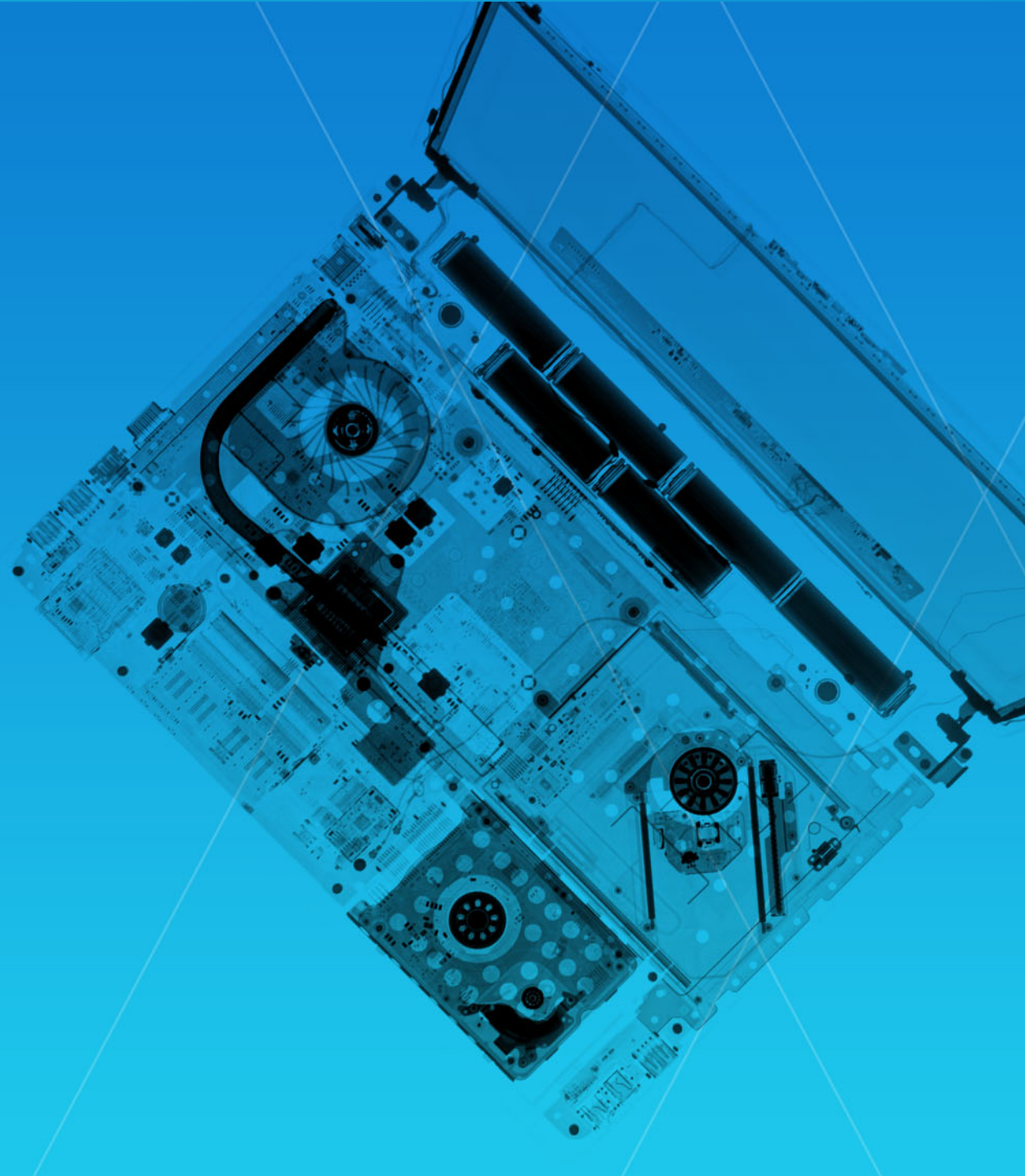
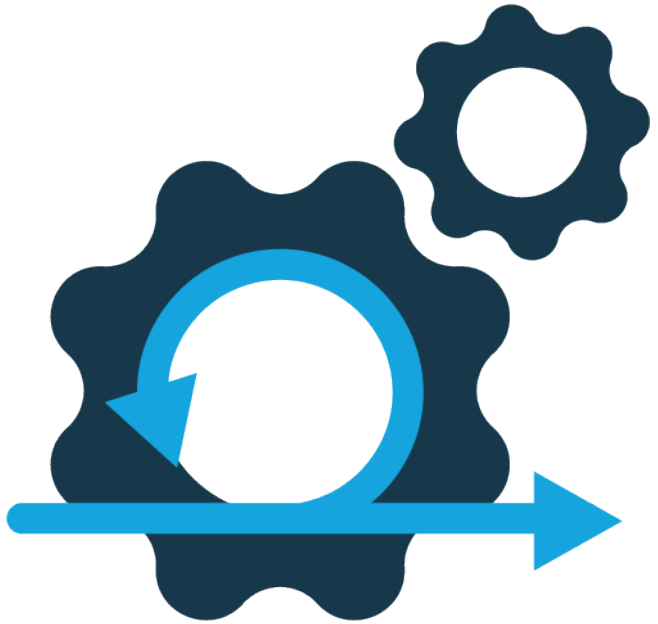


