FOSDEM'17

OSINT tools for security auditing

Open Source Intelligence with python tools

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http://jmortega.github.io

https://github.com/jmortega/osint_tools_security_auditing

- Shodan
- TOR
- emails
- google+API
- images
- ip_map_position
- links
- maltego_python
- mapping
- metadata

- panoramio
- twitter
- youtube
- BuiltWith.py
- GeoLite2-City.mmdb
- README.md
- censys_data.py
- checkFullContactAPI.py
- checkIpDetails.py
- checkLinkedLinProfile.py
- check_social_networks.py
- github_repositories.py

Agenda

- **OSINT introduction**
- **Server information(Censys,Shodan)**
- **OSINT tools developed with python**
- **Geolocation,Metadata**
- **Twitter,Footprinting,FullContact**

OSINT

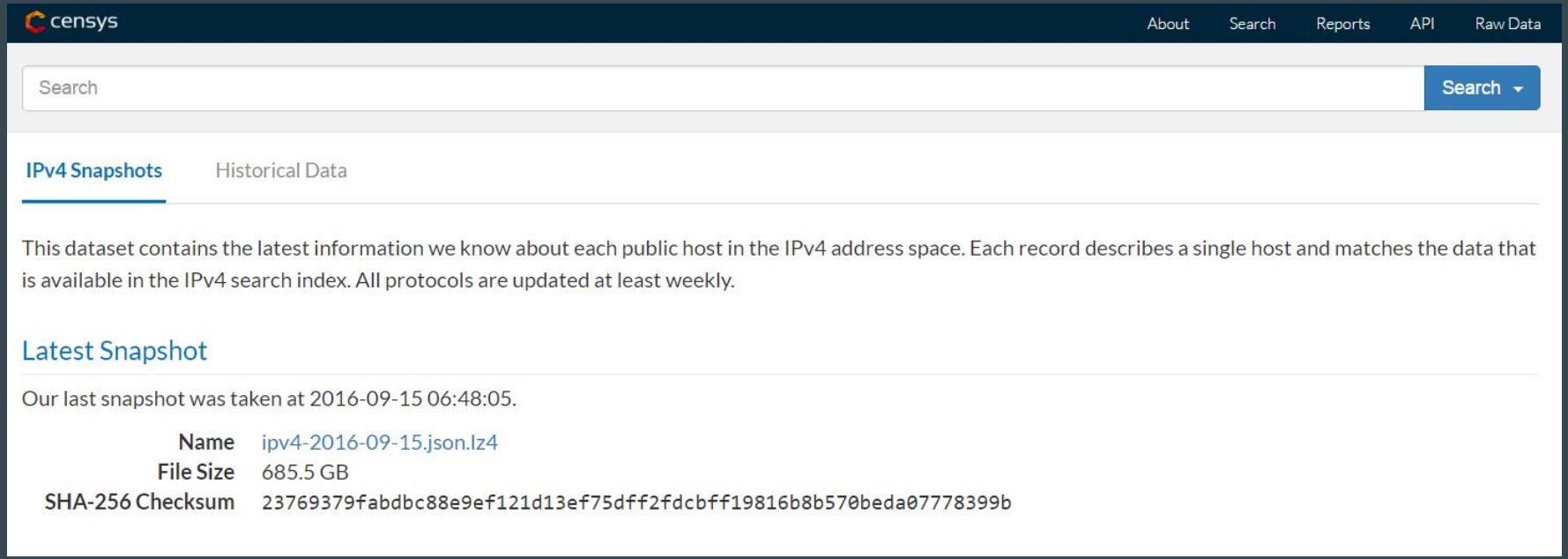
- **Define a specific target and data you wish to obtain**

- **Technical-Accounts,servers,services,software**
- **Social-Social Media,Email,Photos**
- **Physical-Address,Home IP address,Footprinting**
- **Logical-Network,Operational intelligence**

OSINT

- GeoLocation
- IP address
- Email address
- Telephone Number
- Usernames in social network profiles
- Metadata information from images
- Server information & vulnerabilities

Censys.io


censys
About
Search
Reports
API
Raw Data
Search
Search
IPv4 Snapshots
Historical Data
This dataset contains the latest information we know about each public host in the IPv4 address space. Each record describes a single host and matches the data that is available in the IPv4 search index. All protocols are updated at least weekly.
Latest Snapshot
Our last snapshot was taken at 2016-09-15 06:48:05.
Name
ipv4-2016-09-15.json.lz4
File Size
685.5 GB
SHA-256 Checksum
23769379fabdbc88e9ef121d13ef75dff2fdcbff19816b8b570beda07778399b

Censys.io

- https://www.censys.io/api/v1/view/ipv4/ip_address
- https://www.censys.io/api/v1/view/websites/domain

```
def get_censys_data(ip,domain):

    if ip is not None:
        res = requests.get(API_URL + "/view/ipv4/"+ip, auth=(UID,SECRET))

    if domain is not None:
        res = requests.get(API_URL + "/view/websites/"+domain, auth=(UID,SECRET))

    if res.status_code != 200:
        print("error occurred: %s" % res.json()["error"])
        sys.exit(1)

    print(json.dumps(res.json(), indent=4))

    with open('data_censys.txt', 'w') as file:
        json.dump(res.json(), file, ensure_ascii=False,indent=4)
```

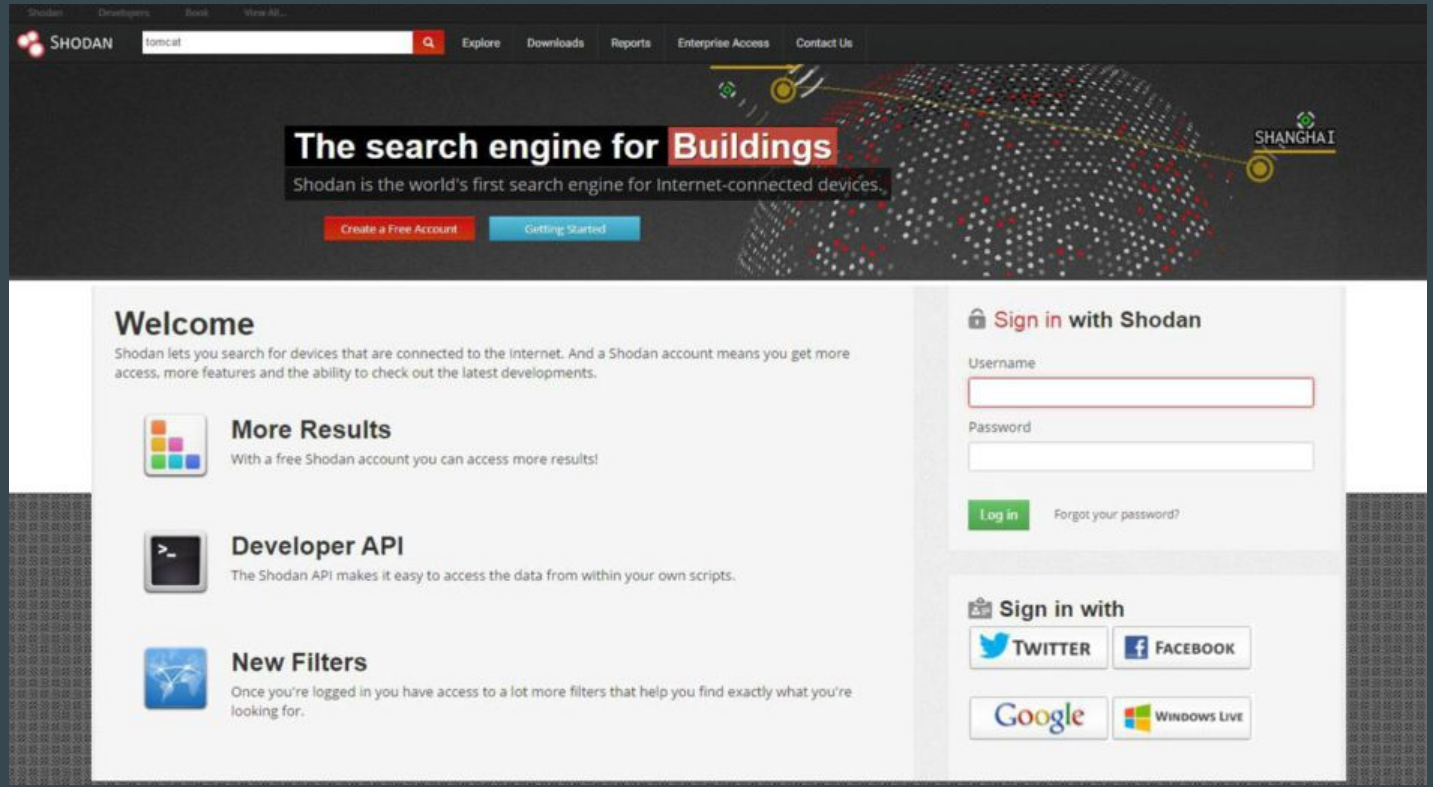
Censys.io

```
python censys_data.py -d python.org
```


```
            "mail.python.org"
        ],
        "organization": [
            "Python Software Foundation"
        ],
        "locality": [
            "Beaverton"
        ]
    },
    "issuer": {
        "country": [
            "IL"
        ],
        "organization": [
            "StartCom Ltd."
        ],
        "common_name": [
            "StartCom Class 2 Primary Intermediate Server CA"
        ],
        "organizational_unit": [
            "Secure Digital Certificate Signing"
        ]
```

```
        },
        "organization": "Rackspace Hosting",
        "asn": 27357,
        "rir": "unknown",
        "description": "RACKSPACE - Rackspace Hosting,US",
        "name": "RACKSPACE",
        "routed_prefix": "104.130.0.0/18"
    },
    "updated_at": "2016-09-24T10:30:10+00:00",
    "location": {
        "province": "Texas",
        "registered_country_code": "US",
        "postal_code": "78218",
        "latitude": 29.4889,
        "registered_country": "United States",
        "country": "United States",
        "longitude": -98.3987,
        "country_code": "US",
        "city": "San Antonio",
        "continent": "North America",
        "timezone": "America/Chicago"
    }
```

