GrimoireLab made simple

Using the basic stuff from Python

CHAOSSCon NA, Vancouver, Aug 28 2018

Jesus M. Gonzalez-Barahona

CHAOSS

chaoss.community

GrimoireLab

Software development analytics with free, open source software

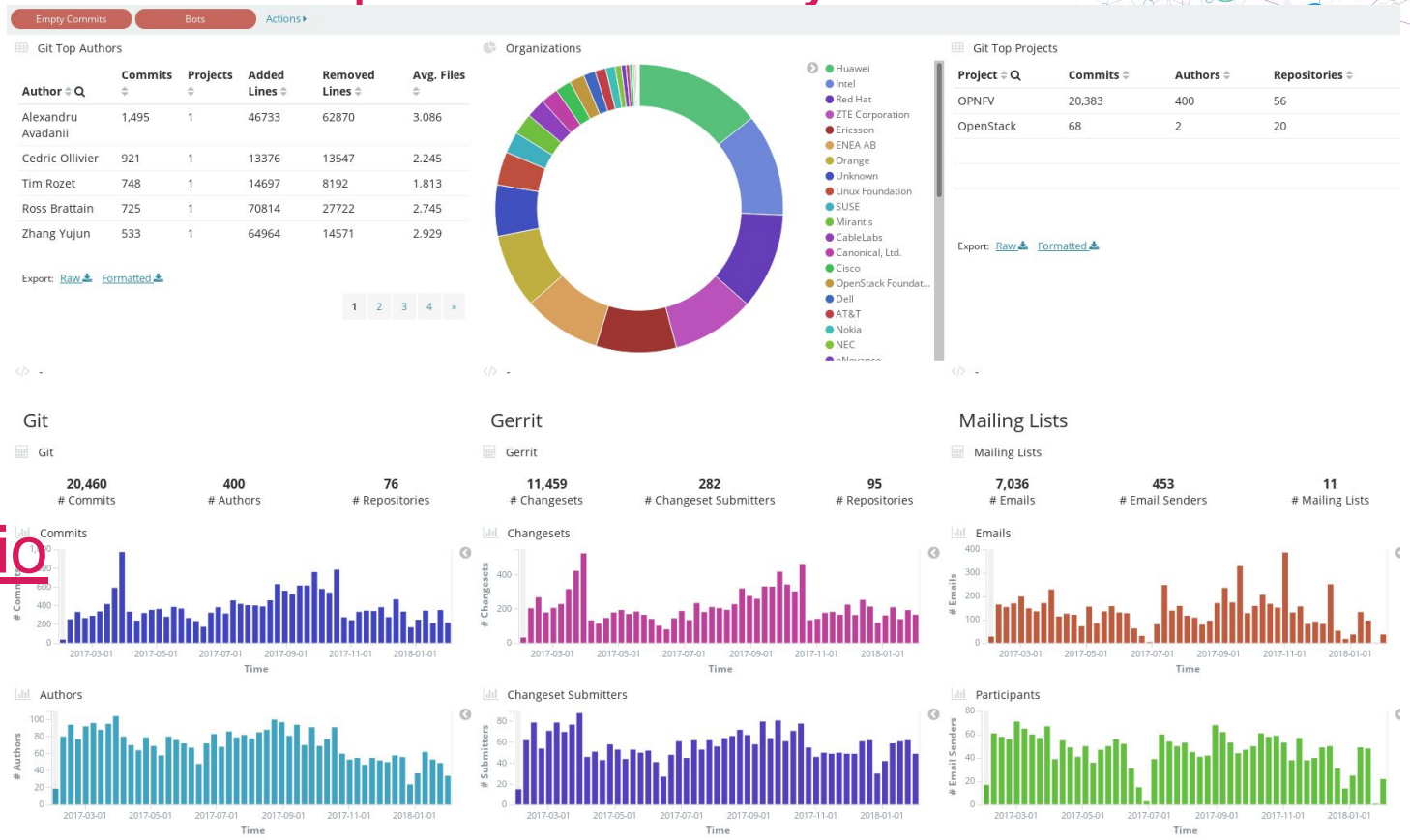
CHAOSS

(a CHAOSS project)

