Snowfox 事件分析

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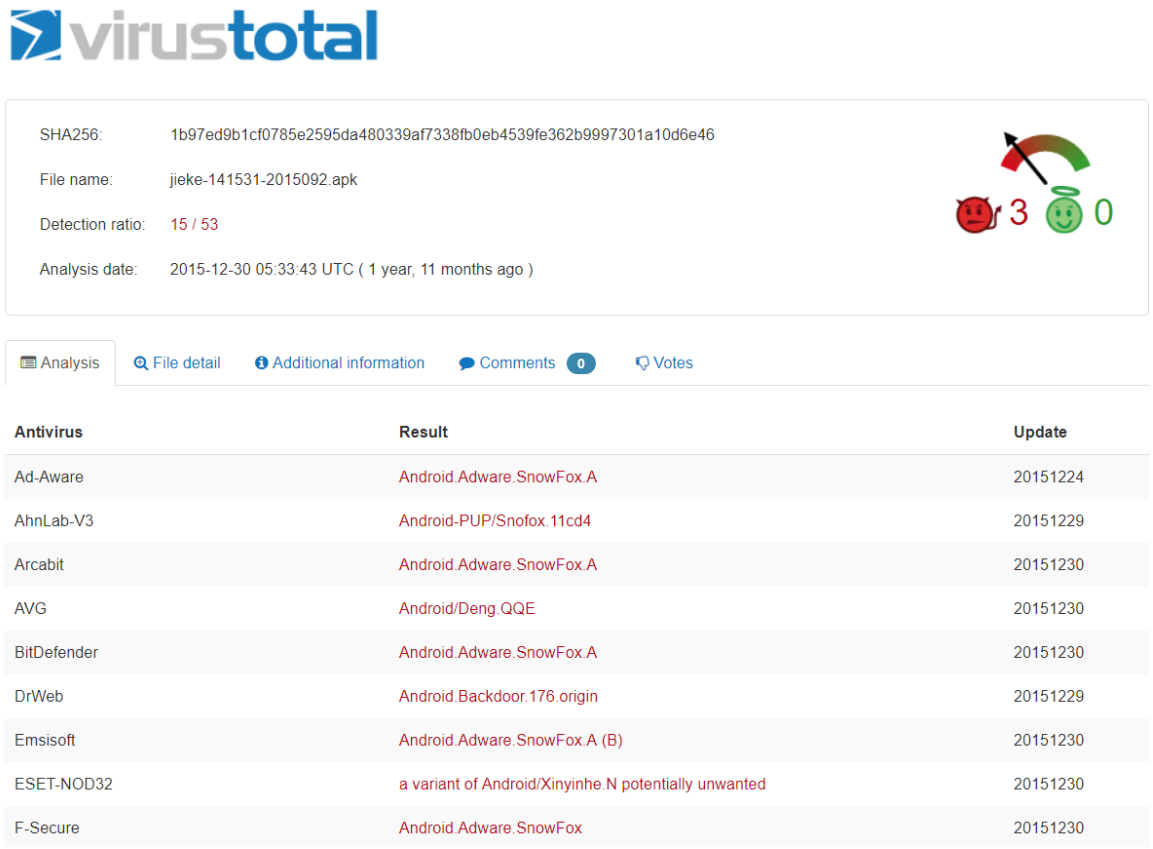
事件介紹

- 資安事件全名: MALWARE-CNC Andr.Tool.Snowfox Androidbauts/snowfox outbound connection
- 10月份此事件總共觸發317筆(不分區網中心)
- Androidbauts是屬於一種android上的廣告軟體(adware)，但是它會回傳裝置內部資訊(例如:IMSI、 IMEI 、GPS位置)給CNC主機

備註:
國際移動設備識別碼（International Mobile Equipment Identity，IMEI）
國際移動用戶識別碼（International Mobile Subscriber Identity，IMSI）