The Evolution of GandCrab Ransomware

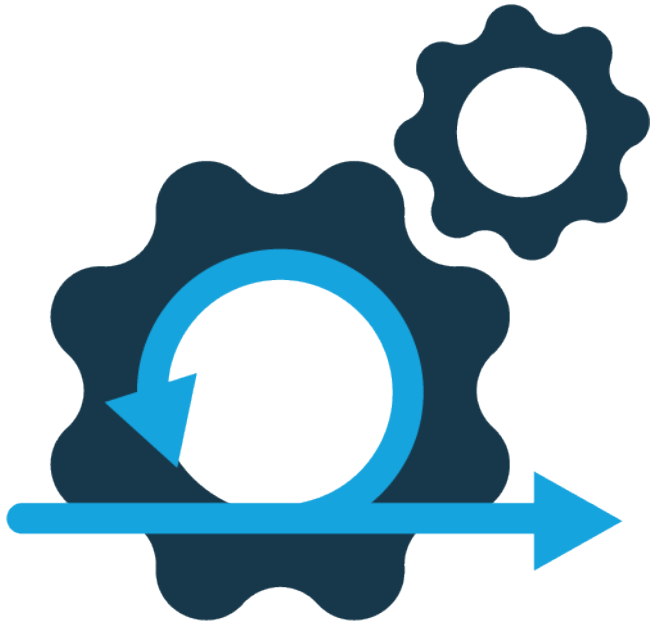
Tamas Boczan
@tamas_boczan
Sr. Threat Analyst

Why?

Why?

