PCSL

IT CONSULTING INSTITUTE

Android Malware Detection Test

手机安全软件病毒检测率测试

2016 Mar

报告目录

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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.   1349 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
AegisLab	AegisLab Antivirus Free	3.0.4 build r32444
AhnLab	AhnLab V3 Mobile Security	3.0.5.3(Build 1451)
Avast	Avast Mobile Security Free	5.0.17-8975-e7cfadb
AVG	AVG Antivirus FREE for Android	5.1.2
Avira	Avira Antivirus Security	4.3 build no. 3887
Antiy	AVL Pro	2.1.2
Bitdefender	Bitdefender Antivirus Free	3.0.135
Ariasecure	Bornaria Mobile Security	1.5.79
Cheetah	CM Security	2.9.2.3063
COMODO	COMODO Mobile Security	3.1.2302
Dr.Web	Dr.Web anti-virus Light	9.01.2(0)
MicroWorld	eScan Mobile Security	5.1.2.12
ESET	ESET Mobile Security & Antivirus Free	3.2.4.0-15
F-Secure	F-Secure Mobile Security	15.4.012621 FS_GP
G DATA	G DATA Internet Security For Android	25.10.5.86b1b9d6
IKARUS	IKARUS mobile.security Free	1.7.36
Kaspersky Lab	Kaspersky Internet Security for	11.10.4.1759
Lookout	Lookout FREE	9.36.1-2e22ae5
McAfee	McAfee Mobile Security	V4.6.0.506
Symantec	Norton Mobile Security Free	3.13.0.3041
Panda	Panda Mobile Security	2.3.15
Quick Heal	Quick Heal Mobile Security	2.01.051
Sophos	Sophos Mobile Security	6.0.1770(14)
Tencent	Tencent Mobile Manager	6.1.5 Build 3304
Trend Micro	Trend Micro Mobile Security	7.0.0.1416
Zemana	Zemana Mobile Security	1.0.6
Zoner	Zoner AntiVirus Free	1.11.1

Chap.4 Test Result

Vendor	Total Samples	Missed Samples	Detected Samples	Detection Rate	False Positive Counts	Total Score
Avast	1349	0	1349	100.000%	0	100.000
Kaspersky Lab	1349	0	1349	100.000%	0	100.000
Symantec	1349	0	1349	100.000%	0	100.000
Trend Micro	1349	0	1349	100.000%	0	100.000
AhnLab	1349	1	1348	99.926%	0	99.926
Quick Heal	1349	0	1349	100.000%	1	99.900
Avira	1349	2	1347	99.852%	0	99.852
ESET	1349	2	1347	99.852%	0	99.852
IKARUS	1349	1	1348	99.926%	1	99.826
Tencent	1349	8	1341	99.407%	0	99.407
McAfee	1349	13	1336	99.036%	0	99.036
G DATA	1349	14	1335	98.962%	2	98.762
Antiy	1349	27	1322	97.999%	0	97.999
Ariasecure	1349	20	1329	98.517%	7	97.817
AegisLab	1349	21	1328	98.443%	7	97.743
Dr.Web	1349	42	1307	96.887%	0	96.887
Zemana	1349	45	1304	96.664%	0	96.664
Cheetah	1349	47	1302	96.516%	0	96.516
Sophos	1349	52	1297	96.145%	0	96.145
Bitdefender	1349	52	1297	96.145%	1	96.045
Panda	1349	60	1289	95.552%	0	95.552
MicroWorld	1349	81	1268	93.996%	0	93.996
AVG	1349	93	1256	93.106%	0	93.106
F-Secure	1349	107	1242	92.068%	1	91.968
Lookout	1349	215	1134	84.062%	0	84.062
COMODO	1349	271	1078	79.911%	1	79.811
Zoner	1349	327	1022	75.760%	0	75.760

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

Avast	
Kaspersky Lab	
Symantec	
Trend Micro	
AhnLab	
Quick Heal	
Avira	
ESET	
IKARUS	
Tencent	
McAfee	
G DATA	

PCSL Android Security 2016.03 (5 star)

Antiy	
Ariasecure	
AegisLab	
Dr.Web	
Zemana	
Cheetah	
Sophos	
Bitdefender	
Panda	

PCSL Android Security 2016.03 (4 star)

MicroWorld	
AVG	
F-Secure	

PCSL Android Security 2016.03 (3 star)

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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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