Shodan


SHODAN
tomcat
Explore
Downloads
Reports
Enterprise Access
Contact Us
The search engine for Buildings
Shodan is the world's first search engine for Internet-connected devices.
Create a Free Account
Getting Started
SHANGHAI
Welcome
Shodan lets you search for devices that are connected to the Internet. And a Shodan account means you get more access, more features and the ability to check out the latest developments.
More Results
With a free Shodan account you can access more results!
Developer API
The Shodan API makes it easy to access the data from within your own scripts.
New Filters
Once you're logged in you have access to a lot more filters that help you find exactly what you're looking for.
Sign in with Shodan
Username
Password
Log in
Forgot your password?
Sign in with
TWITTER
FACEBOOK
Google
WINDOWS LIVE

Shodan

```
import shodan

SHODAN_API_KEY = "insert your API key here"
api = shodan.Shodan(SHODAN_API_KEY)
```

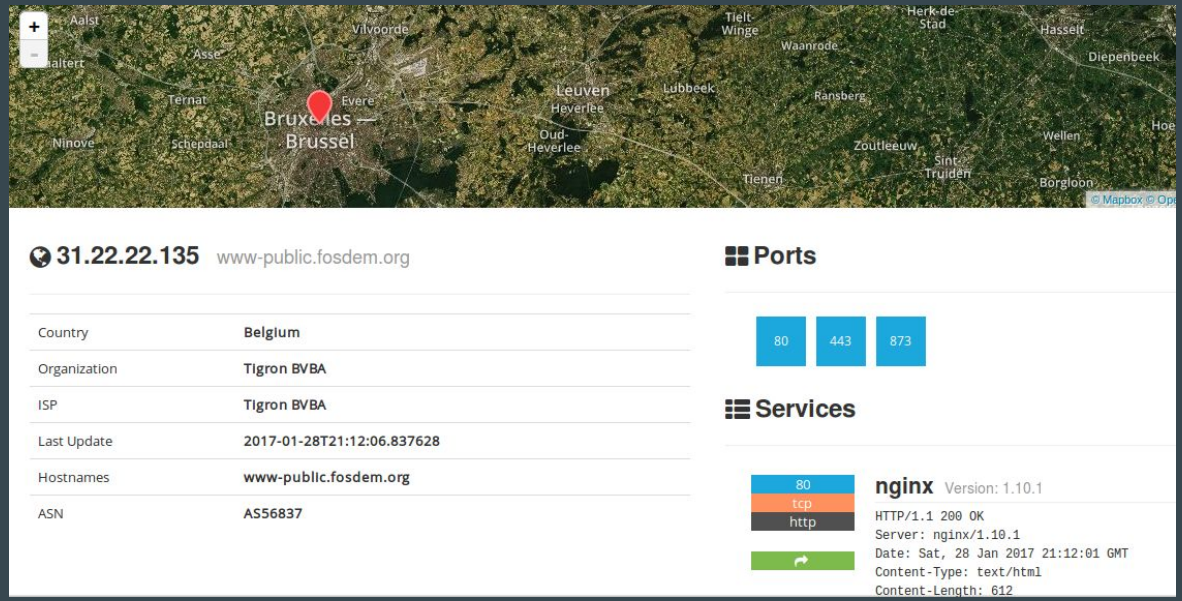
```
# Lookup the host
host = api.host(hostname)

# Print general info
print """
                IP: %s
                Organization: %s
                Operating System: %s
        """ % (host['ip_str'], host.get('org', 'n/a'), host.get('os', 'n/a'))

# Print all banners
for item in host['data']:
        print """Port: %s
        Banner: %s""" % (item['port'], item['data'])
```

Shodan

```
aster/Shodan $ python demoShodanSearch.py -target fosdem.org

                IP: 31.22.22.135
                Organization: Tigron BVBA
                Operating System: None

Port: 80
                        Banner: HTTP/1.1 200 OK
Server: nginx/1.10.1
Date: Sat, 28 Jan 2017 21:12:01 GMT
Content-Type: text/html
Content-Length: 612
Last-Modified: Sun, 25 Sep 2016 19:13:43 GMT
Connection: keep-alive
ETag: "57e821e7-264"
Accept-Ranges: bytes


Port: 873
                        Banner: @RSYNCD: 31.0
video           Recorded videos from the FOSDEM conferences
@RSYNCD: EXIT
```

Shodan

- **Checking data with ip address**
- **https://www.shodan.io/host/31.22.22.135**

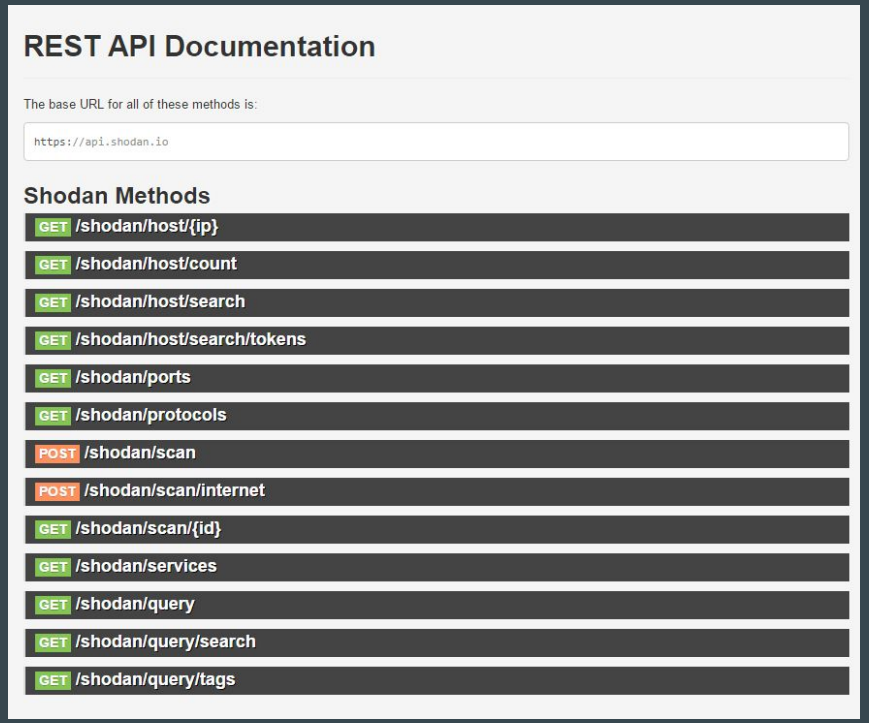


Shodan CVE vulns

```
# Print vuln information
for item in host['vulns']:
    CVE = item.replace('!','')
    print 'Vulns: %s' % item
    exploits = api.exploits.search(CVE)
    for item in exploits['matches']:
        if item.get('cve')[0] == CVE:
            print item.get('description')
```

Shodan Developer API

https://developer.shodan.io/api



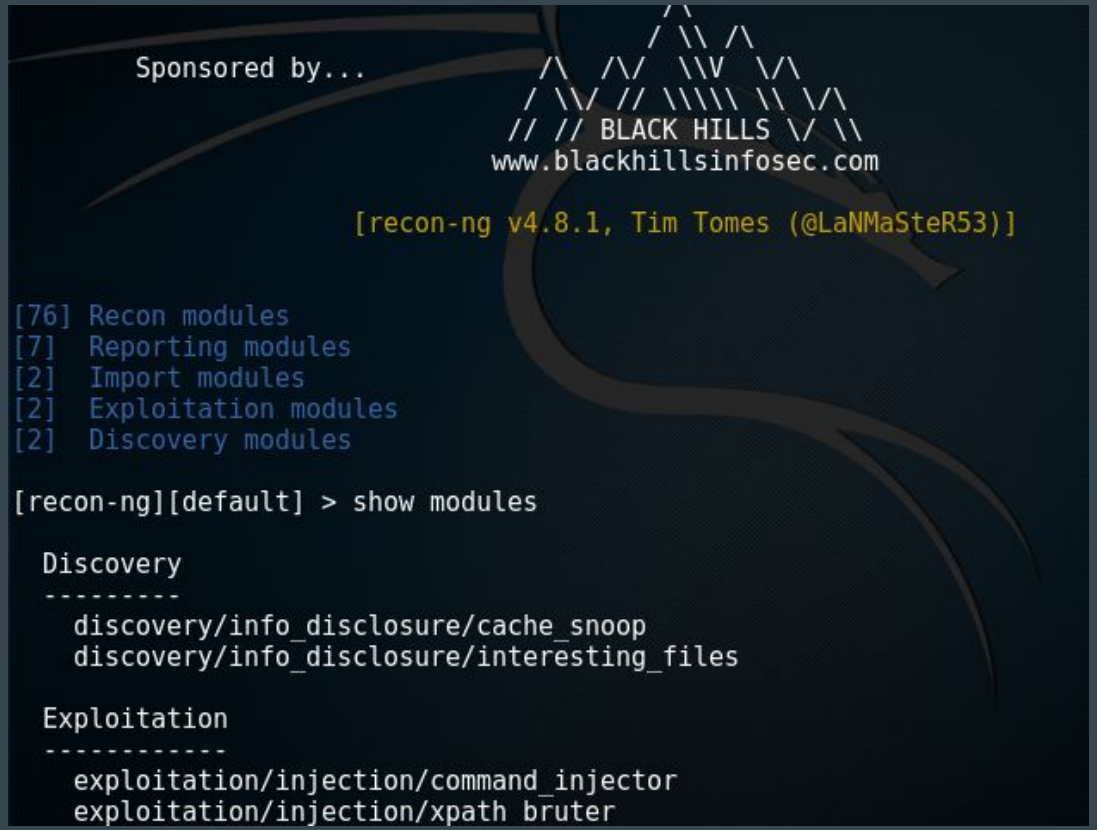
Recon-ng

- https://bitbucket.org/LaNMaSteR53/recon-ng
- **Open Source OSINT toolkit written in python**
- **Actively maintained**
- **Uses modules and saves all recollected information in databases**