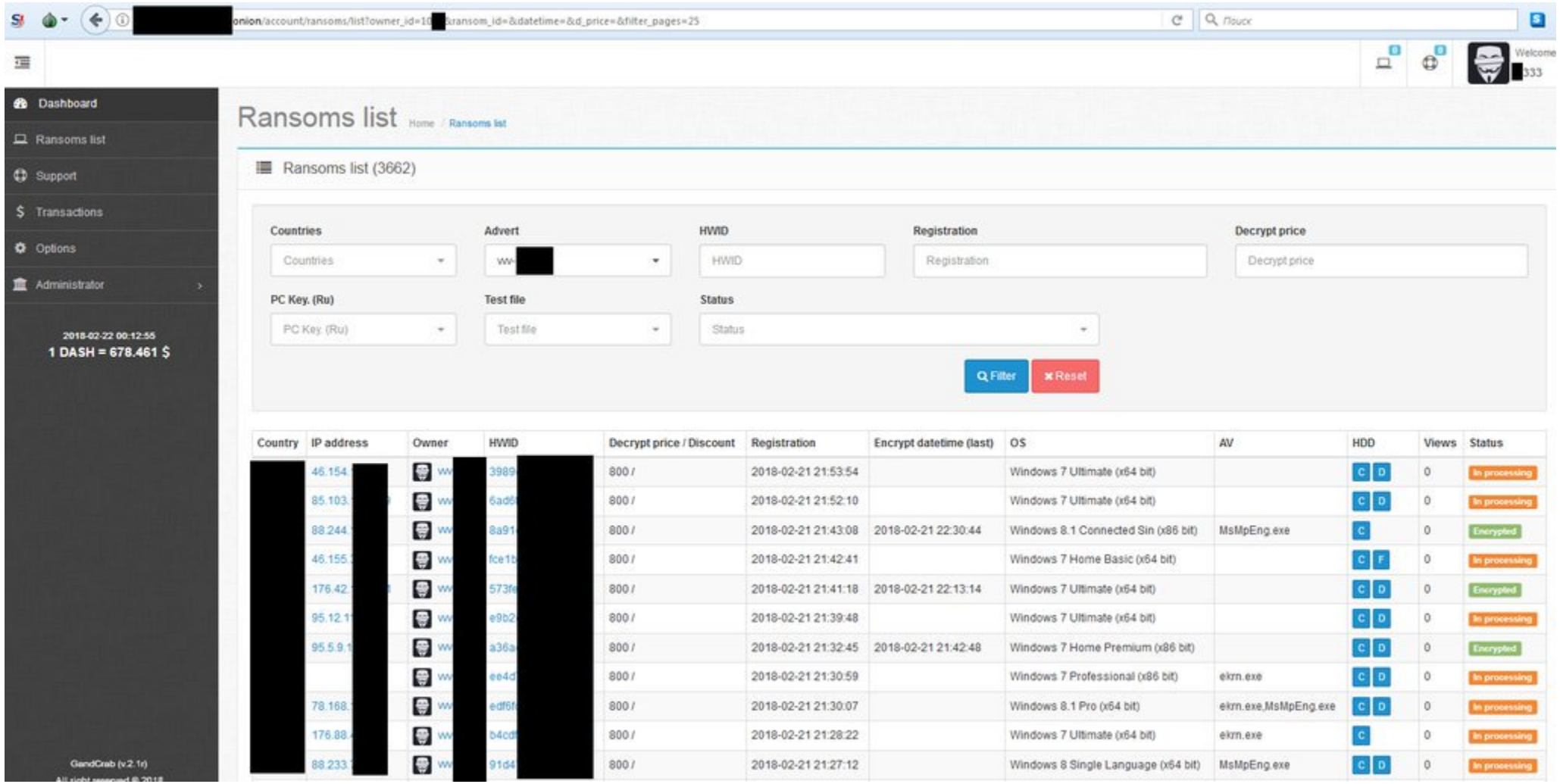


Why?



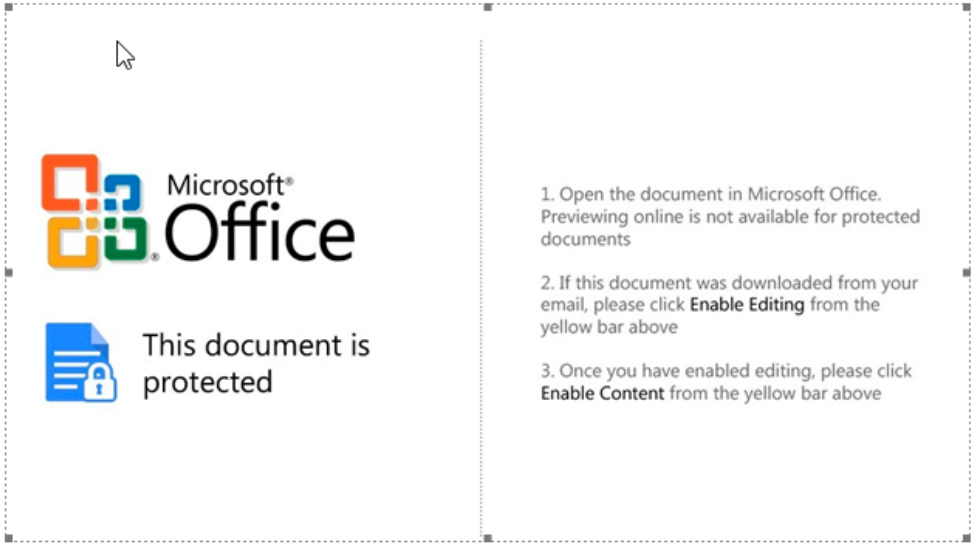
Business Model: RaaS

Panel for Affiliates



Mass Delivery Methods

- Email attachments
  - Javascript
  - Doc
  - Encrypted doc
- Drive-by download



Delivery: RDP, Exploits

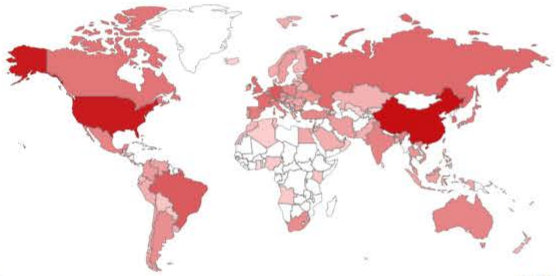
SHODAN | Remote desktop | Explore | Developer Pricing | Enterprise Access | Contac

