

Mobile Security Apps

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The test report is also available on
www.av-test.org

About AV-TEST

- 24 employees in Magdeburg and Leipzig
- Tests of security solutions for consumers and enterprise
- 300 TB test data (malware and clean files)
- Certification program



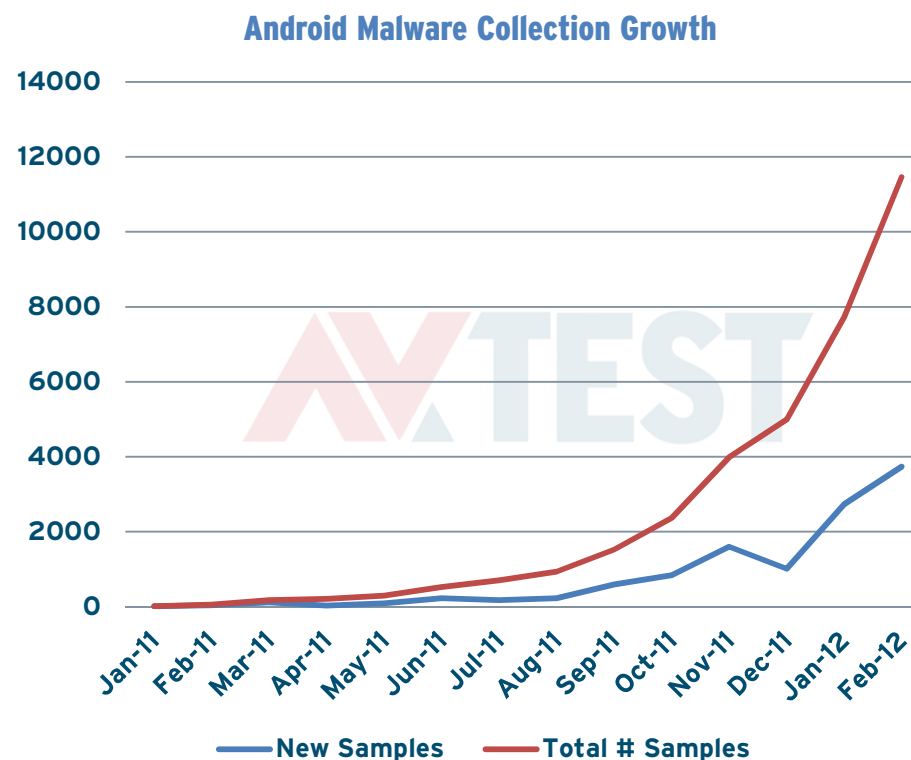
Agenda

- **The Android threat landscape**
- **Common mobile security features**
- **Testing mobile security Apps**
- **Comparison of detection rates**
- **How to protect yourself?**

The Android threat landscape

- Android is the most popular Smartphone OS
- It's easy to install apps from 3rd party app stores
- The Android Market was not very restrictive
-> Google Bouncer was recently introduced

The Android threat landscape



The Android threat landscape

- **Phishing-/Banking Trojans**
- **Spyware**
- **Bots**
- **SMS Fraud**
- **Premium Dialers**
- **Root Exploits**
- **Fake Installers**
- **Download Trojans**

The Android threat landscape

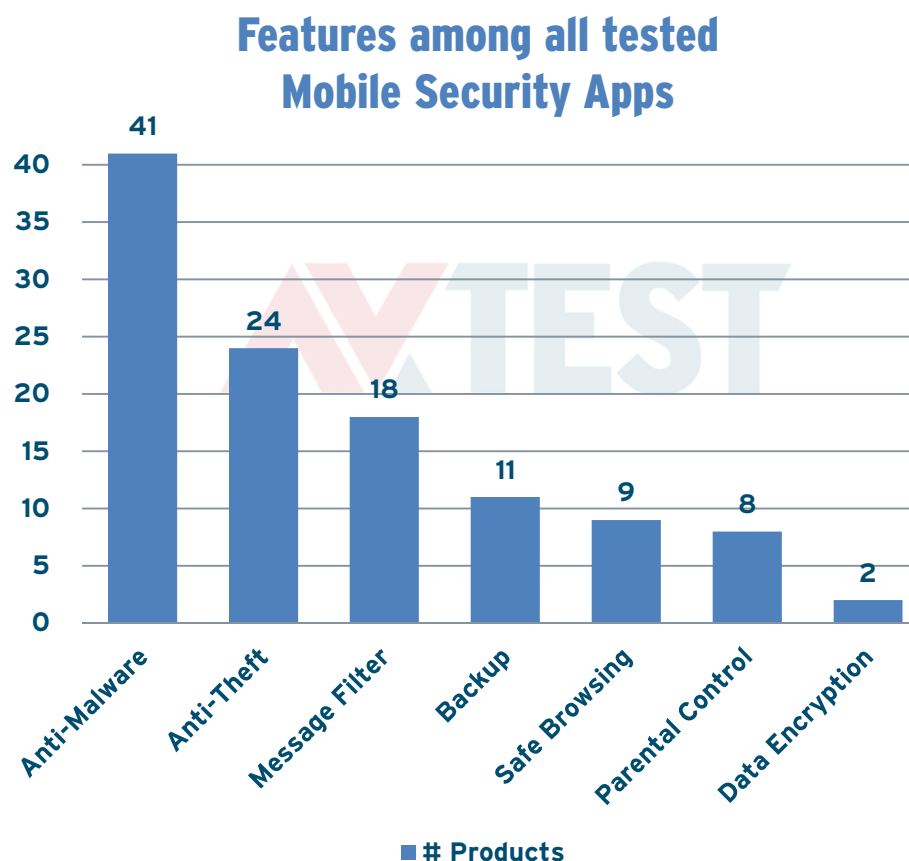
- Phishing-/Banking Trojans
- Spyware
- Bots
- SMS Fraud
- Premium Dailers
- Root Exploits
- Fake Installers
- Download Trojans

