

2014

PCSL

11

Android Malware Detection Test

手机安全软件病毒检测率测试

PCSL IT Consulting Institute

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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 continues to be the most popular mobile platform, with its share of smartphone sales climbing in every major market in Q4 2013, now accounting for 69.5% of all sales across 12 key markets versus 23.7% for number-two Apple, according to figures out today from Kantar Worldpanel, a market research subsidiary of WPP.

Android security software can protect you away 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 4.x (4.0.2/4.4.4) mobility devices will be prepared and backup images are created then.

Detailed process is as follows:

1. 2039 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, after the full scan, missed samples will be installed manually. Malware detection rate and false positive status will be recorded. If full scan function is not provided, then perform manual installation.
4. Restore the backup image and repeat the three steps above.

CHAP. 3

Tested Software

Vendor	Software	Version
AegisLab	AegisLab Antivirus Free	2.1.7 build 28785
Alibaba	Ali Money Shield	1.1.4
Anguanjia	Security Manager	4.9.3
Ariasecure	Bornaria Mobile Security	1.5.78
AVAST	avast! Mobile Security Free	4.0.7870
AVG	AVG Antivirus FREE	4.2 - 758128018-8608-4037
Avira	Avira Antivirus Security	3.6 build no.3082
Baidu	Baidu Mobile Security	V5.9.0
Bitdefender	Bitdefender Antivirus Free	2.19.194
BullGuard	BullGuard Mobile Security	14.0.9.30
Cheetah	CM Security	2.1.0.1988
COMODO	COMODO Mobile Security	2.6.3
Dr.Web	Dr.Web anti-virus Light	9.00.1(0)
DU Apps Studio	DU Security Booster	2.1.0
ESET	ESET Mobile Security & Antivirus Free	3.0.1173.0-15
F-Secure	F-Secure Mobile Security	9.2.15539 FS_GP
G DATA	G DATA Internet Security For Android	25.6.3.99023184
IKARUS	IKARUS mobile.security Free	1.7.21
Kaspersky	Kaspersky Internet Security	11.5.4.836
Lenovo	Lenovo SECUREit	V6.2.0.2913
Malwarebytes	Malwarebytes Anti-Malware Mobile	v1.05.0.9000(90)
McAfee	McAfee Mobile Security	V4.2.0.699
PSafe	PSafe Total	V1.6.5.1005
Qihoo 360	360 Mobile Safe	V5.3.5.1041
Qihoo 360	360 Mobile Security	V1.4.1.1009
Quick Heal	Quick Heal Mobile Security	1.01.070
Sophos	Sophos Mobile Security	3.5.1324(9)
Symantec	Norton Mobile Security Free	3.8.8.1734
Tencent	Tencent Mobile Security Manager	5.2.0 Build 2919
Trend Micro	Trend Micro Mobile Security Free	6.0.0.1447
Webroot	Webroot SecureAnywhere Mobile	3.6.0.6637
Zoner	Zoner AntiVirus Free	1.8.4

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Test Result

Software	Malware	Undetected	Detected	Detection %
G DATA Internet Security For Android	2039	0	2039	100.000%
Avira Antivirus Security	2039	5	2034	99.755%
Kaspersky Internet Security	2039	5	2034	99.755%
BullGuard Mobile Security	2039	6	2033	99.706%
ESET Mobile Security & Antivirus Free	2039	6	2033	99.706%
Bitdefender Antivirus Free	2039	9	2030	99.559%
avast! Mobile Security Free	2039	13	2026	99.362%
Quick Heal Mobile Security	2039	15	2024	99.264%
Trend Micro Mobile Security Free	2039	15	2024	99.264%
CM Security	2039	25	2014	98.774%
360 Mobile Security	2039	25	2014	98.774%
IKARUS mobile.security Free	2039	28	2011	98.627%
360 Mobile Safe	2039	31	2008	98.480%
Security Manager	2039	34	2005	98.333%
Tencent Mobile Security Manager	2039	37	2002	98.185%
COMODO Mobile Security	2039	39	2000	98.087%
Baidu Mobile Security	2039	50	1989	97.548%
DU Security Booster	2039	52	1987	97.450%
F-Secure Mobile Security	2039	86	1953	95.782%
PSafe Total	2039	118	1921	94.213%
AVG Antivirus FREE	2039	125	1914	93.870%
Malwarebytes Anti-Malware Mobile	2039	129	1910	93.673%
Webroot SecureAnywhere Mobile	2039	133	1906	93.477%
Ali Money Shield	2039	140	1899	93.134%
Bornaria Mobile Security	2039	148	1891	92.742%
Norton Mobile Security Free	2039	174	1865	91.466%
Dr.Web anti-virus Light	2039	209	1830	89.750%
Lenovo SECUREit	2039	258	1781	87.347%
AegisLab Antivirus Free	2039	338	1701	83.423%
Zoner AntiVirus Free	2039	481	1558	76.410%
McAfee Mobile Security	2039	778	1261	61.844%
Sophos Mobile Security	2039	1489	550	26.974%