相關檔案掃描結果

- 因為有問題的軟體已經下架，目前找到相關紀錄如下圖



virustotal

SHA256: 1b97ed9b1cf0785e2595da480339af7338fb0eb4539fe362b9997301a10d6e46

File name: jieke-141531-2015092.apk

Detection ratio: 15 / 53

Analysis date: 2015-12-30 05:33:43 UTC (1 year, 11 months ago)

3 0

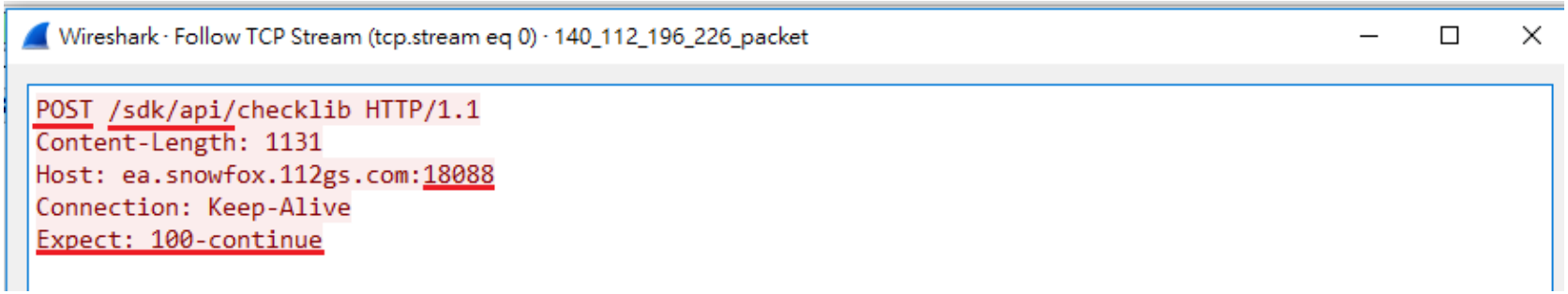
Analysis | File detail | Additional information | Comments 0 | Votes

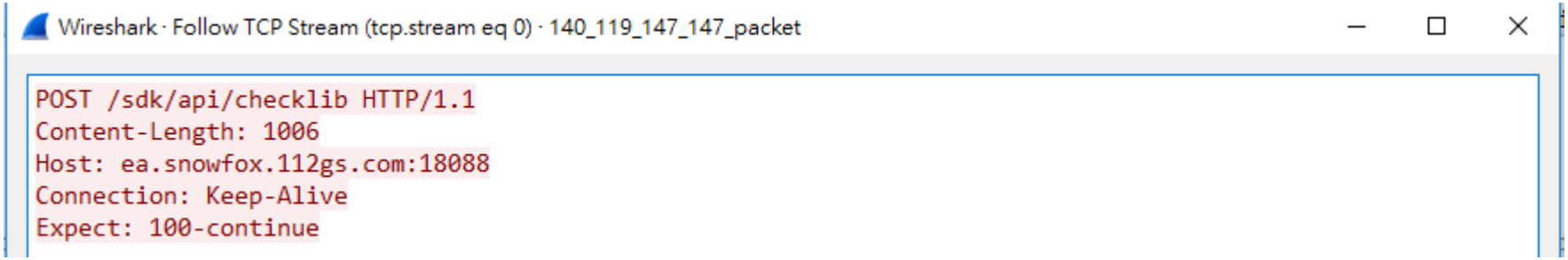
Antivirus	Result	Update
Ad-Aware	Android.Adware.SnowFox.A	20151224
AhnLab-V3	Android-PUP/Snofox.11cd4	20151229
Arcabit	Android.Adware.SnowFox.A	20151230
AVG	Android/Deng.QQE	20151230
BitDefender	Android.Adware.SnowFox.A	20151230
DrWeb	Android.Backdoor.176.origin	20151229
Emsisoft	Android.Adware.SnowFox.A (B)	20151230
ESET-NOD32	a variant of Android/Xinyinhe.N potentially unwanted	20151230
F-Secure	Android.Adware.SnowFox	20151230