chaoss.github.io/grimoirelab

chaoss.github.io/grimoirelab-tutorial

Software development analytics



opnfv.biterg.io

chaoss.biterg.io

CHAOSS

Installing from pip

```
$ python3 -m venv /tmp/gl
$ source /tmp/gl/bin/activate
(gl) $ pip install --upgrade pip setuptools wheel
(gl) $ pip install grimoirelab
(gl) $ grimoirelab -v
```

chaoss.github.io/grimoirelab-tutorial/basics/install.html

Running from Docker images

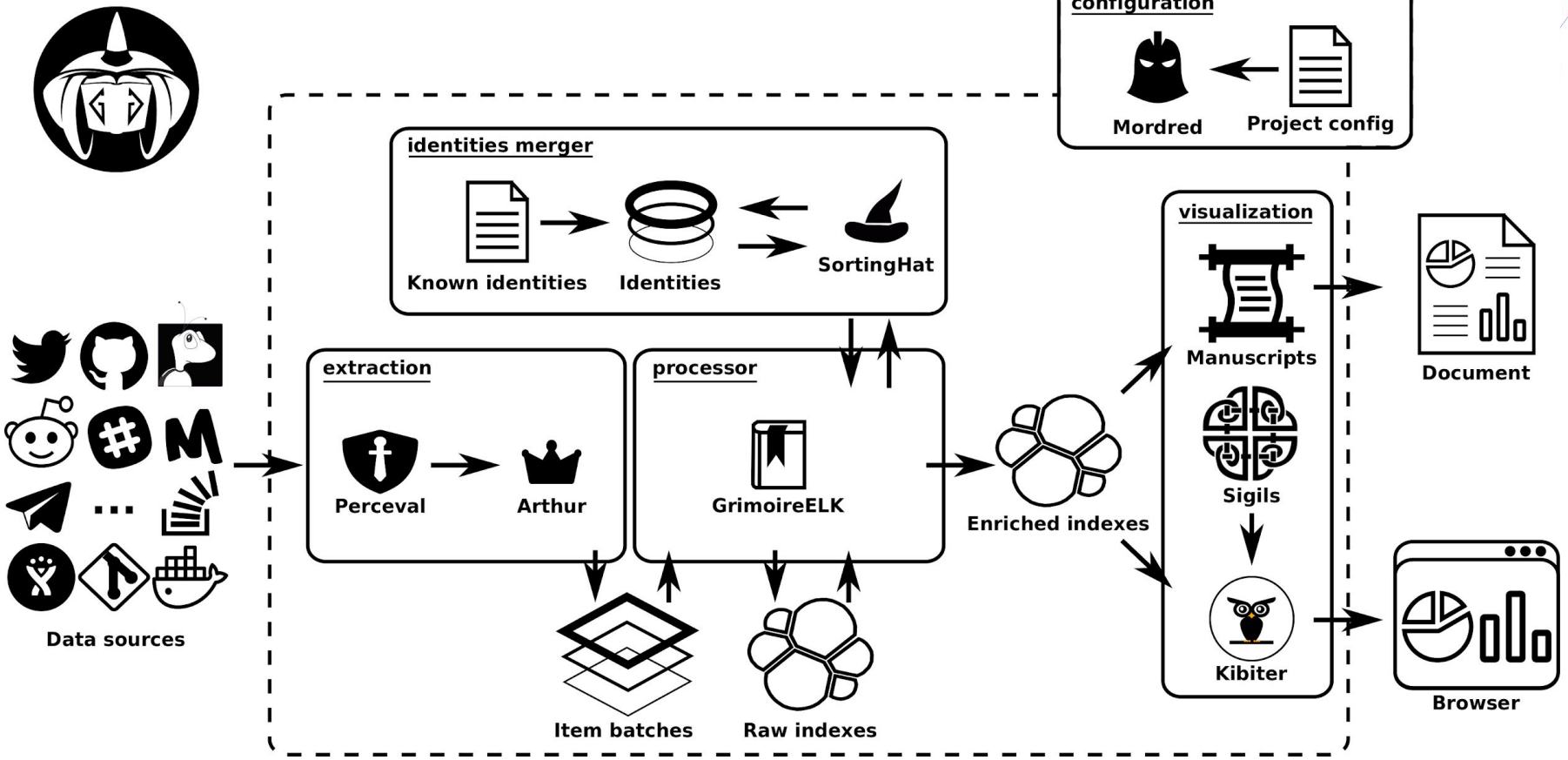
credentials.cfg:

