THREAT REPORT

H1 2014

SWITCH ON FREEDOM

F-Secure

www.f-secure.com

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H1 2014 THREAT REPORT AT A GLANCE...

INCIDENTS CALENDAR

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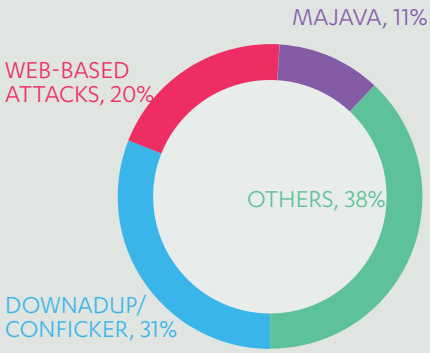
JANUARY	FEBRUARY	MARCH	APRIL	MAY	JUNE
	iOS updates released to fix major SSL flaw		Coremax extension does browser hijacking		FBI hunts down Gameover Zeus' mastermind
	Active attacks using new IE 0-day bug		Windows XP reaches official end of life (EOL)	Police ransomware moves to Android	'Oleg Pliss' hackers arrested in Moscow

PC MALWARE TOP-10 DETECTIONS

Page 9, 11

Windows threat landscape is filled with existing malware families—some of which has been around for years, being kept alive by unpatched machines.



TOP-10 DETECTIONS

DOWNADUP (aka CONFICKER)
This six years old worm exploits the MS08-067 vulnerability in Windows. It spreads over the Internet and through removable media and network shares.

WEB-BASED ATTACKS
A collection of malware, techniques, or exploits used to redirect the web browser to malicious sites where the system may be subjected to further attacks.

MAJAVA
A collection of exploits against vulnerabilities in the Java development platform. A successful attack can, among other things, give the attacker total system control.

rounded up by...

SALITY | RAMNIT | AUTORUN | WORMLINK | BROWSER EXPLOIT | EXPIRO | ZEROACCESS

MOBILE MALWARE

Page 12

Android continues to be a favorite target for majority of the mobile threats. But threats directed towards iOS do exist, even if there are far fewer of them.

ANDROID + iOS

294 NEW FAMILIES or VARIANTS

1 new FAMILY

SSLCREDTHIEF
Signed library file listens to outgoing SSL connections to steal Apple ID and passwords.

TOP-3 ANDROID FAMILIES

SMSSEND
Large family of malware that sends SMS messages to premium-rate numbers.

FAKEINST
Appears to be app installers, but sends SMS messages to premium-rate numbers.

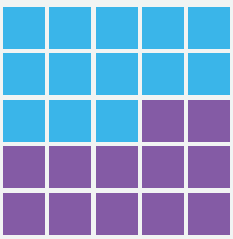
EROPL
Silently harvest data from the device and forwards it to a remote server.

MAC MALWARE

Page 14

While Windows threat landscape is dominated by old and existing malware, Mac is seeing newcomers trying to fill up the previously quiet scene. The malware are getting more sophisticated in term of their capabilities and their distribution methods.

25 NEW VARIANTS discovered between January to June 2014



13 of these variants belong to 5 NEW families

MASK
Belongs to a cyber espionage operation dubbed "The Mask." Targets government institutions and energy companies.

CLIENTSNOW
Used in targeted attacks against Tibetan and Uyghur communities.

LAOSHU
A remote access trojan that spreads via bogus courier email notifications.

COINTHIEF
A trojan spyware aiming to steal cryptocurrencies. Poses as cracked version of OS X applications, but later switch to spread via trojanized cryptocurrency applications.

COINSTEALER
A Bitcoin stealer that poses as a leaked application for accessing Mt. Gox trade information.

$ $ $ DEMANDING RANSOM

ANDROID — **KOLER: First ransomware (almost)**
Mobile extension of the 'police-themed' Reveton ransomware. Claims to encrypt files on device, but actually only disables the Back button to keep the ransom demand prominent.

ANDROID — **SLOCKER: First TOR-encrypted ransomware**
Encrypts image, document and video files on device; disables the Back button to interfere with user's control. Communicates with controlling server via Tor network or SMS messages.

iOS — **Oleg Pliss strikes Australia**
In May, 'Oleg Pliss' locks the accounts of a number of users in Australia, reportedly using the 'Find My iPhone' feature, and demands ransom. Apple denies speculation of a breach in the iCloud service.

FOREWORD

by
Mikko Hypponen
Chief Research Officer
F-Secure Labs

I remember setting up our first website. That was 20 years ago, in 1994. When the Web was very young and there were only a handful of websites, it was easy to forecast that the Web was going to grow. And indeed, during these past 20 years, it has exploded in size. What's even more important, the Web brought normal everyday people online. Before the Web, you would only find geeks and nerds online. Now everybody is online.