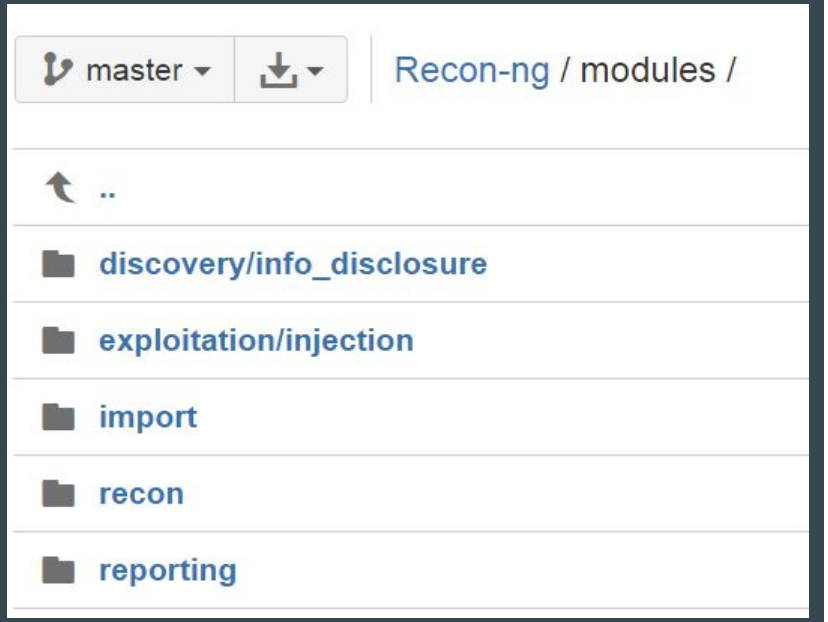
Recon-ng dependences

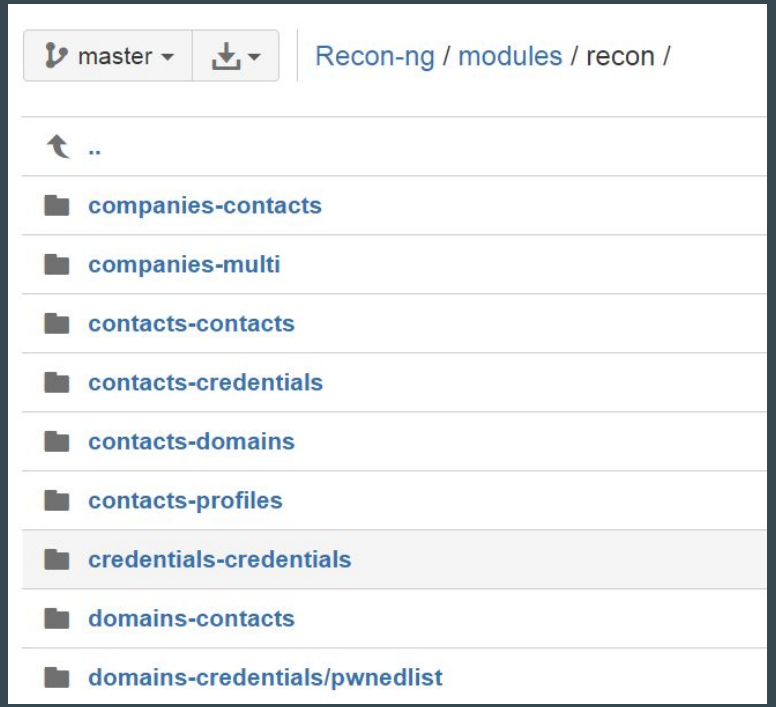
- dnspython - http://www.dnspython.org/
- dicttoxml - https://github.com/quandyfactory/dicttoxml/
- jsonrpclib - https://github.com/joshmarshall/jsonrpclib/
- lxml - http://lxml.de/
- slowaes - https://code.google.com/p/slowaes/
- XlsxWriter - https://github.com/jmcnamara/XlsxWriter/
- Mechanize
- PyPDF2
- sqlite3

