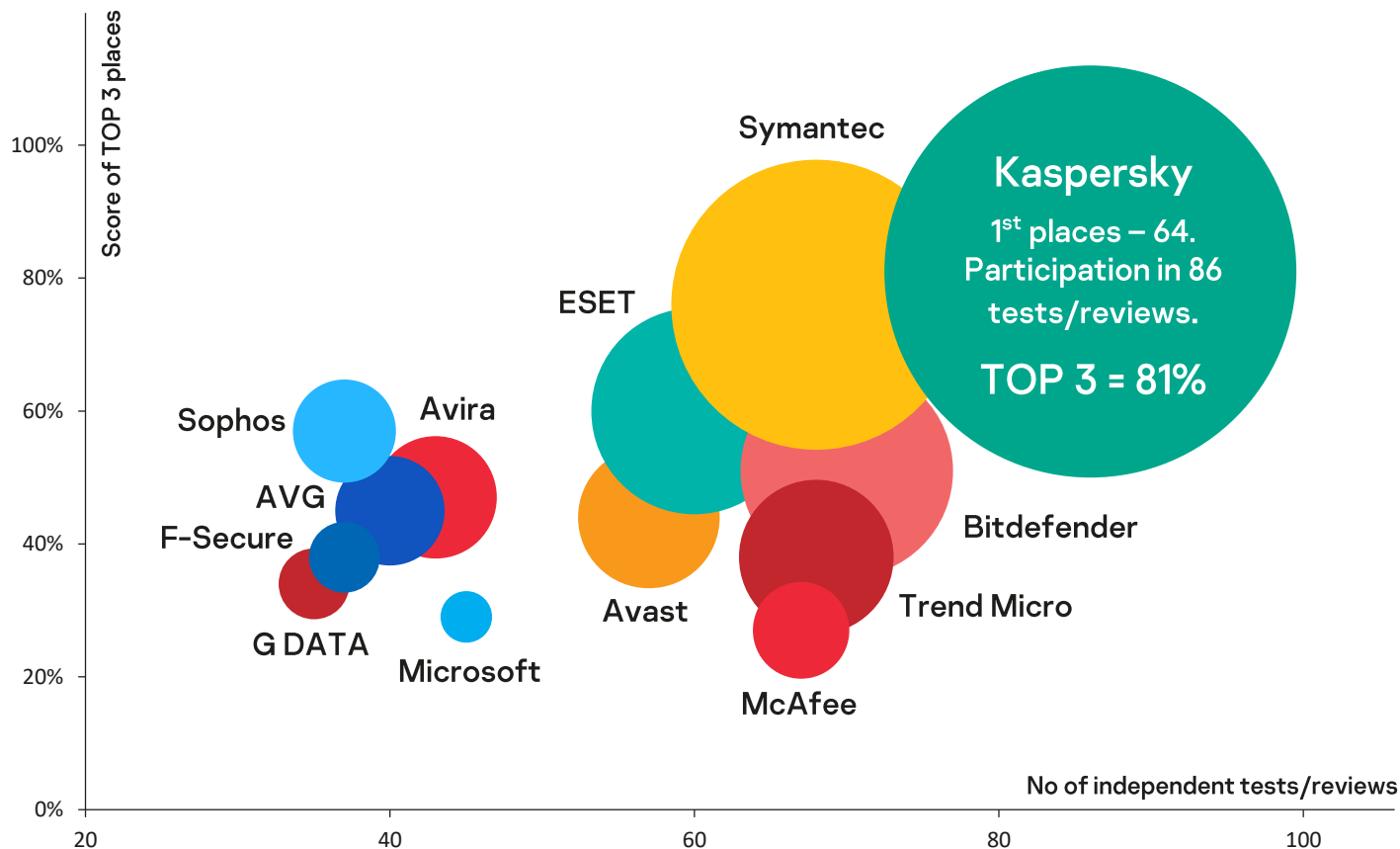


Most Tested. Most Awarded. Kaspersky Protection.*



In 2019 Kaspersky products participated in 86 independent tests and reviews. Our products were awarded 64 firsts and achieved 70 top-three finishes.