Back in 1994, we were guessing what would fuel the upcoming growth of the Web. For it to grow, there has to be online content—content like news or entertainment. And for news and entertainment to move online, somebody has to pay for it. How would users pay for online content? We had no idea. Maybe newspapers would start charging an annual online subscription fee, just like they did for their paper version? Or maybe the web would incorporate some kind of an online on-demand payment system; the user would have an easy way of doing in-browser micropayments in order to access content. This would enable the user pay, say, one cent to read today's Dilbert cartoon.

> "We — the users — are more valuable in the long run by having our data and our actions profiled and saved."

As we know now, such a micropayment system never happened—even though it looked like such an obvious thing 20 years ago. Instead, a completely different way of paying for online content surfaced: **ads**. I remember seeing the first banner ad on a website, maybe in 1995 or 1996. I chuckled at the idea of a company paying money for showing their ad on someone else's website. I should not have chuckled; that same idea now fuels almost all of the content online. And highly efficient ad profiling engines create practically all the profit for companies like Google and Facebook.

Google is a particularly good example of just how profitable user profiling can be. Its services—like Search, Youtube, Maps and Gmail—are free. You don't pay a cent for using them. These services are massively expensive to run: Google's electricity bill alone is more than $100 million a year. You would think that a company that runs very expensive services but doesn't charge for them would be making losses—but it isn't. In 2013, Google's revenue was $60 billion. And their profit was $12 billion. So, if we make a modest estimate that Google has one billion users, every user made 12 dollars of profit for Google last year—without paying a cent.

Frankly, I'd be happy to pay Google $12 a year to use their services without tracking or profiling. Heck, I would be ready to pay $100 a year! But they don't give me that option. We—the users—are more valuable in the long run by having our data and our actions profiled and saved.

Of course, Google is a business. And they are doing nothing illegal by profiling us—we volunteer our data to them. And their services are great. But sometimes I wish things would have turned out otherwise and we would have a simple micropayment system to pay for content and services. Now, with the rise of cryptocurrencies, that might eventually become a reality.

GAME OVER?

The disruption of the GameOver ZeuS (GOZ) botnet by multiple law enforcement agencies[1] was a great success in many ways — but what's next? The botnet was disrupted but not completely destroyed. Its creator was not arrested, is still at large and is currently building a new botnet to replace the old.

by
Sean Sullivan
Security Advisor
F-Secure Labs

Why disrupt GOZ?

CryptoLocker[2], a powerful ransomware trojan dropped by GOZ, was undoubtedly a big reason why the botnet was targeted for takedown. CryptoLocker, with its ability to perfectly encrypt all the documents and data files on its victim's hard drive, was too sinister. There was no cure other than to pay the ransom for the decryption key. So the only way to stop the scheme was to prevent it. And as GOZ delivered CryptoLocker — GOZ was targeted for a takedown.

Escalation

CryptoLocker is exactly the reason why it is so dangerous to disrupt (but not completely takedown) a botnet such as GameOver ZeuS. Ask yourself this:

"If CryptoLocker was so successful, why didn't Slavik (GOZ's botmaster) deploy the ransomware across his entire botnet?"

The obvious answer: because then he wouldn't have a botnet anymore. All two million bots couldn't drop CryptoLocker without also destroying GOZ's infrastructure at the same time.

But what if the infrastructure is already lost due to a takedown? What prevents a future version of GOZ from initiating a "self-destruct" order (like dropping an encryption bomb) if the bot doesn't communicate with its C&C server within a set period of time? Nothing.

Evolution

The story of computer malware is one of evolution. And that evolution is driven by a predator-prey dynamic. Each time the hunter discovers the quarry – a new defense tactic is required to avoid detection. What happens if the next defense tactic is to become poisonous?

The hunters should be wary.

> "What happens if the next defense tactic is to become poisonous?"

SOURCES
1. United States Department of Justice; *U.S. Leads Multi-National Action Against "Gameover Zeus" Botnet and "Cryptolocker" Ransomware, Charges Botnet Administrator*; 2 Jun 2014; http://www.justice.gov/opa/pr/2014/June/14-crm-584.html
2. F-Secure; *Trojan:W32/Cryptolocker*; http://www.f-secure.com/v-descs/trojan_w32_cryptolocker.shtml

H1 2014 INCIDENTS CALENDAR

DIGITAL FREEDOM

GCHQ said to spy on Yahoo video chats
Feb: Imagery from 1.8m 'unselected' users intercepted and stored

Turkey blocks Twitter, Youtube
Mar: Turkish users' access to social media curtailed following gov't controversy

Thailand temporarily blocks Facebook
May: IT Ministry says access blocked at junta request; military blames 'glitch'

NSA reportedly records all calls in Bahamas
May: Drug enforcement agreement allegedly used to underpin monitoring