Exploits | Maps | Images

TOTAL RESULTS

2,558,684

TOP COUNTRIES



China	674,703
United States	542,059
Germany	114,138
Brazil	112,129
Russian Federation	72,462

TOP SERVICES

RDP	2,524,117
RDP (3388)	33,904
SMB	401

140.120.31.200

www.ee.nchu.edu.tw

National Chung Hsing University

Added on 2018-11-10 20:15:08 GMT

Taiwan, Taichung

Details

Remote Desktop Protocol

\x03\x00\x00\x0b\x06\xd0\x00\x00\x124\x

132.232.22.150

Tencent cloud computing

Added on 2018-11-10 20:12:05 GMT

China

Details

self-signed

SSL Certificate

Issued By:

|- Common Name:

Issued To:

|- Common Name:

Supported SSL Versions

TLSv1, TLSv1.1, TLSv1.2

Diffie-Hellman Parameters

Fingerprint: RFC2409/Oakley Group 2

Remote

\x03\x

18.222.229.92

Payload: Starting Point

Data collection

- System Info
- External IP
- AV?

Payload: Starting Point

Data collection

- System Info
- External IP
- AV?

Connect Home

- nslookup

Payload: Starting Point

Data collection

- System Info
- External IP
- AV?

Connect Home

- nslookup

Preparation

- Kill Processes

Payload: Starting Point

Data collection

- System Info
- External IP
- AV?

Connect Home

- nslookup

Preparation

- Kill Processes

Encryption

- AES
- *.GDCB

Payload: Starting Point

Data collection

- System Info
- External IP
- AV?

Connect Home

- nslookup

Preparation

- Kill Processes

Encryption

- AES
- *.GDCB

Post-Infection

- Shadow Copies

Feb 28: Europol decryptor

Data collection

- System Info
- External IP
- AV?