MOST TESTED*
MOST AWARDED*
KASPERSKY PROTECTION

[*kaspersky.com/top3](https://www.kaspersky.com/top3)

*** Notes:**

- According to summary results of independent tests in 2019 for corporate, consumer and mobile products.
- Summary includes independent tests conducted by : AV-Comparatives, AV-TEST, SE Labs, ICSA Labs, NSS Labs, MRG Effitas, Virus Bulletin, PCSL.
- Tests performed in these programs assess all protection technologies against known, unknown and advanced threats.
- The size of the bubble reflects the number of 1st places achieved.

www.kaspersky.com/top3

TOP3 metric reflects how successful a vendor was in independent tests within a calendar year.

The main characteristic of success is a **TOP3 score** that shows how many times a vendor with its products gained the first, second, or third place in independent tests they participated in within a reported period. The **TOP3 score** is calculated by dividing a vendor's **TOP3 counter** by a vendor's **Participation counter**.

The **TOP3 score** is determined for each participating vendor separately and then compared to each other.

- 1. Depending on a test, final test results may vary from giving awards for participating vendors to providing only a list of their detection rates and false positives.
A vendor's **TOP3 counter** is incremented either for winning an award or ranking in the first three places in a test. It cannot be incremented both for receiving the award and one of the first three places.
Several vendors can achieve equal results in detection rates, or summary results, or win awards of the same grade. In this case, the vendors share the same place in the same test.
In case of detection rates or summary results, the place of a vendor with the lower result is calculated as "number of higher ranked vendors + 1". For instance, the sequence "1,1,2,3" is not possible, whilst "**1,1,3,4**", or "**1,2,2,4**", or "**1,1,1,1,6**" are . In the latest sequences TOP3 counter will be incremented for bolded vendors only.
In regards with awards, refer to rule clarifications listed in the tests description below.
- 2. A vendor's **Participation counter** is incremented each time one of its products participates in a test/review/overview.
In some tests several products of one vendor can participate in the same test. In those cases, since all products increment the vendor's Participation counter, the Participation counter can be higher than a total number of tests.

Only those who participate in 35% or more of the total number of tests have their results represented in the chart.

The deadline for submitting scores attained in 2019 was February, 1st 2020, with no option to add any test/review after this date.

Among the security vendors participating in the TOP3 measurements are: Avast, AVG, Avira, Bitdefender, BullGuard, CrowdStrike, Cylance, ESET, F-Secure, G DATA, Intel Security (McAfee), Kaspersky, Microsoft, Palo Alto, Panda, Sentinel One, Sophos, Symantec, Trend Micro, and Quick Heal. A complete list of participants appears at the end of this document.

	No of tests entered	No of TOP3 places	Score of TOP3 places (%)	No of 1 st places
Kaspersky	86	70	81%	64
Symantec	68	52	76%	45
ESET	60	36	60%	32
Sophos	37	21	57%	16
Bitdefender	70	36	51%	33
Avira	43	20	47%	19
AVG	40	18	45%	17
Avast	57	25	44%	22
Trend Micro	68	26	38%	24
F-Secure	37	14	38%	11
G Data	35	12	34%	11
Microsoft	45	13	29%	8
McAfee	67	18	27%	15

2019 TOP3 metric description

3

These tests were performed against various types of malware, including advanced threats, and focused on detection effectiveness as well as frequency of false positives

Specialized threats

Ransomware

- MRG Effitas. 360 Degree Assessment & Certification
- SE Labs. Enterprise Endpoint Protection Test
- SE Labs. Home Anti-Malware Protection Test
- SE Labs. Small Business Endpoint Protection Test
- AV-TEST. Bi-Monthly Certification: Consumer and Business
- AV-Comparatives. Real-World Protection Test
- AV-Comparatives. Malware Protection Test
- AV-Comparatives. Business Security Report