ATTACKS

Yahoo! attack prompts password reset
Jan: Passwords stolen from 'third party' database used to access Mail accounts

Wireless home/office routers hacked
Mar: Security researchers report over 300,000 devices had DNS settings altered

Flexcoin Bitcoin bank robbed, folds
Mar: Attacker exploits flaw in transfer code to steal 896 coins (about $600,000)

Windigo attack infects Linux servers
Mar: Researchers report over 25,000 servers made to send spam, redirect users

SECURITY

Tech giants release FISA request data
Feb: Google, Facebook and others post summaries of requests made by US gov't

TrustyCon conference held in protest
Feb: RSA conference boycotters attend rival event on 'trustworthy technology'

Windows XP reaches official end of life (EOL)
Apr: Microsoft recommends users upgrade from ageing operating system after EOL

eBay forces password change after attack
May: Hack of database prompts preemptive passwords reset

ENFORCEMENT

Spyeye malware author pleads guilty in US
Jan: Russian national created and distributed malware used for wire, bank fraud

2 plead guilty to Android app piracy
Mar: First convictions in US for distributing counterfeit mobile apps

US charges 9 for Zeus malware
Apr: 9 accused of using Zeus to infect thousands of businesses in US

Australia arrests 2 for 'Anon' hacks
May: AFP accuses suspects of gov't site defacements and DoS attacks

GAMEOVER ZEUS BOTNET

Mar: Starts stealing Bitcoin wallets and their encryption passwords

Mar: Injects phishing elements into job-seeking sites visited

MALWARE

New, improved ransomware planned
Jan: Security researchers report on development of new PowerLocker DIY kit

GameOver Zeus starts stealing Bitcoins
Jan: Malware now steals Bitcoin wallets and their encrypting passwords

TheMoon Worm spreading on routers
Feb: Linksys routers infected through firmware exploit to to spread worm copies

Coremax extension does browser hijacking
Apr: Browser extension hijacks ads and redirects users to unsolicited site

VULNERABILITIES

iOS updates released to fix major SSL flaw
Feb: SLL vulnerability could allow attackers to intercept traffic between users

Active attacks using new IE 0-day bug
Feb: CVE-2014-1776 flaw in IE web browsers 10 and 9 allows malware install

Flash Player 0-day hit by driveby attacks
Feb: Adobe emergency patch for bug exploited to silently install malware

Word 0-day used in targeted attacks
Mar: RTF bait documents use bug for remote code execution

The Incidents Calendar lists interesting developments in digital security that took place in H1 2014. Items in the Calendar were reported in various technology portals, security research publications, law enforcement sites, major newspapers and the F-Secure Weblog. Sources are listed on page 15.

DIGITAL FREEDOM

NSA reportedly plants backdoors in routers
May: Exported products intercepted, modified for covert eavesdropping

Iraq blocks social media due to ISIS threat
Jun: Moved aimed at 'disrupting insurgents communications'

Thailand junta blocks sites, censors reporting
Jun: Hundreds of sites reportedly blocked, forbids critical media reports

Youtube, Twitter access restored in Turkey
Jun: Youtube unblocked, follows lifting of ban on Twitter last month

ATTACKS

Heartbleed exploited to hack VPN session
Apr: NYT Times reports attackers used flaw to enter targeted firm's network

AU-CERT reports rise in cyber attacks
May: Report says 56% of firms surveyed reported cyber attacks

TrueCrypt warns software now 'harmful'
May: Drive-encryption project says tool 'not secure', warns against use

Massive DDoS attack hits Hong Kong
Jun: 300Gbps+ attack on voting system after civic referendum

SECURITY

MyBulletins launched to ease updating flow
May: Service intended to simplify identifying applicable security updates

Google debuts 'right to be forgotten' form
May: EU court rules search engine to remove 'irrelevant' links on request in EU

Google Apps add encryption
May: End-to-end email encryption offered to enterprise users

Reset the Net campaign launched
Jun: Coalition of groups aim to encourage use of surveillance-resistance tools

ENFORCEMENT

US wants 5 Chinese hackers for espionage
May: Dept of Justice claims PLA members hacked US businesses for 8 years

Almost 100 arrested for Blackshades trojan
May: Arrests in US, EU & other countries for sale of trojan used to spy on users

'Oleg Pliss' hackers arrested in Moscow
Jun: Russian Interior Ministry says arrested 2 for iOS ransom attacks in Oz

FBI hunts for Gameover Zeus mastermind
Jun: Indictment against Russian national issued following botnet takedown

GAMEOVER ZEUS BOTNET

Jun: FBI & partners launch 'Operation Tovar' takedown, urges users to clean their PCs

Jun: 2-week 'window' for users to clean PCs ends; botnet still recovering

MALWARE

Virus Shield app scam in Play Store reported
Apr: Non-functional app removed, users who purchased refunded

