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Android Malware Detection Test

手机安全软件病毒检测率测试

2016 Dec

••• Celebrating Technology Innovation

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Chap.1 Background

Android is an open-source platform founded in October 2003 by Andy Rubin and backed by Google, along with major hardware and software developers (such as Intel, HTC, ARM, Motorola and Samsung) that form the Open Handset Alliance. In October 2008, HTC released the HTC Dream, the first phone to use Android. The software suite included on the phone consists of integration with Google's proprietary applications, such as Maps, Calendar, and Gmail, and a full HTML web browser.

Android and iOS-powered devices have long dominated the smartphone market, and it's still clear that the two mobile operating systems show no sign of stopping anytime soon. New data has been released by Gartner, suggesting that Android holds 84.7 percent market share as of the third quarter of 2015, which is a 1.4-percent increase year over year. The research firm says Android's growth is thanks in part to strong global smartphone sales from Samsung and Huawei. These manufacturers make up 23.7 and 7.7 percent of all smartphones sold in Q3 2015, respectively.

Android security software can protect you from the following malware activities (all are actual cases):

1. Send messages to "premium service" SMS numbers that cost extra money.
2. Send your personal information to unknown parties.
3. Turn your phone into a part of a botnet so others can execute commands remotely for nefarious purposes, such as spam, DDOS attack, and more.
4. Non-authorized persons may monitor your phone calls and text messages.
5. Open you to blackmail, if something embarrassing can be found and sent elsewhere.
6. Trick you into entering financial information, such as account number, birth date, and more.
7. Even stuff on your PC if you connect your PC to your smartphone.

Chap.2 Test Process

Several android mobility devices will be prepared and backup images are created then. Detailed process is as follows:

1. 651 malware samples and bulks of clean android applications are prepared and delivered to the extended SD card.
2. Install a security product on the device.
3. Update the security product and perform a full scan against the malware set and clean applications. Malware detection rate and false positive status will be recorded. If full scan function is not provided, then perform one by one installation.
4. Restore the backup image and repeat the three steps above.

Vendor	Software	Version
AegisLab	AegisLab Antivirus Free	3.0.4 build r32444
Alibaba	Ali Money Shield	5.1.2
Antiy	AVL Pro	2.1.9
Ariasecure	Bornaria Mobile Security	1.5.81
Avast	Avast Mobile Security Free	5.10.1-14169-ee08055
AVG	AVG Antivirus FREE for Android	5.9.1.224793
Avira	Avira Antivirus Security Pro	4.5 build No.3981
Baidu	Baidu Mobile Security	8.8.5
Bitdefender	Bitdefender Antivirus Free	3.2.179
Dr.Web	Dr.Web anti-virus Light	9.01.2(0)
ESET	ESET Mobile Security & Antivirus Free	3.3.23.0-15
IKARUS	IKARUS mobile.security Free	1.7.68
Kaspersky Lab	Kaspersky Internet Security for Android	11.12.4.1618
Malwarebytes	Malwarebytes Anti-Malware Mobile	2.1.0.5
McAfee	McAfee Mobile Security	V4.7.1.853
Panda	Panda Mobile Security	3.1.4
Quick Heal	Quick Heal Mobile Security	2.01.00.066
Symantec	Norton Mobile Security Free	3.17.0.3200
Tencent	Tencent WeSecure	1.4.0.457
TrustGo	TrustGo Antivirus & Mobile Security	2.5
Zoner	Zoner AntiVirus Free	1.12.0

Chap.3 Tested Software

Vendor	Total Samples	Missed Samples	Detected Samples	Detection Rate	False Positive Counts	Total Score
IKARUS	651	0	651	100.00%	0	100.000
Kaspersky Lab	651	0	651	100.00%	0	100.000
Quick Heal	651	0	651	100.00%	0	100.000
Symantec	651	0	651	100.00%	0	100.000
Avira	651	1	650	99.85%	0	99.846
ESET	651	1	650	99.85%	0	99.846
Tencent	651	1	650	99.85%	0	99.846
Bitdefender	651	4	647	99.39%	0	99.386
Panda	651	7	644	98.92%	0	98.925
Malwarebytes	651	10	641	98.46%	0	98.464
Baidu	651	13	638	98.00%	0	98.003
Antiy	651	16	635	97.54%	0	97.542
Dr.Web	651	16	635	97.54%	0	97.542
Avast	651	18	633	97.24%	0	97.235
TrustGo	651	19	632	97.08%	0	97.081
Alibaba	651	27	624	95.85%	0	95.853
AVG	651	30	621	95.39%	0	95.392
McAfee	651	41	610	93.70%	0	93.702
AegisLab	651	86	565	86.79%	2	86.590
Ariasecure	651	177	474	72.81%	8	72.011
Zoner	651	639	12	1.84%	0	1.843

Chap.4 Test Result

Remarks: Final Score= (Detection %)*100-0.1*FP

6 different mobile security products from six renowned security vendors crashed during the original test, we have already delivered the crash log and related information to them.

Monthly Award

2016.12	
IKARUS Kaspersky Lab Quick Heal Symantec Avira ESET Tencent Bitdefender Panda Malwarebytes Baidu	5 Star Monthly Award 2016 December
Antiy Dr.Web Avast TrustGo Alibaba AVG	4 Star Monthly Award 2016 December
McAfee	3 Star Monthly Award 2016 December

Chap.5 Information

Jiaxing Chenxiang Information Technology Co., Ltd. (PCSL IT Consulting Institute) is an IT product test and consulting company located in Jiaxing, Zhejiang, P. R. China. As a professional tester of desktop security products and mobile security solutions, we are willing to provide references to the endpoint users for choosing security solutions and provide security vendors product improvement solutions and consulting services. Not only do we test security solutions for different environment, but we also provide test and consulting reports for other IT products, e.g. battery, mobile devices, computer power, etc.

In early 2015, we launched a brand new service named BOOM Feeds Data Collection and Analysis Service, which provided a variety of different digital threat data like, android applications collection, PE malware collection, phishing Urls, malicious Urls, Linux threat binaries, iOS binaries, attack records, and white binaries collections.



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