

virus

BULLETIN

Covering the global threat landscape

VB100 COMPARATIVE REVIEW ON WINDOWS 8.1 PRO 64-BIT, WITH UPDATE

INTRODUCTION

The platform selected for this month's comparative is *Microsoft's Windows 8.1*. When first released with the standard hype and fanfare it seemed like another fairly major step in the gradual expansion and improvement of the world's most popular platform, but in hindsight it joins *Windows Vista* as another temporary stopgap, killing time between two much more popular and successful versions of *Windows*. With the huge efforts being put into encouraging, cajoling and even tricking users into upgrading to *Windows 10*, and the bulk of the hold-outs being confirmed *Windows 7* users, there seems little chance that we will be running another test on this platform. In itself, it's not a bad operating system, but in comparison with those either side, it has clearly failed to grab the attention and affection of users, and so is condemned to a slow and undignified death.

For those still tied to it for one reason or another, of course, it remains crucial to maintain a decent level of protection from malware. Therefore, we plough through the products available one more time to provide guidance for those in need.

PLATFORM AND TEST SETS

Setting up *Windows 8.1* is a fairly clean and easy process, although anyone wanting to build multiple matching machines may be mystified by its rather random approach to disk partitioning. For the purposes of this test we had to do little more than revive some images created for earlier comparatives, and update them with the latest testing tools and scripts. As usual, updates were kept to a minimum, and the bulk of the set-up work went into preparing the sample sets.

Our main certification sets included the latest WildList available on the deadline day – the February 2016 list, released on the test deadline, 17 February. Our other test

sets were given their usual clean-and-tidy routine, with the clean sets included in the certification process also frozen on the test deadline; they came to 775,000 files, 168GB.

Other sets were built according to our standard protocols, with performance test sets given no more than minor tweaks to keep the tests running as smoothly and repeatably as possible. With everything in place, we got down to working through the long list of participating products.

BUSINESS PRODUCTS

Avira Pro

Main version: 2016, update 16

Update versions: 8.12.70.228, 8.12.74.126, 8.12.76.138

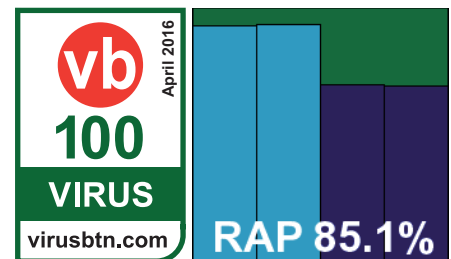
Last 6 tests: 4 passed, 0 failed, 2 no entry

Last 12 tests: 9 passed, 0 failed, 3 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%

False positives: 0 **Stability:** Solid

Getting us under way this month is *Avira's* premium solution, which has a pretty strong record in our tests and generally does



well. Once again stability was very strong indeed, with no problems even under heavy pressure. Detection was also pretty good and performance impact was light. The core certification sets presented no difficulties, and the first VB100 award of the month is neatly claimed by *Avira*.

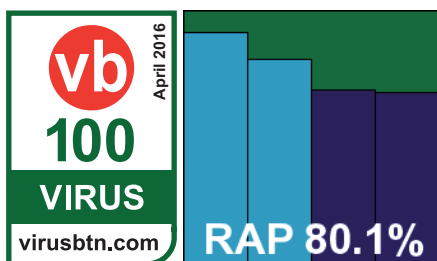
ESTsoft ALYac

Main version: 3.0.0.5
 Update versions: 15.10.21.1/574606.2016021701/7.6453
 0/6108993.20160217, 15.10.21.1/586674.2016041816/7.
 65196/6386339.20160418
 Last 6 tests: 5 passed, 0 failed, 1 no entry
 Last 12 tests: 10 passed, 0 failed, 2 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

Bitdefender-based *ESTsoft* has built up a healthy list of passes over the last few years, and put in a reasonable showing once again this

month. However, due to some issues with the product's logging system, which seemed to collapse if required to record more than a handful of events, our additional detection figures proved somewhat unreliable, with the bulk of the usable data coming from a single usable run. Fortunately, the certification sets presented far fewer problems and were completed successfully, so we are able to record a VB100 pass for *ESTsoft* this month.

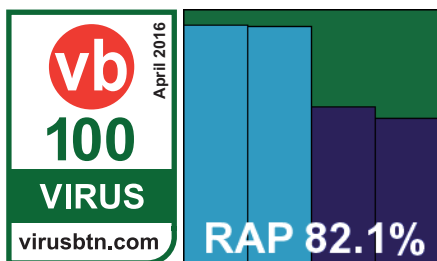


Fortinet FortiClient

Main version: 5.0.9.1349
 Update versions: 5.220/32.676, 33.099, 33.263, 33.423
 Last 6 tests: 5 passed, 0 failed, 1 no entry
 Last 12 tests: 9 passed, 1 failed, 2 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Fortinet's business client solution has a solid record in our tests, and put in another good showing this month with no stability problems, decent detection rates, a noticeable but not overly intrusive impact on the system speed, and no problems in the



certification sets, comfortably earning the product another VB100 award.