Fileless

- AV-Comparatives. Enhanced Real-World Test: Consumer and Business
- SE Labs. Breach Response Test
- AV-TEST. Fileless Threat Protection Test

Exploits

- SE Labs. Enterprise Endpoint Protection Test
- SE Labs. Home Anti-Malware Protection Test
- SE Labs. Small Business Endpoint Protection Test
- MRG Effitas. 360 Degree Assessment & Certification
- NSS Labs. Advanced Endpoint Protection Test
- AV-Comparatives. Enhanced Real-World Test
- SE Labs. Breach Response Test
- Virus Bulletin. VBWeb Comparative Review

Financial malware

- MRG Effitas. Online Banking/Browser Security Certification
- MRG Effitas. 360 Degree Assessment & Certification

APT

- ICSA Labs. Advanced Threat Defense Certification Testing
- SE Labs. Breach Response Test
- AV-Comparatives. Enhanced Real-World Test: Consumer and Business

Phishing

- AV-Comparatives. Anti-Phishing Test
- Virus Bulletin. VBWeb Comparative Review

Dedicated Tests

Android Tests

- AV-Comparatives. Mobile Security Review
- AV-Comparatives. Android Test
- AV-TEST. Android Mobile Security Products Test
- MRG Effitas. Android 360 Assessment Programme
- PCSL. Mobile Security Product Test for Android

Mac Tests

- AV-Comparatives. Mac Security Test & Review
- AV-TEST. Mac Detection & Performance Test: Consumer and Business

Remediation Tests

- AV-TEST. Remediation Product Test

Real-World Tests

- AV-Comparatives. Real-World Protection Test
- AV-Comparative. Enhanced Real-World Test
- AV-TEST Bi-Monthly Certification Consumer and Business
- SE Labs. Enterprise Endpoint Protection Test
- SE Labs. Home Anti-Malware Protection Test
- SE Labs. Small Business Endpoint Protection Test

False positives (FP)

- All the tests mentioned above include FP measurements.

The following tests were performed in 2019 and used to calculate the metric:

AV-Comparatives

• Product of the Year

At the end of the year, this annual award is given to the vendor who attained the highest awards in an entire year's testing cycle, involving the following tests: Malware Protection Test (MPT) + Real-World Protection Test (RWPT) + Enhanced Real-World Test + Performance Test. According to AV-Comparatives' rules, in cases where two or more vendors receive the same maximum score, the award goes to the vendor who has never received it before, or was the last of the participants to receive it previously.

The seal is counted as a first place in the TOP3 metric. Vendors who were nominated, but did not receive the 'Product of the Year' award, are given the 'Outstanding Product' rank, which counts as a second place in the TOP3 metrics.

Vendors who achieved at least 90 points across the entire test cycle are awarded the 'Top Rated' rank, which counts as a third place in the TOP3 metric. Vendors that fail to score any points in, at least, one of the tests are excluded.

At the end of the year, medals ('Gold', 'Silver', 'Bronze') are also given for the best results in specific tests: MPT, RWPT, Performance, Enhanced Real-World Test. As these test results have already contributed to overall TOP3 metrics, the medals themselves do not count towards it since 2015.

Only awards can contribute towards TOP3 counters in AV-Comparatives tests.

• Malware Protection Test

This test is a successor of the File Detection Test and includes execution of the tested files. It is conducted twice a year and, correspondingly, is counted two times in the metrics. The test consists of two parts: Detection Rate and False Positives.

Products receive the following awards: "Advanced+", "Advanced", "Standard" or "Tested". Only products with "Advanced+" gain an increment of TOP3 counters for their vendor.

