

IT Security Survey 2014



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www.av-comparatives.org

Overview

Use of the Internet by home and business users continues to grow in all parts of the world. How users access the Internet is changing, though. There has been increased usage of smartphones by users to access the Internet. The tablet market has taken off as well. This has resulted in a drop in desktop and laptop sales. With respect to attacks by cyber criminals, this means that their focus has evolved.

This is our fourth¹ annual survey of computer users worldwide. Its focus is which security products (free and paid) are employed by users, OS usage, and browser usage. We also asked respondents to rank what they are looking for in their security solution.

Survey methodology

Report results are based on an Internet survey run by AV-Comparatives between 17th December 2013 and 17th January 2014. A total of 5,845 computer users from around the world anonymously answered the questions on the subject of computers and security.

Key Results

- Among respondents, the three most important aspects of a security protection product were (1) Low impact on system performance (2) Good detection rate (3) Good malware removal and cleaning capabilities. These were the only criteria with over 60% response rate.
- Europe, North America and Central/South America were similar in terms of which products they used, with Avast topping the list.
- The share of Android as the mobile OS increased from 51% to 70%, while Symbian dropped from 21% to 5%.
- A majority of users (almost 80%) were well protected in the last 6 months; only a minority reported that their security product had failed to protect them against malware infection in this period. Over a third (38%) stated that their security product had blocked malware within the last week, indicating how easy it is to encounter a threat.

¹ <http://www.av-comparatives.org/security-usage-surveys/>

Conclusions

- Globally the mix among respondents using a free security solution versus a paid AV or Internet Security Suite has remained relatively constant, around 47% for free and around 51% for a paid AV or Internet Security Suite solution (a small percentage don't use a security product).
- When asked to rate the trustworthiness of 17 different publications on a scale of 1 to 5, respondents rated two-thirds of them between 3.0 and 3.5 (the highest score). PC World moved up to the number one position with 3.5 while four publications were tied with a score of 3.4. Clear losers – reviews on YouTube and Amazon.
- 76% of respondents use Windows 7 or 8. With Microsoft's announcement that they are ending support for Windows XP in Q2 2014, this 76% number is likely to increase significantly next year.
- The use of Internet Explorer has been stable at around 14%. Chrome is now the most popular browser with 40%, a 9% lead over Mozilla. Cybercriminals have continued to use weaknesses in browsers as a way to attack the users' devices. We expect that manufacturers will continue to strengthen their browsers. As an example, in early February, Google added a new Chrome reset feature to combat browser hijacking.
- There is a wide range of views as to the fifteen test labs we asked users about. We are pleased (and humbled) by our top score of 4.7.

We are grateful to everyone who completed the survey, and for respondents' trust in AV-Comparatives. The feedback we have gained will be used to ensure that our tests continue to grow in effectiveness and relevance. This enables manufacturers to further improve their products, benefitting both themselves and their users. We are seeing our test results quoted by other publications in their review of AV and Internet Security products!

All AV-Comparatives' public test results are available to everyone at no charge at www.av-comparatives.org

Security Survey 2014

We conducted our annual survey to improve our service to the end-user community. Respondents were asked for their opinions on various topics related to anti-virus software testing and anti-virus software in general. The results were invaluable to us. We would like to thank everyone who took the time to complete the survey.

Key data

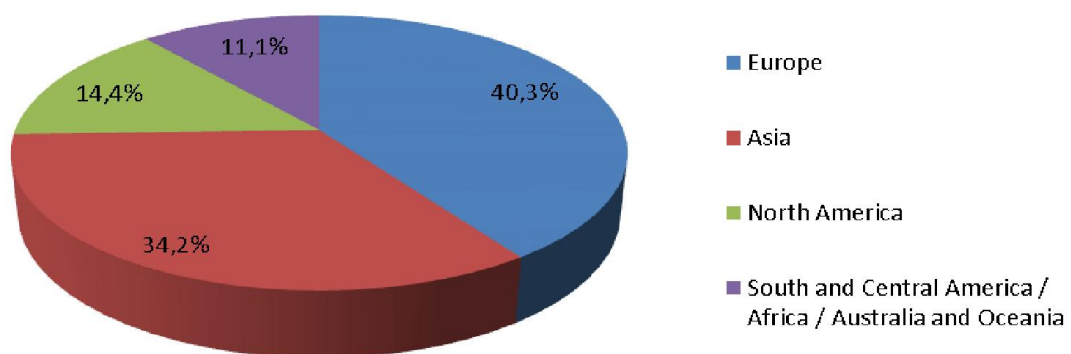
Survey Period: **17th December 2013 - 17th January 2014**

Valid responses of real users: **5,845**

The survey contained some control questions and checks. This allowed us to filter out invalid responses and users who tried to distort the results by e.g. giving impossible/conflicting answers. We were primarily interested in the opinions of everyday users. The survey results in this public report do not take into account the responses of participants who are involved with anti-virus companies.

