

FORENSIC SUPPORT IN MISP

TOOLS AND VISUALIZATION TO SUPPORT DIGITAL

TEAM CIRCL

INFO@CIRCL.LU

AUGUST 5, 2022



2022-08-05

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- **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).

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.

└ DFIR and MISP digital evidences

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- 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.

└ Benefits of using MISP

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- 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

└─ Challenges and implementations

- Standard sharing mechanism for forensic cases
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FORENSIC IMPORT (MISP 2.4.98)

Import analysis file

Analysis file

Choose File test.txt

Upload

Create Objects

Select text for further analysis

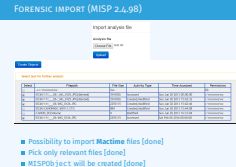
Select	Filepath	File Size	Activity Type	Time Accessed	Permissions
<input type="checkbox"/>	..c.r/r/rwxrwxrwx	Xxx			00
<input checked="" type="checkbox"/>	/DCIM/111___06/_MG_0125.JPG(deleted)	3541836	Accessed	Sun Jun 02 2013 00:00:00	r/rwxrwxrwx
<input checked="" type="checkbox"/>	/DCIM/111___06/_MG_0125.JPG(deleted)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

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

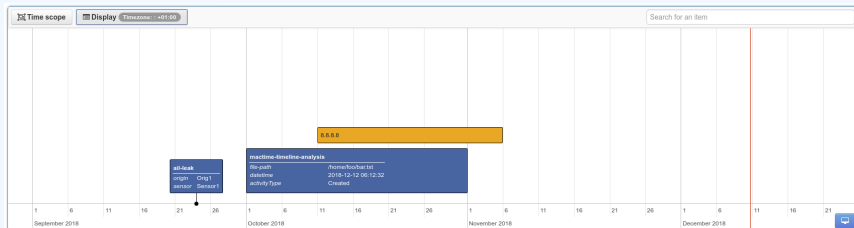
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Forensic support in MISP

└ Forensic import (MISP 2.4.98)



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]

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

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Data visualization (MISP zoidberg branch)

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