[github]

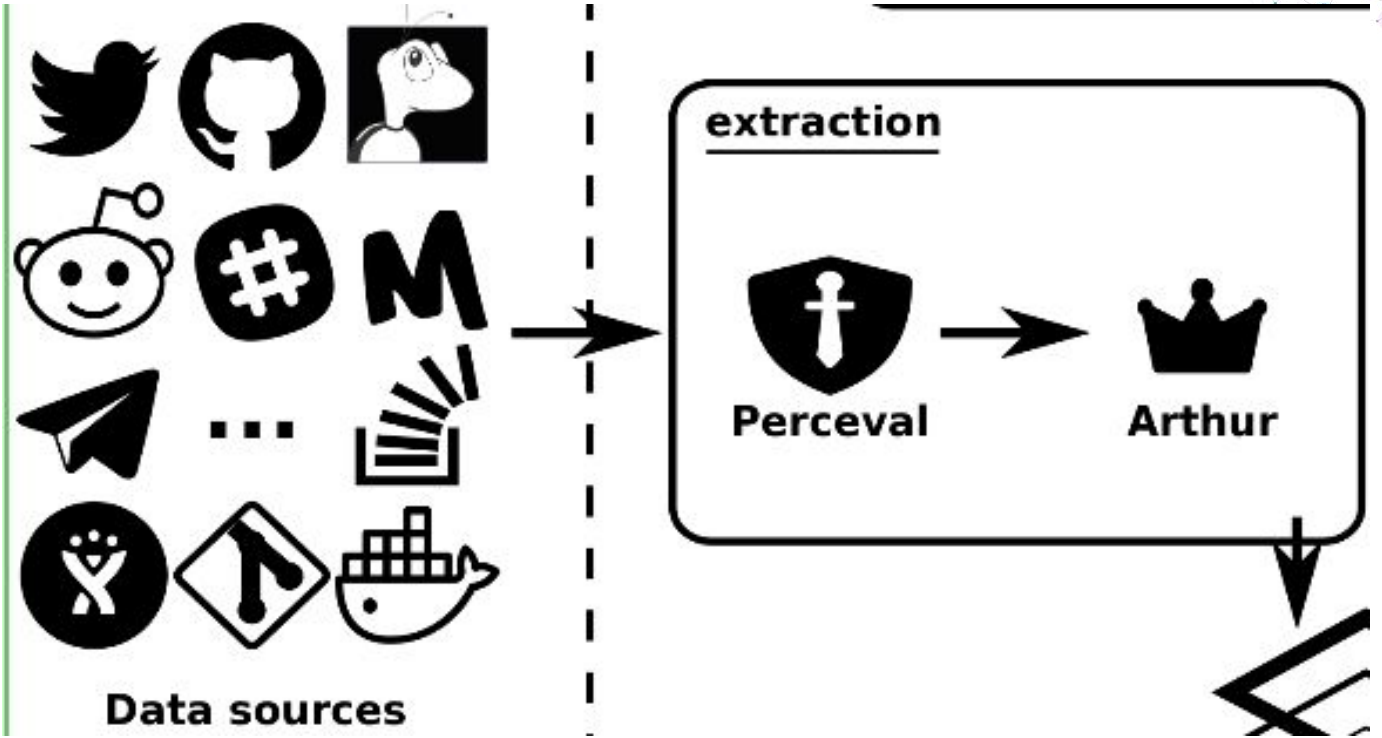
api-token = XXX

```
docker run -p 5601:5601 -p 9200:9200
  -v $(pwd)/credentials.cfg:/override.cfg
  -t grimoirelab/full
```

GrimoireLab architecture



Architecture: extraction



Example: Perceval

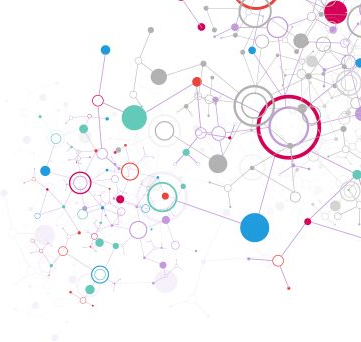
```
(gl) $ pip install perceval
(gl) $ perceval git https://github.com/grimoirelab/perceval
(gl) $ perceval github grimoirelab perceval --sleep-for-rate
          -t XXXXX
...
```