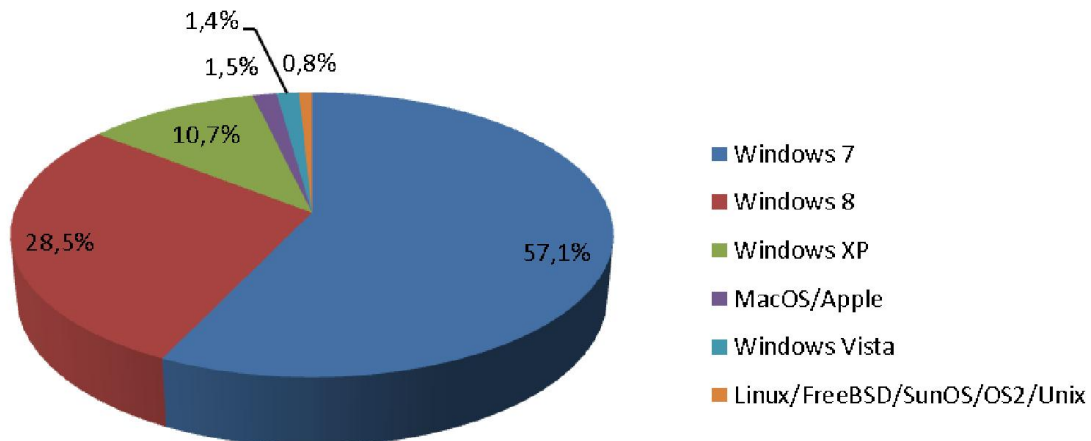
The survey results are invaluable to us. This report contains the results of the survey questions.

1. Where are you from?



Two-fifths of respondents were from Europe, just over a third from Asia, and about 14% from North America.

2. Which operating system do you primarily use?



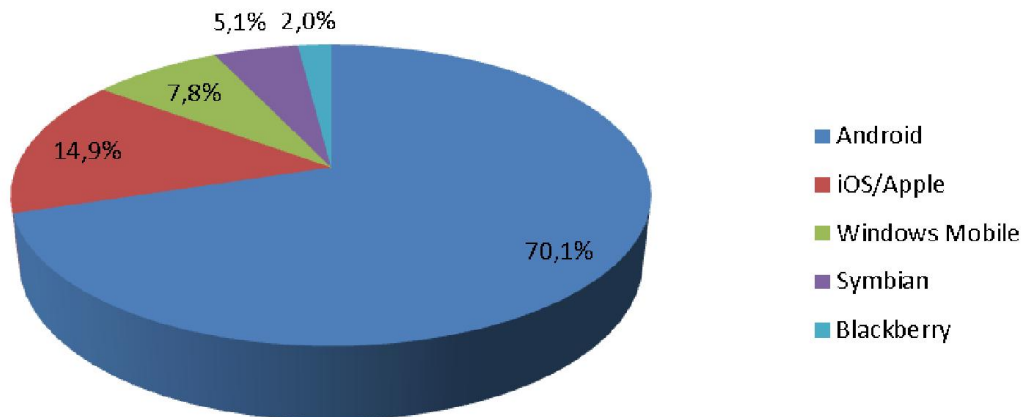
57.1% use Windows 7. A further 28.5% of respondents use Windows 8. We note that the use of Windows 8 by our respondents is significantly higher than by the general public (according to figures published by various metric companies). 10.7% of our respondents still use Windows XP (lower than the general public). Microsoft has announced that XP support will end in April. Undoubtedly, some AV vendors will provide XP-compatible solutions for several more years. In Asia, Windows XP is particularly popular, with 15% usage by respondents as compared to 8% for the rest of the world. In Europe, users seem to adopt newer operating systems more quickly, with 89% usage of Windows 7 or higher, while the figure is only 83% for the rest of the world.

In North America, Apple operating systems are particularly popular (7.2%). In the rest of the world, only 1.2% of users stated that they use Apple/MacOS.

In August 2013, we issued a report reviewing Mac security products². This report is available at <http://www.av-comparatives.org/mac-security-reviews/>

² A list of Mac security products can be found here: <http://www.av-comparatives.org/av-vendors-mac/>

3. Which mobile operating system do you use?



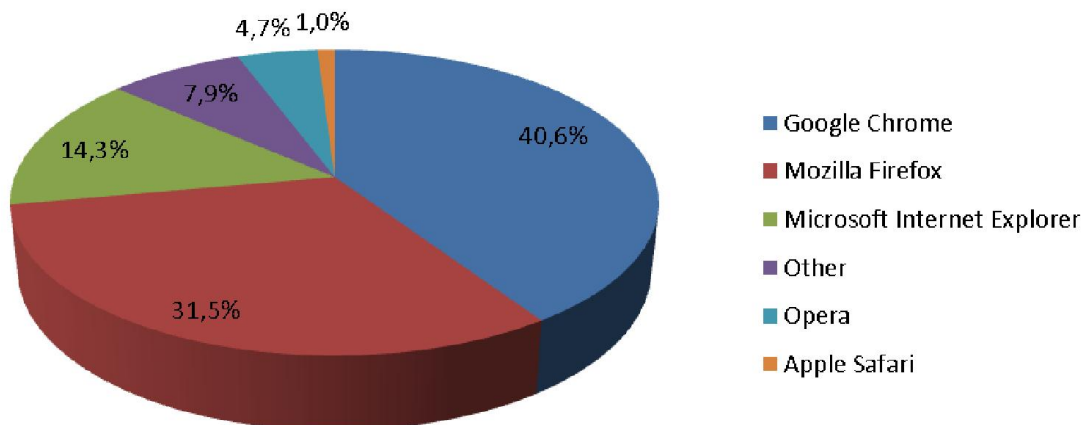
85.4% of survey respondents have a mobile phone. Of these, 70.1% use Android OS. Apple's iOS takes second place with 14.9%, followed by Windows Mobile with 7.8%. Android's dominant position means that it will remain the biggest target for malware writers. In last year's survey, the Android OS had a 51% share and Apple iOS a 17% share.