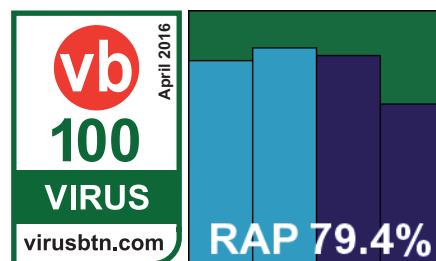
Hammock AssetView

Main version: 8.1.5.1004
 Update versions: 8.3.4.4
 Last 6 tests: 1 passed, 0 failed, 5 no entry
 Last 12 tests: 1 passed, 0 failed, 11 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

A newcomer to our tests this month, *Hammock* hails from Japan and provides a comprehensive business solution; the bulk of the

malware-detection is provided by the *Kaspersky* engine. The product proved rather more complex to set up and operate than we are used to, but with some assistance from the developers we eventually got it running, and saw no stability issues, decent detection, acceptable performance impact and a good showing in our certification sets. *Hammock's* first VB100 award is well deserved.

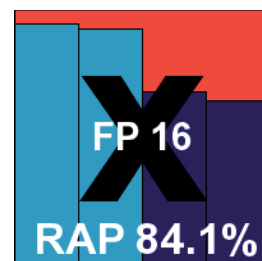


Ikarus anti.virus

Main version: 2.9.26
 Update versions: 96169, 96601, 97058, 97627
 Last 6 tests: 3 passed, 1 failed, 2 no entry
 Last 12 tests: 8 passed, 1 failed, 3 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 16 **Stability:** Fair

Ikarus has been maintaining a good run of VB100 passes in the last few years, but this month returned to old habits, sprinkling false alarms through our clean sets. These included a handful of alerts about a DDoS trojan in a popular *Linux* tool and some issues with a CAD solution. Otherwise things went pretty well, stability was mostly OK although we did note a few crashes, mostly when not doing anything particularly stressful. The WildList set was well covered, but with that



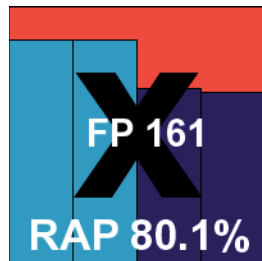
rash of false positives in the clean set no VB100 award is granted this month.

iSheriff Security from the Cloud

Main version: 5.8.0
 Update versions: 5.8.0.0215/3.71, 5.8.1/5.8.1.0000
 Last 6 tests: 3 passed, 2 failed, 1 no entry
 Last 12 tests: 8 passed, 2 failed, 2 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 161 **Stability:** Fair

Another very regular product, and another which has recently had some problems with false positives. The *Bitdefender* engine, present in almost half of the products being tested this month, is integrated into the *iSheriff* product alongside the company's own technologies; it is a complete business product operated from a cloud portal. Stability was mostly fine, apart from a single incident during the performance tests where the product claimed the Internet was down and couldn't communicate with its control systems, rendering it unusable. The WildList sets were handled well, but once again we saw a barrage of false alarms, mainly on DLL files from major software houses including *Dell* and *SAP*, which means there is no VB100 award for *iSheriff* this month, despite a generally good showing.

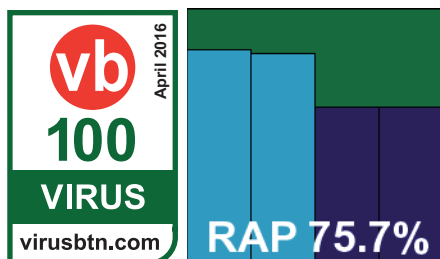


Microsoft System Center Endpoint Protection

Main version: 4.9.218.0
 Update versions: 1.1.12400.0/1.213.6009.0, 1.1.12505.0/1.215.565.0, 1.215.1582.0, 1.215.2503.0
 Last 6 tests: 4 passed, 0 failed, 2 no entry
 Last 12 tests: 9 passed, 0 failed, 3 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Microsoft's business offering is essentially a set of management tools connected to the *Defender* solution, at the desktop



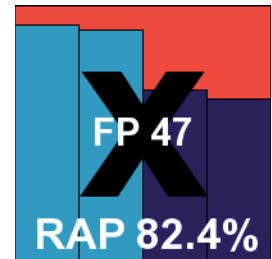
level at least. It generally puts in a good performance, and this occasion was no different, with rock-like stability through the tests and decent detection rates across the board. Performance measures were mostly very close to our baselines taken with standard *Defender* active, although our set of activities was a little slower. With a clean run through the certification sets, another VB100 award goes to *Microsoft*.

