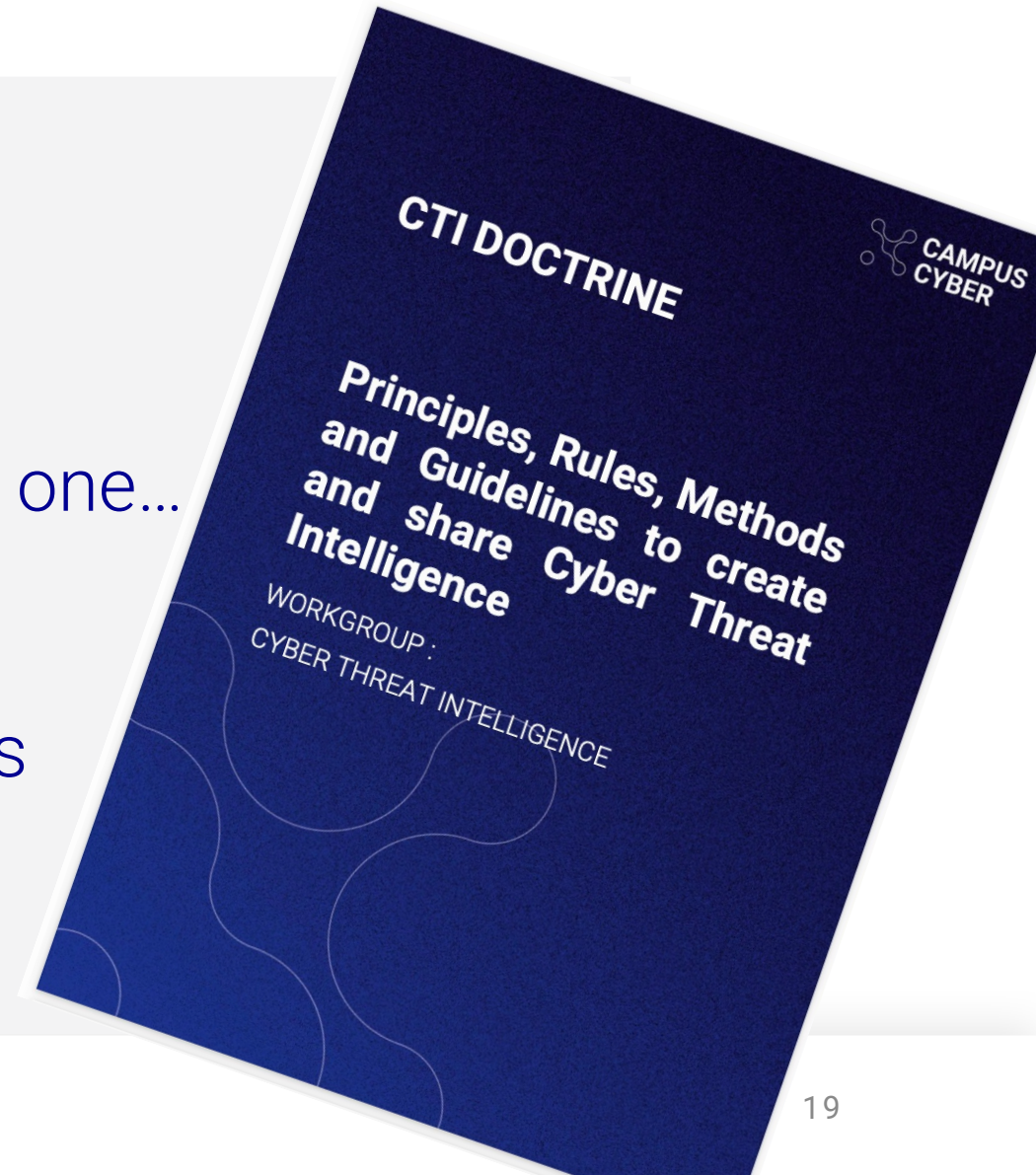
Graph-based CTI

Expertise optimization

03.

# DOCTRINE (how?).

- Pack of 60 rules to do great things
- Available in PDF for everyone
- We did that because we did not find one...
- Organized in scoping rules
  - Global rules
  - Specific rules for use cases focus



03.

# DOCTRINE.

- Example #0 – Naming convention

ID	Description
SCOPE – FIELD - ID	Summary of the rule with a MUST/SHOULD criteria

- Example #1 – Creation and Sharing

ID	Description
<b>GLOBAL-CONTENT-1</b>	Threat Intelligence MUST be normalized under the STIX standard.

ID	Description
<b>GLOBAL-SHARING-7</b>	Export must be possible using STIX format, MISP format, CSV file and text file.