Police ransomware moves on Android
May: Koler malware tries to lock the affected device and displays a ransom demand

BlackEnergy rootkit for Windows 8
Jun: Sample uploaded to VirusTotal service with stripped functionality

Havex hunts ICS/ SCADA systems
Jun: Malware used in targeted attacks checks for industrial control systems

VULNERABILITIES

Heartbleed bug makes global news
Apr: Millions of sites, phones thought to be affected by OpenSSL flaw

Java SE update fixes 37 issues, some critical
Apr: Patch addresses multiple issues, including 4 rated 'most critical'

Windows XP included in off-cycle patch
May: Microsoft makes exception for EOL'ed OS to receive IE8 0-day patch

Tech giants to fund vital projects
May: Core Infrastructure Initiative to fund OpenSSL, OpenSSH, among others

H1 2014 THREAT LANDSCAPE SUMMARY

General trends

The most notable trend in H1 2014 is the continued growth of ransomware and ransoming activities, on both desktop and mobile platforms. Though the June takedown of the **Zeus** botnet [1] has hamstrung the spread of the **Cryptolocker** threat (at least for a while), ransomware as a whole continues to develop, as this half year saw existing threats such as **Cryptolocker** updating their distribution, encryption and payment methods to stay ahead of law enforcement's counterefforts.

Ransomware made the leap to mobile, with the **Koler** [2] threat as the first attempt at gaining a foothold on the Android platform. Though this malware threatened to but doesn't actually encrypt files, the **Slocker** ransomware that soon followed does [3]. As is usual with Android threats, both these ransomware pretend to be legitimate apps in order to trick the user into willingly installing them.

Meanwhile, ransoming activity on iOS devices took a different form. Introduced in iOS 7, the Activation Lock feature is meant to remotely lock an iOS device using an Apple ID password. A malicious misuse of the feature involves criminals offering an Apple ID login and password, supposedly for access to 'free' content. Once a user uses the bait credentials to authorize their iOS device, the criminals change the password, locking the device and essentially hijacking it for ransom. The most notable case of ransom activity on the iOS platform was the **'Oleg Pliss'** incident that affected users in Australia in May, for which two individuals were subsequently arrested in Moscow [4].

In related news, security researchers reported [5] discussions in underground forums for developing a DIY construction kit for ransomware. While this hasn't yet come to pass, considering that most other forms of malware make the transition from bespoke-programmed creations to products churned out from 'build-it-with-a-click' programs, the eventual debut of a **ransomware creator kit** seems a reasonable forecast.

These developments coincide with increasing reports of targeted attacks against companies and government entities that gather and hold data for ransom, including high-profile incidents such as the Nokia ransom case [6]. The success and increasing use of these programs and attacks only underline the importance of data security, for home, enterprise and government users.

Meanwhile, **Windows XP** finally reached its end of life (EOL) mark on 8 April 2014 (notwithstanding an emergency out-of-band patch that came out shortly after its EOL). Despite pressure to upgrade to Windows 8 (or really, any OS that's actively supported), anywhere from 10–30% of computer users worldwide [7] are thought to still be using an OS that remains a favored target for attackers and now is no longer being patched. Though some users (particularly government and enterprise customers) have extended XP support, for most users security will become increasingly 'self-service' from now on.

H1 2014 also saw a slew of reports alleging questionable surveillance, online censorship or data handling activities by government entities in various nations. Major tech companies have made various efforts to increase the security of their offerings, as well as pressure their respective governments for increased transparency. See our H1 2014 Incidents Calendar for more details.

PC malware

As seen in our Top 10 Detections statistics, in H1 2014 the most prevalent threats reported to our telemetry systems by users of our products are mostly the same malware families seen from the second half of last year, just in varying order. **Downadup** (also known as Conficker in the media) is the most reported threat in this half year period, particularly in the Middle East, South America and Asia. This six-year-old worm continues to thrive in the wild, and Windows XP's EOL isn't likely to improve the situation.

Apart from Downadup, **Majava** and **web-based attacks** continue to be most visible in Europe and North America this half year. The file-infector families **Sality** and **Ramnit** are also threats that have been around for a few years, but continue to trouble users in all regions except North America and Europe.

Newcomers to the Top 10 Detections are the families **Wormlink, BrowserExploit** and **Expiro**. Interestingly, a notable change in the first half of this year is that detections related to specific, known exploits (e.g., CVE-2013-2471) are no longer visible in our Top 10 Detections.

TOP 10 DETECTIONS

%

31 DOWNADUP / CONFICKER

WORM
Exploiting the MS08-067 vulnerability in Windows to spread over the Internet (as well as through removable media and network shares), this worm has infected millions of computers in over 200 countries.