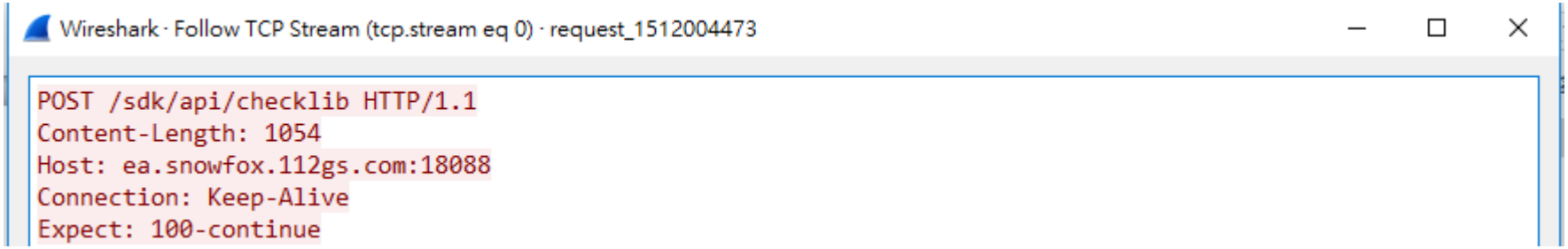
觸發規則(都要符合才會觸發)

1. 內對外連線，目標埠(dst port)為8088、18001、18088其中之一
2. 封包內容有以下特徵
   ① POST
   ② /sdk/api/
   ③ Expect: 100-continue
3. 封包內容不包括此特徵: User-Agent

問題封包範例


Wireshark · Follow TCP Stream (tcp.stream eq 0) · 140_112_196_226_packet
POST /sdk/api/checklib HTTP/1.1
Content-Length: 1131
Host: ea.snowfox.112gs.com:18088
Connection: Keep-Alive
Expect: 100-continue


Wireshark · Follow TCP Stream (tcp.stream eq 0) · 140_119_147_147_packet
POST /sdk/api/checklib HTTP/1.1
Content-Length: 1006
Host: ea.snowfox.112gs.com:18088
Connection: Keep-Alive
Expect: 100-continue

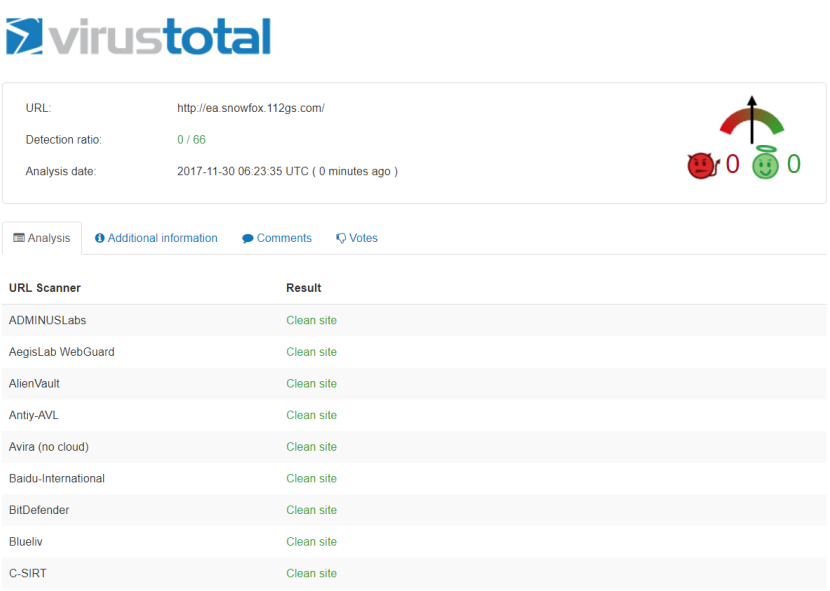

Wireshark · Follow TCP Stream (tcp.stream eq 0) · request_1512004473
POST /sdk/api/checklib HTTP/1.1
Content-Length: 1054
Host: ea.snowfox.112gs.com:18088
Connection: Keep-Alive
Expect: 100-continue