- Example #2 - Metadata

ID	Description
<b>GLOBAL-SHARING-3</b>	The use of TLP MUST be enforced

ID	Description
<b>GLOBAL-SENSITIVITY-2</b>	The use of PAP MUST be enforced

If not explicitly mentioned in the document, applicable PAP by default will be of similar TLP color-codes.

- Example #3 – Use cases focused rules

ID	Description
<b>OSINT-SOURCE-1</b>	Information MUST come from an OSINT source or at least from a source accommodating of broad data sharing (TLP:CLEAR, TLP:GREEN) and will be marked accordingly

ID	Description
<b>INCIDENT-TIME-1</b>	Each artefact associated with the incident MUST be timestamped precisely to establish an attack timeline

# 04. PLATFORM (where?).

- **Criteria**

- Mapping of technical features vs doctrine
- Members experience and appetite
- Hosting environment

- **Choice**

- OpenCTI w/ Filigran support

OSINT-CONTENT-2	Duplication or existing validated intelligence SHOULD not be done except to fix/improve an original incorrect artefact.	Sans objet	Compatible	Compatible	Sans objet	Non compatible
OSINT-CONTENT-3	OSINT content SHOULD always be contextualized.	Compatible	Compatible	Compatible	Compatible	Compatible
OSINT-CONTENT-4	OSINT content MUST be enriched (relationships between objects or metadata)	Partiellement c...	Partiellemen...	Compatible	Compatible	Compatible
MODELLING-SOURCE-1	If multiple sources contribute to threat modelling, all of them SHOULD be listed as external references on the central object of the modelling	Compatible	Compatible	Compatible	Compatible	Compatible
MODELLING-CONTENT-1	STIX best practices (Operation Guidelines) MUST be followed to create a new threat modelling	Non compatible	Non compati...	Compatible	Compatible	Sans objet
MODELLING-CONTENT-2	Kill-chain stage MUST be positioned for every object that can be translated as an attacker progress when observed: indicator, attack pattern (TTPs), malware or tool MITRE ATT&CK matrix SHOULD be preferred to represent this killchain	Compatible	Non compati...	Compatible	Compatible	Compatible
MODELLING-TIME-1	In addition to GLOBAL-TIME-X measures, a specific attention SHOULD be drawn to define the validity period of an indicator depending on its type. This is a precious property for later detection or retro hunting purposes	Partiellement c...	Partiellemen...	Partiellement c...	Compatible	Compatible
MODELLING-ENRICH-1	Enrichment actions SHOULD be applied by analyst to get a better and in-depth view of the threat in a global context. The obvious purpose of doing so is to get multiple properties of one single artefact to represent this artefact with different vantage points	Compatible	Partiellemen...	Compatible	Compatible	Compatible
MODELLING-ANALYSIS-1	Multiple hypothesis of investigation SHOULD be applied by analysts and best one should be kept	Sans objet	Sans objet	Sans objet	Sans objet	Sans objet
FOCUS-CONTENT-1	A focused threat intelligence production MUST be associated with a tag related to the subject matter at hand.	Compatible	Compatible	Compatible	Partielleme...	Compatible



# 04. PLATFORM (Use case #1/OSINT).

The screenshot displays the Campus Cyber platform interface. The top navigation bar includes the 'CAMPUS CYBER' logo, a 'Reports' button, and a menu with 'Overview', 'Knowledge', 'Content', 'Entities', 'Observables', and 'Data'. A search bar is located on the right. The left sidebar contains a navigation menu with items: Dashboard, Analyses, Cases, Events, Observations, Threats, Arsenal, Techniques, Entities, Locations, Data, and Settings. The main content area shows a report titled 'FLINT 2023-037 - ClearFake: a newcomer to the "fake updates" threats landscape'. The report header features the 'sekoia' logo and the text 'FLINT. Sekoia.io Threat Intelligence Flash Report'. The date '2023-037 October 5, 2023' is displayed. Below the header is a red square icon with a white bug symbol and the word 'Malware'. The main title of the report is 'ClearFake: a newcomer to the "fake updates" threats landscape'. The 'Introduction' section begins with the text: 'On 26 August 2023, cybersecurity researcher Randy McEoin published<sup>1</sup> an analysis of a new malicious JavaScript framework deployed on compromised websites to deliver further malware using the drive-by download technique. The newly discovered malware was named ClearFake due to the clear text JavaScript injected into the compromised website, which was not obfuscated in the early version as is usually the case for Javascript malware. ClearFake is another "fake updates" threat leveraging social engineering to trick the user into running a fake web browser update, as for SocGhosh and FakeSG malware. By linking the "fake updates" lure to the watering hole technique, ClearFake operators target a wide range of users and conduct effective, scalable malware distribution campaigns.'