Six years after it first emerged, unpatched machines still keep Downadup alive. As in the previous half-year, It continues to be prominent in **Brazil,** the **United Arab Emirates** and **Italy**, as well as **Malaysia** and **France** this year.

20 WEB-BASED ATTACKS

REDIRECT
A collection of malware, techniques or exploits used to redirect the web browser to malicious sites,where the browser or system may be subjected to more attacks.

The trend from the end of 2013 continues with reports coming most often from **France, the United States** and **Sweden**, though this year **Malaysia** overtakes all three to report the highest number of these detections.

11 MAJAVA

EXPLOIT
A collection of exploits against vulnerabilities in the Java development platform. A successful attack can, among other things, give the attacker total system control.

Most frequently reported by clients in the **United States, France** and **United Kingdom**.

10 SALITY

VIRUS
A large family of viruses that infect EXE files and use entry-point obscuration to hide their presence. Variants may also kill processes, steal data and so on.

First seen in 2010, Sality is especially prominent in **Malaysia, Brazil, Turkey and India.**

9 RAMNIT

VIRUS
Infects EXE, DLL & HTML files. May also drop a file that tries to download more malware from a remote server.

First seen in 2011, Ramnit lingers on in Asia, particularly **Malaysia, India, Vietnam** and **Indonesia**.

7 AUTORUN

WORM
Spreads mostly via infected removable and hard drives. Variants in this family include harmful payloads such as data stealers. Autorun detection reports come most often from **France, Malaysia, India, Poland** and **Turkey.**

4 WORMLINK

EXPLOIT
Detects malicious shortcut icons used to exploit the critical CVE-2010-2568 vulnerability in Windows to gain total system control. Reports of this threat came mostly from **Malaysia, Turkey, Vietnam** and **India**.

3 BROWSEREXPLOIT

EXPLOIT
Detects a browser process being used to drop and run a potentially harmful program. Most reports for this detection are from the **United States, Finland, France** and **the United Kingdom.**

3 EXPIRO

VIRUS
Infects executable files and uses a keylogger component to steal credit card details. Most commonly reported in **Italy, Finland, the United States, France** and **Germany**.

2 ZEROACCESS

BOTNET
Remnants of this botnet continue to trouble users in **France, the United States, United Kingdon, Sweden** and **Finland**.

Mac malware

2014 started with almost 20 new unique variants discovered in the first 2 months alone, though this pace slowed later so that by the end of the H1 period, 25 new Mac threats had been found. Among the new unique variants, 13 belong to 5 new families, with the **Mask** and **Clientsnow** being involved in targeted attacks. The remaining 3 new families—**Coinstealer, Cointhief** and **LaoShu**—affect normal Mac users. More details of the new Mac families are on page 14.

On Mobile

Q1 2014 saw a number of notable firsts for mobile malware (detailed in our Q1 2014 Mobile Threat Report). In Q2 2014, the majority of threats our Mobile Security for Android users reported to our telemetry systems continue to be targeted at the Android platform. Trojans also remain as the main mobile malware type, heavily reliant on straightforward social engineering to gain access to the device and its stored data.

The three most common threats reported are the families **SMSSend, FakeInst** and **Eropl**. This period also unexpectedly saw two SMS-Worms, rare beasts nowadays, in circulation on Android devices. More details on Android malware are on page 12.

iOS malware

Actual malicious apps on the iOS platform are few and far between, but they do exist. Unlike Android, malware on iOS have so far only been effective against jailbroken devices, making the jailbreak tools created by various hacker outfits (and which usually work by exploiting undocumented bugs in the platform) of interest to security researchers. In June, the **Pangu** tool for iOS 7.1.1 was unexpectedly released, with some allegations that it used stolen exploits, as well as concern over a "shady" pirated apps store installed alongside the tool. Both issues were addressed in a subsequent update [8].

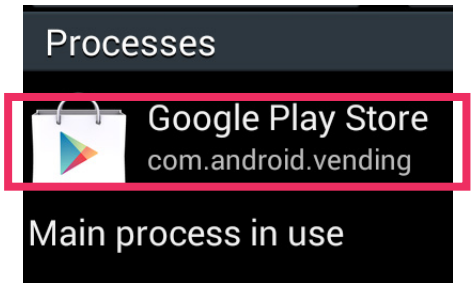
Earlier in H1, reddit users reported a suspicious library file, subsequently named **Unflod Baby Panda**. When installed on jailbroken iOS devices, the malware listens to outgoing SSL connections in order to steal the device's Apple ID and password details [9]. More details on iOS malware are on page 14.

Constants

Despite the various innovations or developments we saw this past quarter, many of the mobile-related findings we documented in our H2 2013 Threat Report remain unchanged. When we looked again at app store security in H1 2014 (comparing the number of malicious samples versus the total number of samples we obtained from a store), we saw no significant change from the results we documented in the previous report. Despite news of four malicious apps being found and pulled from Google's Play Store in H1, considering the vast number of apps in the marketplace, the low incidence of malicious ones (so far) and the prompt remedial efforts the team makes to deal with reported threats, the Play Store remains the safest online market for mobile apps.

