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Android Malware Detection Test

手机安全软件病毒检测率测试

2015 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. 985 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.

Chap.3 Tested Software

Vendor	Software	Version
Ariasecure	Bornaria Mobile Security	1.5.79
AVG	AVG Antivirus FREE	5.1.1
Avira	Avira Antivirus Security	4.2 build no.3837
Baidu	Baidu Mobile Security	7.1.0
Bitdefender	Bitdefender Mobile Security	3.2.57.4
Bullguard	BullGuard Mobile Security	14.0.9.77
Cheetah	CM Security	2.8.5.1008
Dr.Web	Dr.Web anti-virus Light	9.01.2(0)
ESET	ESET Mobile Security & Antivirus Free	3.2.4.0-15
Gdata	G DATA Internet Security for Android	25.9.7.5.5ffc42a9
IKARUS	IKARUS mobile security Free	1.7.36
Kaspersky Lab	Kaspersky Internet Security for Android	11.9.4.1342
Panda	Panda Security & Antivirus for Android	2.3.13
Quick Heal	Quick Heal Mobile Security	2.01.045
Trend Micro	Trend Micro Mobile Security & Antivirus	7.0.0.1239
Zoner	Zoner AntiVirus Free	1.10.1

Chap.4 Test Result

Vendor	Total Samples	Missed Samples	Detected Samples	Detection Rate	False Positive Counts	Total Score
ESET	985	2	983	99.797%	0	99.797
Trend Micro	985	2	983	99.797%	1	99.697
Avira	985	8	977	99.188%	0	99.188
Kaspersky Lab	985	8	977	99.188%	0	99.188
Quickheal	985	7	978	99.289%	2	99.089
IKARUS	985	9	976	99.086%	0	99.086
Cheetah	985	6	979	99.391%	9	98.491
Bitdefender	985	18	967	98.173%	0	98.173
Bullguard	985	18	967	98.173%	0	98.173
Baidu	985	26	959	97.360%	0	97.360
Gdata	985	38	947	96.142%	0	96.142
AVG	985	33	952	96.650%	10	95.650
Dr.Web	985	56	929	94.315%	0	94.315
Ariasecure	985	71	914	92.792%	3	92.492
Panda	985	141	844	85.685%	0	85.685
Zoner	985	576	409	41.523%	0	41.523

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

ESET	
Trend Micro	
Avira	
Kaspersky Lab	
Quickheal	
IKARUS	
Cheetah	
Bitdefender	
Bullguard	
Baidu	
Gdata	
AVG	
Dr.Web	
Ariasecure	

Chap.5 Information

Jiaying Chenxiang Information Technology Co Ltd (PCSL IT Consulting Institute) is an IT product test and consulting company located in Jiaying, 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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