MISP-Dashboard

Real-time overview of threat intelligence from MISP instances

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MISP ZeroMQ

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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

$\rightarrow$ Operates at global level in MISP

MISP ZeroMQ

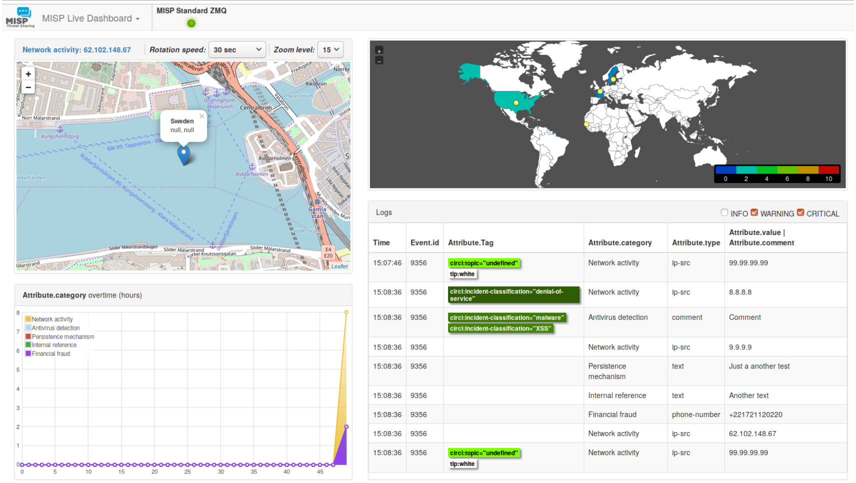
MISP ZeroMQ functionality can be used for various model of integration or to extend MISP functionalities:

- Real-time search of indicators into a SIEM[1]
- Dashboard activities
- Logging mechanisms
- Continuous indexing
- Custom software or scripting

[1] Security Information & Event Management

MISP-Dashboard: An introduction

MISP-Dashboard - Realtime activities and threat intelligence



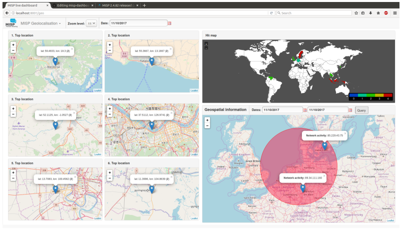
Network activity: 62.102.148.67 | Rotation speed: 30 sec | Zoom level: 15

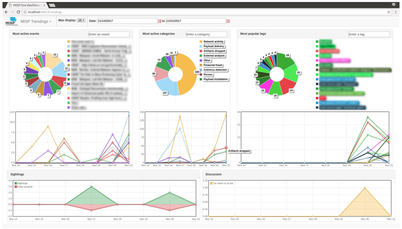
Attribute.category overtime (hours)

Logs ☐ INFO ✓ WARNING ✓ CRITICAL

Time	Event.id	Attribute.Tag	Attribute.category	Attribute.type	Attribute.value | Attribute.comment
15:07:46	9356	circl:topic="undefined" tlp:white	Network activity	ip-src	99.99.99.99
15:08:36	9356	circl:incident-classification="denial-of-service"	Network activity	ip-src	8.8.8.8
15:08:36	9356	circl:incident-classification="malware" circl: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 test
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	circl:topic="undefined" tlp:white	Network activity	ip-src	99.99.99.99

MISP-Dashboard - Features





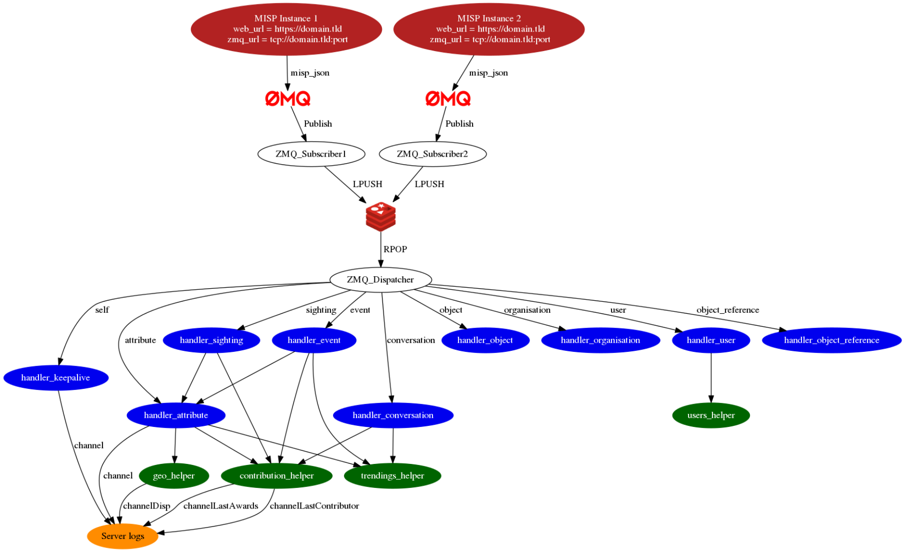
- Subscribe to multiple **ZMQ** MISP instances
- Provides historical geolocalised information
- Present an experimental **Gamification of the platform**
- Shows when and how MISP is used
- Provides real time information showing current threats and activity

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

```python
# Register your handler
dico_action = {
        "misp_json":                        handler_dispatcher,
        "misp_json_event":                  handler_event,
        "misp_json_self":                   handler_keepalive,
        "misp_json_attribute":              handler_attribute,
        "misp_json_object":                 handler_object,
        "misp_json_sighting":               YOUR_CUSTOM_SIGHTINGS_HANDLER,
        "misp_json_organisation":           handler_log,
        "misp_json_user":                   handler_user,
        "misp_json_conversation":           handler_conversation,
        "misp_json_object_reference":       handler_log,
}

```

```python
# Implement your handler

# e.g. user handler
def handler_user(zmq_name, jsondata):
    # json action performed by the user
    action = jsondata['action']
    # user json data
    json_user = jsondata['User']
    # organisation json data
    json_org = jsondata['Organisation']
    # organisation name
    org = json_org['name']
    # only consider user login
    if action == 'login':
        timestamp = time.time()
        # users_helper is a class to interact with the DB
        users_helper.add_user_login(timestamp, org)

```

Future development

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
- Authenticated / ACL enabled version

Conclusion

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