MSecure DenyWall Antivirus

Main version: 1.1.107.0
 Update versions: 96169, 96599, 97075, 97627
 Stability rating: Fair
 Last 6 tests: 0 passed, 1 failed, 5 no entry
 Last 12 tests: 0 passed, 3 failed, 9 no entry

ItW on demand: 100.00% **ItW on access:** 2.75%
False positives: 47 **Stability:** Fair

MSecure's products have appeared in a number of our tests in recent years, but haven't managed to achieve a pass in some time, mainly thanks to a rather glaring issue which meant the content of the extension list was largely ignored, meaning several of the most common malicious file types were not scanned by default on access. There were some other issues to note this month, including an unexpected restart and some logging inconsistencies, but the lingering detection problem was the most serious. Despite decent detection on demand, scores were very low indeed on access, and a glut of false positives in the clean sets confirms that there is no VB100 award for *MSecure* this time. A new and completely reworked product is promised for the near future, which should hopefully fare better.



Quick Heal Seqrite Endpoint Security

Main version: 16.00
 Update versions: 9.0.32.1 64Bit
 Last 6 tests: 4 passed, 0 failed, 2 no entry
 Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Quick Heal's business product line has only been appearing in our tests for the last couple of years, but has a good string of passes accumulating already. Performance hit was not the

lowest but not excessive, and detection was decent in the response tests. Some problems with the submission meant we could not gather a full set of RAP data, but other tests ran without problems and a VB100 award is well deserved.

TrustPort Antivirus 2015

Main version: 2015(15.0.5.5440)

Update versions: N/A

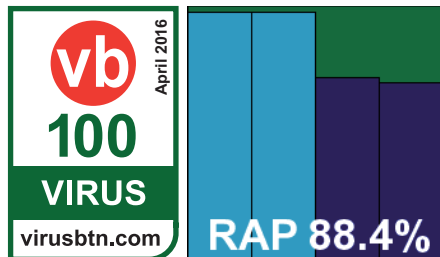
Last 6 tests: 4 passed, 0 failed, 2 no entry

Last 12 tests: 6 passed, 0 failed, 6 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

Dual-engine *TrustPort* can usually be relied upon for some impressively high detection rates. This month, the product is

included in the business category despite, according to its creators, being suitable for both home and office use. The only stability problem observed was an issue with the update button, which decided to stop functioning from time to time, but otherwise all was steady. Performance impact was impressively light for a product with such excellent coverage of malware, and with no problems in the clean sets a VB100 award is easily earned.



CONSUMER PRODUCTS

ALLIT Service Zillya! Internet Security

Main version: 2.0.4785.0

Update versions: 2.0.0.2261, 2.0.0.2708, 2.0.0.2725, 2.0.0.2737

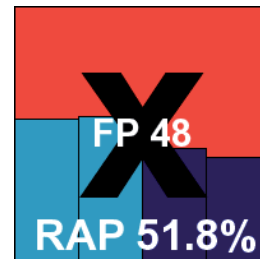
Last 6 tests: 0 passed, 2 failed, 4 no entry

Last 12 tests: 0 passed, 2 failed, 10 no entry

ItW on demand: 76.17% **ItW on access:** 75.03%
False positives: 48 **Stability:** Fair

We've seen *Zillya!* a few times before in our tests, with the standard required for VB100 certification not yet reached. This month it had a few, mostly fairly minor stability

problems, mainly GUI freezes and crashes while scanning, and detection was fairly mediocre with low scores in our sets of recent samples. Quite a few WildList items went undetected, and we noted a fair number of false alarms in our clean sets, including classing a part of the *Firefox* browser as a worm. Thus no VB100 award is granted to *ALLIT Service* this month, although we are seeing steady improvement in the product.



Avast Free Antivirus

Main version: 11.1.2253

Update versions: 160216-0, 160307-0, 160314-0, 160321-0

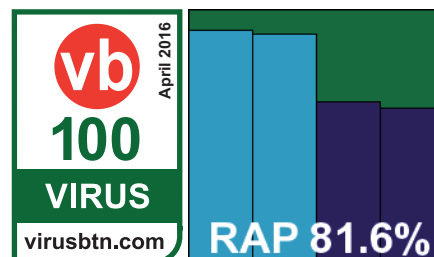
Last 6 tests: 6 passed, 0 failed, 0 no entry

Last 12 tests: 11 passed, 1 failed, 0 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

A regular strong performer, *Avast's* free edition put in another good showing with solid stability and strong detection levels.

The only dent in this month's performance was a rather high impact on our set of activities, which took several times longer than the baseline, rather unusually for this product which has performed the same test pretty rapidly in the past. A clean run through our certification sets comfortably earns *Avast* another VB100 award.



AVG AntiVirus

Main version: 16.41.7442

Update versions: 4530/11630, 4540/11769, 11813, 4542/11858

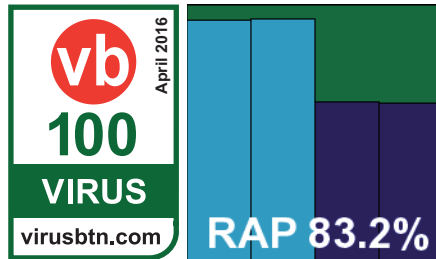
Last 6 tests: 6 passed, 0 failed, 0 no entry