Example: Perceval

```
from perceval.backends.core.git import Git
repo_url = 'http://github.com/grimoirelab/perceval'
repo_dir = '/tmp/perceval'

repo = Git(uri=repo_url, gitpath=repo_dir)
for commit in repo.fetch():
    print(commit['data']['commit'])
```

Running Perceval



(gl) $ perceval --help

(gl) $ perceval git https://github.com/grimoirelab/perceval

grimoirelab.gitbooks.io/tutorial/content/perceval/git.html

Producing a dashboard

(assumes Elasticsearch at http://localhost:9200,
Kibiter at http://localhost:5601)

Prepare: mordred.cfg

Prepare: projects.json

Maybe: identities.yaml

Maybe: menu.yaml

(es) mordred -c mordred.cfg

chaoss.github.io/grimoirelab-tutorial/sirmordred/dashboard.html

Using Perceval to compute metrics

- Get items from the data source
- Store them in a data structure
- Compute metrics
- You can also use Pandas, of course

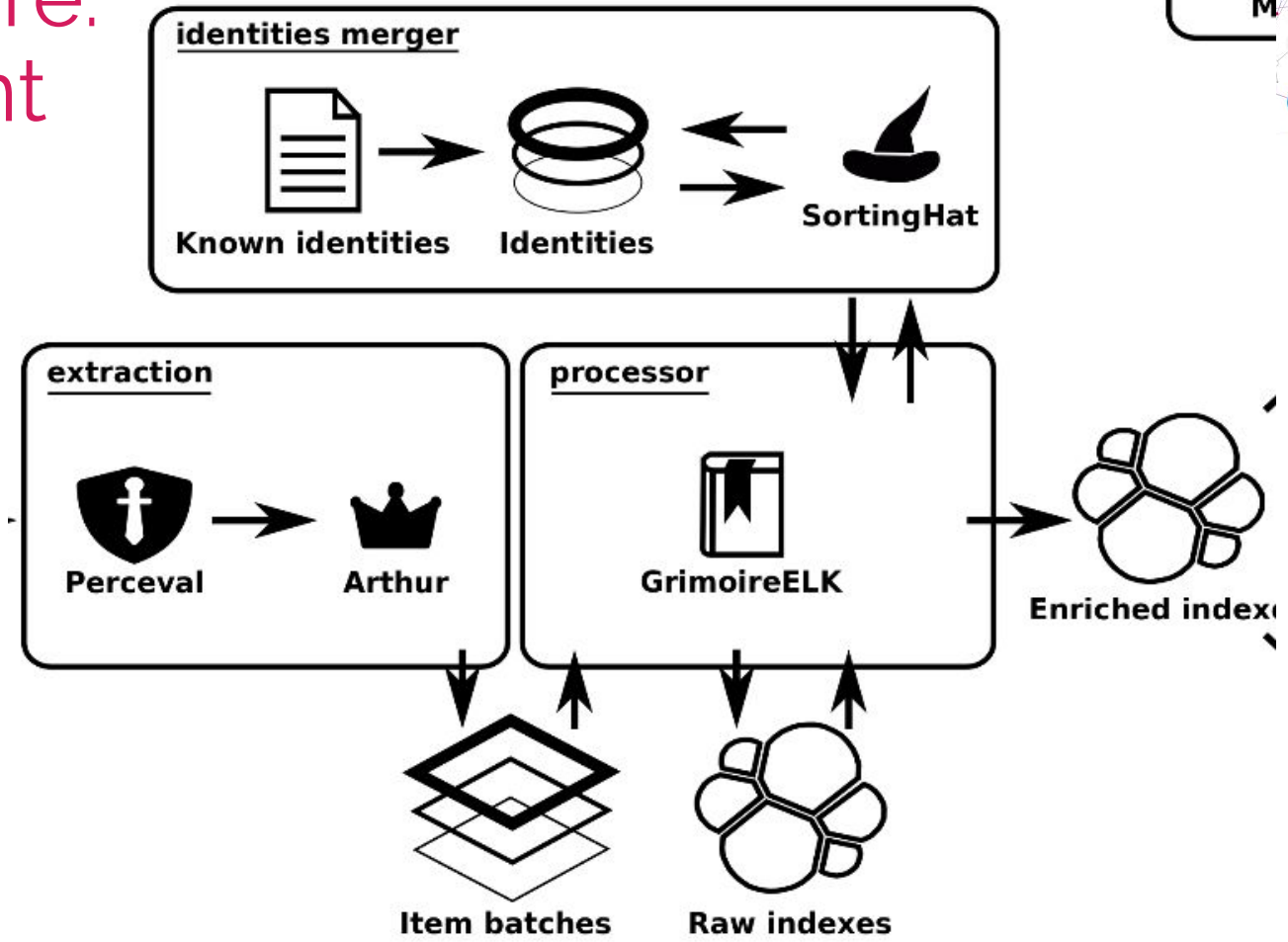
github.com/chaoss/wg-gmd/blob/master/examples/Code_Commits.ipynb