# 04. PLATFORM (Use case #1/OSINT).

The screenshot displays the Campus Cyber platform interface. The top navigation bar includes 'Reports', 'Overview', 'Knowledge', 'Content', 'Entities', 'Observables', and 'Data'. A search bar is located on the right. The left sidebar contains a menu with 'Analyses', 'Cases', 'Events', 'Observations', 'Threats', 'Arsenal', 'Techniques', 'Entities', 'Locations', 'Data', and 'Settings'. The main content area shows a table of entities for the case 'FLINT 2023-037 - ClearFake: a newcomer to the "fake updates" threats landscape'. The table has columns for 'TYPE', 'NAME', 'LABELS', 'AUTHOR', 'CREATION DATE', 'ANALYSES', and 'MARKING'. The 'ANALYSES' column shows counts, and the 'MARKING' column shows TLP levels. A right-hand panel titled 'Entity types' lists various categories with checkboxes, including 'Infrastructure' and 'Intrusion Set' which are checked.

	TYPE	NAME	LABELS	AUTHOR	CREATION DATE	ANALYSES	MARKING
<input type="checkbox"/>	MALWARE	Vidar	No label	Sekoia.io	Sep 7, 2023	4	TLP:CL...
<input type="checkbox"/>	INTRUSION...	TA569	No label	Sekoia.io	Oct 16, 2023	1	TLP:CL...
<input type="checkbox"/>	MALWARE	SystemBC	No label	Sekoia.io	Oct 16, 2023	1	TLP:CL...
<input type="checkbox"/>	MALWARE	Stealc	No label	Sekoia.io	Sep 7, 2023	4	TLP:CL...
<input type="checkbox"/>	ORGANIZA...	Sekoia.io	No label		Sep 7, 2023	39	TLP:CL...
<input type="checkbox"/>	MALWARE	Remcos	No label	Sekoia.io	Sep 7, 2023	3	TLP:CL...
<input type="checkbox"/>	MALWARE	Redline	No label	Sekoia.io	Sep 7, 2023	3	TLP:CL...
<input type="checkbox"/>	MALWARE	Raccoon	No label	Sekoia.io	Sep 7, 2023	6	TLP:CL...
<input type="checkbox"/>	INFRASTRU...	Payload hosting infrastructure for IDAT L...	No label	Sekoia.io	Oct 16, 2023	1	TLP:G...
<input type="checkbox"/>	MALWARE	Lumma	No label	Sekoia.io	Sep 7, 2023	4	TLP:CL...
<input type="checkbox"/>	MALWARE	IDAT Loader	No label	Sekoia.io	Oct 16, 2023	1	TLP:CL...
<input type="checkbox"/>	MALWARE	HijackLoader	No label	Sekoia.io	Oct 16, 2023	1	TLP:CL...

# 04. PLATFORM (Use case #2/CTI Focus).

The screenshot displays the Campus Cyber platform interface. The top navigation bar includes 'Reports', 'Overview', 'Knowledge', 'Content', 'Entities', 'Observables', and 'Data'. A search bar contains the text 'moveit'. The left sidebar lists various sections: Dashboard, Analyses, Cases, Events, Observations, Threats, Arsenal, Techniques, Entities, Locations, Data, and Settings.

The main content area is titled 'Zero-Day Vulnerability in MOVEit Transfer Exploited for Data Theft'. It is divided into two main sections: 'ENTITY DETAILS' and 'BASIC INFORMATION'.

