MISP Training: MISP Deployment and Integration

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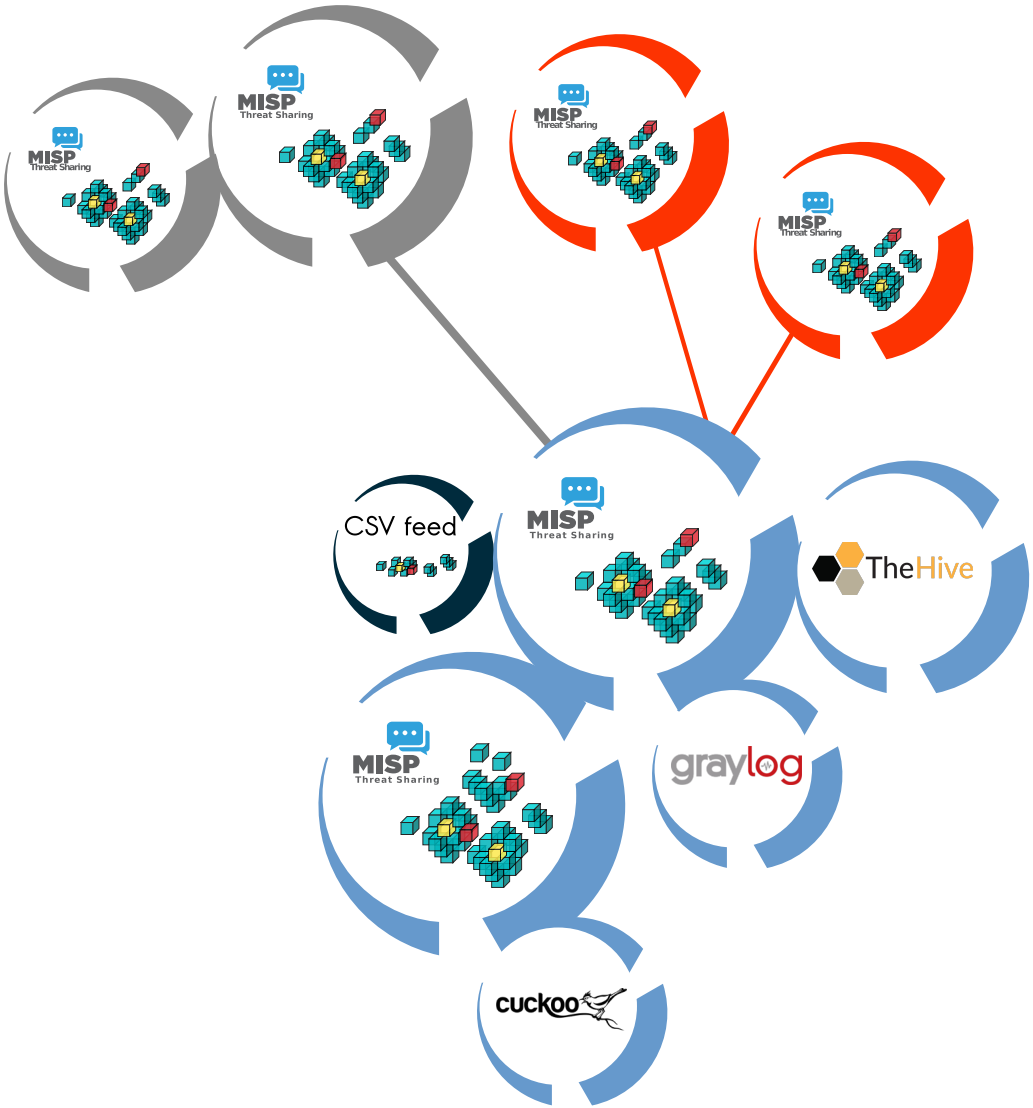
MISP Training @ Prague
20180917

A Common Integration



Recommended MISP Setup

- 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?

Vendors and Formats

- 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).

Connecting Devices and Tools to MISP

- 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.

SIEM and MISP Integration

- 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.