Last 12 tests: 12 passed, 0 failed, 0 no entry

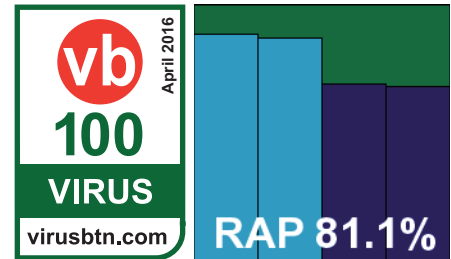
ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

AVG can proudly boast of being one of the few products

with a clean sheet of passes in the last dozen tests. The product's performance this month was strong once again, with flawless stability under pressure, good detection rates and only a fairly heavy impact on our set of tasks to complain about. A VB100 award is well deserved, adding to that pleasingly unbroken chain of passes.



company's engine also playing a key part in many other successful products. This month there were no upsets, with another excellent showing across the board, although detection numbers were a shade lower than we're used to. The core sets were handled impeccably once again, and another VB100 award is well deserved.

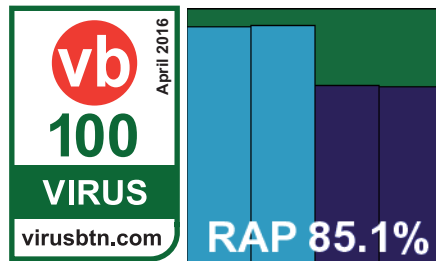


Avira Free Antivirus

Main version: 2016, update 16
 Update versions: 8.12.70.228, 8.12.74.126, 8.12.76.138
 Last 6 tests: 2 passed, 0 failed, 4 no entry
 Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Avira's free edition tends to only show up in our desktop tests, generally putting in the same sort of splendid performances as we see



more regularly from the vendor's premium and corporate editions. This month was much the same, with pretty light performance hit, decent detection and a clean run through the main sets, earning *Avira* another VB100 award.

Bitdefender Antivirus Plus 2016

Main version: 20.0.25.1378
 Update versions: 7.64536/6106005, 7.64780/5857537, 7.64852/5895401, 7.64913/6088530
 Last 6 tests: 6 passed, 0 failed, 0 no entry
 Last 12 tests: 12 passed, 0 failed, 0 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

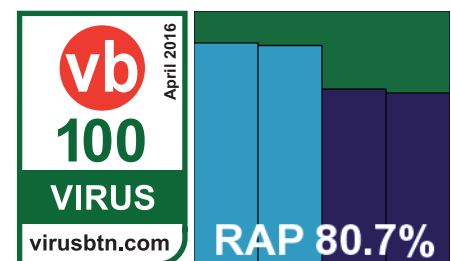
Bitdefender can also show off with an unbroken string of passes in all of our tests over the last two years, with the

BullGuard Antivirus

Main version: 16.0.314.5
 Update versions: 7.64537, 16.0.316.1/7.64780, 16.0.316.1/7.64853, 16.0.317.1/7.64913
 Last 6 tests: 3 passed, 0 failed, 3 no entry
 Last 12 tests: 7 passed, 0 failed, 5 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

BullGuard is one of the long list of products integrating *Bitdefender's* engine, something the firm has been doing very well for quite some



time. It was another good job this month, with dependably good detection rates and minimal performance hit. The certification sets were nicely managed, earning *BullGuard* another VB100 award.

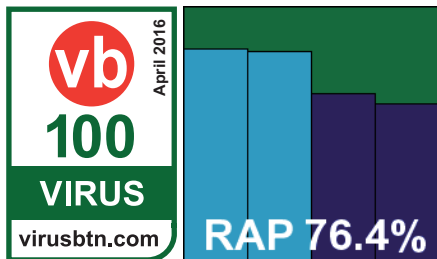
Check Point Zone Alarm Extreme Security

Main version: 14.1.048.000
 Update versions: 8.6.0.97
 Last 6 tests: 2 passed, 0 failed, 4 no entry
 Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

Bucking the trend somewhat, *Check Point* bundles the *Kaspersky* engine alongside its own technology as part of

the venerable *Zone Alarm* product line. It did well once again this month, with decent detection, although our set of tasks was a little slower than the baseline. The certification sets were properly dealt with, and a VB100 award is merited.

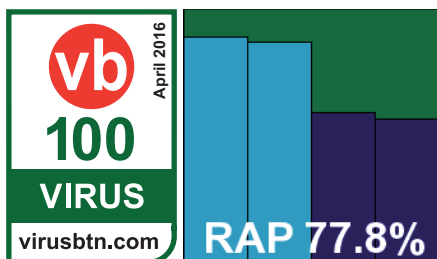


CompuClever Antivirus Plus

Main version: 19.2.0.151
Update versions: 7.62494, 19.4.0.239/7.64779, 7.64852, 7.64913
Last 6 tests: 2 passed, 0 failed, 4 no entry
Last 12 tests: 2 passed, 0 failed, 10 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

A somewhat newer name in our tests, *CompuClever* managed its first pass at the end of 2015 and is back for more. Once again using the *Bitdefender* engine, it put in a decent showing with low performance hit and decent scores. The RAP figures were a little lower than for some other *Bitdefender* users, but this is probably due to submission timing rather than anything more serious. The WildList and clean sets presented no problems, and a second VB100 award is earned by *CompuClever*.