Installing servers from Docker images

```
$ docker run -p 127.0.0.1:9200:9200 \
  -p 127.0.0.1:5601:5601 -p 127.0.0.1:3306:3306 \
  -e RUN_MORDRED="NO" \
  -t grimoirelab/full
```

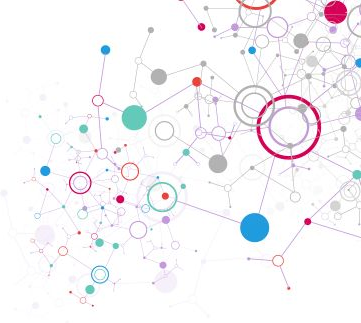
chaoss.github.io/grimoirelab-tutorial/sirmordred/container.html

Architecture: enrichment



CHAOSS

Elk: raw and enriched indexes



```
(gl) $ p2o.py --enrich --index git_raw --index-enrich git \
  -e http://localhost:9200 --no_inc --debug \
  git https://github.com/grimoirelab/perceval
```

(assumes Elasticsearch at http://localhost:9200)

chaoss.github.io/grimoirelab-tutorial/gelk/simple.html

Example: item in enriched index

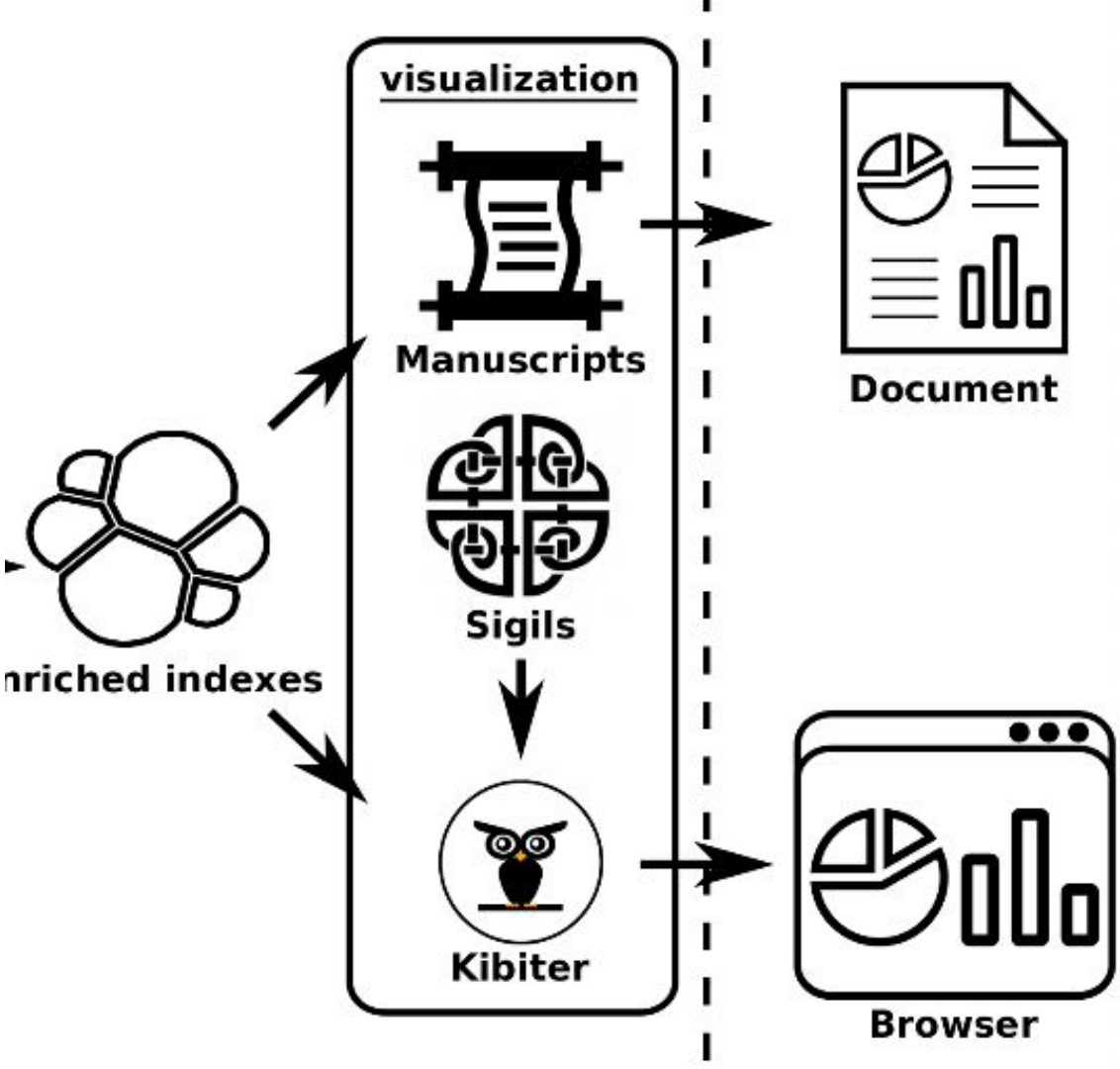

```
{
  "_index": "git_grimoirelab",
  "_type": "items",
  "_id": "34a30200a149354032326ba517d278d7804e8f7e",
  "_version": 167,
  "_score": null,
  "_source": {
    "metadata__enriched_on": "2018-02-03T22:56:57.610440",
    "author_date": "2018-02-02T13:12:10",
    "utc_commit": "2018-02-02T12:12:10",
    "Author_user_name": "",
    "hash_short": "9e6ae8",
    "lines_added": 0,
    "author_id": "75fc28ef4643de5323e89fb26e4e67c97b24f507",
    "project": "grimoire",
    "author_max_date": "2018-02-02T12:12:10.000Z",
    "uuid": "34a30200a149354032326ba517d278d7804e8f7e",
