



San Francisco | February 13 – 17 | Moscone Center



SESSION ID: HT-R02

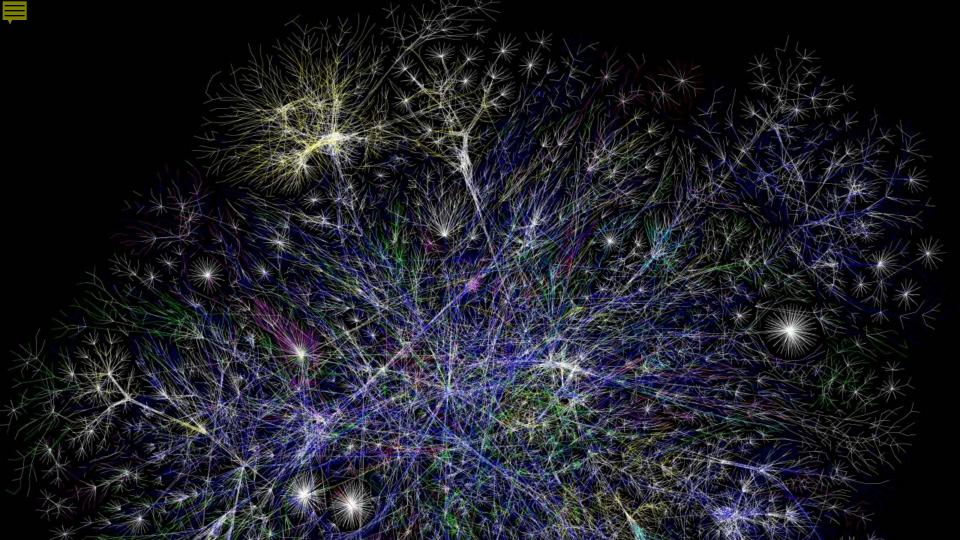
Tracking Darknet:

A Window into Attackers' Motives, Methods, and Targets



Andrew Lewman















Last days, we got lot of huge DDoS. Here, the list of "bigger that 100Gbps" only. You can see the

simultaneous DDoS are close to 1Tbps!

```
log /home/vac/logs/vac.log-last | egrep "pps\|.....
bps" | awk '{print $1,$2,$3,$6}' | sed "s/ /l/g" | cut -f
1,2,3,7,8,10,11 -d '|' | sed "s/.....bps/Gbps/" | sed
"s/.....pps/Mpps/" | cut -f 2,3,4,5,6,7 -d ":" | sort | q
rep "gone" | sed "s/gone|//"
Sep|18|10:49:12|tcp_ack|20Mpps|232Gbps
Sep | 18 | 10:58:32 | tcp_ack | 15Mpps | 173Gbps
Sep|18|11:17:02|tcp ack|19Mpps|224Gbps
Sep|18|11:44:17|tcp_ack|19Mpps|227Gbps
Sep|18|19:05:47|tcp_ack|66Mpps|735Gbps
Sep | 18 | 20:49:27 | tcp_ack | 81Mpps | 360Gbps
Sep|18|22:43:32|tcp_ack|11Mpps|136Gbps
Sep | 18 | 22:44:17 | tcp_ack | 38Mpps | 442Gbps
Sep | 19 | 10:13:57 | tcp_ack | 10Mpps | 117Gbps
Sep|19|11:53:57|tcp_ack|13Mpps|159Gbps
Sep|19|11:54:42|tcp ack|52Mpps|607Gbps
Sep|19|22:51:57|tcp_ack|10Mpps|115Gbps
Sep | 20 | 01:40:02 | tcp_ack | 22Mpps | 191Gbps
Sep|20|01:40:47|tcp_ack|93Mpps|799Gbps
Sep | 20 | 01:50:07 | tcp_ack | 14Mpps | 124Gbps
Sep | 20 | 01:50:32 | tcp_ack | 72Mpps | 615Gbps
Sep|20|03:12:12|tcp_ack|49Mpps|419Gbps
Sep|20|11:57:07|tcp_ack|15Mpps|178Gbps
Sep|20|11:58:02|tcp_ack|60Mpps|698Gbps
Sep|20|12:31:12|tcp_ack|17Mpps|201Gbps
Sep | 20 | 12:32:22 | tcp_ack | 50Mpps | 587Gbps
Sep|20|12:47:02|tcp_ack|18Mpps|210Gbps
Sep|20|12:48:17|tcp_ack|49Mpps|572Gbps
Sep|21|05:09:42|tcp_ack|32Mpps|144Gbps
Sep|21|20:21:37|tcp_ack|22Mpps|122Gbps
Sep | 22 | 00:50:57 | tcp_ack | 16Mpps | 191Gbps
You have new mail in /var/mail/root
```



Octave Klaba / Oles @olesovhcom - Sep 23

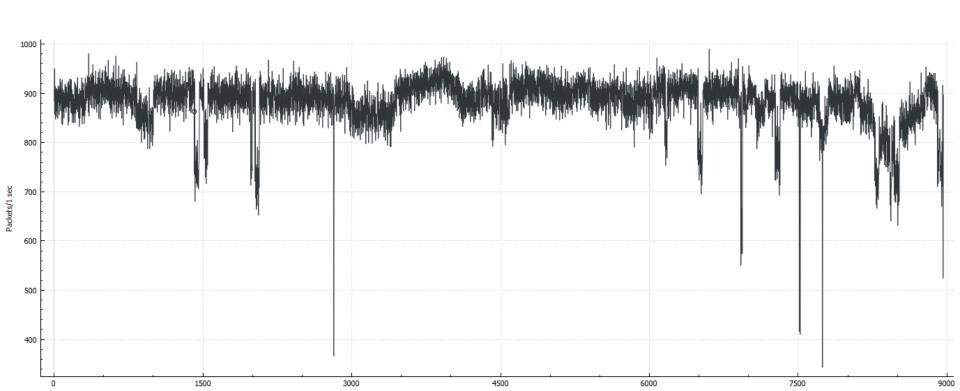
This botnet with 145607 cameras/dvr (1-30Mbps per IP) is able to send >1.5Tbps DDoS. Type: tcp/ack, tcp/ack+psh, tcp/syn.