There was also no significant change in the package names used by malicious Android apps, with most either using a fake but legitimate-sounding name (e.g., com.software.app) for their packages, or simply straightforward garbage (e.g., fkjsgmjl.ceinnykas). The use of nonsense names is particularly common in the Fakeinst family.

While checking the software name remains a standard security precaution for desktop threats, the same advice is difficult to apply to Android threats, as the package name is rarely displayed to the user, being visible on the device only for running processes under the Settings > Apps > Running > Processes menu. As this is unlikely to change soon, vigilance at the point of download remains for now the most effective precaution mobile users can take to avoid trojans.



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1. Federal Bureau of Investigations; *GameOver Zeus Botnet Disrupted*; 2 Jun 2014; http://www.fbi.gov/news/stories/2014/june/gameover-zeus-botnet-disrupted/gameover-zeus-botnet-disrupted
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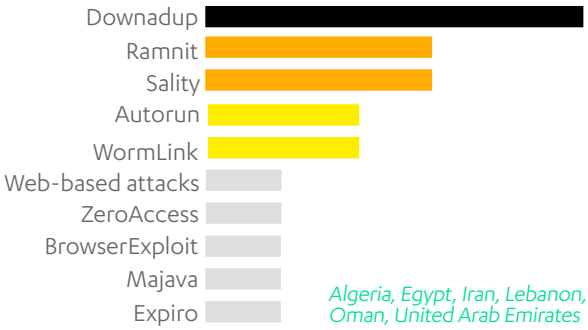
3. F-Secure Weblog; *SLocker Android Ransomware Communicates Via Tor And SMS*; 16 Jun 2014; http://www.f-secure.com/weblog/archives/00002716.html
4. Info Security; *'Oleg Pliss' Apple Hackers Could Be Behind Bars*; 10 Jun 2014; http://www.infosecurity-magazine.com/news/oleg-pliss-apple-hackers-could-be/

TOP 10 DETECTIONS BY REGION PER 1 000 USERS

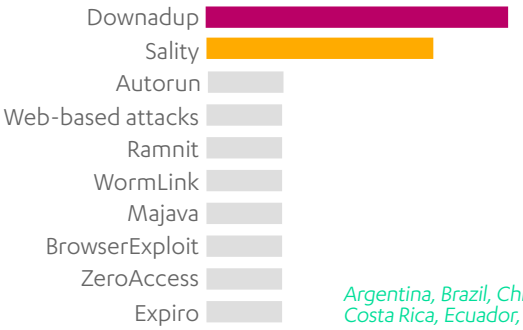
> 500 reports per 1 000	250 - 500 reports per 1 000	100 - 250 reports per 1 000	50 - 100 reports per 1 000	0-50 reports per 1 000

MIDDLE EAST



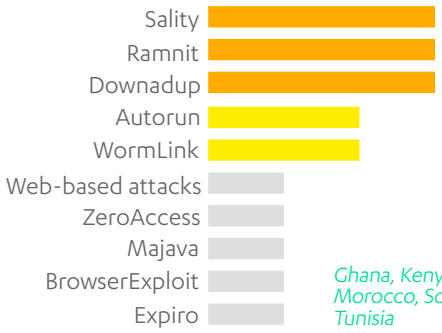
Algeria, Egypt, Iran, Lebanon, Oman, United Arab Emirates

SOUTH AMERICA



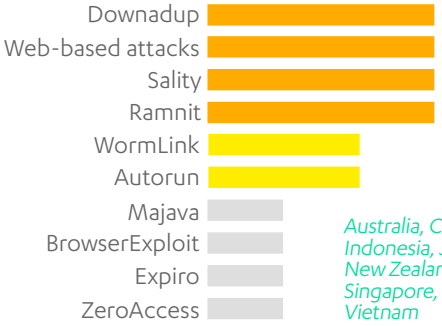
Argentina, Brazil, Chile, Colombia, Costa Rica, Ecuador, Guadaloupe

AFRICA



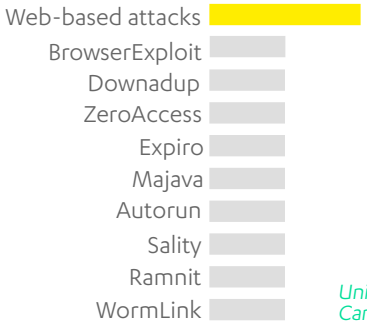
Ghana, Kenya, Morocco, South Africa, Tunisia

ASIA



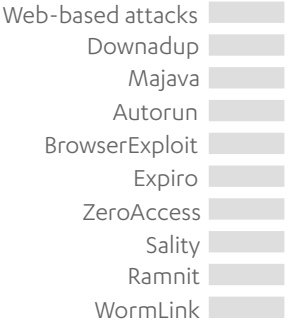
Australia, China, Hong Kong, India, Indonesia, Japan, South Korea, Malaysia, New Zealand, Pakistan, Philippines, Singapore, Taiwan, Thailand, Turkey, Vietnam

NORTH AMERICA



United States, Canada, Mexico

EUROPE



Aland Islands, Austria, Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Romania, Russia, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Ukraine, United Kingdom

Note: Other countries were excluded due to lack of statistically valid data.