連線網址分析-1

- 網址: ea.snowfox.112gs.com
- IP: 35.162.109.206
- 查詢此IP的位置屬於美國
- 把該網址丟入Virustotal，沒發現任何問題

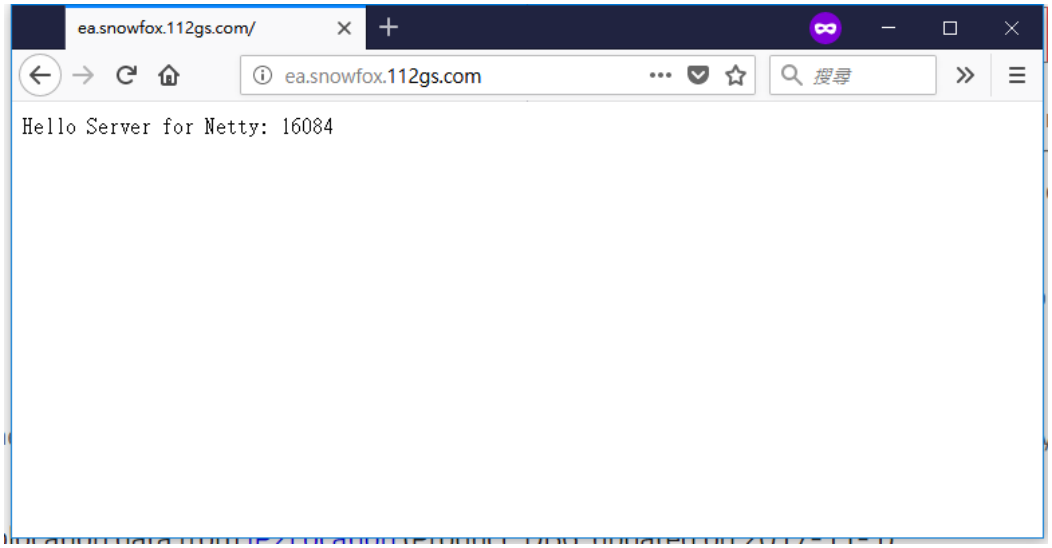
Geolocation data from IP2Location (Product: DB6, updated on 2017-11-1)

IP Address	Country	Region	City
35.162.109.206	United States	Oregon	Portland
ISP	**Organization**	**Latitude**	**Longitude**
Amazon.com Inc.	Not Available	45.5234	-122.6762