Recon-ng modules

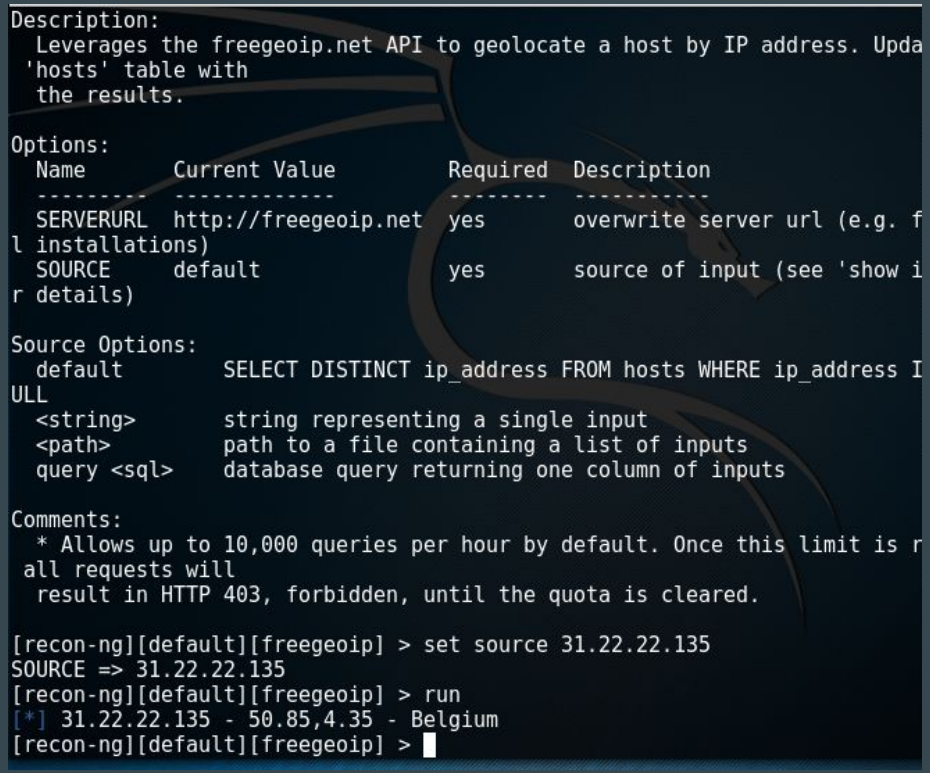


Recon-ng modules





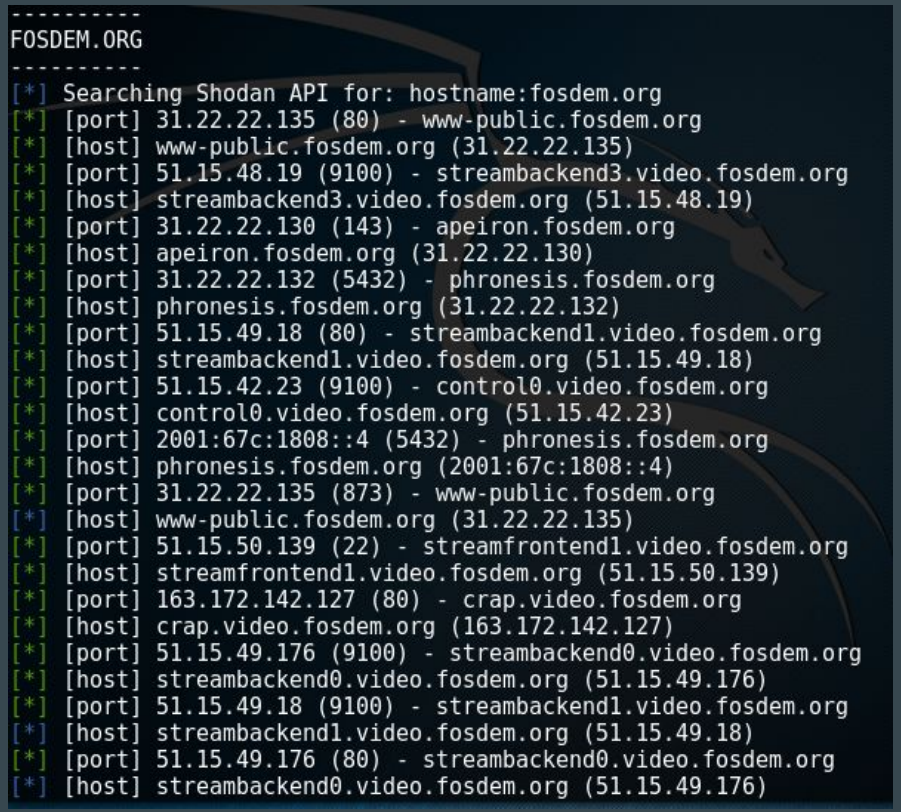
Recon-ng modules



Recon-ng subdomains

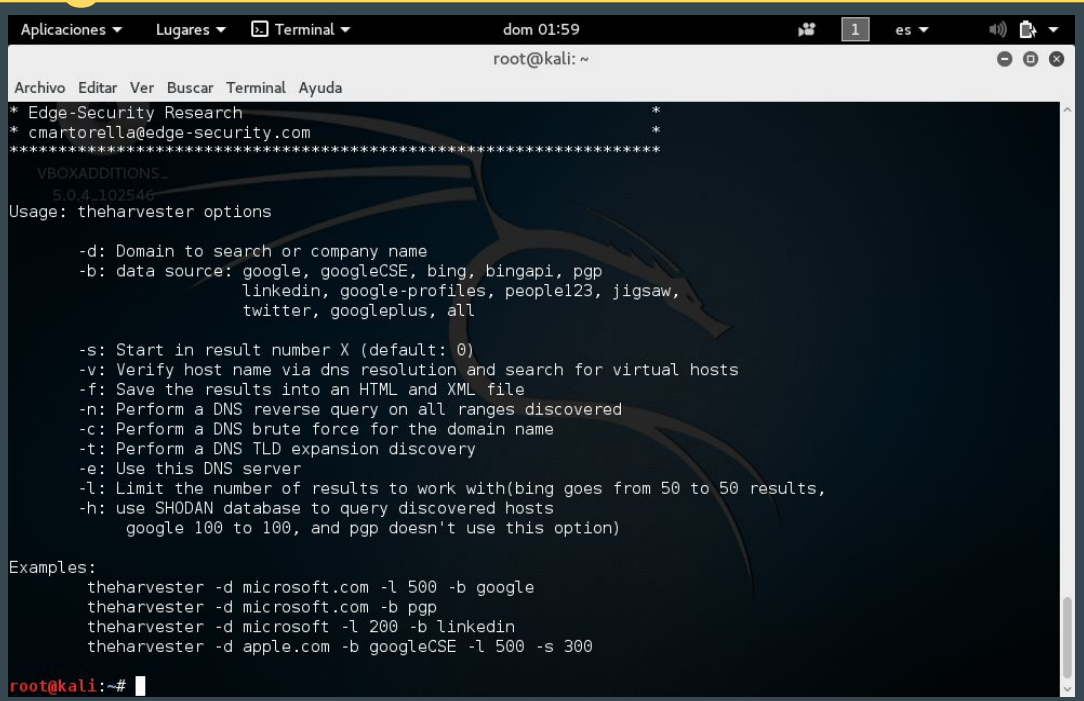
```
class Module(BaseModule):
    meta = {
        'name': 'HackerTarget Lookup',
        'author': 'Michael Henriksen (@michenriksen)',
        'description': 'Uses the HackerTarget.com API to find host names. Updates the \'hosts\' table with the results.',
        'query': 'SELECT DISTINCT domain FROM domains WHERE domain IS NOT NULL',
    }

    def module_run(self, domains):
        for domain in domains:
            self.heading(domain, level=0)
            url = 'https://api.hackertarget.com/hostsearch/'
            payload = {'q': domain}
            resp = self.request(url, payload=payload)
            if resp.status_code is not 200:
                self.error('Got unexpected response code: %i' % resp.status_code)
                continue
            if resp.text == '':
                self.output('No results found.')
                continue
            for line in resp.text.split("\n"):
                line = line.strip()
                if line == '':
                    continue
                host, address = line.split(",")
                self.add_hosts(host=host, ip_address=address)
```

Recon-ng Shodan API

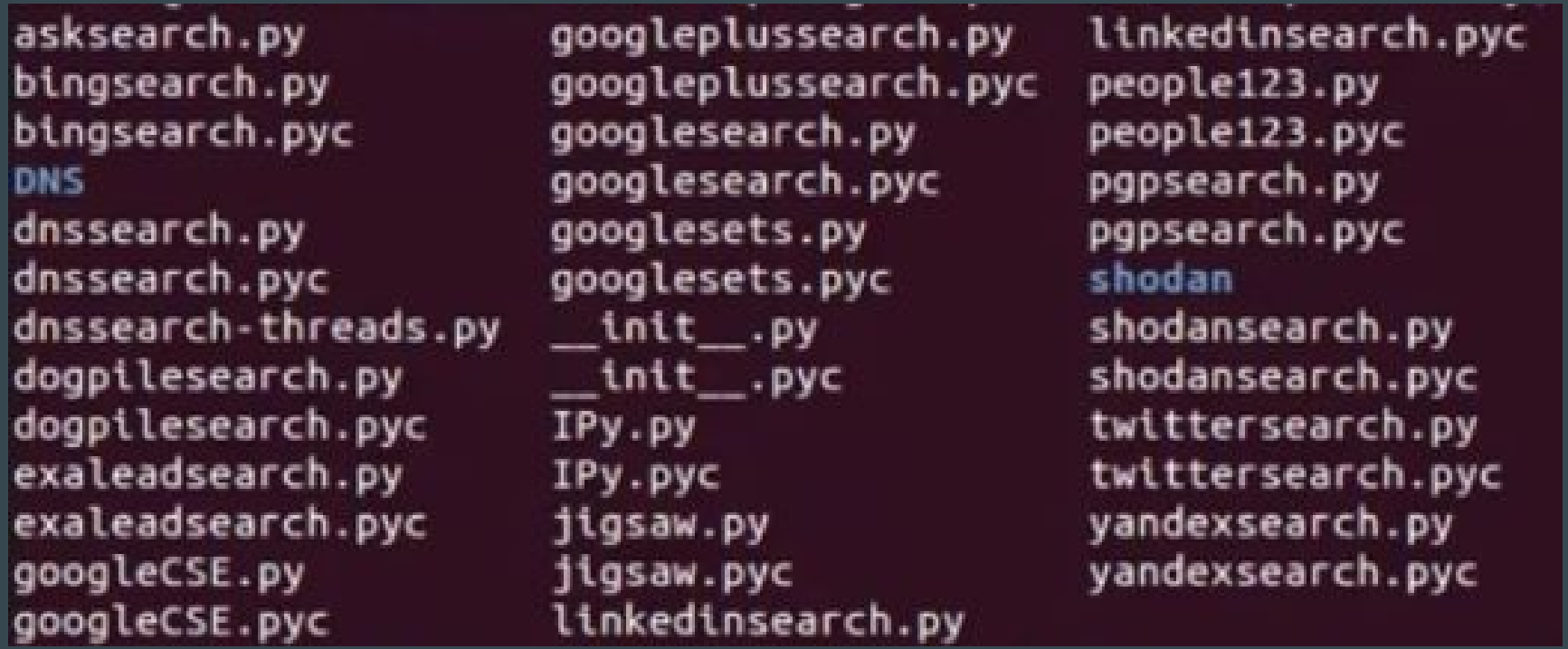


The harvester

- https://github.com/laramies/theHarvester



The harvester modules



Python modules

- httplib
- socket
- requests
- shodan

```
import string
import httplib
import sys
import os
from socket import *
import re
import getopt

try:
    import requests
except:
    print "Request library not found,
    sys.exit()

from discovery import *
from lib import htmlExport
from lib import hostchecker
```

The harvester

```
[-] Searching in Bing:
root@kali:~# theharvester -d pycon.org -l 500 -b google

*******************************************************************
*                                                                 *
* | |_| |__   ___    /\  /\__ _ _ ____   _____ ___| |_ ___ _ __  *
* | __| '_ \ / _ \  / /_/ / _` | '__\ \ / / _ \/ __| __/ _ \ '__| *
* | |_| | | |  __/ / __  / (_| | |   \ V /  __/\__ \ ||  __/ |    *
*  \__|_| |_|\___| \/ /_/ \__,_|_|    \_/ \___||___/\__\___|_|    *
*                                                                 *
* TheHarvester Ver. 2.6                                           *
* Coded by Christian Martorella                                   *
* Edge-Security Research                                          *
* cmartorella@edge-security.com                                   *
*******************************************************************


[-] Searching in Google:
        Searching 0 results...
        Searching 100 results...
        Searching 200 results...
        Searching 300 results...
        Searching 400 results...
        Searching 500 results...
```

```
[+] Emails found:
------------------
contacto2016@es.pycon.org
info@pycon.org
swc@za.pycon.org

[+] Hosts found in search engines:
-----------------------------------
[-] Resolving hostnames IPs...
148.251.113.227:www.pycon.org
144.76.246.116:2016.es.pycon.org
69.164.212.224:za.pycon.org
151.101.60.223:us.pycon.org
82.166.0.152:il.pycon.org
151.101.60.133:na.pycon.org
106.187.52.176:tw.pycon.org
144.76.246.116:2015.es.pycon.org
205.147.96.46:in.pycon.org
188.166.192.28:ua.pycon.org
52.50.6.31:cz.pycon.org
94.23.84.75:es.pycon.org
87.204.59.165:pl.pycon.org
106.187.52.176:Tw.pycon.org
158.69.9.197:ar.pycon.org
```

OSR framework

- **pip install osrframework**
- **Developed in python 2.7**
- **Integrates with maltego transforms**
- https://pypi.python.org/pypi/osrframework/0.13.2
- https://github.com/i3visio/osrframework

OSR python modules

- **BeautifulSoup**
- **Requests**
- **Mechanize**
- **pyDNS**→resolving name servers
- **python-whois**→to recover the whois info from a domain
- **tweepy**→for connecting with Twitter API
- **Skype4Py**→ for connecting with Skype API
- **Python-emailahoy**→for checking email address
- **Multiprocessing**→import Process, Queue, Pool

OSR python scripts

alias_generator.py	Added osrfconsole script to control de utilities in the framework to ...
domainfy.py	Check information against DNS instead of making HTTP GET queries
entify.py	Added osrfconsole script to control de utilities in the framework to ...
enumeration.py	Added osrfconsole script to control de utilities in the framework to ...
mailfy.py	Added osrfconsole script to control de utilities in the framework to ...
osrfconsole.py	Fix issue #166 by adding a split to information in PLATFORMS
phonefy.py	Added osrfconsole script to control de utilities in the framework to ...
searchfy.py	Added osrfconsole script to control de utilities in the framework to ...
usufy.py	Added osrfconsole script to control de utilities in the framework to ...