900 packets per second

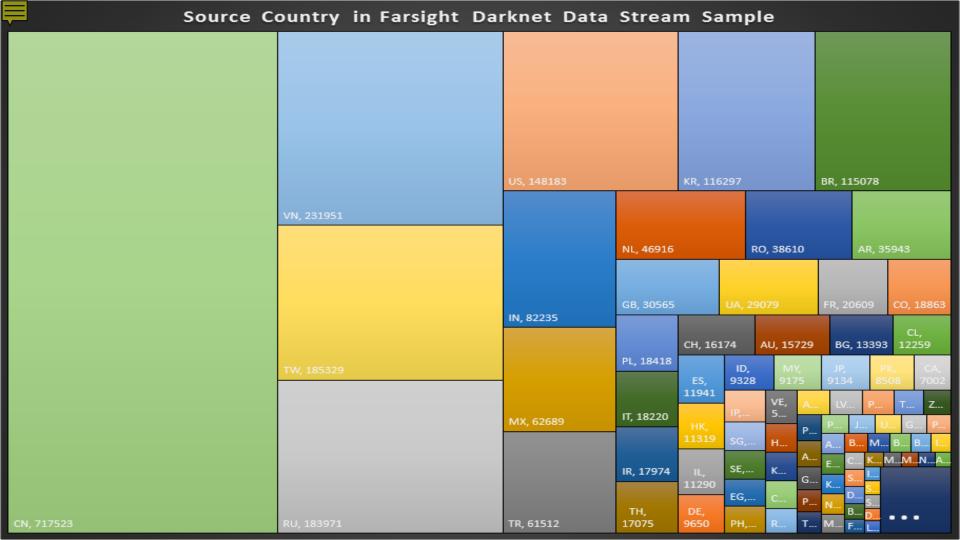




Telnet/Mirai Probes

16:23:22.991398 IP 59.60.31.217.43527 > 204.7.69.194.socks: Flags [S], seq 2320092157, win 1024, length 0

```
16:23:23.629078 IP 187-75-229-41.dsl.telesp.net.br.15802 > 154.36.171.98.6789: Flags [S], seg 2586094434, win 5840, length 0
16:23:33.641533 IP 171.234.204.178.12061 > 204.7.252.132.telnet: Flags [S], seq 3423075460, win 53651, options [mss 1440], length 0
16:23:34.310444 IP 218.19.151.209.50351 > 207.60.134.88.telnet: Flags [S], seq 1929643311, win 5440, options [mss 1360,sackOK,TS val 314719626 ecr 0,nop,wscale 2], length 0
16:23:35.080082 IP b140cd74.virtua.com.br.18569 > 199.98.56.108.telnet: Flags [S], seq 30890, win 14600, length 0
16:23:35.760851 IP 120.132.51.207.57603 > 128.145.94.32.http-alt: Flags [S], seq 2078144182, win 65535, length 0
16:23:37.014059 IP 59.29.126.135.53553 > 143.240.188.187.telnet: Flags [5], seq 80084992, win 14600, length 0
16:23:38.464603 IP 220-133-165-203.HINET-IP.hinet.net.17512 > 204.6.38.75.telnet: Flags [S], seq 3422955083, win 19226, length 0
16:23:40.760649 IP 163.53.207.132.15753 > 128.145.17.112.6789: Flags [S], seq 2156990832, win 5840, options [mss 1460], length 0
16:23:42.014120 IP b1c2a7c3.virtua.com.br.25873 > 154.36.251.89.telnet: Flags [S], seq 2751463424, win 14600, length 0
16:23:43.103045 IP 211-75-155-189.HINET-IP.hinet.net.23073 > 206.85.122.93.telnet: Flags [5], seq 3461708381, win 48629, length 0
16:23:44.661941 IP static.res.bb.93157192244.dslon.ws.12104 > 154.36.148.57.telnet: Flags [S], seq 2586088505, win 8691, options [mss 1452], length 0
<u>16:23:54.672787 IP researchscan</u>392.eecs.umich.edu.44975 > 154.36.49.119.ftp: Flags [S], seq 3378586162, win 65535, length 0,
16:23:55.508711 IP 122-116-189-95.HINET-IP.hinet.net.12100 > 148.254.185.185.telnet: Flags [S], seq 1716781056, win 14600, length 0
16:23:55.991600 IP 119.99.208.6.56405 > 136.161.176.11.telnet: Flags [S], seq 8490, win 14600, length 0
16:23:56.925751 IP 88.ppp-dhcp.logic.bm.30208 > 204.7.201.216.telnet: Flags [S], seq 50210, win 14600, length 0
16:23:57.695047 IP 219-85-61-196-adsl-TPE.STATIC.so-net.net.tw.20988 > 204.7.177.231.telnet: Flags [S], seq 3423056359, win 17388, length 0
16:23:58.147429 IP 118.117.156.140.58523 > 128.145.52.209.telnet: Flags [S], seq 2156999889, win 4467, length 0
16:23:58.859666 IP 114-35-56-24.HINET-IP.hinet.net.65460 > www.primecard.com.telnet: Flags [S], seq 3510463045, win 34764, length 0