**More than 100 malware families!
Each with dozens of unique samples!**

Common mobile security features

- **Anti-Malware scanner, Privacy scanner**
- **Real-time protection**
- **Anti-Theft: remote wipe, remote lock, localization of lost devices**
- **Message filter for SMS/mail**
- **Safe browsing, Parental control**
- **Data Encryption**
- **Backup**

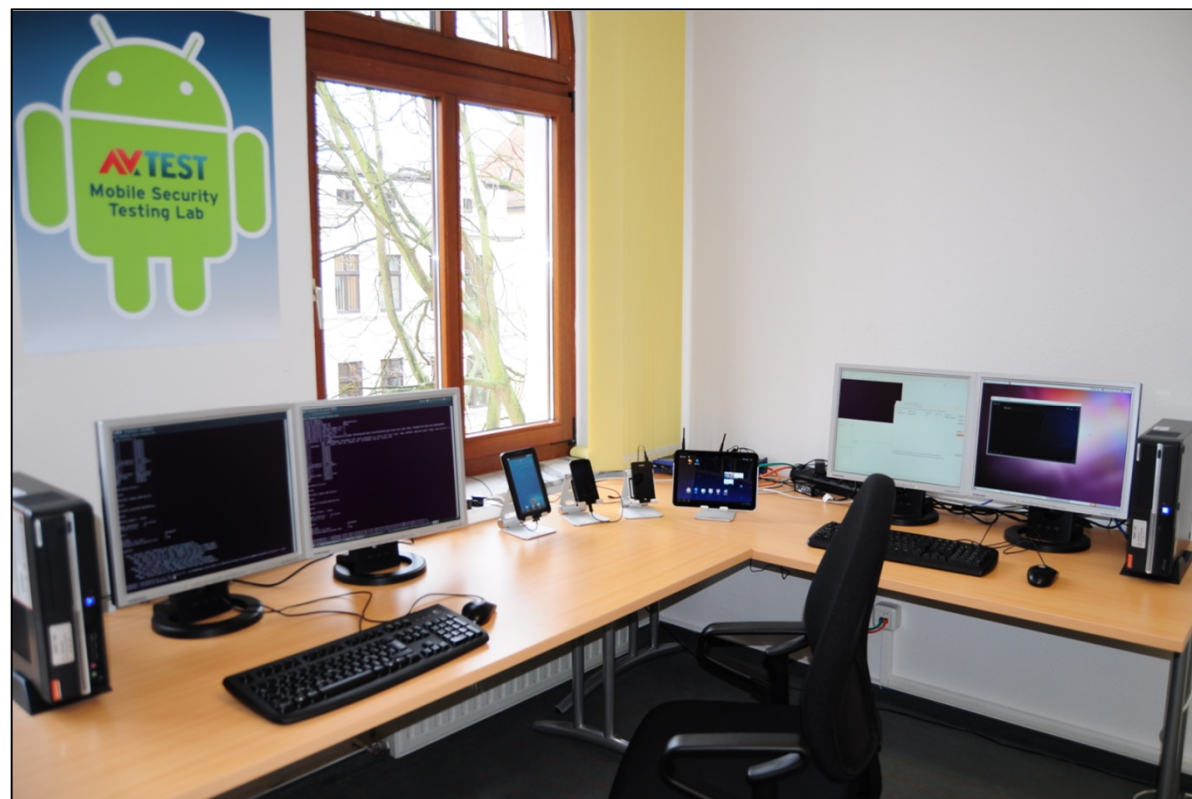
Common mobile security features



Testing mobile security Apps

- Our goal: determining malware detection rate
- Test environment: Android Emulator with API-level 10, Samsung GalaxyTab, Samsung Galaxy Nexus, Motorola Xoom
- Emulator snapshots were used to freeze signatures
- All emulator tests were cross checked on a real device