OSR python scripts

```
python searchfy.py -q "fosdem" -p "twitter"
```

i3visio_uri	i3visio_alias	i3visio_platform
http://twitter.com/ruby_fosdem	ruby_fosdem	Twitter
http://twitter.com/PerlFosdem	PerlFosdem	Twitter
http://twitter.com/FosdemBar	FosdemBar	Twitter
http://twitter.com/yaloki	yaloki	Twitter
http://twitter.com/fosdemlive	fosdemlive	Twitter
http://twitter.com/fosdem13home	fosdem13home	Twitter
http://twitter.com/PythonFOSDEM	PythonFOSDEM	Twitter
http://twitter.com/FosdemBot	FosdemBot	Twitter
http://twitter.com/go_fosdem	go_fosdem	Twitter
http://twitter.com/PHP_FOSDEM	PHP_FOSDEM	Twitter

OSR python scripts

```
python usufy.py -n "fosdem"
```

i3visio_uri	i3visio_alias	i3visio_platform
http://favstar.fm/users/fosdem	fosdem	Favstar
http://www.instagram.com/fosdem	fosdem	Instagram
http://www.slideshare.net/fosdem	fosdem	Slideshare
http://es.badoo.com/fosdem	fosdem	Badoo
https://gytorrents.com/user/fosdem/	fosdem	Gytorrents
http://www.klout.com/fosdem	fosdem	Klout
https://www.facebook.com/fosdem	fosdem	Facebook
http://twitter.com/fosdem	fosdem	Twitter
http://web.tv/user/fosdem	fosdem	Webtv
http://www.metacafe.com/channels/fosdem	fosdem	Metacafe
https://github.com/fosdem	fosdem	Github
http://twicsy.com/u/fosdem	fosdem	Twicsy
http://forocompraventa.com/member.php?username=fosdem	fosdem	Forocompraventa
http://www.nubelo.com/perfil/fosdem	fosdem	Nubelo

OSR python scripts

checkIfEmailWasHacked.py	Added Tor search platform to searchfy.py
checkIfHashIsCracked.py	Added Tor search platform to searchfy.py
checkInSkype.py	Checked that mailfy.py work on Linux.
checkIpDetails.py	Added Tor search platform to searchfy.py
checkIpFromAlias.py	Checked that mailfy.py work on Linux.
checkPhoneDetails.py	Added Tor search platform to searchfy.py
getBitcoinAddressDetails.py	Added Tor search platform to searchfy.py

```
python checkIpDetails.py -q fosdem.org
```

```
try:
    apiURL = "http://ip-api.com/json/" + query


    # Accessing the ip-api.com RESTful API
    data = urllib2.urlopen(apiURL).read()

    # Reading the text data onto python structures
    apiData = json.loads(data)

    # i3visio structure to be returned
    jsonData = []
```

SpiderFoot-modules

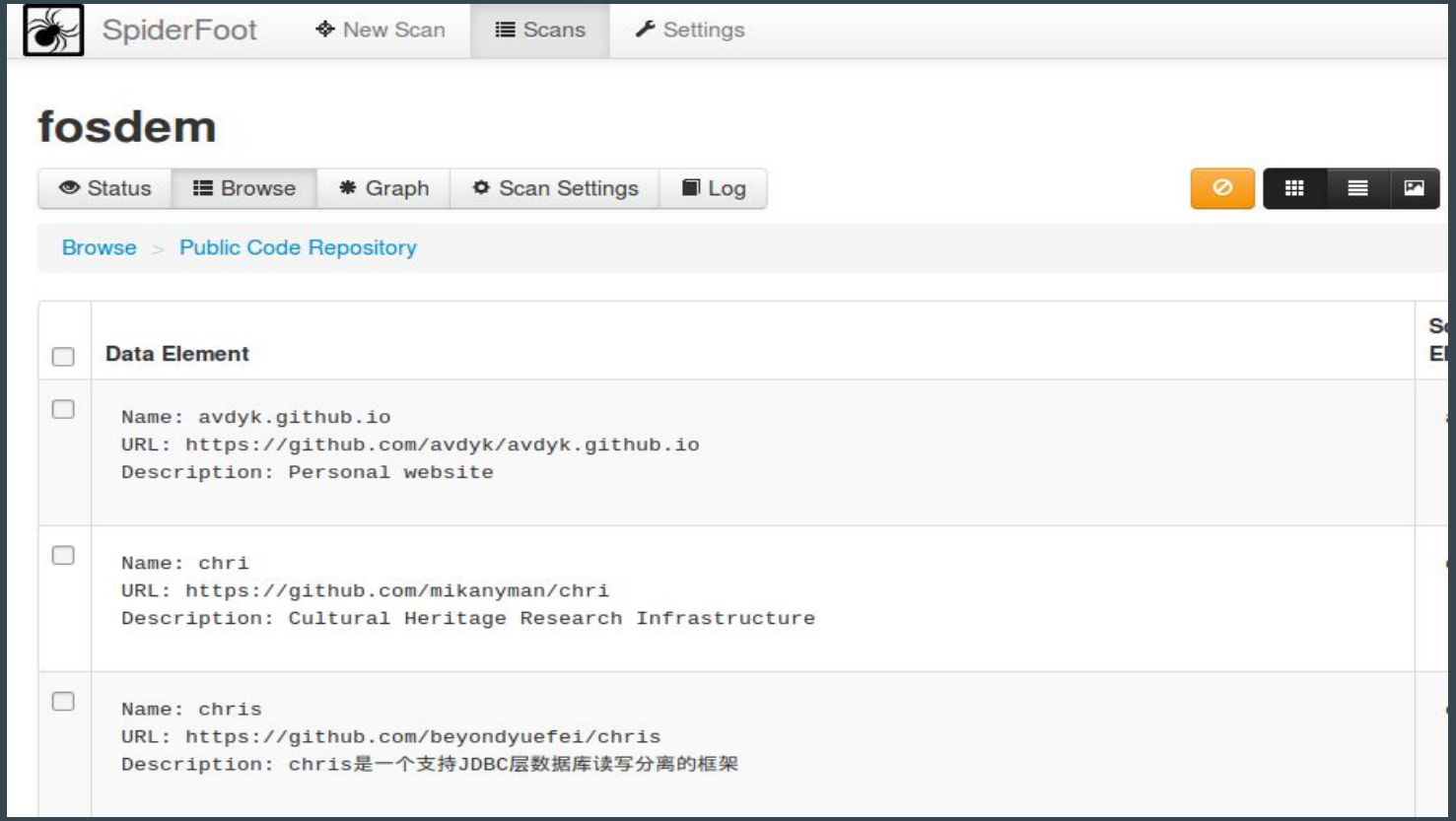
- Python 2.7
- BeautifulSoup
- DNSPython
- Socks
- Socket
- SSL
- CherryPy
- M2MCrypto
- Netaddr
- pyPDF

adblockparser	Added AdBlock parser module.
bs4	Spidering to utilise BeautifulSoup parsing and adjusted configuration.
dns	Added the DNSPython library.
exifread	Identify image meta data and extract software used from images, offic...
gexf	PyGEXF added
ispell	Identifying names in content.
metapdf	Extracting docx, xlsx, pptx and pdf meta data.
openxmllib	Extracting docx, xlsx, pptx and pdf meta data.
phonenumbers	Support for identifying phone numbers.
pyPdf	Extracting docx, xlsx, pptx and pdf meta data.
pythonwhois	Pythonwhois external module added.
stem	Stem license.
__init__.py	Module re-shuffle.
socks.py	TOR integration support.