16:24:03.650930 IP 122-117-86-17.HINET-IP.hinet.net.11557 > 136.161.96.78.telnet: Flags [S], seq 2292277326, win 5720, length 0
16:24:04.277736 IP 109-162-85-119-lzv.broadband.kyivstar.net.25555 > 204.6.52.86.telnet: Flags [S], seq 3422958678, win 45849, length 0
16:24:05.980931 IP www.telnetscanproject.org.38126 > 154.36.11.84.48202: Flags [S], seq 3863422755, win 65535, length 0
16:24:05.980932 IP adsl-188-158-48-187.sabanet.ir.58731 > 204.7.158.127.7547: Flags [S], seq 3423051391, win 5840, length 0
16:24:16.057458 IP 220-134-254-179.HINET-IP.hinet.net.52831 > 204.7.54.247.telnet: Flags [S], seq 3423024887, win 50945, length 0
16:24:16.354087 IP 222.104.240.140.44176 > 206.84.178.150.1900: UDP, length 94
16:24:27.057555 IP 218-161-93-132.HINET-IP.hinet.net.59551 > 149.67.139.247.telnet: Flags [5], seg 806813696, win 14600, length 0
16:24:27.552139 IP 176-8-98-120-rov.broadband.kyivstar.net.34982 > 207.60.27.252.telnet: Flags [S], seq 3476823036, win 27002, length 0
<u> 16:24:28.190323 IP 88.247.126.157</u>.dynamic.ttnet.com.tr.51608 > 206.85.126.190.telnet: Flags [S], seq 3189637120, win 14600, length 0
16:24:30.332667 IP 37-229-25-18-dne.broadband.kyivstar.net.60182 > 204.7.31.91.telnet: Flags [5], seq 3423018843, win 56096, length 0
16:24:30.332667 IP 116.108.47.199.46597 > 154.36.120.17.telnet: Flags [S], seq 2880962560, win 14600, options [mss 1452], length 0
16:24:40.716903 IP 175-182-230-91.adsl.dynamic.seed.net.tw.50036 > 199.98.9.85.microsoft-ds: Flags [S], seq 1608674812, win 16384, options [mss 1440,nop,wscale 0,nop,nop,sack
OK], length 0
16:24:40.815850 IP 122-117-66-238.HINET-IP.hinet.net.13689 > 149.67.231.86.telnet: Flags [5], seq 2504255318, win 19495, length 0
16:24:41.783598 IP static.vnpt.vn.21216 > 206.84.73.203.telnet: Flags [S], seq 4145741824, win 14600, options [mss 1452], length 0
16:25:01.804833 IP 124.107.103.161.pldt.net.58689 > 206.85.98.192.telnet: Flags [S], seq 3549018702, win 5808, options [mss 1452,sackOK,TS val 3565279 ecr 0,nop.wscale 2], le
ngth 0
16:25:02.607476 IP 114-33-230-171.HINET-IP.hinet.net.5004 > 143.240.39.110.telnet: Flags [5], sea 2414880622, win 35894, length 0
16:25:03.201041 IP 176-8-108-93-rmn.broadband.kyivstar.net.13905 > 207.60.184.76.telnet: Flags [S], seq 3476863052, win 50879, length 0
16:25:04.059726 IP 111.225.110.44.24736 > 149.67.69.131.telnet: Flags [S], seq 1258677456, win 14520, options [mss 1452,sackOK,TS val 46691432 ecr 0,nop,wscale 4], length 0
```