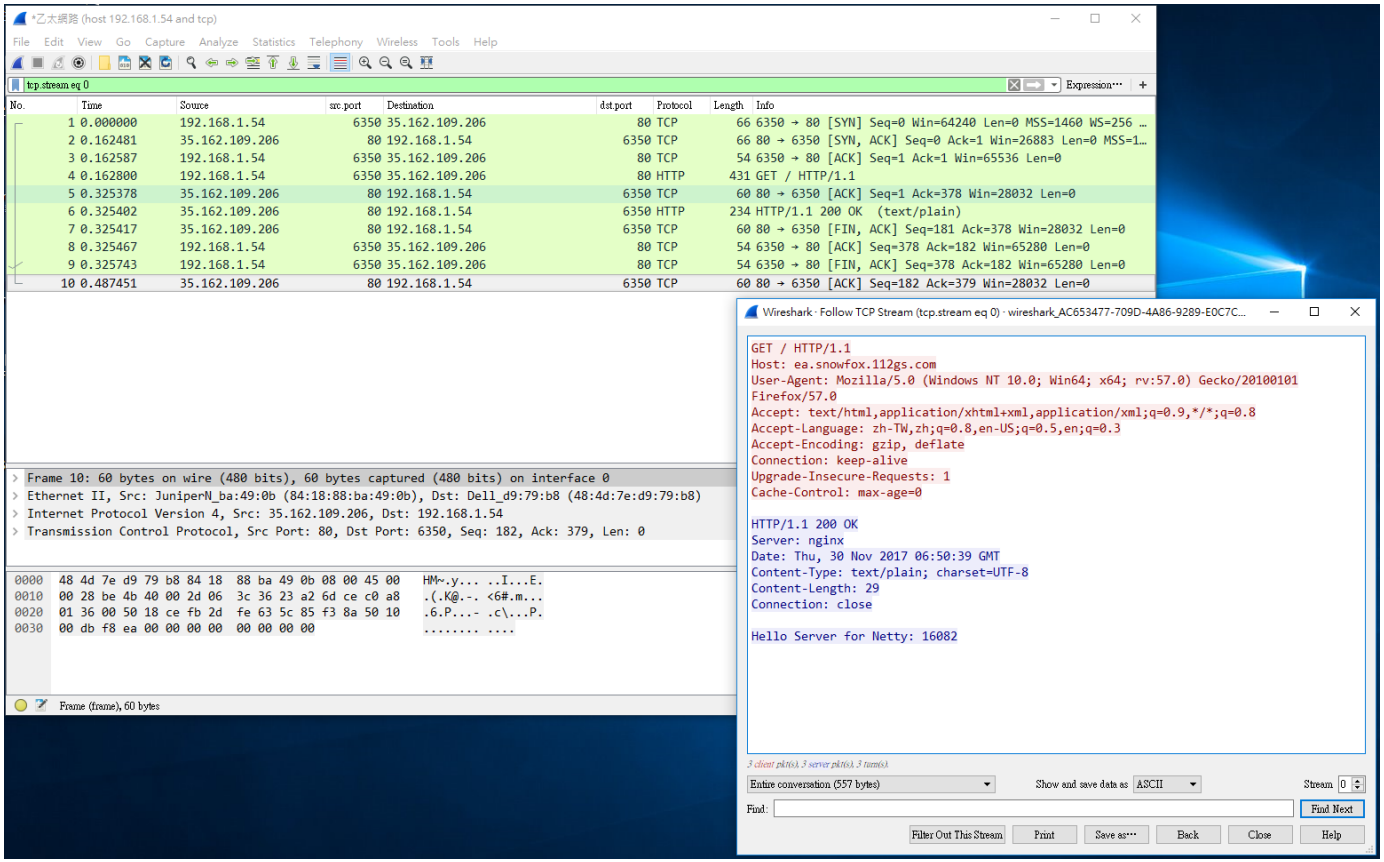
連線網址分析-2

- 用虛擬主機去連線，得到的畫面如左下圖
- 只有這行訊息: Hello Server for Netty: 16081



連線網址分析-3

- 用wireshark側錄封包結果如下圖(正常連線的封包)



結論

- 目前Google play上大部分的軟體都是沒問題，有問題的軟體都下架了
- 如果還有使用上的疑慮，可以安裝免費的防毒軟體
- 該主機似乎被當成跳板
- 請使用者不要去來路不明的網站下載apk檔安裝

參考來源

- https://www.bitsighttech.com/blog/androidbauts-advertising-with-a-bit-more-than-expected
- https://dotblogs.com.tw/marcus116/archive/2011/05/29/26428.aspx
- https://www.virustotal.com/en/url/cf5a4a1e76769e4d52c48fa8bda5fa5ab098d581b1b543860024a62a1a5d56a3/analysis/1512023015/
- https://www.virustotal.com/en/file/1b97ed9b1cf0785e2595da480339af7338fb0eb4539fe362b9997301a10d6e46/analysis/1451453623/