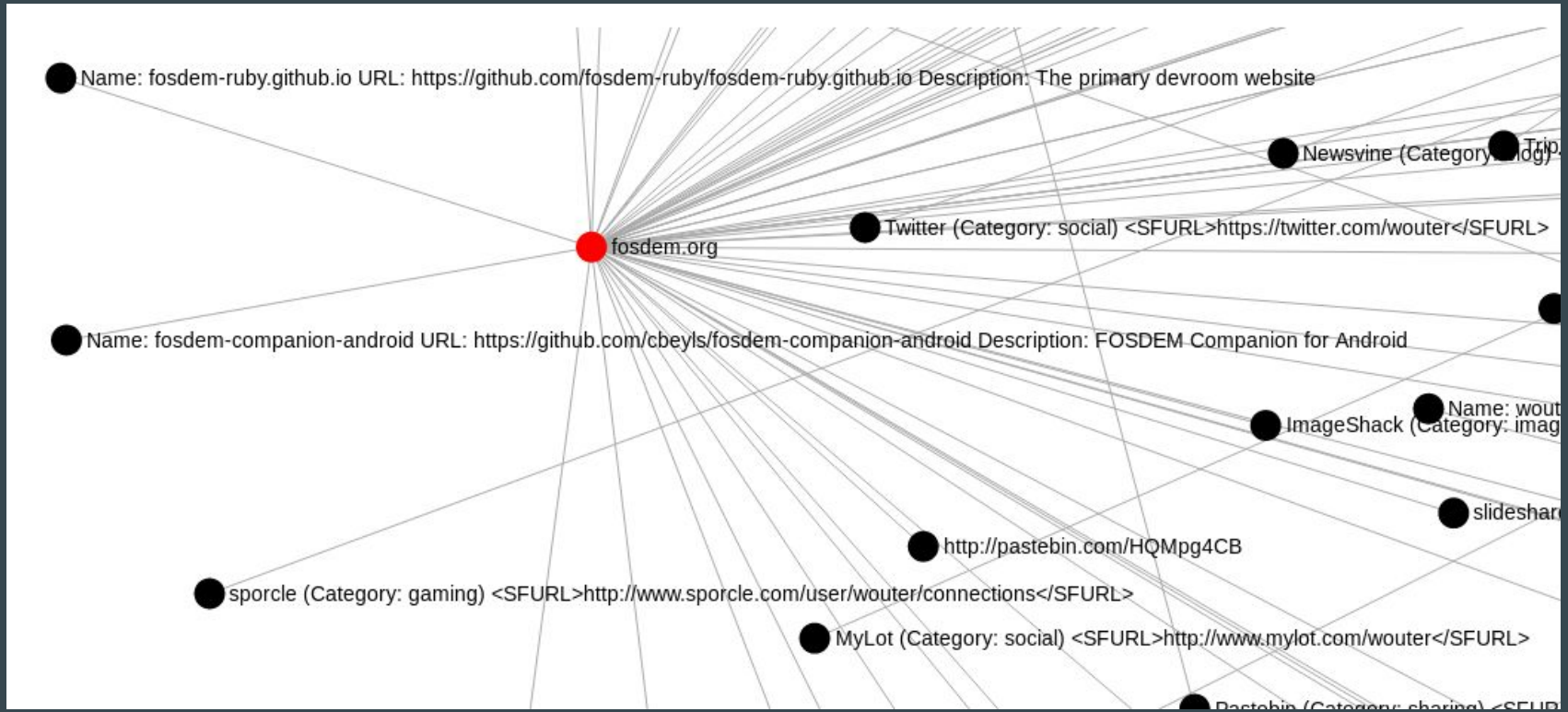
SpiderFoot-data sources

Source	Location	Notes
abuse.ch	http://www.abuse.ch	Various malware trackers.
AdBlock	https://easylist-downloads.adblockplus.org/easylist.txt	AdBlock pattern matches
AlienVault	https://reputation.alienvault.com	AlienVault's IP reputation database.
Autoshun.org	http://www.autoshun.org	Blacklists.
AVG Site Safety Report	http://www.avgthreatlabas.com	Site safety checker.
Bing	http://www.bing.com	Scraping but future version to also use API.
Blocklist.de	http://lists.blocklist.de	Blacklists.
Checkusernames.com	http://www.checkusernames.com	Look up username availability on popular sites.
DNS	Your configured DNS server.	Defaults to your local DNS but can be configured to whatever IP address you supply SpiderFoot.
DomainTools	http://www.domaintools.com	
DroneBL	http://www.dronebl.org	
Facebook	http://www.facebook.com	Scraping but future version to also use API.
FreeGeoIP	http://freegeoip.net	
Google	http://www.google.com	Scraping but future version to also use API.
Google+	http://plus.google.com	Scraping but future version to also use API.
Google Safe Browsing	http://www.google.com/safebrowsing	Site safety checker.
LinkedIn	http://www.linkedin.com	Scraping but future version to also use API.
malc0de.com	http://malc0de.com	Blacklists.
malwaredomainlist.com	http://www.malwaredomainlist.com	Blacklists.

SpiderFoot-Results



SpiderFoot-Results



Github repositories

```
GITHUB_URL_REPOS = 'https://api.github.com/repos'
GITHUB_URL_USERS = 'https://api.github.com/users'

import argparse
import requests
import json

def search_repositories(author, search_for):
    url = "%s/%s/repos" %(GITHUB_URL_USERS, author)
    print("Searching Repositories URL: %s" %url)
    result = requests.get(url)
    if(result.ok):
        repo_info = json.loads(result.text or result.content)
        print("Github repository info for: %s" %author)
        result = "No result found!"
        keys = []
        for value in repo_info:
            for key,value2 in value.items():#python 2-->iteritems()
                if str(search_for)in str(key):
                    result = value
                    return result

if __name__ == '__main__':
    parser = argparse.ArgumentParser(description='Github search')
    parser.add_argument('--author', action="store", dest="author",required=True)
    parser.add_argument('--repo', action="store", dest="repo",required=False)
    parser.add_argument('--search_for', action="store",dest="search_for", default='owner', required=False)
    given_args = parser.parse_args()
    if given_args.repo is not None:
        result = search_repository(given_args.author, given_args.repo,given_args.search_for)
    else:
        result = search_repositories(given_args.author,given_args.search_for)
```

Github repositories

```
Github repository info for: fosdem
Got result for 'owner'...
issues_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/issues{/number}
deployments_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/deployments
stargazers_count => 0
forks_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/forks
mirror_url => None
subscription_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/subscriptio
notifications_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/notificati
collaborators_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/collaborat
updated_at => 2016-12-05T17:01:34Z
private => False
pulls_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/pulls{/number}
issue_comment_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/issues/com
labels_url => https://api.github.com/repos/FOSDEM/frontdesk-t-shirt_tracker/labels{/name}
has_wiki => True
full_name => FOSDEM/frontdesk-t-shirt_tracker
```

Extract Metadata

- PDF→PyPDF2,PDFMiner
- Images→Pillow,pyexiv2(python 2.7),gexiv2(python 3)

```
[+] Metadata for file: images\img.jpg
Metadata: 42016 - Value: 2BF3A9E97BC886678DE12E6EB8835720
Metadata: YResolution - Value: (300, 1)
Metadata: ResolutionUnit - Value: 2
Metadata: Copyright - Value: Frank Noort
Metadata: Artist - Value: Frank Noort
Metadata: Make - Value: Canon
Metadata: GPSInfo - Value: {'Lat': 32.07874722222222, 'Lng': -131.4675777777778}
Metadata: XResolution - Value: (300, 1)
Metadata: ExifOffset - Value: 146
Metadata: ExifVersion - Value: 0220
Metadata: DateTimeOriginal - Value: 2002:10:28 11:05:09
Metadata: Model - Value: Canon EOS-5
Metadata: DateTime - Value: 2008:03:09 22:00:01
Metadata: Software - Value: Adobe Photoshop CS2 Windows
```

GeoLocation

http://dev.maxmind.com/geoip/geoip2/geolite2/

```
import geoip2
import geoip2.database
```

```
def getGeo(self, ip):
    response = ''
    if not os.path.exists('GeoLite2-City.mmdb'):
        msg = "[*] GeoLite2-City.mmdb is not found ..."
        logging.error(msg)
    else:
        try:
            reader = geoip2.database.Reader('GeoLite2-City.mmdb')
            response = reader.city(ip)
        except:
            #   *** need fixing exception messages ***
            msg = "[*] AddressNotFoundError for ip: %s" % (ip)
            logging.error(msg)
    return response
```

```
python GeoIP.py --target 8.8.8.8
```

```
[*] city: Mountain View
[*] region_code: CA
[*] area_code: 650
[*] time_zone: America/Los_Angeles
[*] dma_code: 807
[*] metro_code: San Francisco, CA
[*] country_code3: USA
[*] latitude: 37.3845
[*] postal_code: 94040
[*] longitude: -122.0881
[*] country_code: US
[*] country_name: United States
[*] continent: NA
[*] city: Mountain View
[*] region_code: CA
[*] area_code: 650
```

FootPrinting tools

- **Orb(Python 2.x)**
- **https://github.com/epsylon/orb**
- python-whois - Python module for retrieving WHOIS information
- python-dnspython - DNS toolkit for Python
- python-nmap - Python interface to the Nmap port scanner

- **InstaRecon(Python 2.x)**
- **https://github.com/vergl4s/instarecon**
- Dnspython,ipaddress
- ipwhois,python-whois
- requests,shodan

InstaRecon

```
python instarecon.py -v -s <SHODAN_API_KEY> python.org
```

```
# ____________________ Scanning python.org ____________________ #

[-] WARNING: PTR lookup failed for 23.253.135.79 - NXDOMAIN
[*] Domain: python.org

[*] IPs & reverse DNS:
23.253.135.79

[*] NS records:
ns1.p11.dynect.net
        208.78.70.11 - ns1.p11.dynect.net
ns2.p11.dynect.net
        204.13.250.11 - ns2.p11.dynect.net
ns3.p11.dynect.net
        208.78.71.11 - ns3.p11.dynect.net
ns4.p11.dynect.net
        204.13.251.11 - ns4.p11.dynect.net

[*] MX records:
mail.python.org
        188.166.95.178 - mail.python.org
```

InstaRecon

```
status.python.org
        52.35.72.202 - ec2-52-35-72-202.us-west-2.compute.amazonaws.com
        54.149.249.224 - ec2-54-149-249-224.us-west-2.compute.amazonaws.com
        54.148.61.28 - ec2-54-148-61-28.us-west-2.compute.amazonaws.com
        https://status.python.org/
testpypi.python.org
        151.101.12.175
        https://testpypi.python.org/
warehouse.python.org
        151.101.60.175
        https://warehouse.python.org/
        https://warehouse.python.org/project/whitenoise/
wiki.python.org
        140.211.10.69 - virt-y8pzvf.psf.osuosl.org
        https://wiki.python.org/jython
        https://wiki.python.org/jython/JythonDeveloperGuide
        https://wiki.python.org/jython/JythonFaq
        https://wiki.python.org/jython/JythonUsers
        https://wiki.python.org/jython/PackageScanning
        https://wiki.python.org/jython/PoiExample
        https://wiki.python.org/jython/ReadlineSetup
        https://wiki.python.org/jython/RoadMap
        https://wiki.python.org/jython/WhyJython
```

Python modules

- **BeautifulSoup** for parsing web information
- **Requests,urllib3** for synchronous requests
- **Asyncio,aiohttp** for asynchronous requests
- **Robobrowser,Scrapy** for web crawling
- **PyGeoIP,geoip2,geojson** for GeoLocation
- **python-twitter,tweepy** for connecting with twitter
- **Shodan** for obtain information for servers
- **DNSPython,netaddr** for resolving ip address