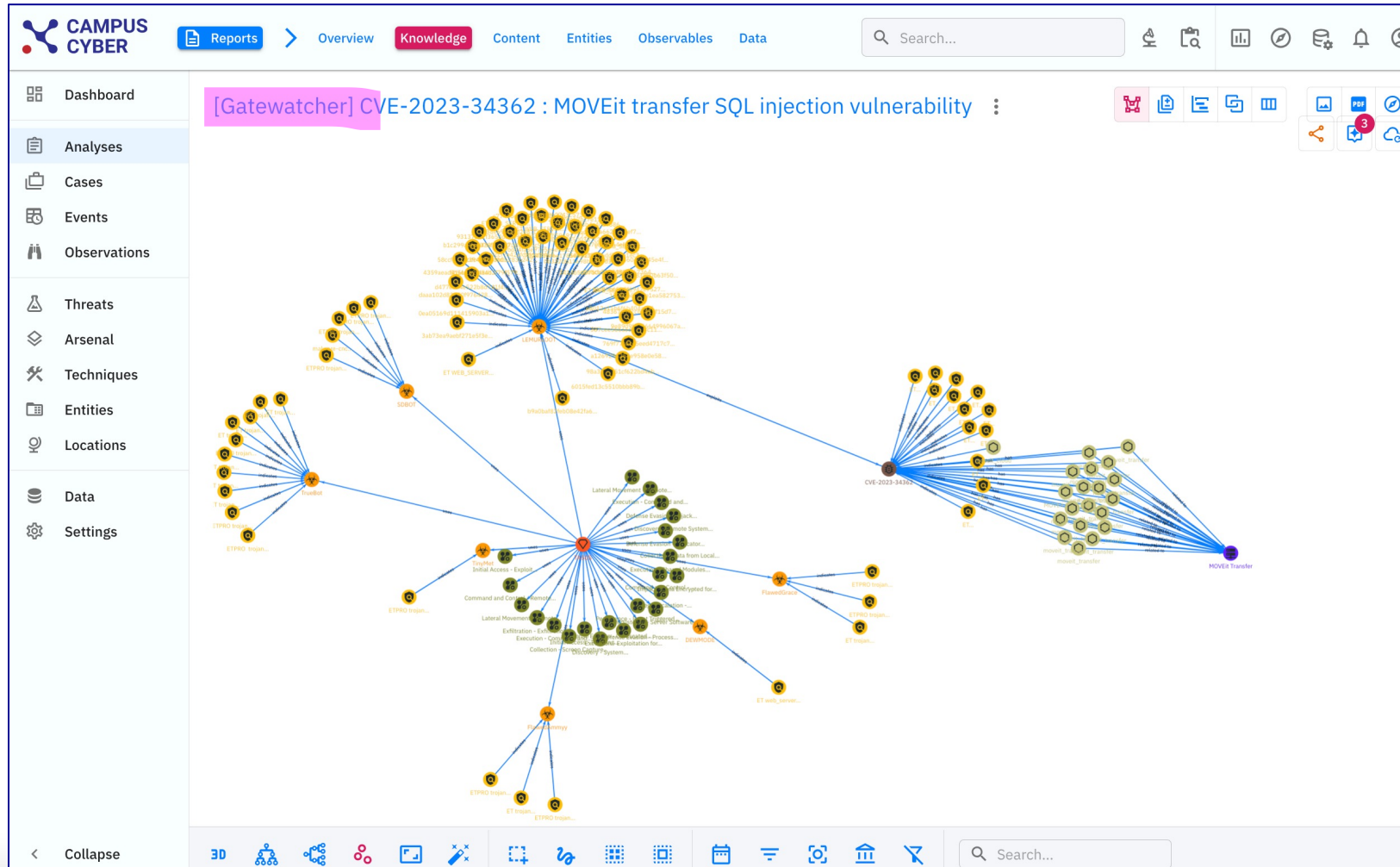
**ENTITY DETAILS**

- Description:** Mandiant has observed wide exploitation of a zero-day vulnerability in the MOVEit Transfer secure managed file transfer software for subsequent data theft. This vulnerability was announced by Progress Software Corporation on May 31, 2023 and has been assigned CVE-2023-34362. Based on initial analysis from Mandiant incident response engagements, the earliest evidence of exploitation occurred on...
- Entities distribution:** A horizontal bar chart showing the distribution of entities. The 'Indicator' category has the highest count, followed by 'Attack Pattern', 'Campaign', 'Intrusion Set', 'Malware', 'Organization', 'Position', and 'Vulnerability'.
- Report types:** A button labeled 'THREAT-REPORT' is visible.
- Publication date:** June 5, 2023 at 10:21:47 AM
- Correlated reports:** A small pink bar is visible.

**BASIC INFORMATION**

- Marking:** TLP:CLEAR
- Author:** SEKOIA.IO
- Reliability (of author):** Unknown
- Confidence level:** 1 - Confirmed by other sources
- Processing status:** NEW
- Assignees:** -
- Participants:** -
- Revoked:** NO
- Labels:** campuscyber:vuln
- Creation date (in this platform):** September 18, 2023 at 4:32:25 PM
- Creators:** [C] SEKOIA-CAMPUS-LABELS
- Standard STIX ID:** report--10ea4d19-5e14-58f6-b997-9e751f5...
- Creation date:** June 5, 2023 at 10:21:47 AM
- Modification date:** September 18, 2023 at 4:32:25 PM

## 04. PLATFORM (Use case #2/CTI Focus).



## 05. TAKE AWAYS

### <sup>1</sup> **Obvious steps but long-term project**

2 years

Tons of discussions to promote sharing (who accept to share what and how?)

### <sup>2</sup> **Doctrine can probably be better**

Adapt it to your environment

Bring new ideas

### <sup>3</sup> **Governance aspects not 100% ready**

Licence content

Validation mechanisms

THANK  
YOU!



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[david.bizeul@sekoia.io](mailto:david.bizeul@sekoia.io)

Doctrine file

[https://wiki.campuscyber.fr/images/1/10/221206\\_GT\\_CTI\\_doctrine.pdf](https://wiki.campuscyber.fr/images/1/10/221206_GT_CTI_doctrine.pdf)