• Real-World Protection Test

The test lasts for five months and is finalized in two half-year reports using mainly current, visible, and relevant malicious websites/malware. Correspondingly, this test is counted two times in the metrics. Because all product components contribute a significant role in overall protection, results achieved in this category are a good indicator of anti-malware product efficiency in real-world scenarios.

Products receive the following awards: "Advanced+", "Advanced", "Standard" or "Tested". Only products with "Advanced+" gain an increment of TOP3 counters for their vendor.

• Enhanced Real-World Test: Consumer and Business

This is the Advanced Threat Protection test that checks the products' defenses against targeted attacks that aim to sabotage corporate networks or steal confidential data. This test is conducted and counted in the metrics once a year. Consumer and Business related products are assessed separately.

Products receive the following awards: "Advanced+", "Advanced", "Standard" or "Tested". Only products with "Advanced+" gain an increment of TOP3 counters for their vendor.

• Anti-Phishing Test

This test is performed and counted in the metrics once a year and simulates a common situation: users rely on the anti-phishing protection provided by their security products while browsing the web. The test consists of two parts: Detection Rate and False Positives.

If all products achieved zero False Positives, the products achieving the highest three places based on Protection Rate, gain an increment of TOP3 counters for their vendor.

If any of participating products achieved any False Positives, only certified products gain an increment of TOP3 counters for their vendor.

AV-Comparatives

- **Android Test**

This test is performed and counted in the metrics once a year and evaluates the protection capabilities of mobile security applications for Android.

Products achieving the highest three places, based on Protection Rate, gain an increment of TOP3 counters for their vendor.

- **Mobile Security Review**

This review is done and counted in the metrics once a year and includes a malware protection test along with an overview of additional features (theft protection, battery consumption, etc.).

If all products achieved zero False Positives, the products achieving the highest three places based on Protection Rate, gain an increment of TOP3 counters for their vendor.

If any of participating products achieved any False Positives, only certified products gain an increment of TOP3 counters for their vendor.

- **Mac Security Test & Review**

This review is done and counted in the metrics once a year and evaluates various Mac protection products against a product feature list and measures protection levels in categories such as Detection Rate on separate Mac- & Windows-related malware sets and a False Positive level.

If all products achieved zero False Positives, the products achieving the highest three places based on Protection Rate, gain an increment of TOP3 counters for their vendor.

If any of participating products achieved any False Positives, only certified products gain an increment of TOP3 counters for their vendor.

- **Business Security Report**

This report is conducted and published twice a year. Correspondingly, it is counted two times in the metrics. The report includes a review of various business security products and also evaluates the protection efficiency in categories such as Protection Rate on different malware sets, websites, and exploits and a False Positive level.

Products achieving, at least, 90 percent Protection Rate with no False Positives on common business software in the Malware Protection Test and, at least, 90 percent Protection Rate with less than 100 False Positives on any clean software/websites in the overall Real-World Protection Test, with no major performance issues, are certified by the test lab, and gain an increment of TOP3 counters for their vendor.

AV-Test

- **Best Protection Award: Consumer and Business**

This annual award is given once a year for perfect results in the Protection category over the course of an entire year, during which bi-monthly certification takes place. Consumer and Business related products are assessed separately.

Only products that receive this award gain a TOP3 counter increment for their vendor.

- **Best Usability Award: Consumer and Business**

This annual award is given once a year for perfect results in the Usability category over the course of an entire year, during which bi-monthly certification takes place. Consumer and Business related products are assessed separately.

Only products that receive this award gain a TOP3 counter increment for their vendor.

AV-Test

- **Best Android Security**

This annual award is given once a year for perfect results in the Android security testing over the course of a whole year.

Only products that receive this award gain a TOP3 counter increment for their vendor.