Wig-WebApp Information gatherer

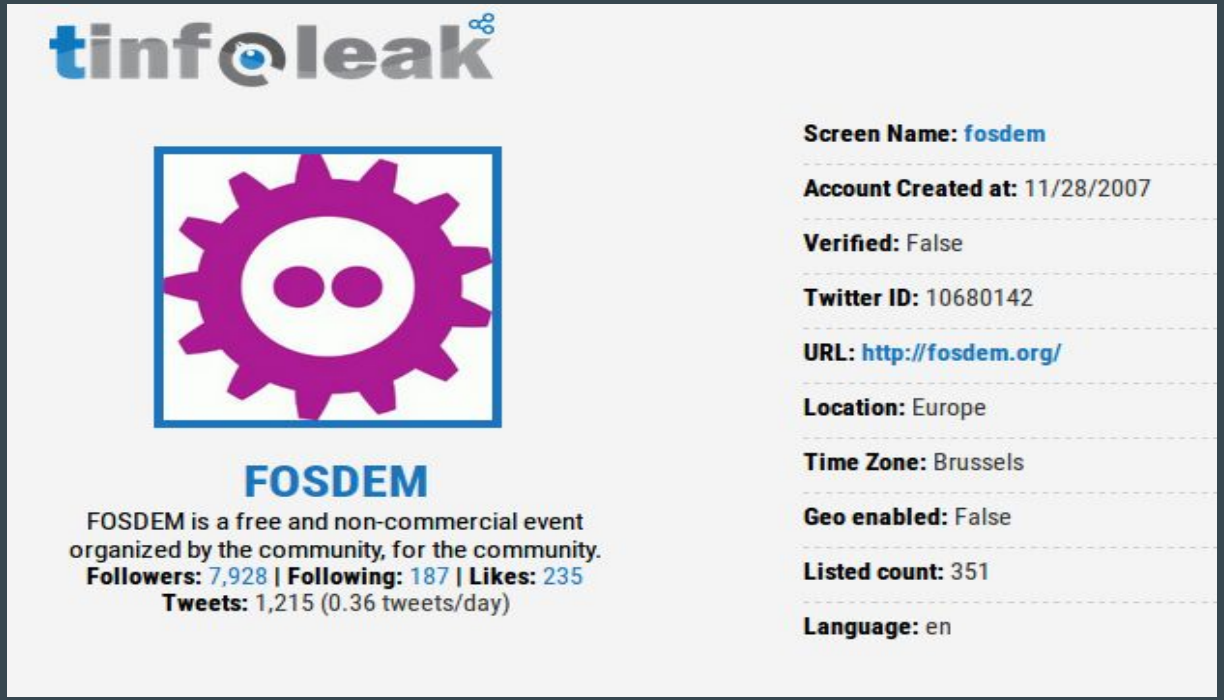
```
root@kali:~/wig# ./wig.py --help
usage: wig.py [-h] [-l INPUT_FILE] [-n STOP_AFTER] [-a] [-m] [-u]
              [--no_cache_load] [--no_cache_save] [-N] [--verbosity]
              [--proxy PROXY] [-w OUTPUT_FILE]
              [url]

WebApp Information Gatherer

positional arguments:
  url                 The url to scan e.g. http://example.com

optional arguments:
  -h, --help          show this help message and exit
  -l INPUT_FILE       File with urls, one per line.
  -n STOP_AFTER       Stop after this amount of CMSs have been detected. Default:
                      1
  -a                  Do not stop after the first CMS is detected
  -m                  Try harder to find a match without making more requests
  -u                  User-agent to use in the requests
  --no_cache_load     Do not load cached responses
  --no_cache_save     Do not save the cache for later use
  -N                  Shortcut for --no_cache_load and --no_cache_save
  --verbosity, -v     Increase verbosity. Use multiple times for more info
  --proxy PROXY       Tunnel through a proxy (format: localhost:8080)
  -w OUTPUT_FILE      File to dump results into (JSON)
root@kali:~/wig#
```

Wig-WebApp Information gatherer

https://github.com/jekyc/wig

Tinfoleak-fosdem

```
python tinfoleak.py -u fosdem -i -s --sdate 2016-01-01 --hashtags --mentions --meta --media media
--social --top 10 --conv -o report.html
```



Tinfoleak-python dependences

- import tweepy→**Twitter API library for Python**
- from PIL import Image, ExifTags, ImageCms→**metadata from images**
- import pyexiv2→**metadata from images**
- import urllib2→**requests**
- from OpenSSL import SSL
- from jinja2 import Template, Environment, FileSystemLoader→**report**

Tinfoleak-parameters

```
optional arguments:
  -h, --help            show this help message and exit
  -v, --version         show program's version number and exit
  -t TWEETS, --tweets TWEETS
                        number of tweets to be analysed (default: 200)
  -i, --info            general information about a user
  -s, --sources         show the client applications used to publish the
                        tweets
  --sdate SDATE         filter the results for this start date (format:
                        yyyy/mm/dd)
  --edate EDATE         filter the results for this end date (format:
                        yyyy/mm/dd)
  --stime STIME         filter the results for this start time (format:
                        HH:MM:SS)
  --etime ETIME         filter the results for this end date (format:
                        HH:MM:SS)
  --hashtags            show info about hashtags included in tweets
  --mentions            show info about user mentions
  --meta                show metadata information from user images
  --media [D]           [no value]: show user images and videos, [d]: download
                        user images to "username" directory
  --friend FRIENDNAME   show friendship with the FRIENDNAME user
```

Tinfoleak

HASHTAG DETAIL

Date (since)	Date (until)	RT's	Likes	Count	#Hashtag
01/13/2016	01/31/2016	159	122	14	#FOSDEM
01/31/2016	01/31/2016	22	7	1	#fodem
01/30/2016	01/31/2016	14	5	2	#line71
01/31/2016	01/31/2016	9	5	1	#funwithpublictransport
01/30/2016	01/30/2016	7	10	1	#hsbxl
01/30/2016	01/30/2016	7	10	1	#ByteNight
01/24/2016	01/30/2016	64	32	3	#FOSDEM2016
01/27/2016	01/27/2016	24	10	1	#opensource

TOP MENTIONS

Date (since)	Date (until)	RT's	Likes	Count	Name	Mention
01/26/2016	02/05/2016	191	177	12	FOSDEM	@fosdem
01/30/2016	02/11/2016	171	93	8	Peter Van Eynde	@pvaneynd
02/02/2016	11/28/2016	1	5	5	JJ Merelo	@jjmerelo
01/04/2016	11/28/2016	0	0	4	Alessio Fattorini	@ale_fattorini
01/26/2016	01/26/2016	0	0	4	Simon Phipps	@webmink
01/26/2016	01/26/2016	0	0	4	christian	@csgui
11/27/2016	12/07/2016	1	4	3	Kenneth Hoste	@kehoste
01/29/2016	01/30/2016	0	4	3	lefred	@lefred
01/04/2016	01/04/2016	1	0	3	Rob Bosch	@robb_nl
01/04/2016	01/04/2016	0	0	3	Su-Shee	@sheeshee

Tinfoleak-get auth configuration

```
class Configuration():
    """Configuration information"""
    # --------------------------------------------------------------------
    def __init__(self):
        try:
            # Read tinfoleak configuration file ("tinfoleak.conf")
            config = ConfigParser.RawConfigParser()
            config.read('tinfoleak.conf')
            self.color = config.get('colors', 'INFO')
            self.color_hdr = config.get('colors', 'HEADER')
            self.color_fun = config.get('colors', 'FUNCTION')

            CONSUMER_KEY = config.get('Twitter OAuth', 'CONSUMER_KEY')
            CONSUMER_SECRET = config.get('Twitter OAuth', 'CONSUMER_SECRET')
            ACCESS_TOKEN = config.get('Twitter OAuth', 'ACCESS_TOKEN')
            ACCESS_TOKEN_SECRET = config.get('Twitter OAuth', 'ACCESS_TOKEN_SECRET')
```

Tinfoleak-Geolocation

```
# ------------------------------------------------------
def set_geofile_information(self, tweet, user):
    try:
        tweet_geo = 0
        place = ""
        geo = ""

        # Get place from tweet
        if tweet.place:
            place = tweet.place.name.encode('utf-8')

        # Get coordinates from tweet
        if tweet.geo:
            geo = tweet.geo['coordinates']
            tweet_geo = 1
```