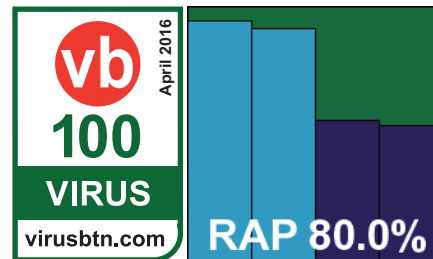
CYREN Command Anti-Malware

Main version: 5.1.35
Update versions: 5.4.20
Last 6 tests: 2 passed, 3 failed, 1 no entry
Last 12 tests: 3 passed, 7 failed, 2 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

On the surface at least, *CYREN's Command* product remains one of the least changed for quite some time, with

the simple and minimalist interface a very familiar sight on the VB test bench. Under the covers it has seen some serious work though, with the company's cloud look-up system providing an impressive boost in detections over the last few years. This has often come at the expense of a higher false alarm rate, but this month there were no such problems; superb detection was recorded in the response sets, with the offline part of the RAP tests clearly demonstrating the importance of the cloud look-ups. As usual, our set of tasks was fairly heavily slowed down, but a clean run through the certification sets earns *CYREN* another VB100 award.

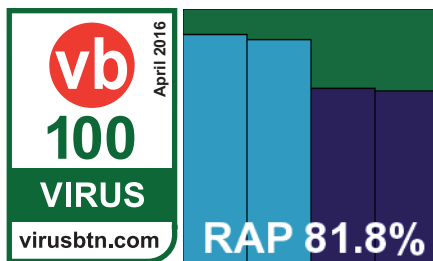


Emsisoft Anti-Malware

Main version: 11.0.0.6131
Update versions: 3.5.0.656/11.0.1.12, 11.5.0.6191, 11.5.0.6191, 11.5.1.6247
Last 6 tests: 5 passed, 0 failed, 1 no entry
Last 12 tests: 10 passed, 0 failed, 2 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

Emsisoft has earned VB100 passes in all of our *Windows* tests in recent years, with only our annual visits to *Linux* missed out. This month



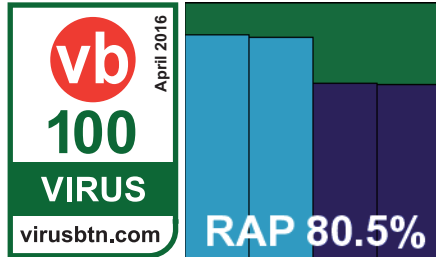
we saw decent detections along the lines of others using the same *Bitdefender* engine, a very light impact on system speeds and a good showing in the core sets, earning the product another VB100 award.

eScan Internet Security Suite for Windows

Main version: 14.0.1400.1860 DB
Update versions: N/A
Last 6 tests: 6 passed, 0 failed, 0 no entry
Last 12 tests: 12 passed, 0 failed, 0 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

Another product maintaining a flawless record of passes in all tests in the last few years, the *eScan* suite also includes the *Bitdefender*



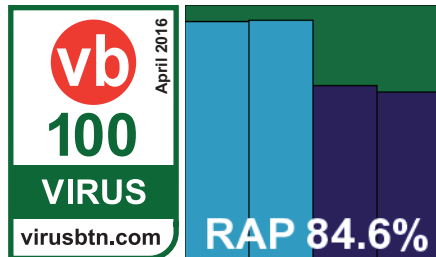
engine and scored predictably well, with low resource use but a fairly notable hit on our set of activities. The certification sets were dealt with well, and that perfect record of VB100 passes is maintained.

ESET NOD32 Antivirus

Main version: 9.0.349.14
 Update versions: 13042, 13139, 13174, 9.0.375.0/13212
 Last 6 tests: 6 passed, 0 failed, 0 no entry
 Last 12 tests: 12 passed, 0 failed, 0 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

ESET's record in our tests speaks for itself, with an unbroken run of passes going way back into the past affirming the solid reliability



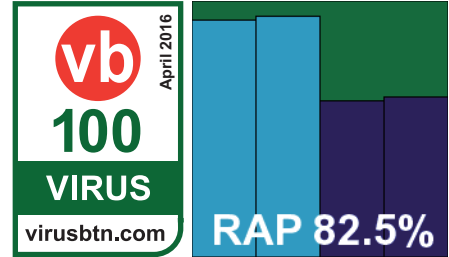
of the company's products. There were a couple of very minor glitches this month, including a button offering a new version which seemed to do nothing, but otherwise all was as good as ever, with a light system footprint and strong detection, extending as usual to the certification sets which were brushed aside effortlessly to earn yet another VB100 award for *ESET*.

