

MISP DASHBOARD

REAL-TIME OVERVIEW OF THREAT INTELLIGENCE FROM

CIRCL / TEAM MISP PROJECT

INFO@CIRCL.LU

OCTOBER 2, 2024



MISP
Threat Sharing

MISP ZEROMQ

MISP includes a flexible publish-subscribe model to allow real-time integration of the MISP activities:

- Event publication
- Attribute creation or removal
- Sighting
- User login

→ Operates at global level in MISP

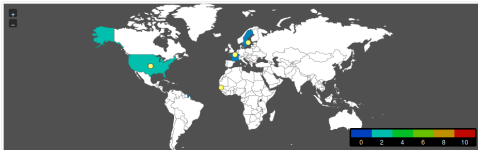
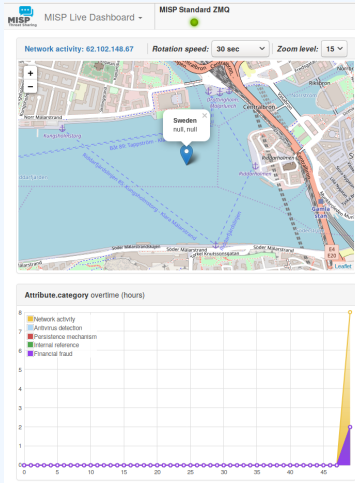
MISP ZeroMQ functionality can be used for various model of integration or to extend MISP functionalities:

- Real-time search of indicators into a SIEM¹
- Dashboard activities
- Logging mechanisms
- Continuous indexing
- Custom software or scripting

¹Security Information & Event Management

MISP-DASHBOARD: AN INTRODUCTION

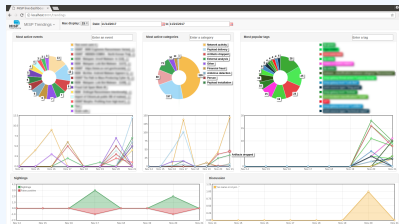
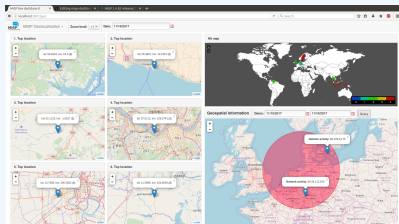
MISP-DASHBOARD - REALTIME ACTIVITIES AND THREAT INTELLIGENCE



Logs INFO WARNING CRITICAL

Time	Event.id	Attribute.Tag	Attribute.category	Attribute.type	Attribute.value Attribute.comment
15:07:46	9356	ctrl:topic="undefined" ip:white	Network activity	ip-src	99.99.99.99
15:08:36	9356	ctrl:incident-classification="denial-of-service"	Network activity	ip-src	8.8.8.8
15:08:36	9356	ctrl:incident-classification="malware" ctrl:incident-classification="XSS"	Antivirus detection	comment	Comment
15:08:36	9356		Network activity	ip-src	9.9.9.9
15:08:36	9356		Persistence mechanism	text	Just a another text
15:08:36	9356		Internal reference	text	Another text
15:08:36	9356		Financial fraud	phone-number	+221721120220
15:08:36	9356		Network activity	ip-src	62.102.148.67
15:08:36	9356	ctrl:topic="undefined" ip:white	Network activity	ip-src	99.99.99.99