5. Arstechnica; Dan Goodin; *Researchers warn of new, meaner ransomware with unbreakable crypto*; 7 Jan 2014; http://arstechnica.com/security/2014/01/researchers-warn-of-new-meaner-ransomware-with-unbreakable-crypto/
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Q2 2014 MOBILE MALWARE

NEW FAMILIES or VARIANTS

294 Android

1 iPhone

Trojan:iPhoneOS/SSLCredThief
Signed library file listens to outgoing SSL connections to steal the device's Apple ID info and password

TOP 3 ANDROID FAMILIES

Trojan:Android/SMSSend
Large family of malware that sends SMS messages to premium-rate numbers

Trojan:Android/FakeInst
Appears to be app installers, but sends SMS messages to premium rate numbers

Trojan:Android/Eropl
Silently harvests data from the device and forwards it to a remote server

% TOP REPORTING COUNTRIES

- 23 Great Britain
- 11 France
- 9 Saudi Arabia
- 8 India
- 8 Germany
- 8 Spain
- 5 Finland
- 3 Malaysia
- 3 Brazil
- 2 Netherlands
- 21 All Other Countries

DEMANDING RANSOM

First ransomware (almost)

Trojan:Android/Koler is the mobile extension of 'police-themed' Reveton ransonware. First reported in May, the app appears to offer access to adult contents but once installed, it demands a 'fine' for "security violations" (or similar). Though it claims to encrypt files on the device, Koler only disables the Back button to keep the ransom demand prominent.

First TOR-encrypted ransomware

Unlike Koler, the Trojan:Android/Slocker malware reported in June actually encrypts image, document and video files on the device. Like Koler, it also disables the Back button to interfere with the user's control of the device. Slocker variants can communicate with their controlling server either via the Tor anonymizing network or SMS messages.

Oleg Pliss strikes Australia

In May, 'Oleg Pliss' locks the accounts of a number of users in Australia, reportedly by using the 'Find My iPhone' feature, and demands ransom. Apple denies speculations of a breach in their iCloud services (some reports blamed phishing scams). In June, two individuals are detained in Moscow, Russia in connection with the attack.

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IN THE NEWS

Shipped with Spyware
A security firm reports discovering a smartphone shipped out straight from the factory with extensive spyware (**Trojan:Android/SmsSend.AC)** built into the device's firmware, which would allow the malware controller full access to data saved on the phone.

Prepaid card-stealer
Trojan:Android/Cardbuyer is reportedly able to defeat various verification processes used by online games or payment platforms, and intercepts SMS messages to quietly buy prepaid cards with the user's account.

iDroidBot on sale
In April, Russian underground forums post ads for iDroidbot, targeting devices running iOS 7.1 as well as Android, and is capable of stealing saved credit card details and credit from QIWI wallets, among other actions.

Stealing Apple IDs
Reddit users report a suspicious library file being distributed that when installed will hook all running processes and listen to outgoing SSL connections in order to steal the device's Apple ID and password details. The malware is subsequently named Unflod Baby Panda.

Worm: Android/ Samsapo. A

Это твои фото?
Russian: Is this your photo?

Link in an SMS prompts download of an app that registers the phone to a premium-rate service, steals data, sends itself to all listed contacts and more.

"Dear [NAME], Look the Self-time, http://goo.gl/******
Link in an SMS prompts download of a 'SelfTimer' app, which sends a text message to 20 contacts and asks users to download an additional file.

Worm: Android/ Selfmite

In the Play Store

Virus Shield
In April, the Android Police site breaks the news that Virus Shield, security software that was the top-ranked paid app in the Google Play Store (with over 10,000 downloads and a 4.7 star rating) is in fact nothing but a scam. Google subsequently pulls it from the market and offers users who had purchased the fraudulent app a refund, plus store credit.

★★★★ 3.99

BankMirage
A malicious clone of a legitimate banking app for the Israeli Mizrahi Bank that steals user IDs from an in-app login form. Researchers speculate it was designed to gather data for a later attack, as the app explicitly ignored passwords. The malware is only available on the Play Store for a few days before a security firm reports it and the app is swiftly removed.

