# FORENSIC SUPPORT IN MISP TOOLS AND VISUALIZATION TO SUPPORT DIGITAL

**TEAM CIRCL** 

INFO@CIRCL.LU

APRIL 15, 2024



### 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<sup>1</sup> 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).

<sup>&</sup>lt;sup>1</sup>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.

- 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.

#### 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

## FORENSIC IMPORT (MISP 2.4.98)

| Import analysis file                            |  |
|---|--|
| Analysis file<br>Choose File test.txt<br>Upload |  |

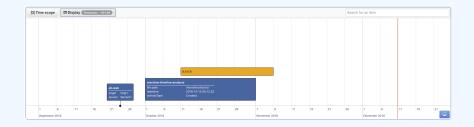
Create Objects

#### Select text for further analysis

| Select   | Filepath                          | File Size | Activity Type    | Time Accessed            | Permissions  |
|----------|-----------------------------------|-----------|------------------|--------------------------|--------------|
|          | c.r/rrwxrwxrwx                    | Ххх       |                  |                          | 00           |
| <b>e</b> | /DCIM/11106/_MG_0125.JPG(deleted) | 3541836   | Accessed         | Sun Jun 02 2013 00:00:00 | r/rrwxrwxrwx |
| <b>e</b> | /DCIM/11106/_MG_0125.JPG(deleted) | 3541836   | Created,Modified | Sun Jun 02 2013 15:42:32 | r/rrwxrwxrwx |
| <b>e</b> | /DCIM/11106/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 |
| <b>e</b> | /DCIM/11106/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]

# DATA VISUALIZATION (MISP ZOIDBERG BRANCH)



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

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