    "Author_id": "75fc28ef4643de5323e89fb26e4e67c97b24f507",
    "message": "Merge branch 'fix-bs4' of 'https://github.com/jgbarah/perceval
    "metadata__gelk_version": "0.30.23",
    "files": 0,
```

Computing metrics from enriched indexes

- Connect to Elasticsearch indexes
  (produced with p2o, mordred)
- Query them to get items of interest
- Compute metrics
- You can also use Pandas, of course

chaoss.github.io/grimoirelab-tutorial/python/indexes.html

Architecture: exploitation



CHAOSS

Example: producing a dashboard

```
(es) $ pip install grimoire-mordred
(es) $ mordred -c mordred.cfg
```

(assumes Elasticsearch at http://localhost:9200,
Kibiter at http://localhost:5601)

Needs: mordred.cfg, projects.json, identities.yaml, menu.yaml

chaoss.github.io/grimoirelab-tutorial/sirmordred/dashboard.html

Producing a report

(assumes Elasticsearch at http://localhost:9200)

(es) $ pip install manuscripts

(es) $ manuscripts -d /tmp/report-result \

-u http://localhost:9200 \
-n GrimoireLab --data-sources git

Try GrimoireLab with a single line!!

credentials.cfg:

[github]

api-token = XXX

```
$ docker run -p 5601:5601
-v $(pwd)/credentials.cfg:/override.cfg
-t grimoirelab/full
```

http://localhost:5601

chaoss.github.io/grimoirelab

chaoss.github.io/grimoirelab-tutorial