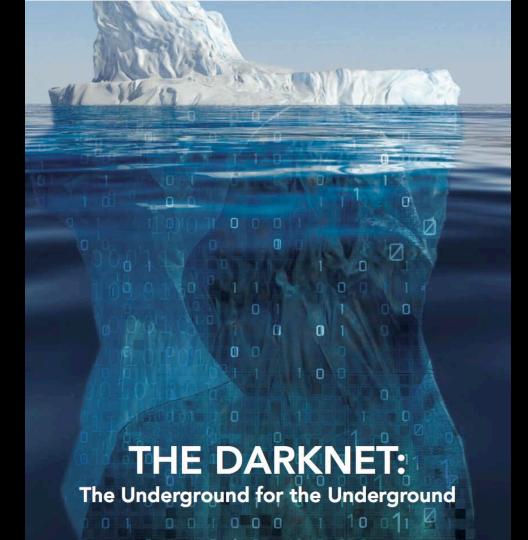
Google

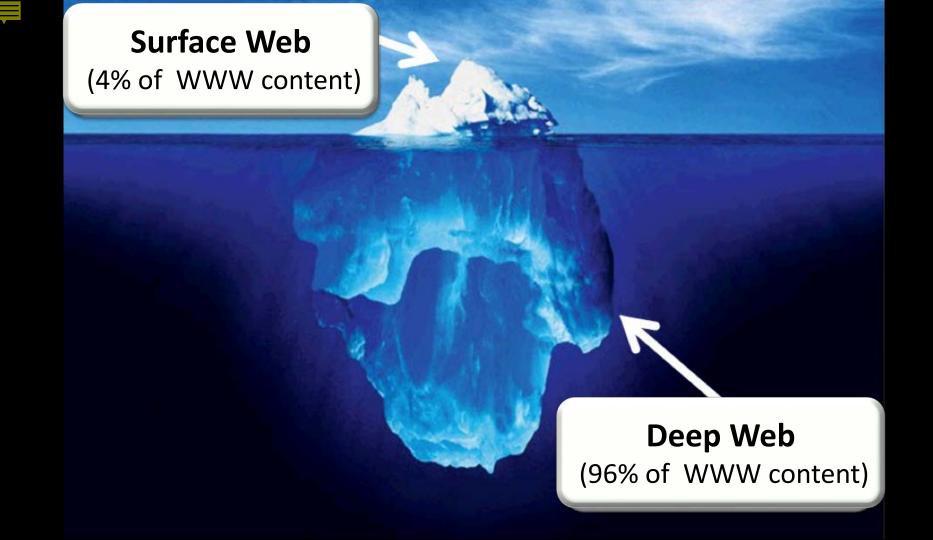
dark net

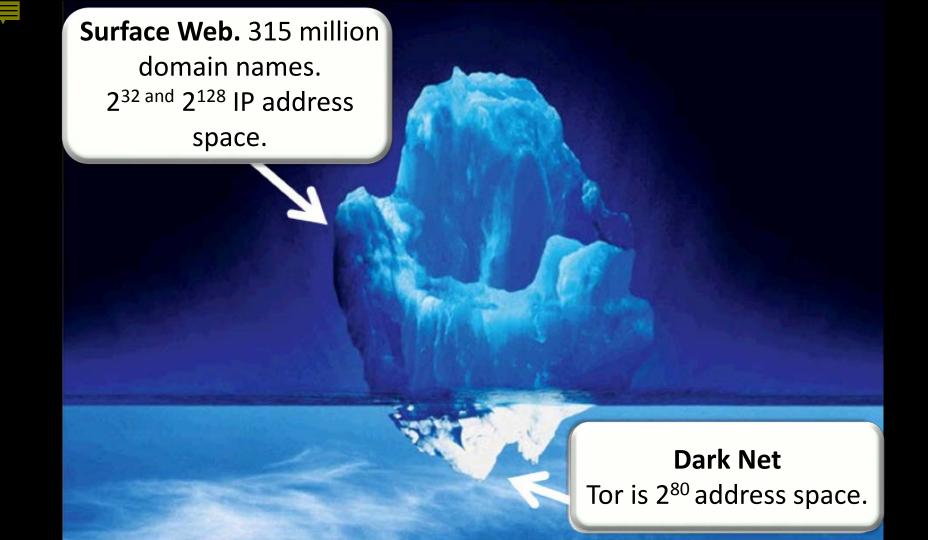
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About 1,120,000 results (0.62 seconds)











Many crypto. So anon.

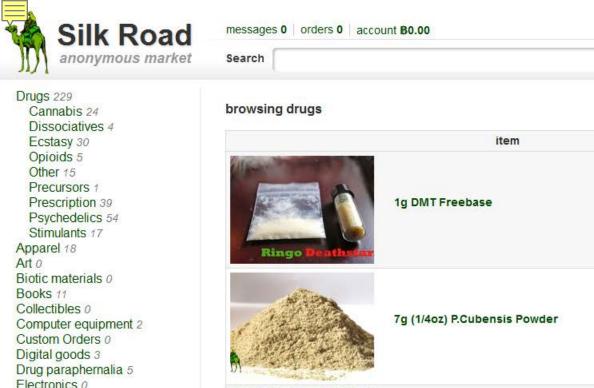












Erotica 0
Forgeries 16
Hardware 0

Jewelry 0 Lab Supplies 1 Lotteries & games 5

Medical 0 Money 3

Herbs & Supplements 0



a few words from the Dread Pirate Roberts

settings - logout

Hi.

Go



Popularity of No-longer Existent HSes

HS Address	Requests/Day	Days Observed	Description
177ukkijtdca2tsy	679,470	9	Botnet Sefnit
7sc6xyn3rrxtknu6	525,930	11	Botnet Sefnit
pomyeasfnmtn544p	514,766	10	Botnet Sefnit
ceif2rmdoput3wjh	247,296	6	Botnet Sefnit
censored	6,603	10	Child Abuse

Source: Global Commission on Internet Governance, The Tor Dark Net, September 2015





Non-sequential Snapshot of Popular HSes

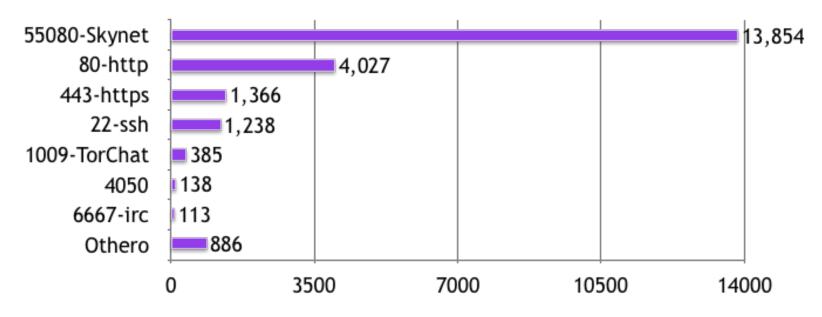
HS Address	Requests/Day	Days Observed	Description
Censored	168,152	12	Child Abuse
silkroad6ownowfk	8,067	11	Silk Road
agorabasakxmewww	3,035	8	Agora
k5zq47j6wd3wdvjq	2,589	5	Evolution
xmh57jrzrnw6insl	1,341	7	Torch
3g2upl4pq6kufc4m	1,223	4	DuckDuckGo
wikitjerrta4ggz4	555	12	HiddenWiki
mail2tor2zyjdctd	266	8	Mail

Source: Global Commission on Internet Governance, The Tor Dark Net, September 2015





Hidden Service Open Ports



Source: "Content and popularity analysis of Tor hidden services", November 2014



#RSAC

What's the relevance of this data?

- Actual usage vs possible usage
- Actual size of the darknet is tiny
- Botnets love the darknet



messages 0 orders 0 account \$0.0000

Search

a few words from the Dread Pirate Roberts

Go

Hi, hrtshpdbx logout



Shop by Category



Grilled Cheese Sandwich

B0.0534 add to cart

seller: Z1Supplies(91)

ships from: United States of America ships to: USA and Canada

category: Food

bookmark this item

postage options:

Priority (\$0.0387)