- **Bi-Monthly Certification: Consumer and Business**

This year-long certification series consists of Consumer and Business segments, each divided into six separate, two-month-long tests, which results are published every even months, i.e. this test is counted 6 times in the metrics. Consumer and Business related products are assessed separately. All participating products are evaluated and receive points in Protection, Performance and Usability categories. The sum of the points gained in each category makes up the overall score; products in the top three have their TOP3 counters incremented.

- **Android Mobile Security Products Test**

This year-long certification series is divided into six separate, month-long tests, which results are published every odd months, i.e. this test is counted 6 times in the metrics. All participating products are evaluated and receive points in Protection, Performance and Usability categories. The sum of the points gained in each category makes up the overall score; products in the top three have their TOP3 counters incremented.

- **Mac Detection & Performance Test: Consumer and Business**

This test evaluates various security protection products for Mac OS X and is conducted twice a year. Correspondingly, this test is counted two times in the metrics. Consumer and Business related products are assessed separately. All participating products receive points in Protection, Performance and Usability categories. The sum of the points gained in each category makes up the overall score; products in the top three have their TOP3 counters incremented.

- **Repair Test: Integrated and Dedicated**

This test is published and counted in the metrics once a year, and evaluates various security protection packages for clean-up performance and system recovery. Integrated and dedicated Consumer products are assessed separately.

Three products with the highest remediation points gain an increment of TOP3 counters for their vendor.

- **Fileless Threat Protection Test**

This vendor-commissioned test aims to reveal ability of the products to detect fileless threats and protect and remediate all malicious actions by fileless threats.

Three products with the highest Protection Rate gain an increment of TOP3 counters for their vendor.

SE Labs

- **Enterprise Endpoint Protection Test**
- **Home Anti-Malware Protection Test**
- **Small Business Anti-Virus Protection Test**

These quarterly-long tests are published and counted in the metrics four times a year. These tests aim to compare the effectiveness of anti-malware products provided by well-known security companies. Enterprise, Home, and Small Business products are evaluated separately. The products are exposed to live Internet threats during the test period. This exposure is carried out in a very realistic way, closely reflecting the customer experience. The results reflect how products perform under real-life, customer-use-case scenarios, i.e. what happens when a user visits an infected website. The tests include a detection subtest and a false positive one.

Three products with the highest Total Accuracy Rating scores (calculated as a combination of points of the two subsets) gain an increment of TOP3 counters for their vendor.

- **Breach Response Test**

This vendor-commissioned test evaluates effectiveness of a tested product against a range of hacking attacks designed to compromise systems and penetrate target networks in the same way as criminals and other attackers breach systems and networks. The tests include a detection subtest and a false positive one.

Three products with the highest Total Accuracy scores (calculated as a combination of points of the two subsets) gain an increment of TOP3 counters for their vendor.

MRG Effitas

- **Online Banking/Browser Security Certification**

This test is conducted and published four times a year and assesses the efficiency of products against financial malware by implementing different test methodologies and scenarios: 'In The Wild' real financial malware sets, botnet environments, and simulations of different sensitive data interception techniques. Only products that successfully pass the first two steps receive certification and gain a TOP3 counter increment for their vendor.

- **360 Assessment & Certification**

This test is conducted and published four times a year and evaluates both the ability to block initial infection and time taken to detect and remediate malware on a compromised system. This test replaces the older "Time to Detect & Remediate Assessment" test. Only certified products gain an increment of TOP3 counters for their vendor.

- **Android 360 Assessment Programme**

The conducted every quarter test is published four times a year and evaluates both the ability to block initial infection while copying it to the device, so called the Early Stage Detection, and while running it, the Installation Stage. The test also includes a false positive subtest.

Products placing in the highest three positions based on the combined of two stages Detection Rate gain an increment of TOP3 counters for their vendor.

