Forensic support in MISP

Tools and visualization to support digital

Team CIRCL

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August 3, 2022

MISP Threat Sharing

2022-08-03

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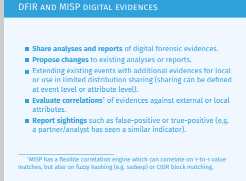
MISP Threat Sharing

DFIR and MISP digital evidences

- **Share analyses and reports** of digital forensic evidences.
- **Propose changes** to existing analyses or reports.
- Extending existing events with additional evidences for local or use in limited distribution sharing (sharing can be defined at event level or attribute level).
- **Evaluate correlations**[1] of evidences against external or local attributes.
- **Report sightings** such as false-positive or true-positive (e.g. a partner/analyst has seen a similar indicator).

[1] MISP has a flexible correlation engine which can correlate on 1-to-1 value matches, but also on fuzzy hashing (e.g. ssdeep) or CIDR block matching.



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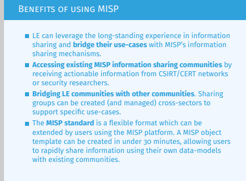
Benefits of using MISP

- LE can leverage the long-standing experience in information sharing and **bridge their use-cases** with MISP's information sharing mechanisms.
- **Accessing existing MISP information sharing communities** by receiving actionable information from CSIRT/CERT networks or security researchers.
- **Bridging LE communities with other communities**. Sharing groups can be created (and managed) cross-sectors to support specific use-cases.
- The **MISP standard** is a flexible format which can be extended by users using the MISP platform. A MISP object template can be created in under 30 minutes, allowing users to rapidly share information using their own data-models with existing communities.



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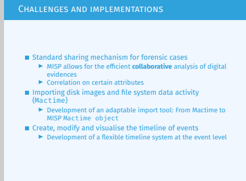
Challenges and implementations

- Standard sharing mechanism for forensic cases
    - MISP allows for the efficient **collaborative** analysis of digital evidences
    - Correlation on certain attributes
- Importing disk images and file system data activity (`Mactime`)
    - Development of an adaptable import tool: From Mactime to MISP `Mactime object`
- Create, modify and visualise the timeline of events
    - Development of a flexible timeline system at the event level



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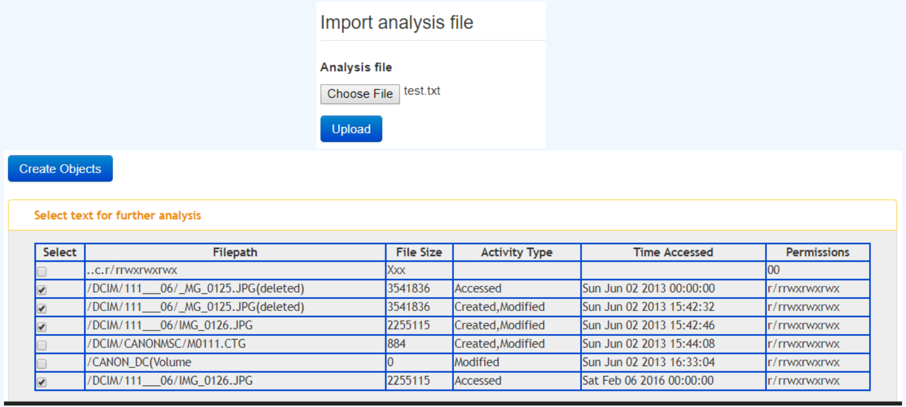
Forensic import (MISP 2.4.98)



Import analysis file

Analysis file

test.txt

Select text for further analysis

Select	Filepath	File Size	Activity Type	Time Accessed	Permissions
☐	..c.r/rrwxrwxrwx	Xxx			00
☑	/DCIM/111___06/_MG_0125.JPG(deleted)	3541836	Accessed	Sun Jun 02 2013 00:00:00	r/rrwxrwxrwx
☑	/DCIM/111___06/_MG_0125.JPG(deleted)	3541836	Created,Modified	Sun Jun 02 2013 15:42:32	r/rrwxrwxrwx
☑	/DCIM/111___06/IMG_0126.JPG	2255115	Created,Modified	Sun Jun 02 2013 15:42:46	r/rrwxrwxrwx
☐	/DCIM/CANONMSC/M0111.CTG	884	Created,Modified	Sun Jun 02 2013 15:44:08	r/rrwxrwxrwx
☐	/CANON_DC(Volume	0	Modified	Sun Jun 02 2013 16:33:04	r/rrwxrwxrwx
☑	/DCIM/111___06/IMG_0126.JPG	2255115	Accessed	Sat Feb 06 2016 00:00:00	r/rrwxrwxrwx

- Possibility to import **Mactime** files [done]
- Pick only relevant files [done]
- `MISPObject` will be created [done]

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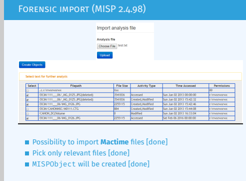

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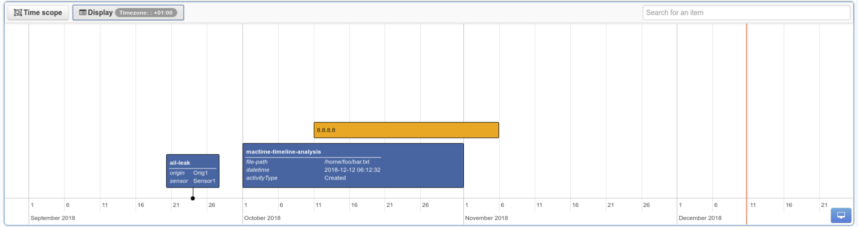
DATA VISUALIZATION (MISP ZOIDBERG BRANCH)



ail-leak

origin	Orig1
sensor	Sensor1

mactime-timeline-analysis

file-path	/home/foo/bar.txt
datetime	2018-12-12 06:12:32
activityType	Created

- View: start-date only, spanning and search [dev-branch]
- Manipulate: Edit, Drag and Expand [dev-branch]
- Others: Timezone support [dev-branch]

→ For now [dev-branch], supports up to **micro-seconds** in the database and up to **milliseconds** in the web interface.

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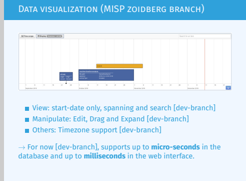
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