3

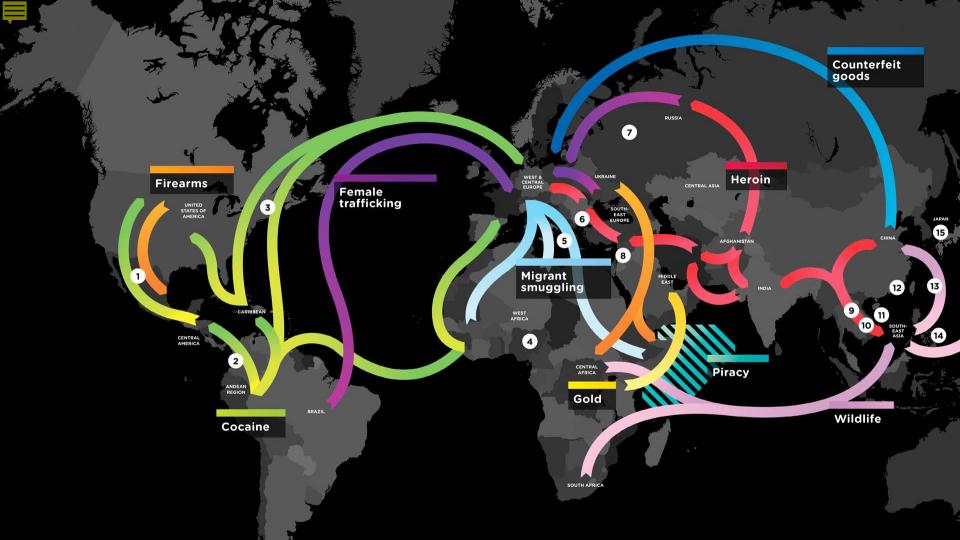
report this item

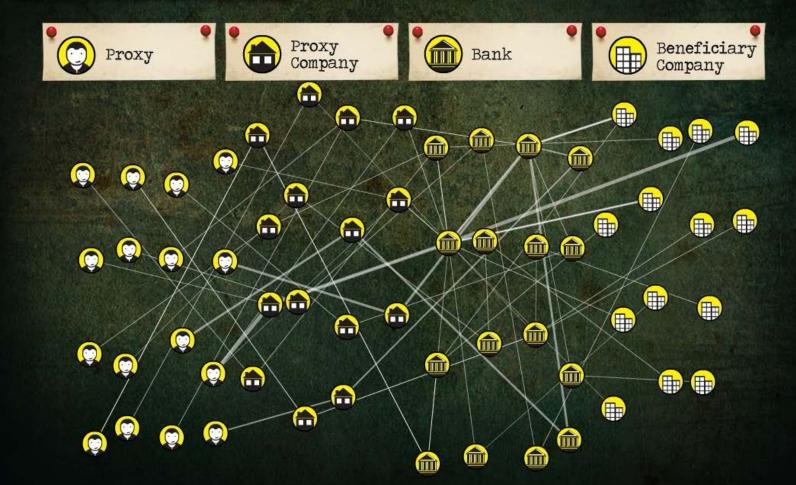
Description

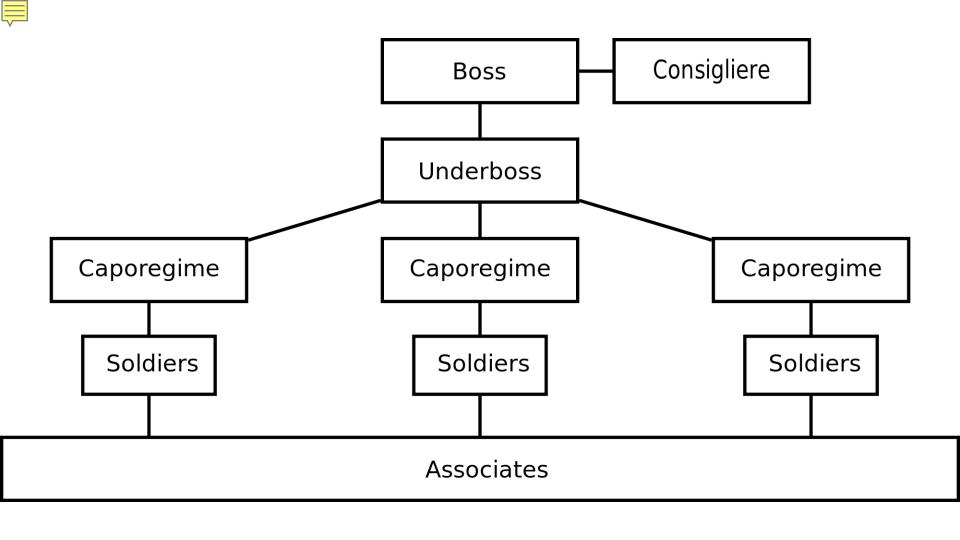
Grilled Cheese Sandwich. Tomato soup not included. Some assembly required.



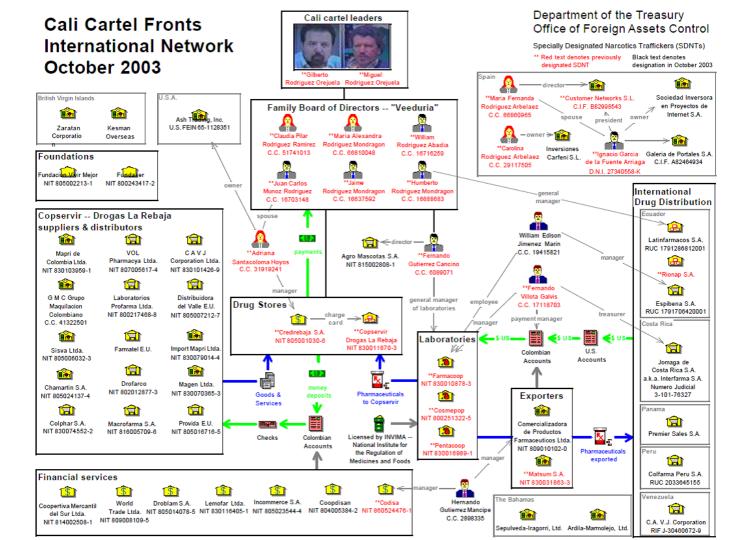














Ring Leader

Trustee

Technical experts

Skimming cells

Online trader Runner coordinator

Runners

Mule herder

Mules

Goods reseller

Obtains the cards through ATM and PoS tampering



Buys or sells tools, kits and cards



Cashes out at ATM



Purchases online and reships



Resells purchased goods

isconceptions 🕶

-Tor.exe is not dropped, it is injected

-Yes, this is an HTTP bot, not a RAT. It works through a web server, not straight to your computer.

Please understand this:

RAT:

Slave -> Master

HTTP bot: Slave -> Server -> Master

It's simply a controller that works in place of a web panel. It provide extra security, as a web panel can be scanned for, but a controller can NOT.

-Yes, the GUI isn't the best. Functionality > looks. It'll be cleaned up.

Technical details

- Version: 1.0.0.0
- Coded in C#.
- Dependencies: .NET Framework 2.0

Features:

- Download-Execute
- Update
- Uninstall
- Password Recovery
- -> Supported browsers: Internet Explorer, Firefox, Chrome, Opera, Safari
- A feature I will not name to prevent from moving to the SST section. They're rather powerful methods.