In Asia, Android OS dominates with a 63.5% share. Apple finds its biggest market in North America with 18.0%.

In August 2013, we issued a report reviewing Mobile (Android)³ security products. This report is available at <http://www.av-comparatives.org/mobile-security/>

³ An overview of security products for Android can be found here: <http://www.av-comparatives.org/list-mobile/>

4. Which browser do you primarily use?



Over two fifths of the computer users who took part in our survey use Google Chrome with Mozilla Firefox in second place. Microsoft Internet Explorer is the third most popular browser overall.

Overall last year, Firefox had 39%, followed Chrome with a 35% share, and IE with a 14% share. Third-party bundling of Chrome has probably contributed to this change.

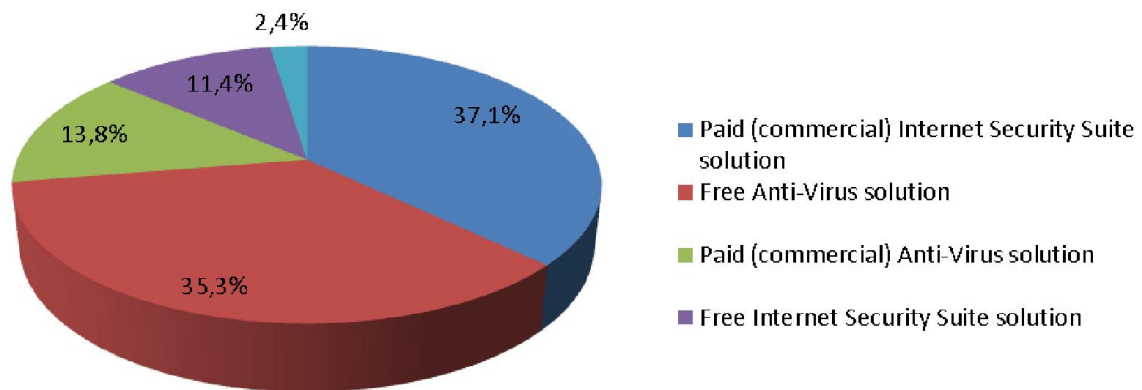
In Asia and South/Central America, Google Chrome also prevails this year (41.3%/58.8% vs. 22.4%/25.3% for Mozilla Firefox).

In Europe and North America, Mozilla Firefox still dominates (38.4%/39.0% vs. 37.5%/33.9% for Google Chrome).

StatCounter⁴ shows slightly different numbers for worldwide use by the general public during the survey period: Google Chrome 43.8%, Microsoft Internet Explorer 23.0%, Mozilla Firefox 18.9%, Safari 9.4%, Opera 1.3% and Other Browser 3.5%.

⁴ <http://gs.statcounter.com/#browser-ww-monthly-201312-201401-bar>

5. Which type of security solution do you primarily use?



Worldwide, just over half of users (50.9%) pay for a security solution. 2.4% of the users answered to do not use any security solution. According to Microsoft⁵, around 5% of computers worldwide are unprotected.

In North America, the most popular solutions (39.0%) are free antivirus programs (mainly Avast and Microsoft Security Essentials / Windows Defender). This may explain aggressive marketing by some major antivirus vendors, and claims that free programs are inadequate. The popularity of free programs in the USA is surprising, in that US users can often receive free “competitive upgrades” by switching to a competing product.

In Europe, paid Internet security suites are the most popular solution (45.5%). Many vendors have multiple choices of Internet Security suite.

In Asia, free solutions are popular (59.6%). In China, nearly all AV products are free. Companies obtain their revenue from ads and gaming platforms. It is to be expected that in the future, more and more AV companies will provide free security solutions for home users and get their revenue only from business software packages.

In South/Central America, free solutions are used by a slim majority (51.1%). Avast is the product of choice.

In 2012, 41% of European respondents and 44% of Asian respondents used a paid Internet Security solution while in South/Central America, 58% of respondents used free solutions.

