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Android Malware Detection Test

手机安全软件病毒检测率测试

2018 Jun

••• 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. 1427 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	3.0.7
Antiy	AVL Pro	2.2.2
Avast	Avast Mobile Security Free	6.10.13-318023-812a60e
Avira	Avira Antivirus Security Free	5.2.5 build No.4303
Baidu	Baidu Mobile Security	V9.12.5
ESET	ESET Mobile Security & Antivirus Free	4.1.20.0-15
IKARUS	IKARUS mobile.security Free	1.7.93
Kaspersky Lab	Kaspersky Internet Security for Android	11.17.4.838
Malwarebytes	Malwarebytes for Android	3.3.1.6
McAfee	McAfee Mobile Security	v4.9.5.2184
Quick Heal	Quick Heal Mobile Security Free	2.05.01.010
Tencent	WeSecure	1.4.0.553
Trend Micro	Trend Micro Mobile Security Free	9.5.1.1536
Zemana	Zemana Mobile Security Free	1.7.0
Zoner	Zoner AntiVirus Free	1.13.5

Chap.3 Tested Software

Vendor	Total Samples	Missed Samples	Detected Samples	Detection Rate	False Positive Counts	Total Score
Avira	1427	0	1427	100.000%	0	100.000
ESET	1427	0	1427	100.000%	0	100.000
IKARUS	1427	0	1427	100.000%	0	100.000
Kaspersky Lab	1427	0	1427	100.000%	0	100.000
Quick Heal	1427	0	1427	100.000%	0	100.000
Tencent	1427	0	1427	100.000%	0	100.000
Trend Micro	1427	0	1427	100.000%	0	100.000
Antiy	1427	0	1427	100.000%	0	100.000
Avast	1427	1	1426	99.930%	0	99.930
Baidu	1427	1	1426	99.930%	0	99.930
Malwarebytes	1427	2	1425	99.860%	0	99.860
McAfee	1427	3	1424	99.790%	0	99.790
AegisLab	1427	62	1365	95.655%	0	95.655
Zemana	1427	298	1129	79.117%	0	79.117
Zoner	1427	483	944	66.153%	0	66.153

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

2018.06	
Avira	5 Star Monthly Award 2018 June
ESET	
IKARUS	
Kaspersky Lab	
Quick Heal	
Tencent	
Trend Micro	
Antiy	
Avast	
Baidu	
Malwarebytes	
McAfee	
Aegislab	4 Star Monthly Award 2018 June

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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