Connect Home

- nslookup

Preparation

- Kill Processes

Encryption

- AES
- *.GDCB

Post-Infection

- Shadow Copies

7 days later: v2

Data collection

- System Info
- External IP
- AV?
- **Kernel-AV**

Connect Home

- nslookup

Preparation

- Kill Processes

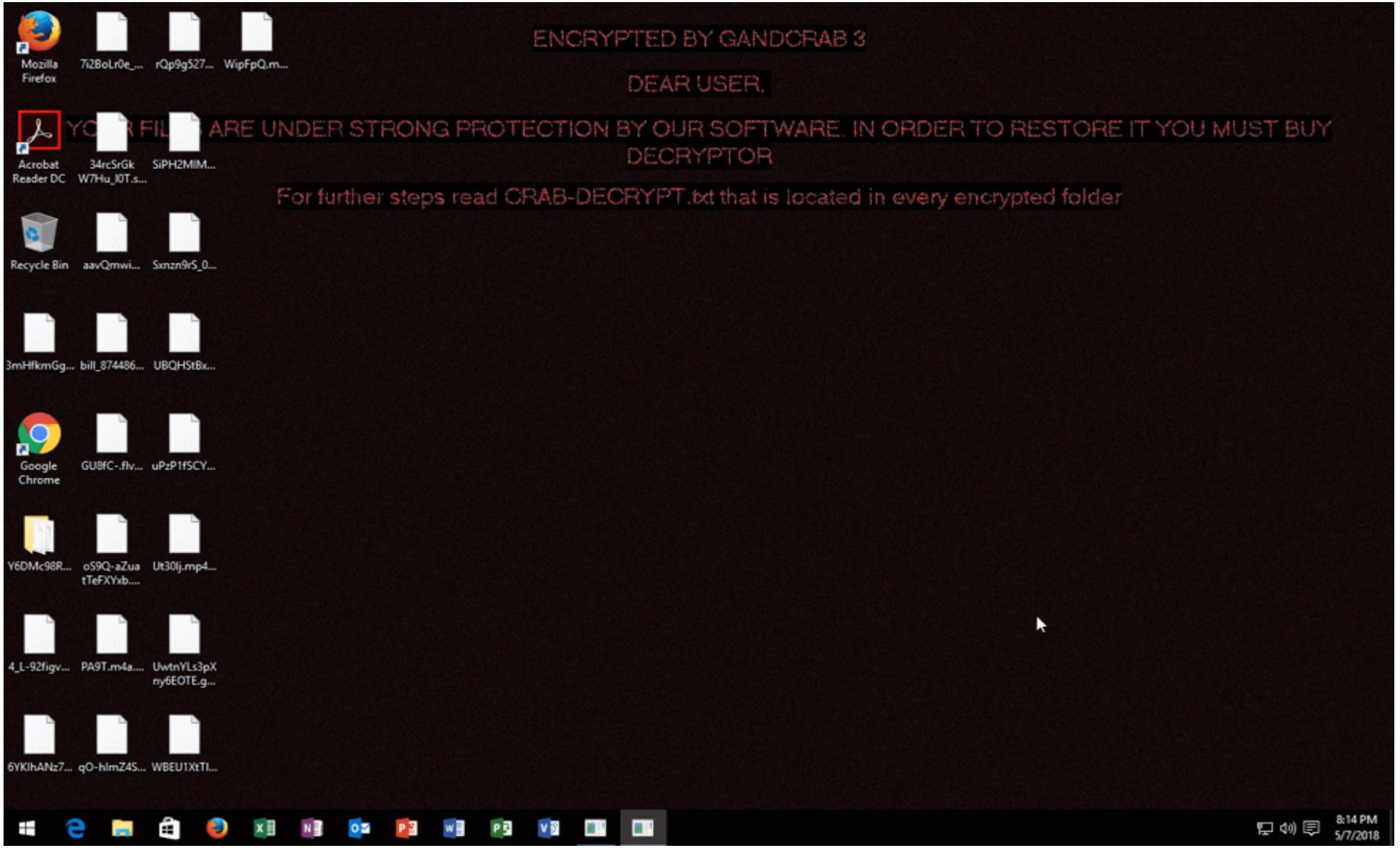
Encryption

- AES
- ***.CRAB**

Post-Infection

- Shadow Copies

7 weeks later: v3



Post-Infection

- Shadow Copies
- **Wallpaper**

v4

Data collection

- System Info
- ~~**External IP**~~
- AV?

Connect Home

- nslookup

Preparation

- Kill Processes

Encryption

- ~~**AES**~~
- **Salsa**
- ***.KRAB**
- **SMB shares**

Post-Infection

- Shadow Copies
- Wallpaper
- **Self-removal**

Data collection

- System Info
- AV?