FREE

Songs & Prized
Two free apps share similar behavior to cryptocurrency mining apps found on third-party app stores. Silently performs digital currency mining while the device is charging and prevents it from going into sleep mode. Both apps were removed from the Play Store following news of the discovery.

FREE

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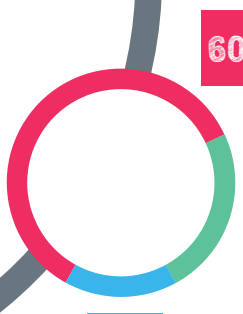
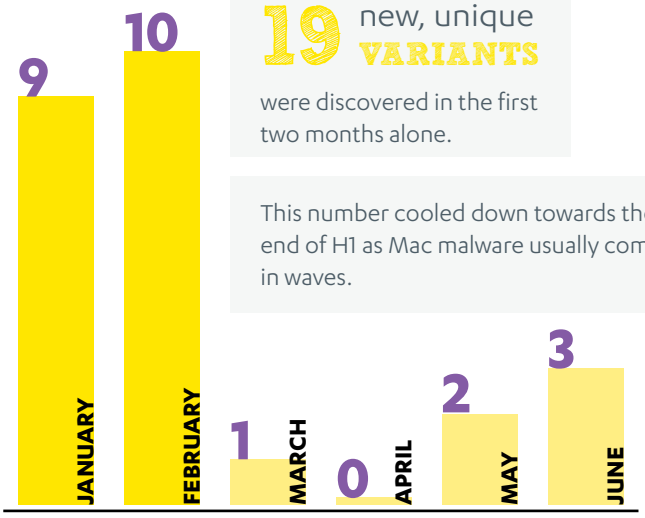
H1 2014 MAC MALWARE

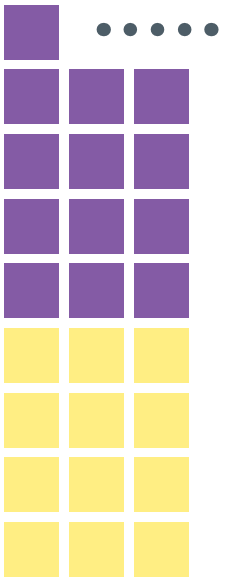
25
NEW VARIANTS
of Mac malware in total were discovered between
JANUARY to JUNE 2014





19 new, unique VARIANTS were discovered in the first two months alone.

This number cooled down towards the end of H1 as Mac malware usually come in waves.



13 VARIANTS out of the 25 belong to

5 NEW FAMILIES

2 used in targeted attacks

MASK

The **Mask** family belongs to a high profile cyber espionage operation dubbed "The Mask." It targets government institutions and energy companies.

CLIENTSNOW

The **Clientsnow** family has links to GhostNet. It is one of the many Mac malware families used in targeted attacks against Tibetan and Uyghur communities.

COINTHIEF

The **CoinThief** family is a trojan spyware intended for stealing cryptocurrencies. Since Q2 2013, it has managed to spread unnoticed via BitTorrent, posing as cracked versions of popular OS X applications. But in early 2014, it changed tactics and started spreading via trojanized cryptocurrency applications found in online repositories such as Github and popular download sites such as *downloads.com.*

3 affect regular Mac users

The change in tactics proved to be effective since the people who look for cryptocurrency applications are more likely to be in possession of some cryptocurrency already[1]. And most of them would not expect to find trojanized applications on legitimate download sites. This led to a significant number of users being affected, and eventually the family being discovered[2].

LAOSHU

The **LaoShu** (which literally translates to rat or mouse in Chinese) family is a remote access trojan that spreads via bogus courier email notifications.

COINSTEALER

The **Coinstealer** family is a Bitcoin stealer that poses as a leaked back office application[3] for accessing restricted Mt. Gox trade information. It was distributed via the hacked Reddit account and personal blog belonging to Mt. Gox's CEO[4] after the Bitcoin exchange went offline without providing any explanation[5]. It appeared to be making an attempt to exploit the mental state of Mt. Gox customers who were anxious for more details at the time.

***NOTE:** Numbers shown are the count of unique variants detected. This means repackaged installers are not counted and multiple-component malware are counted as one.

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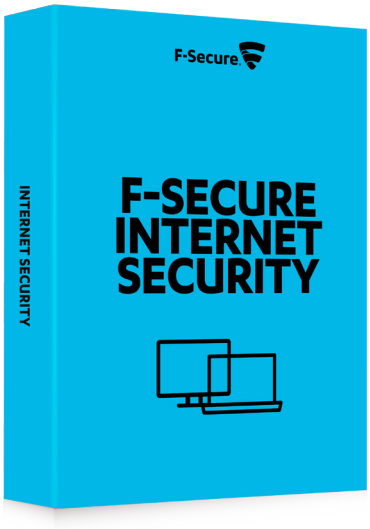

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