Price:

- ${f 100~USD.}$ We accept only Bitcoin and Litecoin for yours and our safety and privacy.





Dashboard

🗏 Dashboard 🧧 Pools 🗱 Workers 🕕 About

Last updated on: Tuesday, 24th of April 2012 at 16:52:44

Recent work submissions

Worker	Pool	Result	Time
user	BTCguild	Accepted	24-04-2012 18:52:43 CEST
user	BTCguild	Accepted	24-04-2012 18:52:43 CEST
user	BTCguild	Accepted	24-04-2012 18:52:43 CEST
user	BTCguild	Accepted	24-04-2012 18:52:43 CEST
user	BTCguild	Accepted	24-04-2012 18:52:42 CEST

Recent failed work submissions

Worker	Pool	Time
user	BTCguild	24-04-2012 18:52:13 CEST
user	BTCguild	24-04-2012 18:52:12 CEST
user	BTCguild	24-04-2012 18:52:12 CEST
user	BTCguild	24-04-2012 18:52:08 CEST
user	BTCguild	24-04-2012 18:52:04 CEST

Worker status

Vorker	Last work request	Last accepted submission	Shares'	Rejected*	Hashing speed*	Actions
ıser	At 24-04-2012 18:52:43 CEST from BTCguild	At 24-04-2012 18:52:43 CEST to BTCguild	1483	25 (1.69%)	10615.727 MHash/s	6 * 9
	r r	7	(Carrier	A PROPERTY OF		

one CC : No.1 Trusted onion site for Cloned Credit Card. \$2000/\$5000 balance available

http://ccccrckysxxm6avu.onion CRAWLED ON: OCT 27, 2016, 12:10:03 AM

Body Details

Metadata Details

All Cards 14

Visa 11

MasterCard 2

American Express 1

Email Addresses

SS Numbers 5

Source: Owl Cybersecurity

Our URL is Verify it before you order. clonecc@tutanota.com
Welcome back! Thank you for giving us another chance to pro
promised funds.

All cards are skimmed and cloned. Every card is written by his

Oday to 90days. Every card is verified for funds and validity b

We ship all of our cards via FedEx Standard Overnight within

Free CC dump of June 2014. We also sell dump 1&2 tracks. E First Name : William

Middle Name : K Last Name : Black

Spouse Name :

Father Name:

Dilling Address - SE Autumn Crook Land Ant C

the CC : No.1 Trusted onion site for Cloned Credit Card. \$2000/\$5000 balance available

http://ccccrckysxxm6avu.onion CRAWLED ON: OCT 27, 2016, 12:10:03 AM

Body Details Metadata Details All Cards 14 Visa 11 MasterCard 2 American Express 1

SS Numbers 5

Email Addresses 1

File Size:

14.6 kB

Domain:

ccccrckysxxm6avu.onion

Full URL:

http://ccccrckysxxm6avu.onion

HTTP HEADERS

HttpStatus: HTTP/1.1 200 OK Content-type: text/html

Date: Thu, 27 Oct 2016 04:10:03 GMT

Transfer-Encoding: chunked

Server: lighttpd/1.4.33

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

Source: Owl Cybersecurity



Interesting Metadata

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

Released 2014-10-29

https://launchpad.net/ubuntu/+source/php5/ versus

https://launchpad.net/ubuntu/+source/php5/5.5.9+dfsg-1ubuntu4.20

15 CVE's behind current version.







lighttpd/1.4.33

Search

QResults found: 2
Use-after-free vulnerability in lighttpd before 1.4.33 allows remote attackers to cause a denial of service (segmentation fault and crash) via unspecified vectors that trigger FAMMonitorDirectory failures.

lighttpd before **1.4.33** does not check the return value of the (1) setuid, (2) setgid, or (3) setgroups functions, which might cause **lighttpd** to run as root if it is restarted and allows remote attackers to gain privileges, as demonstrated by multiple calls to the clone function that cause setuid to fail when the user process limit is reached.