Virus Bulletin

- **VB100 Comparative Review and Certification**

These tests are held every two months on operating systems Win7 and Win10 in parallel to evaluate different types of products; the reports are published six times a year.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

- **VBWeb Comparative Review**

This test is performed every quarter, i.e. four times a year, and measures the ability of participating gateway level products to prevent malicious traffic such as malicious executables and drive-by downloads from infecting an organization's network.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

ICSA Labs

- **Advanced Threat Defense Certification Testing**

This assessment is performed every quarter, i.e. four times a year, and aims to evaluate the efficiency of security solutions to detect new and little-known threats while minimizing false positives.

Each product that passes the certification gains an increment of TOP3 counter for their vendor.

NSS Labs

- **Advanced Endpoint Protection Test**

This test is done once a year and evaluates Advanced Endpoint Protection solutions (AEP) on security effectiveness and total cost of ownership.

Based on Detection Rate, products that achieve the top three places gain an increment of TOP3 counters for their vendor.

PCSL (PC Security Labs)

- **Mobile Security Product Test for Android¹**

This test evaluates Detection Rate and False Positives of mobile products every quarter and are published four times a year.

Products achieving the highest three Final scores, based on Detection Rate and False Positives, gain an increment of TOP3 counters for their vendor.

¹ Results for the third and fourth quarters were not taken into account in the TOP3 metrics as they had not been published by the database freeze deadline.

2019 TOP3 metric participants

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|------------------|--------------------------|-------------------|---------------------------|--------------------------|--------------------|
| • 1E | • Cheetah Mobile | • FireEye | • Lavasoft | • Qihoo 360 | • Total Defense |
| • AdSpider | • Chili Security | • Fortinet | • Lookout Mobile Security | • Quick Heal | • TotalAV |
| • AegisLab | • Cisco | • Fotoable | • Malwarebytes | • REVE | • Trend Micro |
| • AhnLab | • ClamXav | • F-Secure | • MalwareFox | • Rising | • TrustGo |
| • Airo | • Clean Boost+ | • G Data | • Max Dev Labs | • Samsung | • Trustlook |
| • Alibaba | • Comodo | • GizmoLife | • McAfee | • Scanguard | • TrustPort |
| • Antivirus | • Counter Tack | • Google | • Media Master | • Securetek IT Solutions | • Trustwave |
| • Apps Studio | • CrowdStrike | • Hammock | • Microsoft | • Securion | • Vendor A |
| • Antiy Labs | • Cyber Intell Solutions | • Hawk App | • Microworld | • SentinelOne | • Vendor B |
| • Apex Apps | • Cylance | • Heimdal | • MY-DATA | • Seqrite | • Vendor C |
| • APUS Group | • Cynet | • Hi Security Lab | • MYMobileSecurity | • SK Telecom | • Vendor D |
| • ArcaBit | • CYREN | • Hyper Speed | • NANO | • Smooth Apps Studio | • VIPRE |
| • Avast | • Defenx | • iBoss | • Nox | • Sophos | • Watchdog |
| • AVG | • Dr.Web | • Ikarus | • NQ mobile | • SparkCognition | • We Make It Appen |
| • Avira | • DU Apps Studio | • INetCop | • NSHC | • STOPzilla | • Webroot |
| • Baidu | • EmsiSoft | • Innovana | • ONE App Limited | • Super Cleaner Studio | • Wontok |
| • Bitdefender | • Endgame | • Intego | • Panda | • Super Security Studio | • Zemana |
| • Brainiacs Apps | • Ensilo | • IntelliAV | • PC Pitstop | • Supermobilesafe | • Zoner |
| • Bsafe Labs | • eScan | • Iobit Mobile | • PCProtect | • Symantec | |
| • BullGuard | • ESET | • Security | • Phone Clean Apps | • TAPI Security Labs | |
| • CAP Lab | • ESTsoft | • Juniper | • Power Tools Team | • TeamViewer | |
| • Carbon Black | • Exosphere | • K7 Computing | • Privacy Lab | • Tencent | |
| • Check Point | • Faronics | • Kaspersky | • PSafe | • TGSoft | |