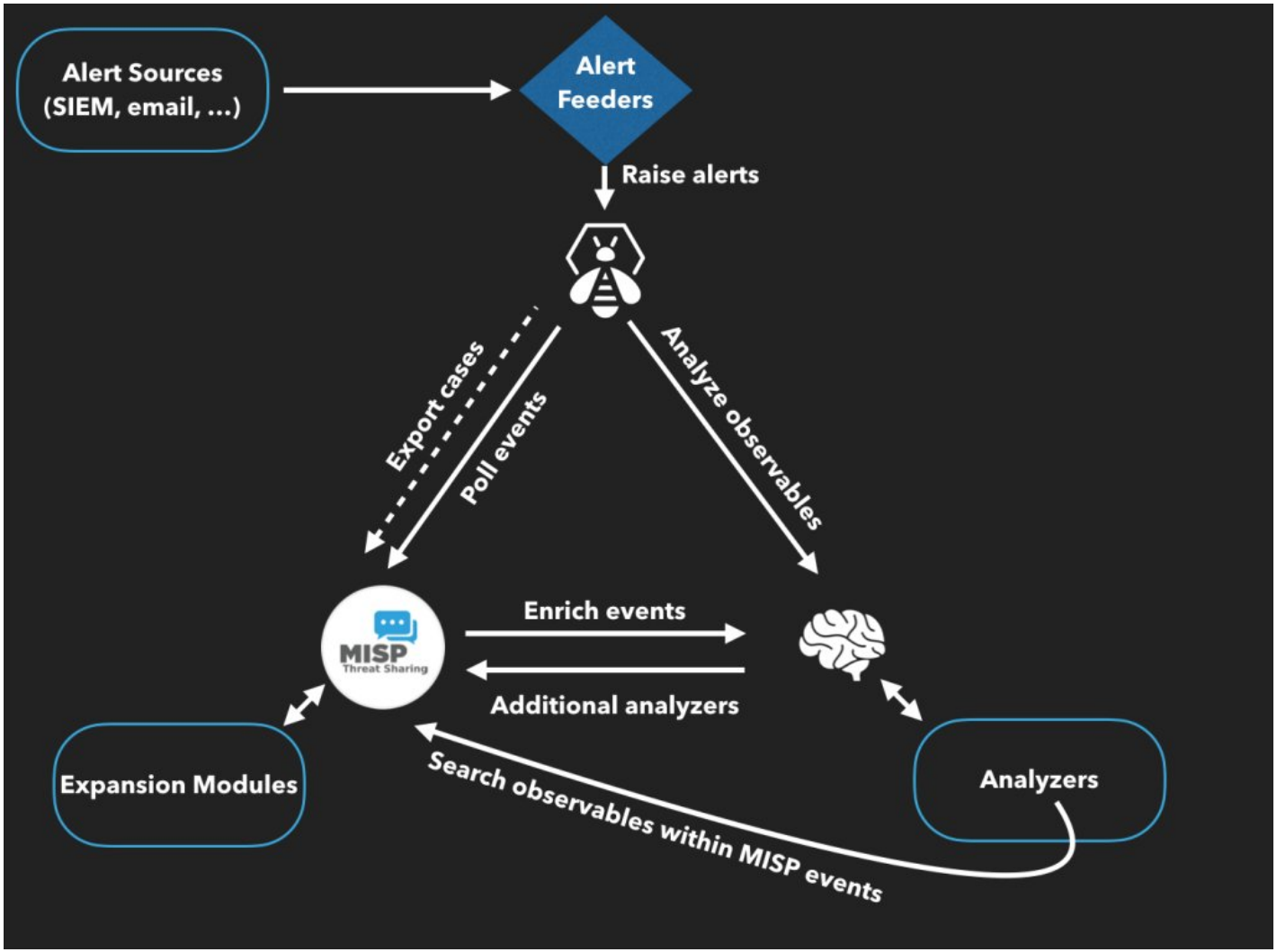
ZMQ integration: misp-dashboard

- 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**
- (`https://securingtomorrow.mcafee.com/business/optimize-operations/expanding-automated-threat-hunting-response-open-dxl`)

The Hive integration



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 devices[1].
- Sighting can affect the API to limit the NIDS exports and improve the NIDS rule-set directly.

[1] https://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,...