MISP-DASHBOARD - FEATURES



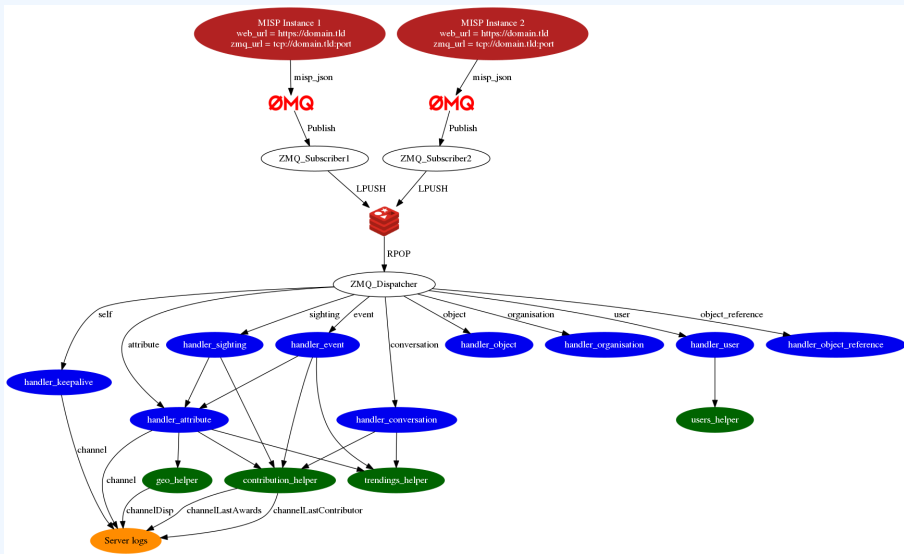
- Subscribe to multiple **ZMQ** MISP instances
- Provides historical geolocalised information
- Present an experimental **Gamification of the platform**
- Shows when and how MISP is used
- Provides real time information showing current threats and activity

MISP-DASHBOARD: ARCHITECTURE AND DEVELOPMENT

SETTING UP THE DASHBOARD

1. Be sure to have a running redis server: e.g.
 - ▶ `redis-server -p 6250`
2. Update your configuration in `config.cfg`
3. Activate your virtualenv:
 - ▶ `. ./DASHENV/bin/activate`
4. Listen to the MISP feed by starting the `zmq_subscriber`:
 - ▶ `./zmq_subscriber.py`
5. Start the dispatcher to process received messages:
 - ▶ `./zmq_dispatcher.py`
6. Start the Flask server:
 - ▶ `./server.py`
7. Access the interface at `http://localhost:8001/`

MISP-Dashboard architecture



WRITING YOUR HANDLER

```
1 # Register your handler
2 dico_action = {
3     "misp_json":                handler_dispatcher,
4     "misp_json_event":         handler_event,
5     "misp_json_self":          handler_keepalive,
6     "misp_json_attribute":     handler_attribute,
7     "misp_json_object":        handler_object,
8     "misp_json_sighting":      YOUR_CUSTOM_SIGHTINGS_HANDLER,
9     "misp_json_organisation":  handler_log,
10    "misp_json_user":           handler_user,
11    "misp_json_conversation":   handler_conversation,
12    "misp_json_object_reference": handler_log,
13 }
14
```

```
1 # Implement your handler
2
3 # e.g. user handler
4 def handler_user(zmq_name, jsondata):
5     # json action performed by the user
6     action = jsondata['action']
7     # user json data
8     json_user = jsondata['User']
9     # organisation json data
10    json_org = jsondata['Organisation']
11    # organisation name
12    org = json_org['name']
13    # only consider user login
14    if action == 'login':
15        timestamp = time.time()
16        # users_helper is a class to interact with the DB
17        users_helper.add_user_login(timestamp, org)
18
```

- MISP authentication can now be used in the misp-dashboard
- Improved TLS/SSL support in the default misp-dashboard
- Self-test tool to debug and test ZMQ connectivity



Optimizing contribution scoring and model to encourage sharing and contributions enrichment



Increasing geolocation coverage



Global filtering capabilities

- Geolocation: Showing wanted attribute or only on specific region
- Trendings: Showing only specified taxonomies



Tighter integration with MISP

- Present in MISP by default
- ACL enabled version

MISP-Dashboard can provides realtime information to support security teams, CSIRTs or SOC showing current threats and activity by providing:

- Historical geolocalised information
- Geospatial information from specific regions
- The most active events, categories, tags, attributes, ...

It also propose a prototype of gamification of the platform providing incentive to share and contribute to the community