Essentware PCKeeper Antivirus PRO

Main version: 8.3.36.16
 Update versions: 8.12.58.254, 8.3.36.42/8.12.66.134, 8.3.36.54/8.12.69.118, 8.3.38.0/8.12.72.206
 Last 6 tests: 2 passed, 0 failed, 4 no entry
 Last 12 tests: 3 passed, 0 failed, 9 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

The *PCKeeper* brand has been popping up in our tests for some time under various different owners, and on this occasion returns for its



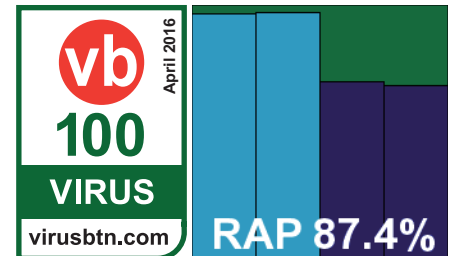
second attempt under the *Essentware* umbrella. Bundling the *Avira* engine with a few additional tricks, it scored very well indeed in the response tests, dropping down a fair bit in the offline parts of the RAP tests. RAM usage was a touch high, but our set of activities was not too heavily slowed down, and a clear run through the certification sets earns the product another VB100 award.

G Data Antivirus

Main version: 25.1.0.10
 Update versions: AVA 25.5548/GD 25.6.373, AVA 25.5807/GD 25.6495, AVA 25.5879/GD 25.6535, AVA 25.5943/GD 25.6565
 Last 6 tests: 5 passed, 0 failed, 1 no entry
 Last 12 tests: 9 passed, 0 failed, 3 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

When *G Data* changed from using two third-party engines to a combination of *Bitdefender* and the company's own in-house technology,



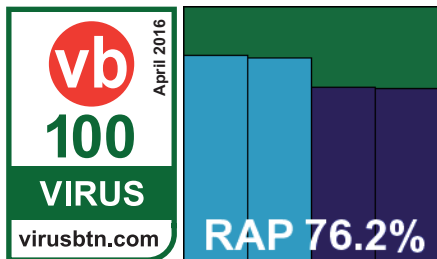
we predicted some dropping off in detection rates from the superb heights we were used to. However, our prediction has repeatedly been proved wrong over the course of the last few tests, as the product continues to impress with its breadth of coverage. This month's performance was very strong once again with excellent detection rates in the RAP sets and a pleasingly low system speed impact. The core sets presented no difficulties, and *G Data* earns a VB100 award with another excellent showing.

Inca nProtect AVS V4.0

Main version: 2016.02.17.01
 Update versions: 4.0.0.10010, 2016.03.09(1),
 2016.03.17(1), 2016.03.23(1)
 Last 6 tests: 2 passed, 0 failed, 4 no entry
 Last 12 tests: 2 passed, 0 failed, 10 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

A fairly new name on our testing roster, *Inca* has already notched up a pass on its first attempt at VB100 certification, and returns this



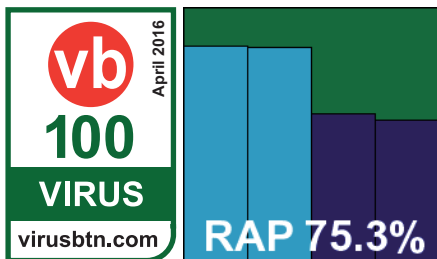
month for a second try. As with so many others, the product uses the *Bitdefender* engine, which as usual provided some dependable detection scores. Our set of tasks showed a significant slowdown, accompanied by very high use of CPU cycles, but the certification sets were nicely handled and a VB100 award is merited.

K7 Total Security

Main version: 15.1.0.288
 Update versions: 9.213.18774, 15.1.0.289/9.214.18951,
 9.214.19004, 9.218.19067
 Last 6 tests: 5 passed, 0 failed, 1 no entry
 Last 12 tests: 9 passed, 0 failed, 3 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

K7's 'Total' solution has been putting in some reliably classy performances in our comparatives over the last few years, with



stability rarely challenged even by our most high-pressure tests. This month we saw another solid and dependable performance, with decent detection scores, very low resource use, and a fair but not excessive hit on our set of

tasks. Good work in the certification sets easily earns *K7* another VB100 award.

Kaspersky Internet Security

Main version: 16.0.1.445
 Update versions: 16.0.1.445, 16.0.1.445(b), 16.0.1.445
 Last 6 tests: 4 passed, 0 failed, 2 no entry
 Last 12 tests: 9 passed, 0 failed, 3 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

There was just a single product from *Kaspersky Lab* this month, for a change. The *Internet Security* suite is a regular in our tests, with some good history, and this month it put in its usual strong showing. Stability was shaken only by a single incident where the interface locked up for ten minutes or so, but managed to straighten itself out without intervention. RAP data is absent once again. The core sets were cleanly dealt with, and a VB100 award is earned by *Kaspersky*.