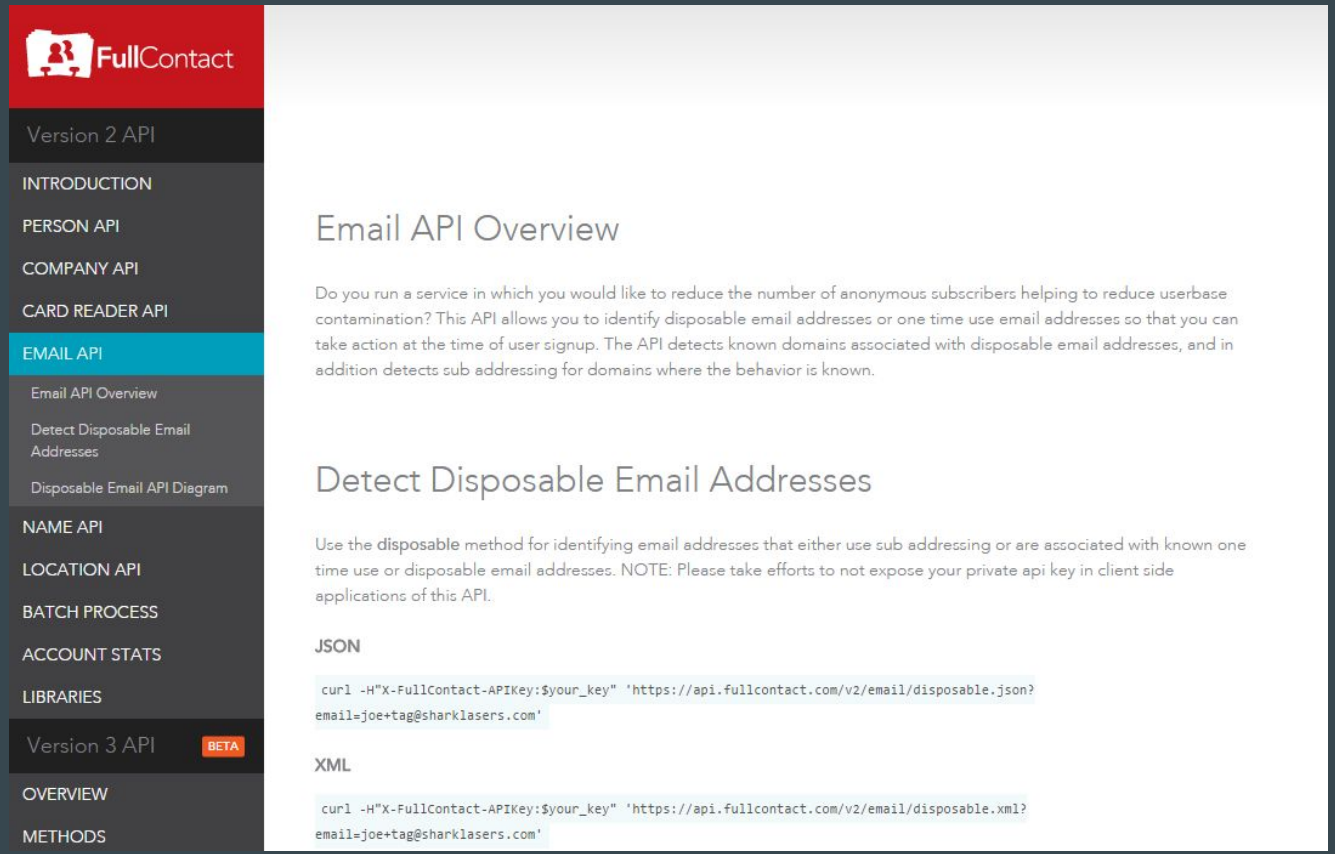
Tinfoleak-Geolocation

```
if tweet.geo:
    sgeo = tweet.geo['coordinates']
    add = 1
    lat = str(sgeo[0])[:str(sgeo[0]).find(".")+4]
    lon = str(sgeo[1])[:str(sgeo[1]).find(".")+4]
    location = "[" + lat + ", " + lon + "]"
    for i in range (1, 20-len(location)):
        location += " "
    location = location + "\t" + splace
```

FullContact API

- **We know we have a valid email address**
- **What other profiles are associated with this address?**
- **Go to fullcontact.com for an API key.....**

FullContact API



FullContact API

```
def get_fullcontact(email):
        api_key = 'a82ad9009f6b1b1'
        base_url = 'https://api.fullcontact.com/v2/person.json'
        payload = {'email':email, 'apiKey':api_key}
        resp = requests.get(base_url, params=payload)
        if resp.status_code == 200:
                # parse contact information
                if 'contactInfo' in resp.json():
```

FullContact API

```
python checkFullContactAPI.py -e gvanrossum@gmail.com
```

```
Guido van Rossum - gvanrossum@gmail.com
Staff Engineer at Dropbox
Employee at Google
Employee at Elemental Security
Employee at Zope Corporation
Employee at CNRI
Employee at BeOpen.com
Employee at CWI
Employee at SARA
San Francisco Bay Area
Github - https://github.com/gvanrossum
Twitter - https://twitter.com/gvanrossum
Quora - http://www.quora.com/Guido-van-Rossum
Gravatar - https://gravatar.com/gvanrossum
Flickr - https://www.flickr.com/people/gvanrossum
Yelp - http://gvanrossum.yelp.com
Blogger - http://blogger.com/profile/12821714508588242516
GooglePlus - https://plus.google.com/u/0/115212051037621986145
Klout - http://klout.com/gvanrossum
LinkedIn - https://www.linkedin.com/pub/guido-van-rossum/0/756/4a0
Confidence: 88%
```

FullContact API

```
python checkFullContactByDomain.py -d fosdem.org
```


```
    "links" : [ {
      "url" : "http://fosdem.org/2017/rss.xml",
      "label" : "rss"
    }, {
      "url" : "http://fosdem.org/2016/rss.xml",
      "label" : "rss"
    } ]
  },
  "socialProfiles" : [ {
    "bio" : "FOSDEM is a free and non-commercial event organized by the community for the community. The goal is to provide Fr
rce developers and communities a place to meet to: * get in touch with other developers and projects; * be informed about the
he Free Software and Open Source world; * attend interesting talks and presentations held in large conference rooms by Free So
roject leaders and committers on various topics; and * to promote the development and the benefits of Free Software and Open S
pation and attendance is totally free, though the organization gratefully accepts donationals and sponsorships.",
    "typeId" : "linkedincompany",
    "typeName" : "LinkedIn",
    "url" : "https://www.linkedin.com/company/fosdem",
    "username" : "fosdem",
    "id" : "349978"
  } ],
  "traffic" : {
    "topCountryRanking" : [ {
      "rank" : 466884,
      "locale" : "us"
    } ],
    "ranking" : [ {
      "rank" : 631870,
      "locale" : "global"
    }, {
      "rank" : 466884,
      "locale" : "us"
```

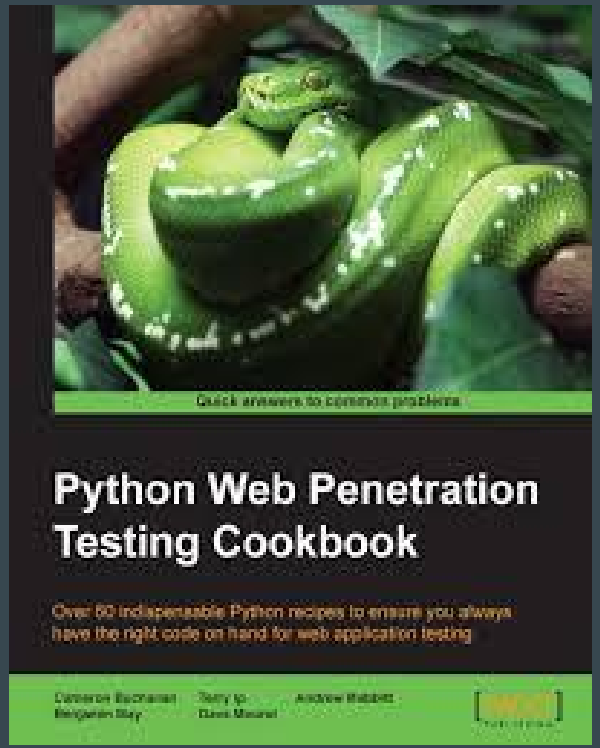
Kali Linux

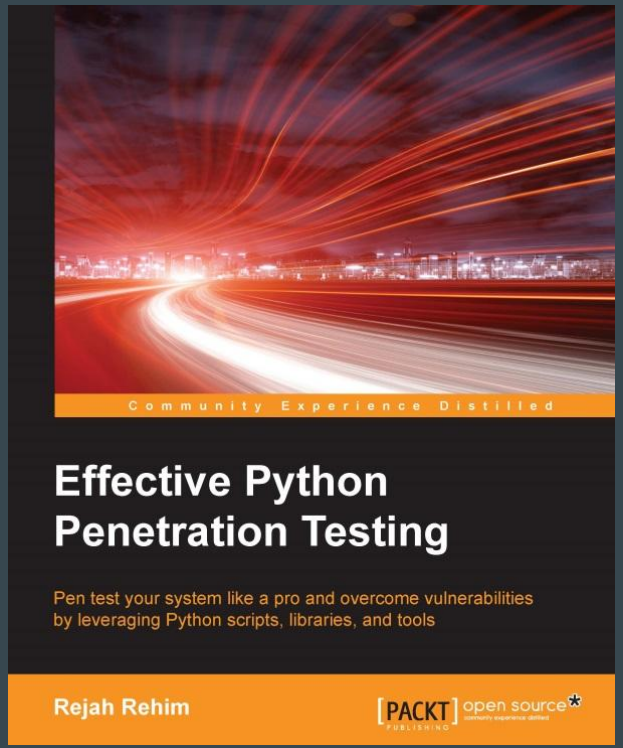

Aplicaciones
Lugares
vie 15:58
es
Escribir para buscar...
01-Information
02-Vulnerability
03-WebApps
04-Database
05-Password
06-Wireless
intrace
irpas-ass
irpass-cdp
lbd
maltego
miranda
nbtscan
ncat
netdiscover
netmask
nmap
onesixtyone
p0f
recon-ng
smbmap
smtp-user-enum
snmp-check
sparta
Frecuentes
Todas

References

- **http://osintframework.com**
- https://sourceforge.net/projects/spiderfoot
- http://www.edge-security.com/theharvester.php
- https://developer.shodan.io/api
- http://www.clips.ua.ac.be/pattern
- http://www.pentest-standard.org/index.php/PTES_Technical_Guidelines#OSINT
- http://www.vicenteaguileradiaz.com/tools
- https://github.com/automatingosint/osint_public
- http://www.automatingosint.com/blog/

Books


Python Web Penetration Testing Cookbook
Over 50 indispensable Python recipes to ensure you always have the right code on hand for web application testing


Community Experience Distilled
Effective Python Penetration Testing
Pen test your system like a pro and overcome vulnerabilities by leveraging Python scripts, libraries, and tools
Rejah Rehim
PACKT open source

FOSDEM'17

Thanks!

@jmortegac