⁵ http://download.microsoft.com/download/5/0/3/50310CCE-8AF5-4FB4-83E2-03F1DA92F33C/Microsoft_Security_Intelligence_Report_Volume_15_English.pdf

6. Which mobile anti-malware security solution do you primarily use on your smartphone?

25.8% of the respondents do not use any security solution on their mobile phones. In Asia, only 18.8% do not use security product on their mobiles smartphone. In North America over 33% do not use a mobile security product on their smartphones. These figures will probably drop in next year's survey as people become increasingly aware that their smartphones are vulnerable.

Worldwide, the ten most commonly used manufacturers of mobile security products are, in order: Avast, Qihoo, ESET, Bitdefender, Kaspersky Lab, AVG, Tencent, Dr.Web, AVIRA and Symantec.

The list below shows the Top 10 manufacturers⁶ of mobile security products most commonly used by survey participants. There were not enough responses from some regions to produce significant results. Therefore, Australia/Oceania and Africa are not shown.

Europe	North America	Asia	South/Central America
1. Avast	1. Avast	1. Qihoo 360	1. Avast
2. ESET	2. Lookout	2. Tencent	2. AVIRA
3. Bitdefender	3. AVG	3. Avast	3. AVG
4. Kaspersky Lab	4. Bitdefender	4. Baidu	4. Kaspersky Lab
5. Dr.Web	5. Kaspersky Lab	5. Kingsoft	5. McAfee
6. AVG	6. TrustGo	6. Kaspersky Lab	6. Bitdefender
7. AVIRA	7. ESET	7. Bitdefender	7. ESET
8. Symantec	8. Webroot	8. ESET	8. Panda
9. TrustGo	9. Malwarebytes	9. AVG	9. Symantec
10. Lookout	10. Symantec	10. Dr.Web	10. Trend Micro

Avast was the most popular product in all regions except Asia. In Asia, Qihoo 360 and Tencent were the top two products but didn't appear in the top 10 in any other region of the world.

Protecting mobile devices has become increasingly more important as BYOD (Bring Your Own Device) has continued its growth. Businesses expect employees practicing BYOD to have protection on their devices to secure any corporate information that may be on them, and to prevent unauthorised access to the corporate network.

Major products for mobiles were reviewed by AV-Comparatives in a report⁷ in August 2013.

AV-Comparatives offers a free scan service (AVC UnDroid) to check Android apps for suspicious traits. It is located at <http://www.av-comparatives.org/avc-analyzer/>

⁶ A list of all major security manufacturers for the Android platform can be found here: <http://www.av-comparatives.org/list-mobile/>

⁷ http://www.av-comparatives.org/wp-content/uploads/2013/08/avc_mob_201308_en.pdf

7. Which anti-malware security solution do you primarily use?

Worldwide, the twelve most commonly used manufacturers of anti-malware products for Windows platforms are (in this order): Avast, Kaspersky Lab, ESET, Bitdefender, AVIRA, Qihoo 360, Microsoft, Symantec, AVG, Tencent QQ, Panda and F-Secure. The table below shows the top twelve manufacturers of the products most commonly used by survey participants.

Europe	North America	Asia	South/Central America
1. Avast	1. Avast	1. Qihoo 360	1. Avast
2. Kaspersky Lab	2. ESET	2. Kaspersky Lab	2. Kaspersky Lab
3. ESET	3. Microsoft	3. Avast	3. ESET
4. Bitdefender	4. Symantec	4. Tencent QQ	4. AVIRA
5. AVIRA	5. Kaspersky Lab	5. ESET	5. Bitdefender
6. Symantec	6. Malwarebytes	6. Bitdefender	6. Microsoft
7. Microsoft	7. Bitdefender	7. AVIRA	7. Panda
8. Panda	8. AVIRA	8. Microsoft	8. McAfee
9. Emsisoft	9. AVG	9. Symantec	9. Symantec
10. F-Secure	10. Webroot	10. Kingsoft	10. Trend Micro
11. AVG	11. Panda	11. AVG	11. AVG
12. McAfee	12. F-Secure	12. F-Secure	12. Emsisoft

2012 Versus 2013 Comparisons⁸

Europe: Avast remained the most popular product. Bitdefender moved into the top five. Emsisoft came in 9th position, having not made the top 12 last year.

North America: ESET jumped into the top five; Malwarebytes⁹ entered the top ten. It wasn't even in the top 12 last year.

Asia: Qihoo 360 and Tencent QQ are both new to the top five.

South/Central America: Bitdefender replaced Microsoft as one of the top five products.

2013 Regional Comparisons

Europe and South/Central America: the top three products are Avast, Kaspersky Lab and ESET, with Qihoo 360 being top in Asia, and Avast being in the top 3 in all continents.

North America: Microsoft¹⁰ slipped into third place (was in first place last year).

⁸ The previous survey can be found here: http://www.av-comparatives.org/wp-content/uploads/2013/03/security_survey2013_en.pdf

⁹ Malwarebytes sees itself as a complement to an antivirus program. The free version does not have real-time protection.