Connect Home

- **WPress hacks**
- **URL generation**

Preparation

- Kill Processes

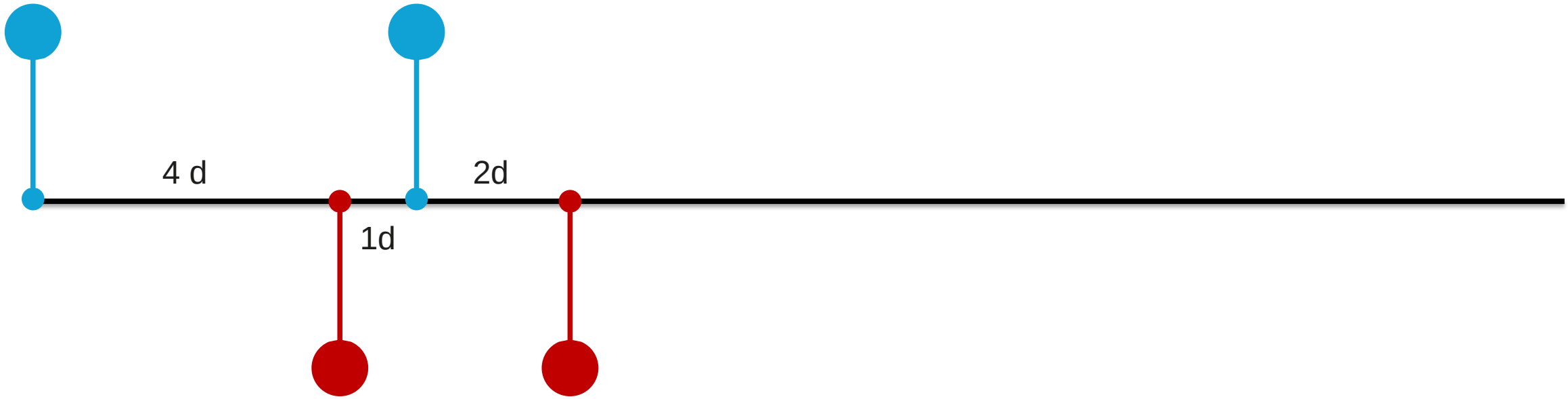
Encryption

- Salsa
- *.KRAB
- SMB shares

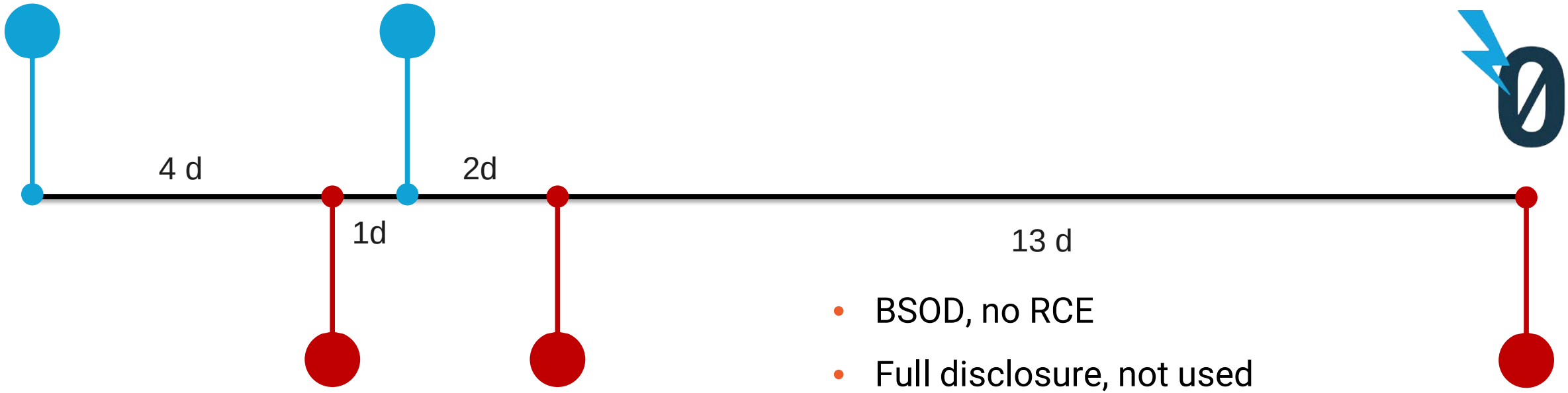
Post-Infection

- Shadow Copies
- Wallpaper
- Self-removal

Vaccine: Jul 13



Zero day details



- BSOD, no RCE
- Full disclosure, not used
- Why?
  - Retaliation
  - Overestimated impact
- Probably just fuzzed it

v5

Data collection

- System Info
- AV?

Connect Home

- WPress hacks
- URL generation

Preparation

- Kill Processes
- **Escalate**

Encryption

- Salsa
- ***.{Random}**
- SMB shares

Post-Infection

- Shadow Copies
- Wallpaper
- Self-removal

v5: Maintenance

Data collection

- System Info
- AV?

Connect Home

- WPress hacks
- URL generation

Preparation

- Kill Processes
- Escalate

Encryption

- Salsa
- *.{Random}
- SMB shares

Post-Infection

- Shadow Copies
- Wallpaper
- Self-removal

Retired?