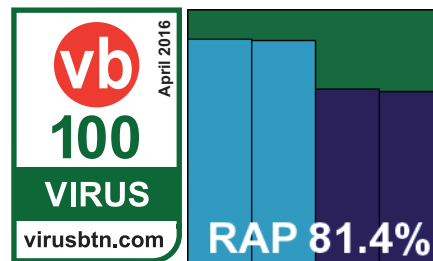


Lavasoft Ad-Aware Free Antivirus +

Main version: 11.10.767.8917
 Update versions: N/A
 Last 6 tests: 3 passed, 0 failed, 3 no entry
 Last 12 tests: 6 passed, 0 failed, 6 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Lavasoft's iconic *Ad-Aware* brand is represented by two versions this month, starting off with the free edition. It had no stability



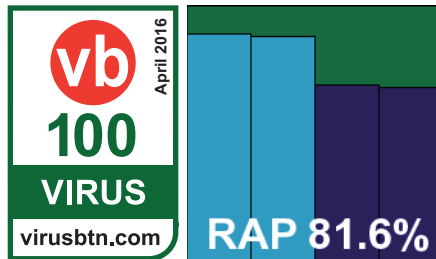
problems at all and scored well in our detection tests, helped by that ever-present *Bitdefender* engine. Performance measures were once again a bit odd, with our set of tasks held up by regular pauses waiting for some input – during this time the local system was largely idle, hence the very low average CPU usage. This does not affect certification of course, which was comfortably earned after a clean run through the certification tests.

Lavasoft Ad-Aware Pro Security

Main version: 11.10.767.8917
 Update versions: N/A
 Last 6 tests: 1 passed, 0 failed, 5 no entry
 Last 12 tests: 1 passed, 0 failed, 11 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

The 'Pro' version of *Ad-Aware* has a similar look and feel to the free edition, with a slight tweak to the colour scheme to differentiate the two and a few extras thrown in under the hood. It put in a similar performance, with solid stability, strong detection, some issues with our set of tasks but no problems in the certification sets, earning *Lavasoft* another VB100 award this month.

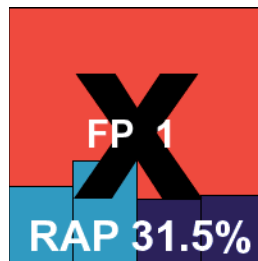


Maya PremiumIS

Main version: 2.0.88.147
 Update versions: 2.0.88.147, 2.0.89.148, 2.0.89.148
 Last 6 tests: 0 passed, 2 failed, 4 no entry
 Last 12 tests: 0 passed, 4 failed, 8 no entry

ItW on demand: 21.22% **ItW on access:** N/A
False positives: 1 **Stability:** Buggy

Maya's products have made it into our reports on a couple of occasions so far, with several additional submissions having been discarded from other tests long before the final testing phases thanks to a number of stability problems. This month these problems raised their heads once more, with several crashes and freezes and, most significantly, no luck whatsoever in getting the on-access component to work. On-demand detection was rather feeble, and with no on-access detection and a false positive in the clean sets to boot, we can only conclude that *Maya* still has some way to go before it reaches the required standard for VB100 certification.



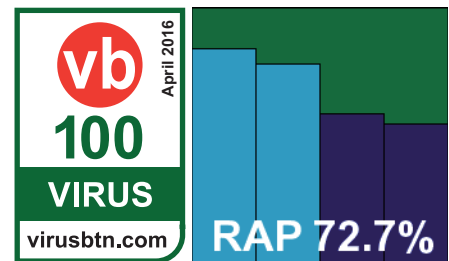
NANO Antivirus Pro

Main version: 1.0.14.71740
 Update versions: 0.14.24.6969,
 1.0.18.72213/0.14.25.7107, 0.44.25.7145, 1.0.18.72737
 Pro/0.14.25.7186

Last 6 tests: 1 passed, 1 failed, 4 no entry
 Last 12 tests: 1 passed, 1 failed, 10 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

NANO has impressed over the last few tests with a steady trend of improvement across the board, and this month it did well



once again. Stability was impeccable, system impact quite acceptable, and detection pretty decent, including flawless coverage of the WildList sets. The clean sets have been a bit of a problem in previous tests, but this month all was clear there too. Thus, just a short time after we first started looking at this all-new product, *NANO* should be very proud to claim its first VB100 certification.

Panda Internet Security 2016

Main version: 16.0.2
 Update versions: 16.1.0
 Last 6 tests: 2 passed, 0 failed, 4 no entry
 Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

A fairly regular participant in our tests over the last few years, *Panda* has been quietly building up a decent string of passes. The heavily cloud-dependent product scored pretty well in the online parts of the RAP test, with the offline parts of the test not compatible with the product's requirements. The product showed minimal memory usage, not too much CPU usage, and our set of tasks was not too heavily delayed. The certification sets were cleanly dealt with, and another VB100 award is earned by *Panda*.



PC Pitstop PC Matic Home Security

Main version: 1.0.0.60

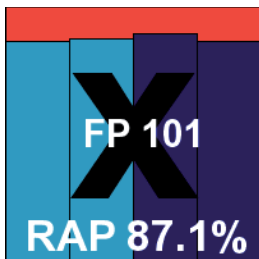
Update versions: N/A

Last 6 tests: 0 passed, 3 failed, 3 no entry

Last 12 tests: 1 passed, 5 failed, 6 no entry

ItW on demand: 88.25% **ItW on access:** 62.53%
False positives: 101 **Stability:** Fair

PC Pitstop's fairly unusual combination of whitelisting alongside a 'traditional' malware detection engine has proved pretty strong at flagging up malware over the last few years, balanced as one would expect with a rather higher than average rate of false positives. There were some false positives once again this month, although this still only represented 0.013% of our full clean sets, so they are likely to be fairly rare in the real world. The detection rate was strong and consistent across all sets, even without access to the Internet. Similar scores were recorded in the WildList sets, although somewhat lower than expected, which we suspect is due to an as-yet undiagnosed problem with fitting the product into our testing system – something we hope to resolve shortly, along with a handful of freezing issues we noted during testing. No VB100 certification is awarded to *PC Pitstop* this month.