¹⁰ Microsoft previously regarded their own security program as a "baseline" and encouraged users to install third-party solutions – see <http://www.pcpro.co.uk/news/security/384394/microsoft-security-essentials-is-designed-to-be-bottom-of-the-antivirus-rankings>

8. Which security solutions would you like to see in our yearly public main-test series?

Below are the 15 top requested products (with over 50% of users voting for them, products with less than 50% are not listed). Users had to choose 15 products. Note that a number of the vendors listed below offer both free and paid products.

1. Avast
2. Kaspersky Lab
3. Bitdefender
4. AVIRA
5. ESET
6. AVG
7. Symantec/Norton
8. F-Secure
9. Panda
10. Microsoft
11. McAfee
12. Trend Micro
13. G DATA
14. Emsisoft
15. BullGuard

All the products above (except **Symantec/Norton**)¹¹ were tested last year. This year our test series will also include some new products whose vendors have agreed to participate. These products are from **Baidu** and **Lavasoft**.

Further vendors tested last year and also included in this year's tests are **AhnLab**, **eScan**, **Fortinet**, **Kingsoft**, **Qihoo 360**, **Sophos**, **Tencent QQ** and **ThreatTrack Vipre**. Although we had intended to limit the number of public participants to 20 at most, the high demand for places in our public main test series means that we have nonetheless agreed to publicly test products from 23 vendors¹² altogether.

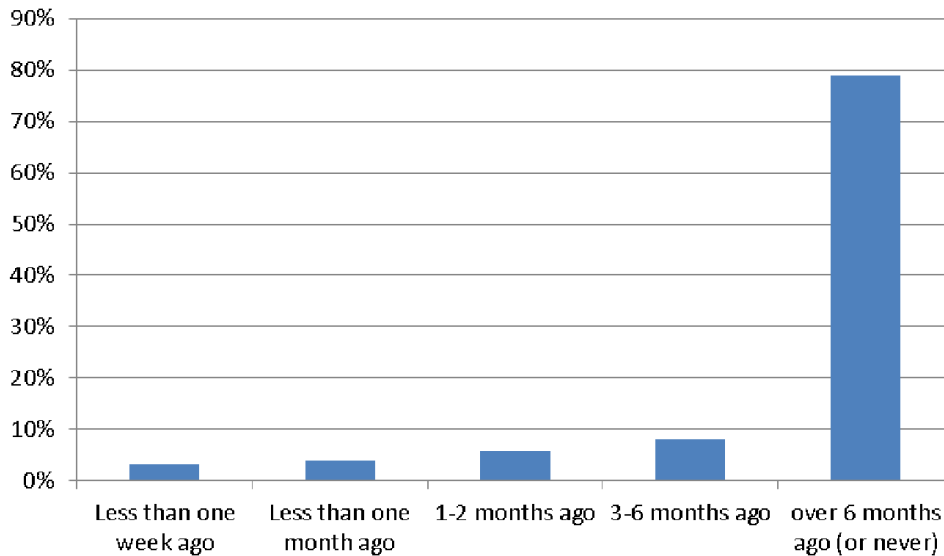
The current¹³ versions of **G Data** security solutions require user decision in certain actions of the integrated behaviour blocker, and offer various options (including executing/allowing the file) in the case of suspicious behaviour. User-prompts such as this are regarded by AV-Comparatives as "user-dependent". G Data has a different view of how "user-dependent" should be evaluated, and is therefore not participating in AV-Comparatives' tests in 2014. AV-Comparatives evaluates the user-prompts according to the [AMTSO](#) guidelines and best practices.

¹¹ Symantec only wanted to take part in our public tests if they could choose which of the tests from our yearly public test-series to participate in. As an independent testing organization, we require all vendors to take part in all the basic tests in the series. We do not allow vendors them to pick and choose among the core tests. Consequently, Symantec has decided not to submit its products for our public main test-series in 2014. We may include some non-participating products in some tests, if commissioned by e.g. a computer magazine.

¹² A huge list of popular AV vendors can be seen at <http://www.av-comparatives.org/av-vendors/>

¹³ G DATA indicated that they will re-join our public test-series in future.

9. When was the last time that your PC was (unintentionally) infected/compromised by malware? (i.e. that your security product failed to stop malware)?



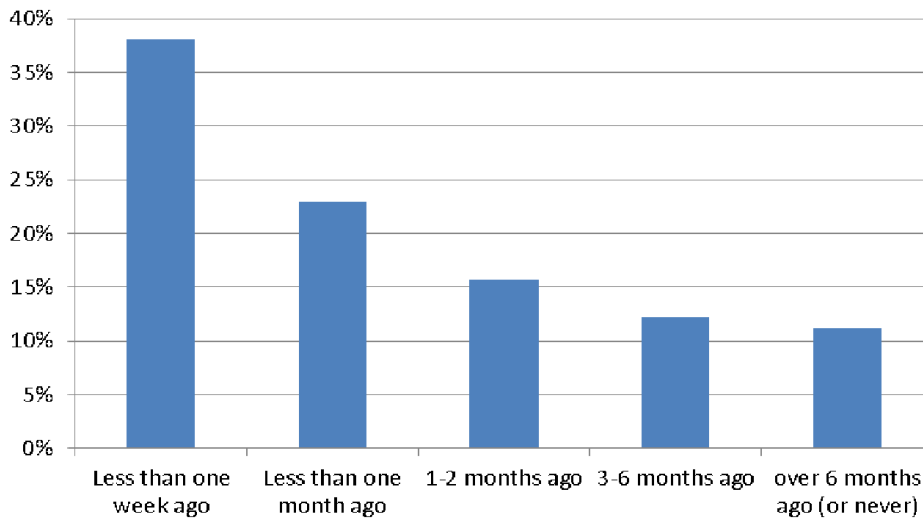
3.2% of the users stated that their security product failed to protect their system within the last week. 79% of the users stated that the last time their security product failed to protect their system was over six months ago.