Gandcrab
(\ /) _ ($ __ $) _ (\ /)

Seller
424 posts
Joined
12/18/17 (ID: 84324)
Activity
virology

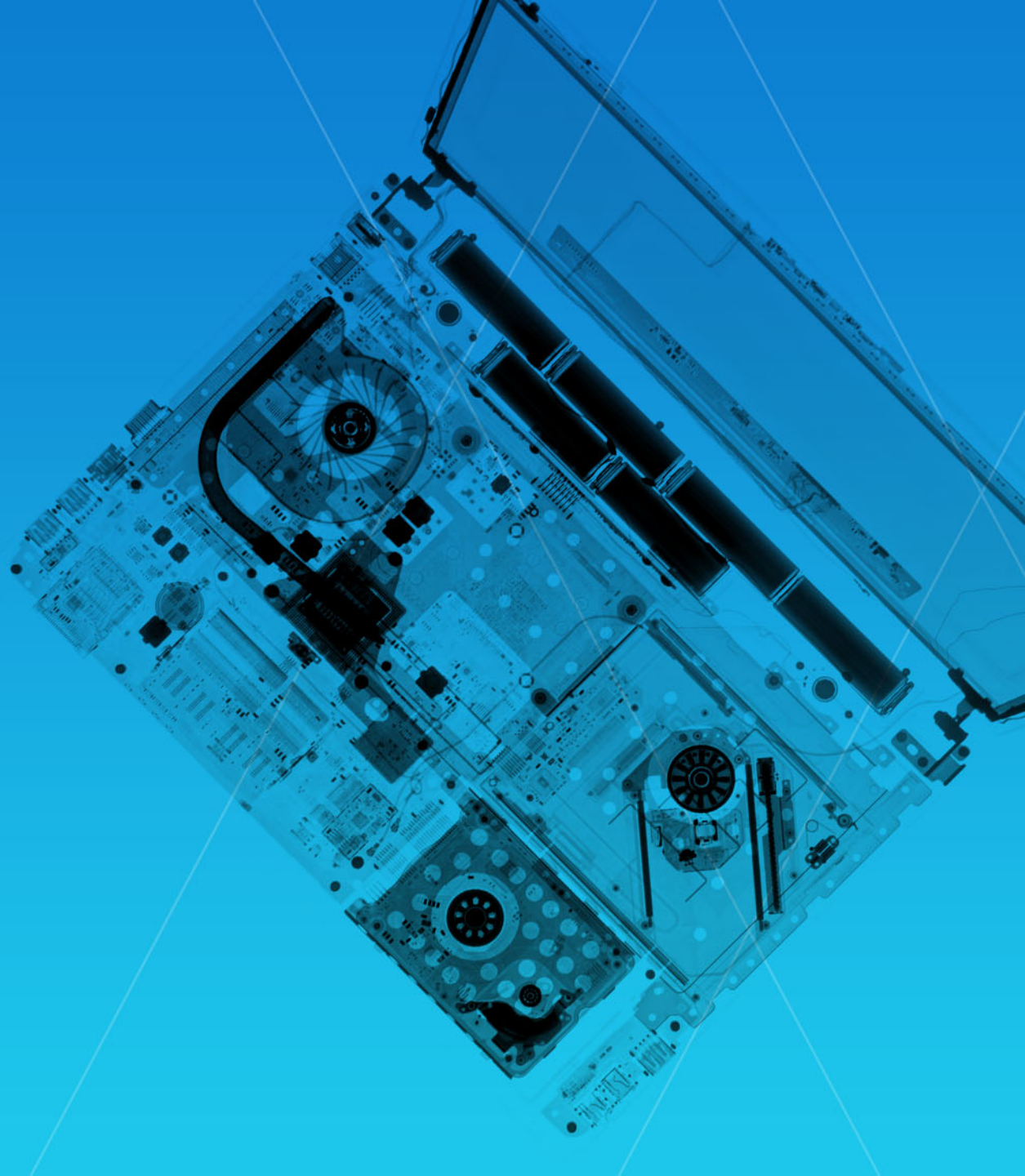
We are leaving for a well-deserved retirement .

We personally earned more than **150 million** dollars per year.

For the year of working with us, people have earned more than **$ 2 billion**

What We Learned: Developer's Profile

- > RaaS marketing skills
- Project organization:
  > react quickly
  < poor quality
- Exploit development capability:
  > implement exploits based on POCs
  > find simple exploit via fuzzing
  < can't develop more complex RCE exploit
  < can't guess impact of an exploit



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