Software	Detection %	FP	Final Score	Rank
BullGuard Mobile Security	99.706%	0	99.706	1
ESET Mobile Security & Antivirus Free	99.706%	0	99.706	1
G DATA Internet Security For Android	100.000%	3	99.700	3
Bitdefender Antivirus Free	99.559%	0	99.559	4
Avira Antivirus Security	99.755%	3	99.455	5
Kaspersky Internet Security	99.755%	3	99.455	5
Trend Micro Mobile Security Free	99.264%	0	99.264	7
Quick Heal Mobile Security	99.264%	2	99.064	8
avast! Mobile Security Free	99.362%	4	98.962	9
CM Security	98.774%	0	98.774	10
360 Mobile Security	98.774%	1	98.674	11
360 Mobile Safe	98.480%	1	98.380	12
Security Manager	98.333%	0	98.333	13
Tencent Mobile Security Manager	98.185%	0	98.185	14
COMODO Mobile Security	98.087%	1	97.987	15
Baidu Mobile Security	97.548%	0	97.548	16
DU Security Booster	97.450%	0	97.450	17
IKARUS mobile.security Free	98.627%	12	97.427	18
F-Secure Mobile Security	95.782%	0	95.782	19
AVG Antivirus FREE	93.870%	0	93.870	20
PSafe Total	94.213%	4	93.813	21
Malwarebytes Anti-Malware Mobile	93.673%	2	93.473	22
Webroot SecureAnywhere Mobile	93.477%	2	93.277	23
Ali Money Shield	93.134%	0	93.134	24
Bornaria Mobile Security	92.742%	0	92.742	25
Norton Mobile Security Free	91.466%	0	91.466	26
Dr.Web anti-virus Light	89.750%	0	89.750	27
Lenovo SECUREit	87.347%	0	87.347	28
AegisLab Antivirus Free	83.423%	3	83.123	29
Zoner AntiVirus Free	76.410%	0	76.410	30
McAfee Mobile Security	61.844%	1	61.744	31
Sophos Mobile Security	26.974%	0	26.974	32

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

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Monthly Award

Software	Score	2014.11
BullGuard Mobile Security	99.706	
ESET Mobile Security & Antivirus Free	99.706	
G DATA Internet Security For Android	99.700	
Bitdefender Antivirus Free	99.559	
Avira Antivirus Security	99.455	
Kaspersky Internet Security	99.455	
Trend Micro Mobile Security Free	99.264	
Quick Heal Mobile Security	99.064	
avast! Mobile Security Free	98.962	
CM Security	98.774	
360 Mobile Security	98.674	
360 Mobile Safe	98.380	
Security Manager	98.333	
Tencent Mobile Security Manager	98.185	
COMODO Mobile Security	97.987	
Baidu Mobile Security	97.548	
DU Security Booster	97.450	
IKARUS mobile.security Free	97.427	
F-Secure Mobile Security	95.782	
AVG Antivirus FREE	93.870	
PSafe Total	93.813	
Malwarebytes Anti-Malware Mobile	93.473	
Webroot SecureAnywhere Mobile	93.277	
Ali Money Shield	93.134	
Bornaria Mobile Security	92.742	
Norton Mobile Security Free	91.466	
Dr.Web anti-virus Light	89.750	TESTED
Lenovo SECUREit	87.347	
AegisLab Antivirus Free	83.123	
Zoner AntiVirus Free	76.410	
McAfee Mobile Security	61.744	
Sophos Mobile Security	26.974	

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Information



Jiaxing Chenxiang Information Technology Co., Ltd., is an IT product test and consulting company located in Jiaxing, Zhejiang, P. R. China. As a professional tester of desktop security products and mobility 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 we test security solutions for different environment, but also we provide test and consulting reports of other IT products, e.g. battery, mobility devices, computer power, etc.

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