In South and Central America the situation is worse, with 16.7% infected by malware in the last week. According to the Microsoft Security Intelligence Report Nr. 15¹⁴, Brazil is one of the countries where users often encounter “a data-stealing Trojan that usually targets customers of Brazilian banks using Portuguese language social engineering” (Win32/Banker)¹⁵, as well as various potentially unwanted programs.

¹⁴ http://download.microsoft.com/download/5/0/3/50310CCE-8AF5-4FB4-83E2-03F1DA92F33C/Microsoft_Security_Intelligence_Report_Volume_15_English.pdf

¹⁵ “Win32/Banker: A family of data-stealing Trojans that capture banking credentials such as account numbers and passwords from computer users and relays them to the attacker. Most variants target customers of Brazilian banks; some variants target customers of other banks.”

10. When was the last time your security product found/blocked or warned about a malicious file/website (i.e. that your security product successfully protected your system against a malware attack)?

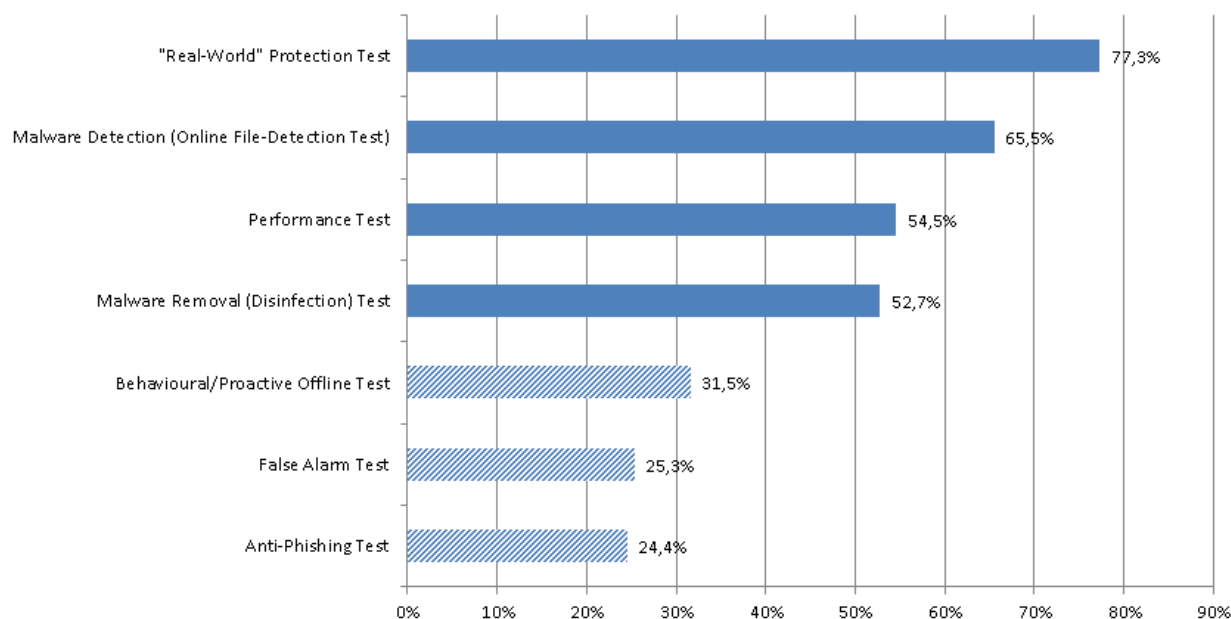


38.0% of the users stated that they encountered malware and that their security product successfully protected their system less than a week ago. About 11% of the users said that the last time that their security product warned/protected them against malware was over six months ago.

Users in South/Central America and in Asia encounter malware more often, with nearly 50% successful blocks seen in the last week.

The results of questions 9 and 10 together illustrate the effectiveness of current antivirus software. Responses to question 10 show how frequently malware is encountered, with almost two-fifths of users having encountered malware in the last week. Answers to question 9 indicate that security software works, as nearly four fifths of respondents had not been infected within the last 6 months.

11. Which type of tests/reviews are you most interested in (please choose 4)?



Perhaps due to our continued emphasis on the importance of our Real-World Protection Test, this test now tops the list in what our respondents are looking for. This is in spite of efforts by some manufacturers to advertise apparently similar tests by other labs, which use far fewer samples and consequently produce less-meaningful results,

The Real-World Protection Test framework was recently recognized by the Austrian Government's Constantinus Award, along with the 2012 Cluster Award for innovation in computer science (Standortagentur Tirol) and others.

