MISP feeds - A simple and secure approach to generate, select and collect intelligence

Providing ready-to-use threat intelligence in

CIRCL / Team MISP Project
TLP:WHITE

http://www.misp-project.org/
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MISP Project

2024-04-15

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MISP Feed - Basics

MISP Feeds provide a way to

- **Exchange information via any transports** (e.g. HTTP, TLS, USB keys)
- Preview events along with their attributes, objects
- Select and import events
- **Correlate attributes using caching**

MISP Feeds have the following advantages

- Feeds work without the need of MISP synchronisation (reducing attack surface and complexity to a static directory with the events)
- **Feeds can be produced without a MISP instance** (e.g. security devices, honeypot sensors)

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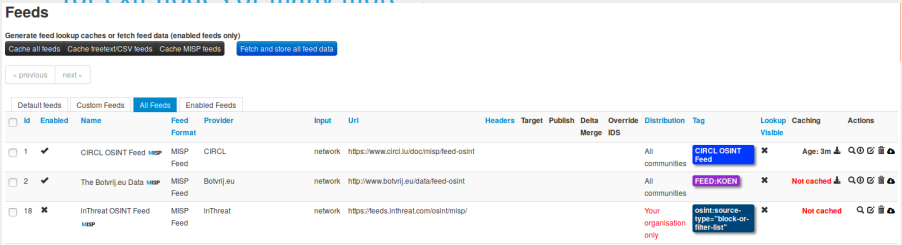
Feeds can be used to produce output from various security devices

Feed - Overview

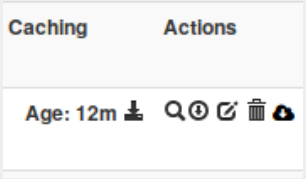
- By default, MISP is bundled with ∼50 default feeds (MISP feeds, CSV or freetext feeds) which are not enabled by default and described in a simple JSON file[1].
- The feeds include CIRCL OSINT feed but also feeds like abuse.ch, Tor exit nodes or many more [2]



[1] https://github.com/MISP/MISP/blob/2.4/app/files/feed-metadata/defaults.json

[2] http://www.misp-project.org/feeds/

Feed - Operations



- Cache feed attributes for correlation (not imported but visible in MISP)
- Disable feed
- Explore remote events
- Fetch all events (imported in MISP as event)
- Edit the feed configuration (e.g. authentication, URL,...)
- Remove feed
- Download feed metadata (to share feed details)

Feed - Operations
Caching Actions
Age: 12m
Cache feed attributes for correlation (not imported but visible in MISP)
Disable feed
Explore remote events
Fetch all events (imported in MISP as event)
Edit the feed configuration (e.g. authentication, URL,...)
Remove feed
Download feed metadata (to share feed details)

Feed - Creation using PyMISP `feed generator`

`feed generator` fetches events (matching some filtering) from a MISP instance and construct the manifest (defined in *MISP core format*) needed to export data.

Particularly,

- Used to generate the **CIRCL OSINT feed**
- Export events as json based on tags, organisation, events, ...
- Automatically update the dumps and the metadata file
- Comparable to a lighweight **TAXII interface**

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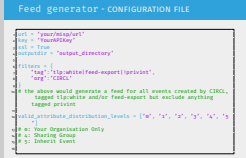
Feed generator - CONFIGURATION FILE

```
url = 'your/misp/url'
key = 'YourAPIKey'
ssl = True
outputdir = 'output_directory'

filters = {
    'tag':'tlp:white|feed-export|!privint',
    'org':'CIRCL'
}
# the above would generate a feed for all events created by CIRCL,
     tagged tlp:white and/or feed-export but exclude anything
    tagged privint

valid_attribute_distribution_levels = ['0', '1', '2', '3', '4', '5
    ']
# 0: Your Organisation Only
# 4: Sharing Group
# 5: Inherit Event

```

Real-time Feed generator - Purpose

The PyMISP feed generator is great but may be inadequate or ineficient:

- Batch import of attributes/objects
- Data producer doesn't have a MISP instance at hand and only wants to **produce a directly consumable feed**:

ip-src
payload-delivery
url
malware
...

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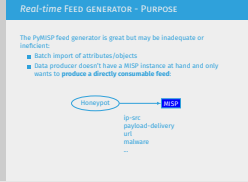
└*Real-time* Feed generator - Purpose



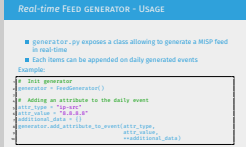
Real-time Feed generator - Usage

- generator.py exposes a class allowing to generate a MISP feed in real-time
- Each items can be appended on daily generated events

Example:

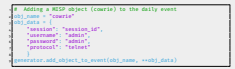
```python
#  Init generator
generator = FeedGenerator()

#  Adding an attribute to the daily event
attr_type = "ip-src"
attr_value = "8.8.8.8"
additional_data = {}
generator.add_attribute_to_event(attr_type,
                                 attr_value,
                                 **additional_data)
```

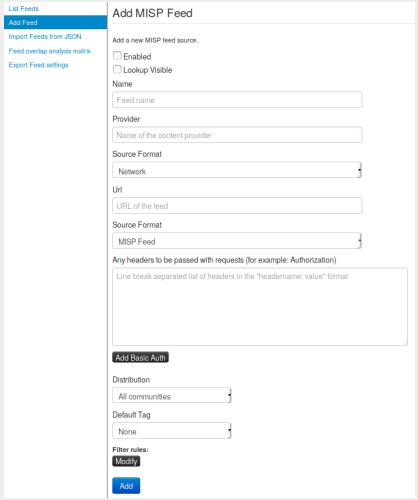



Real-time Feed generator - Usage (2)

```python
#  Adding a MISP object (cowrie) to the daily event
obj_name = "cowrie"
obj_data = {
    "session": "session_id",
    "username": "admin",
    "password": "admin",
    "protocol": "telnet"
    }
generator.add_object_to_event(obj_name, **obj_data)
```

Adding custom feed to MISP



- Enabled
- Lookup visible
- Name
- Provider
- Source Format
- Url
- Source Format
- Headers
- Distribution
- Default Tag
- Filter rules

Adding custom feed to MISP

Enabled
Lookup visible
Name
Provider
Source Format
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Distribution
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Filter rules

Q&A

- https://github.com/MISP/PyMISP
- https://github.com/MISP/
- We welcome new functionalities and pull requests.

Q&A
MISP
Threat Sharing
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