Top Countries		
United States	24	
Germany	4	
Colombia	3	
China	3	
Ireland	2	

Source: https://exploits.shodan.io/?q=lighttpd%2F1.4.33

_		Adele Hall
$\overline{=}$	Authors [46]	http://pinkmwiibcnugpom.onion/Adele-Hall/page-2.html
	Shiny-Flakes (93)	Fri, 06 May 2016 3 kbyte Metadata Parser Citations Pictures Augmented Browsing #**
	☐ National Institute of Justice (7)	Jill-Slater-Pink Meth Archive
	Adobe Acrobat 9.54 Paper Capture Plug-in (6)	Jill Slater
	NONE (5)	http://pinkmwiibcnugpom.onion/Jill-Slater/page-2.html Fri, 06 May 2016 3 kbyte Metadata Parser Citations Pictures Augmented Browsing ***
	Adobe Acrobat 9.55 Paper Capture Plug-in (4)	111, 00 May 2010 3 kbyte Metadata 1 alset Ottations 1 retures Augmented blowsing 40
	Adobe PDF Library 4.0 (4)	Erin-Willms-Pink Meth Archive
	Uncle Fester (3)	Erin Willms http://pinkmwiibcnugpom.onion/Erin-Willms/page-2.html
	Acrobat Distiller 5.0.5 (Windows) (3)	Fri, 06 May 2016 3 kbyte Metadata Parser Citations Pictures Augmented Browsing #**
	Acrobat Distiller 4.0 for Windows (3)	Chantel-Tiner-Pink Meth Archive
	GPL Ghostscript 8.60 (2)	Chantel Tiner Chantel Tiner
	Dave Klein (1)	http://pinkmwiibcnugpom.onion/Chantel-Tiner/page-2.html
	Christopher Tilley, Wayne Bennett (1)	Fri, 06 May 2016 3 kbyte Metadata Parser Citations Pictures Augmented Browsing 🕬
	Acrobat PDFWriter 3.03 for Windows (1)	Jennifer-Blee-Pink Meth Archive
	Gregory J Chaitin (1)	Jennifer Blee
	David Garfinkle & Richard Garfinkle (1)	http://pinkmwiibcnugpom.onion/Jennifer-Blee/page-2.html Fri, 06 May 2016 4 kbyte <u>Metadata Parser Citations Pictures Augmented Browsing the light of the light </u>
	Adobe Acrobat 7.0 Image Conversion Plug-in (1)	
	Myers, Richard L. (1)	Stefanie-Evans-Pink Meth Archive Stefanie Evans
	SPDF (1)	http://pinkmwiibcnugpom.onion/Stefanie-Evans/page-2.html
	John C. Brenner (1)	Fri, 06 May 2016 4 kbyte Metadata Parser Citations Pictures Augmented Browsing #**
	http://rutor.is/torrent/514407 (1)	Jacqui-Barbero-Pink Meth Archive
	Roger Sabin (edt) (1)	Jacqui Barbero
	Sarah Pink (1)	http://pinkmwiibcnugpom.onion/Jacqui-Barbero/page-2.html Fri, 06 May 2016 4 kbyte <u>Metadata Parser Citations Pictures Augmented Browsing</u> ***
	□ Erowid.org (1)	
	Greenberg, Barbara R.; Patterson, Dianne. (1)	Cassandra-Fairbanks-Pink Meth Archive
		Cassandra Fairbanks http://pinkmwiibcnugpom.onion/Cassandra-Fairbanks/page-2.html
	Adobe PDF Library 9.0 (1)	Fri, 06 May 2016 3 kbyte Metadata Parser Citations Pictures Augmented Browsing #**
	Mitnick, Kevin D.; Simon, William L. (1)	



Anonymous wrote on Oct 12, 2016, #0f91ee5990 [open thread]

I have child porn videos, how to share them with you guys?

Anonymous wrote on Oct 12, 2016, #587e2fe6e3

>>0f91ee5990

https://ipfstube.erindachtler.me/

https://github.com/micahflee/onionshare

http://storj.io/

http://tribler.org/

or you can put the file in zeronet and publish it but file size will be the problem. or you can try zerotube.

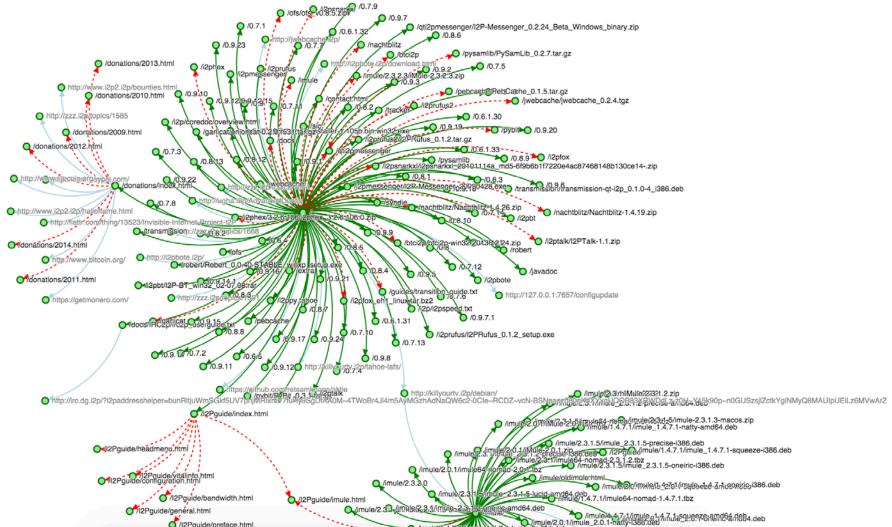
but i dont guaranty it will be secure.so watch out or FBI will sniff you but off.

Anonymous wrote on Oct 12, 2016, #1440cb0f8a

>>587e2fe6e3

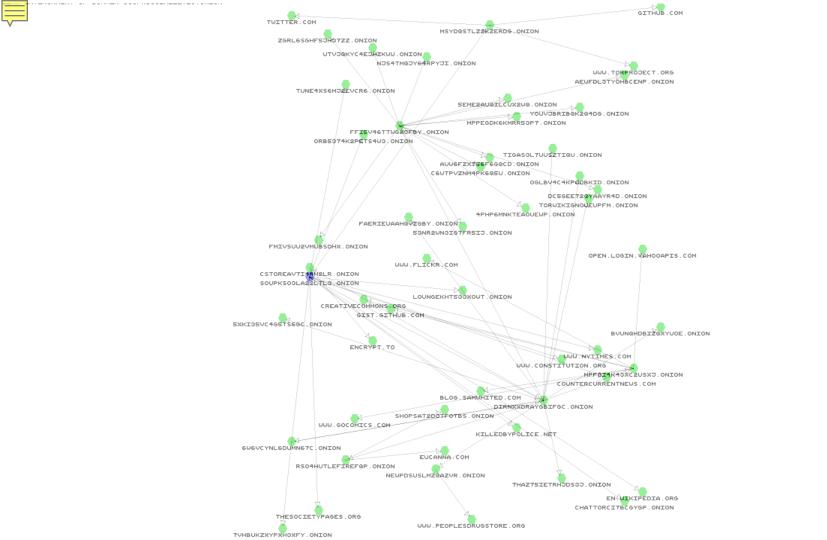
lets hope you arent american.