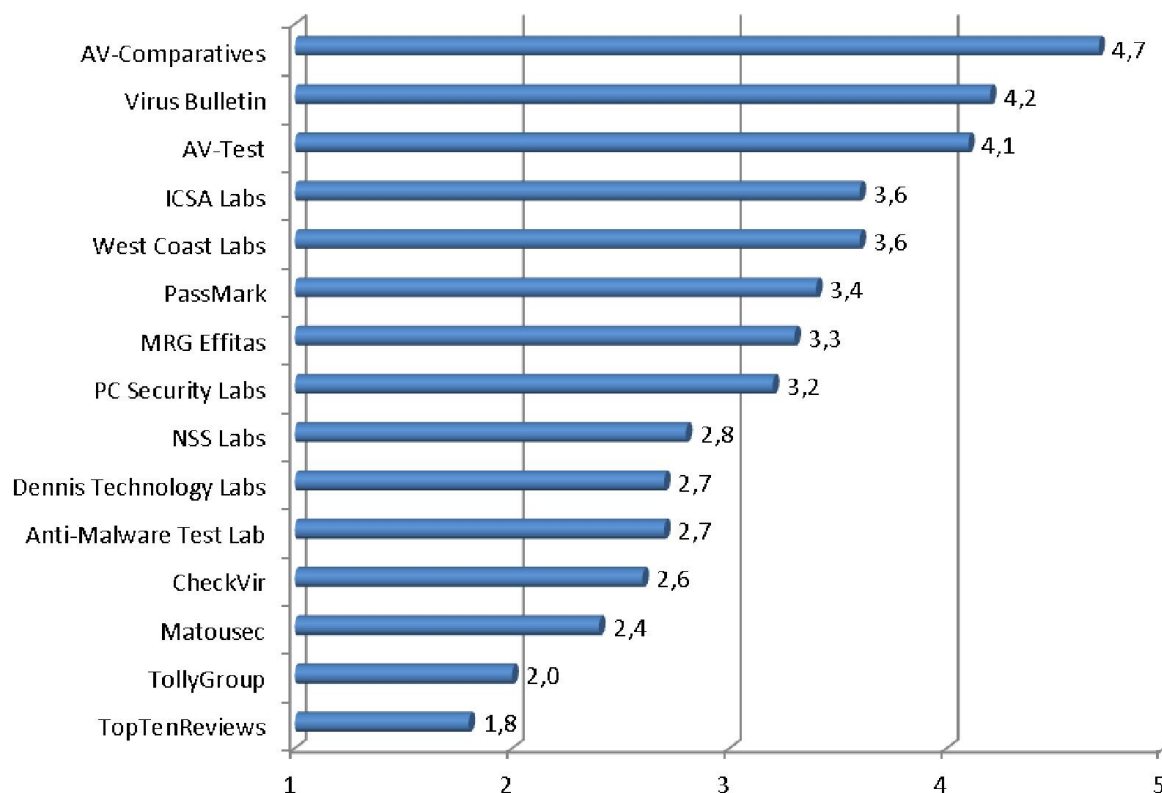
In order to provide users with an all-round view of a product's capabilities¹⁶, we also perform File Detection, Heuristic/Behavioural, False Alarm, Performance, Malware Removal and Anti-Phishing Tests for Windows products, in addition to the Real-World Protection Test.

Additionally, we carry out Mac Security and Mobile Security Tests, as well as reviewing business security software, all the tested Windows products (Summary Report), and single products on request.

Our annual awards are based on the Real-World Protection Test, Overall Performance Test, File Detection Test, and False-Positive Test (all of which are compulsory), along with the optional Proactive Test and Malware Removal Test.

