FORENSIC SUPPORT IN MISP

TOOLS AND VISUALIZATION TO SUPPORT DIGITAL

TFAM CIRCL

INFO@CIRCL.LU

SEPTEMBER 16, 2022



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 correlations¹ 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).

5

¹MISP 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.

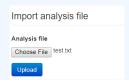
BENEFITS OF USING MISP

- 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.

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

FORENSIC IMPORT (MISP 2.4.98)



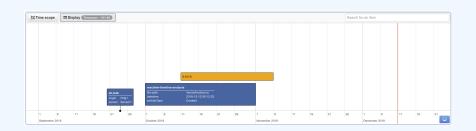
Create Objects

Select	Filepath	File Size	Activity Type	Time Accessed	Permissions
	c.r/rrwxrwxrwx	Xxx			00
•	/DCIM/11106/_MG_0125.JPG(deleted)	3541836	Accessed	Sun Jun 02 2013 00:00:00	r/rrwxrwxrwx
2	/DCIM/11106/_MG_0125.JPG(deleted)	3541836	Created,Modified	Sun Jun 02 2013 15:42:32	r/rrwxrwxrwx
•	/DCIM/11106/IMG_0126.JPG	2255115	Created,Modified	Sun Jun 02 2013 15:42:46	r/rrwxrwxrwx
9	/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
v	/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]

5

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.