MISP Training: MISP Deployment and Integration

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A Common Integration
Provisioning your MISP infrastructure depends heavily on the number of attributes/events (whether your dataset is below or above 50 million attributes).

Number of MISP instances and the overall design depends on the following factors:

- Is your community private? Are you gathering MISP events from other communities? Are you publishing events to external (trusted/untrusted) communities.
- Do you plan to have automatic tools (e.g. sandbox analysis or low-value information needing correlation or an analyst workbench) feeding MISP?
There is **a jungle of formats** with some vendors having little to no interest in keeping their users autonomous.

Attacks and threats require a **dynamic format** to be efficiently shared (e.g. from financial indicators to personal information).

**Review your current list of formats/vendors** to ensure a limited loss of information, especially when exporting from MISP to other formats (e.g. STIX not supporting financial indicators or taxonomies/galaxies).
Use case: Normalizing OSINT and Private Feeds

- Normalizing external input and feed into MISP (e.g. feed importer).
- Comparing feeds before import (how many similarities? false-positives?).
- Evaluating quality of information before import (warning-list lookup at feed evaluation).
One of the main goals of MISP is to feed protective or detection tools with data

- IDSes / IPSes (e.g. Suricata, Bro, Snort format as included in Cisco products)
- SIEMs (e.g. CEF, CSV or real-time ZMQ pub-sub or Sigma)
- Host scanners (e.g. OpenIOC, STIX, yara rule-set, CSV)
- Various analysis tools (e.g. Maltego)
- DNS policies (e.g. RPZ)

Various ways of exporting this data (downloads of the selected data, full exports, APIs)

The idea was to leave the selection process of the subset of data to be pushed to these up to the user using APIs.
SIEMs and MISP can be integrated with different techniques depending on the processes at your SOC or IR:

- Pulling events (via the API) or indicator lists at regular intervals in a given time frame to perform lookups.
- Subscribing to the MISP ZMQ pub-sub channel to directly get the published events and use these in a lookup process.
- Lookup expansion module in MISP towards the SIEM to have a direct view of the attributes matched against the SIEM.

The above options can be combined, depending on your organisation or requirements to increase coverage and detection.
A dashboard showing live data and statistics from the ZMQ pub-sub of one or more MISP instances.

Building **low-latency software** by consuming pub-sub channel provides significant advantages over standard API use.

Process information in **real-time** when it’s updated, created, published or gathered in MISP.

Demo!
New integrations: IR and threat hunting using MISP

- Close co-operation with the Hive project for IR
  - Interact with MISP directly from the Hive
  - Use both the MISP modules and the Cortex analysers in MISP or the Hive directly

- Using MISP to support your threat hunting via McAfee OpenDXL

The Hive Integration

Alert Sources (SIEM, email, ...)

Alert Feeders

Raise alerts

Export cases

Poll events

Analyze observables

MISP Threat Sharing

Enrich events

Additional analyzers

Expansion Modules

Search observables within MISP events

Analyzers
Reporting Back from your Devices, Tools or Processes

As **Sightings** can be positive, negative or even based on expiration, different use cases are possible:

- **Sightings** allow users to notify a MISP instance about the activities related to an indicator.
- Activities can be from a SIEM (e.g. Splunk lookup validation or **false-positive feedback**), a NIDS or honeypot devices¹.
- Sighting can affect the API to limit the NIDS exports and improve the NIDS rule-set directly.

¹https://www.github.com/MISP/misp-sighting-tools
Q&A

- info@circl.lu (if you want to join the CIRCL MISP sharing community)
- https://github.com/MISP/
- http://www.misp-project.org/
- We welcome any contributions to the project, be it pull requests, ideas, github issues,...