¹⁶ <http://www.av-comparatives.org/comparatives-reviews/>

12. Which of the following testing labs are, in your opinion, reliable and trustworthy?

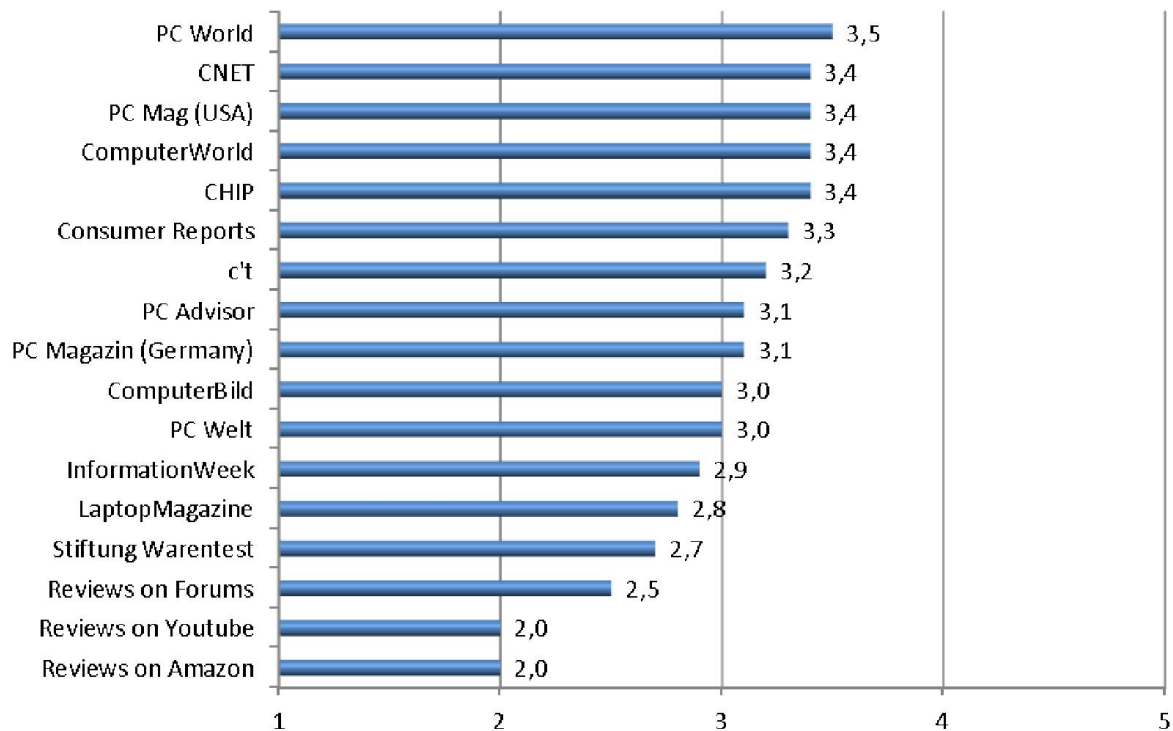


Users had to rate various security product testing labs and institutes by giving a score from 1 to 5, where 5 meant reliable/trustworthy and 1 unreliable/biased. Note that not all respondents were aware of all the labs, so each lab was only rated by those who were aware of it.

AV-Comparatives, AV-Test and Virus Bulletin reached a mean score of at least 4. These three are also the best-known AV testing labs in the world. Obviously, most of the survey respondents were aware of AV-Comparatives. We hope that our high rating is also down to the carefully prepared methodology of our tests, large number of samples, transparency, and freely available test reports, which describe the tests in detail. Our willingness to allow other publications to cite our results (subject to proper attribution) has also increased our visibility.

For products that are not tested by us, we recommend our readers to look at the tests done by other well-known testing labs or at least certification bodies. For a list of some other testing labs, go to <http://www.av-comparatives.org/list-of-av-testing-labs/>

13. Which of the following magazines/reviewers are in your opinion reliable/trustworthy?



Users had to give a score from 1 to 5, where 5 meant reliable/trustworthy and 1 unreliable/biased.

Reviews on Amazon and YouTube were regarded as the least reliable, probably because they are largely provided by users who are effectively anonymous. These reviews are typically focussed on user experience only. Often, the user may review/test only one product. Whilst some reviewers may write competent articles with integrity, other writers may base their opinions on e.g. a one-off bad experience with a particular product, or deliberately deceive readers in order to promote a product they have a commercial interest in, or to malign competitors. The same applies to reviews and opinions expressed on forums. In fact, there are paid bloggers¹⁷, forum / YouTube posters etc. who provide e.g. fake Amazon reviews¹⁸ and feedback.

¹⁷ <http://paidcontent.org/2012/08/07/judge-orders-oracle-google-to-disclose-paid-journalists-and-bloggers/>

¹⁸ <http://www.forbes.com/sites/suwcharmananderson/2012/08/28/fake-reviews-amazons-rotten-core/>

14. What is important for you in a security product?

Low impact on system performance	69.1%
Good detection rate of malicious files (without being dependent on cloud/online connection)	62.4%
Good malware removal/cleaning capabilities	60.7%
Good generic/heuristic detection (without being dependent on cloud/online connection)	50.5%
Low false alarm rate	50.2%
Good online protection rate while surfing the web	39.6%
Good scores in various independent third-party tests	25.9%
Strong default settings providing already maximum protection/detection	25.7%
Low price (including free)	25.6%
Respecting my privacy/no private data in the cloud	19.1%
Ease of use/manageability	17.6%
Low user interaction/pop-ups from the security product	15.0%
Good/Fast support	13.6%
Many customizable features/options inside the product	13.0%
Well-known product/software vendor	10.1%

Users were asked to select five characteristics of an anti-virus product which they considered most important to them. A majority of respondents chose the following:

- A low impact on system performance
- Good detection rates of malicious files (without being dependent on cloud/online connection)
- Good malware cleaning abilities
- Good generic/heuristic detection (without being dependent on cloud/online connection)
- Low false alarm rate
- Good online protection rate while surfing the web

All those aspects are tested by AV-Comparatives with various test methods.

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For more information about AV-Comparatives and the testing methodologies, please visit our website.

AV-Comparatives (February 2014)