Testing mobile security Apps



Testing mobile security Apps

- Scan sample set on SD card
- Use real-time protection, to check all remaining files

Testing mobile security Apps

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 - > Install each sample one by one!

Testing mobile security Apps

- Scan sample set on SD card
- Use real-time protection, to check all remaining files
 - > Install each sample one by one!
 - > In addition to the scans we've performed thousands of real-time tests!
 - > Used ADB to automate tasks

Testing mobile security Apps



Testing mobile security Apps

Some Problems:

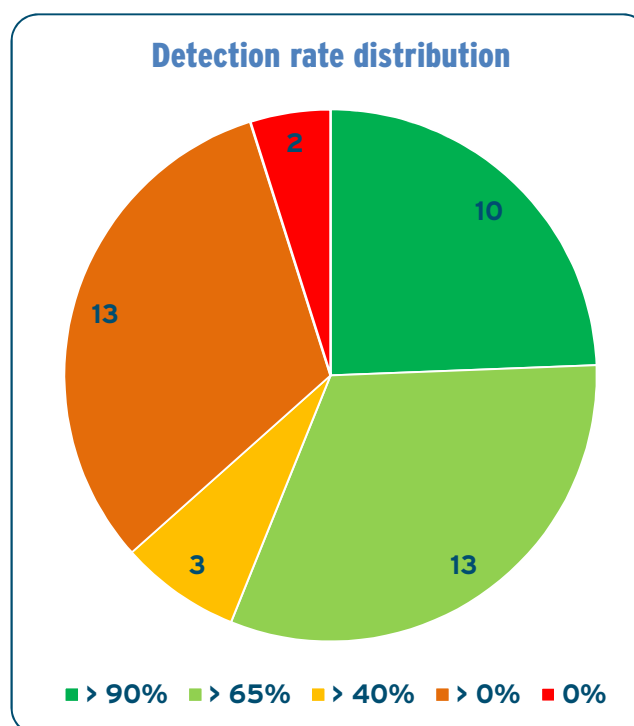
- No consistent reporting
- No “Delete all” buttons
- Cloud queries didn’t always work on the emulator due to high latency
- Different implementations of on-demand and real-time scans

Testing mobile security Apps

Future tests

- **Anti-Theft**
- **Message filters**
- **Safe browsing**
- **Performance / Battery usage**

Comparison of detection rates



Comparison of detection rates

Detection rate > 90%
avast! Mobile Security
Dr.Web anti-virus
F-Secure Mobile Security
IKARUS mobile.security
Kaspersky Mobile Security
Lookout Security & Antivirus
McAfee Mobile Security
MYAndroid Protection
NQ Mobile Security
Zoner AntiVirus

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Traditional Anti-Virus vendors

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Anti-Virus vendors focused on Mobile Security and other areas

Comparison of detection rates

Detection rate > 65%
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AVG Mobilation Anti-Virus
Bitdefender Mobile Security
BullGuard Mobile Security
Comodo Mobile Security
ESET Mobile Security
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Quick Heal Mobile Security
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Comparison of detection rates

Detection rate > 40%
BluePoint Security Free
G Data MobileSecurity
Kinetoo Malware Scan

Comparison of detection rates

Detection rate > 0%
ALYac Android
Android Antivirus
Android Defender / Virus Shield
Antivirus Free
BlackBelt AntiVirus
CMC Mobile Security
Fastscan Anti-Virus
GuardX Antivirus
MobiShield Mobile Security
MT Antivirus
Privateer LITE
Snap Secure
TrustGo Mobile Security

Comparison of detection rates

Detection rate > 0%
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CMC Mobile Security
Fastscan Anti-Virus
GuardX Antivirus
MobiShield Mobile Security
MT Antivirus
Privateer LITE
Snap Secure
TrustGo Mobile Security

Comparison of detection rates

Detection rate = 0%

LabMSF Antivirus beta

MobileBot Antivirus

How to protect yourself?

- **Install apps from trusted sources!**
- **Check the permissions!**
- **Check the reliability with help of ratings, user comments, reviews or the developer website!**

Questions?