ACROPOL4TI6YTZEH.ONION

WWW.EROWID.ORG



WWW.GRC.COM

TORSTATUS RUECKGR. AT TORSTATUS CYBERPHUNK. ORG

WWW.THEGLOBEANDMAIL.COM NUW EMULATION

LYP6SF5TZD6MBNMC ONTON

HYPERMART . NET

TORSTATUS . KGPROG . COM

WWW.WAMPSERVER.COM

CRYPTOJUNKY.COM

WWW.IRONGEEK.COM

TRAC . TORPROJECT . ORG

DONNCHA.IS

JLVE2Y45ZACPBZ65.ONION

AUUTWVPT2ZKTXWNG.ONION MCGNLDSSMPFOSVGM ONION

TLEFL ONION ONICHANYLOSTSI4 ONION

WWW HACKCANADA . COM

MEMBERS AOL COM

WWW.CENTOS.ORG

GETI2P NET

WWW.SIMPLEMACHINES.ORG

KITSUNE : I2P MUC. KITSUNE . I2P WWW.PIDGIN.IM

GITHUM: COM

TORSTATUS . BLUTMAGIE DE WWW. MYSERVICEPROVIDER . COM TONYARCIERI.COM

CWU7EGLXCABUTTZF. ONION CONFIDENTMAIL.ORG VALIDATOR, W3. ORG

SOUPKSX6VQH3YDDA.ONION SECRETSKSRVLPAWM ONION YSOKDPARMONFGCPY ONION WWW.GNUPG.ORG

DIRECTORY TISQUE ONION

WWW. OPENSSL. ORG ANON4JMYSF30ZLV6.ONION DISKCRYPTOR NET

OXWUGZCCVKSDKETJ.ONION TRMATHAROZOFZA42.ONION PYLTA4CCWGPXMGRD.ONION WUVDSBMBWYJZSGEI.ONION DTT6TDTGROJ6SIUD.ONION DIRNXXDRAYGBIFGC.ONTON WWW.NYTIMES.COM

VRIMUTD6S06A565X.ONION XFMRO77I3LIXUCJA.ONION

GRAMSTENUFITJMDL.ONION

BLOCKCHAIN.INFO 4JBXJJRBAKMDCMVB.ONION E4C4XZZ3HL772FTI.ONION

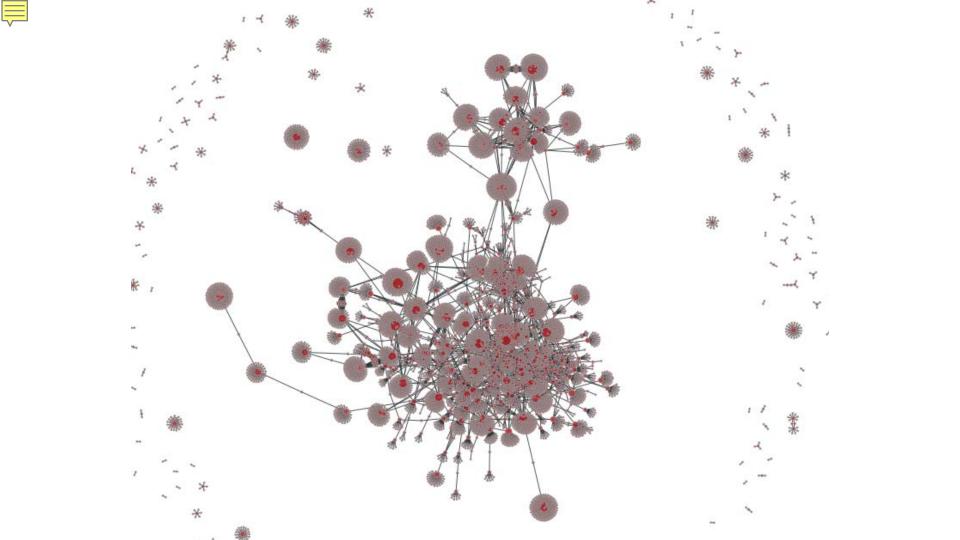
XXXXXXX76UUCEMDV BITTYLICIOUS COM

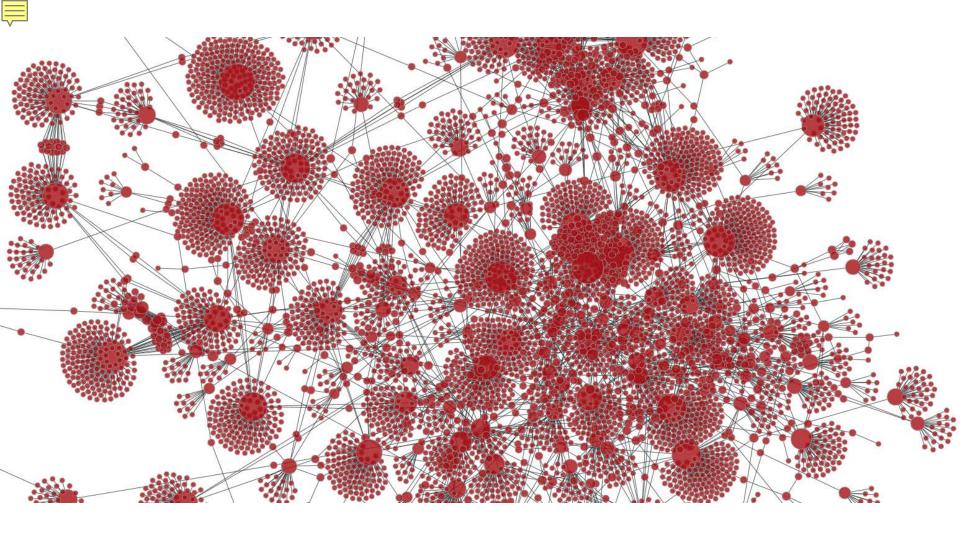
HACKMEON2TE

BDPUQVSQMPHCTRCS ONION OESHASNASNPGRFOB ONION RAMPZBOMBKADWYGZ ONION TAILS . BOUM . ORG 2V7IBXMGUNXLBK7M.ONION

> NFOKJGFJSHXS4NUU.ONION PIBNOUEHEUBJXVZZ ONION PIBNOUEHEUBJXVZZ ONION PSFSH57X73XCU ONION ONION ONITCHANYLOZTSI4 ONION NFOKJGFJ3HX54NUU ONION TO

SERVICE-HIDDEN.TK





Summary

- Need to be aware of both darknets
- Old darknet is still very active and as dangerous as ever
- New darknet is tiny and the source of many emerging dangers



Any Questions?



Thank you! F < R S I G H T Y