Qihoo 360

Main version: 5.0.0.6221

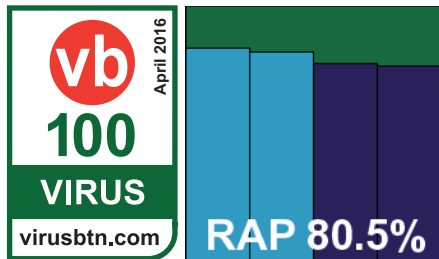
Update versions: N/A

Last 6 tests: 2 passed, 0 failed, 4 no entry

Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Qihoo's 360 brand continues to grow in stature around the world, and has a strong history in our tests of late. Its (optional) multi-engine approach has worked well, with pretty light system footprint by this month's standards. Detection rates



were also good, and with no stability problems or issues in the certification sets, a VB100 award is comfortably earned.

Quick Heal Total Security

Main version: X

Update versions: 16.00/9.0.24.4 64Bit

Last 6 tests: 4 passed, 0 failed, 2 no entry

Last 12 tests: 6 passed, 0 failed, 6 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

Our second product from *Quick Heal* this month has a very similar feel to its business cousin, producing similar results too. Stability was good, with only a very minor issue noted involving losing touch with our lab's Internet connection. Detection was good too, again there are no offline RAP scores thanks to issues with the submission. Performance measures showed fairly high resource usage and impact on our set of tasks, but nothing too severe. The core sets were covered nicely, and another VB100 award is earned by *Quick Heal*.



REVE Antivirus

Main version: 1.2.0.6

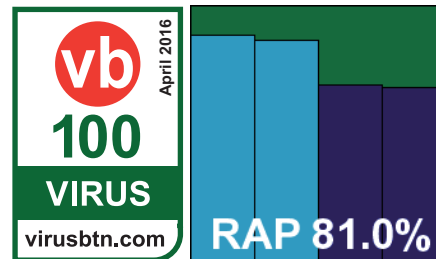
Update versions: N/A

Last 6 tests: 1 passed, 0 failed, 5 no entry

Last 12 tests: 1 passed, 0 failed, 11 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

Another newcomer to our tests, *REVE* is based in India and, like many companies these days, incorporates the *Bitdefender* engine into its product. There were some stability issues, including updating problems, crashes during scans, and failures to start tasks properly, but for the most part things ran smoothly. Detection was strong as one would expect, and slowdown and resource usage were minimal. With the certification sets dealt with easily, a VB100 award goes to *REVE* for the first time.

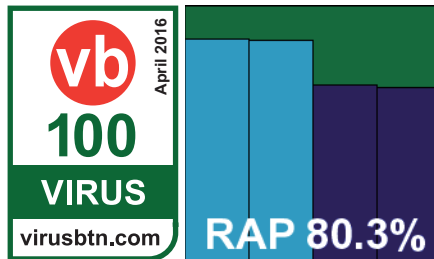


Tencent PC Manager

Main version: 11.2.26139.901
 Update versions: 11.2.26147.901, 11.2.26152.901,
 11.2.26157.901
 Last 6 tests: 4 passed, 0 failed, 2 no entry
 Last 12 tests: 8 passed, 0 failed, 4 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Solid

Tencent's PC Manager managed another very stable and reliable performance this month, with no wobbles



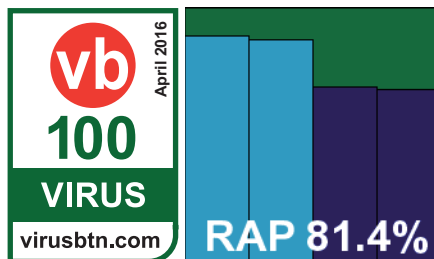
noted and pretty reasonable impact on system speed. Detection was decent, close to that of others using the same *Bitdefender* engine, and the core sets presented no difficulties, earning *Tencent* another VB100 award.

ThreatTrack VIPRE Internet Security Pro 2016

Main version: 9.3.4.3
 Update versions: 3.9.2671.2-3.0/47274/7.64536,
 47750/7.64784, 47946/7.64854, 48084/7.64915
 Last 6 tests: 2 passed, 0 failed, 4 no entry
 Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

ThreatTrack's VIPRE was something of a revolution when it first emerged under then-owner *Sunbelt Software*, as one of the first completely new



anti-malware engines to come to the market in many years. With the engine now retired in favour of that ever-popular *Bitdefender* one, *VIPRE* carries on. This month's testing saw reasonable impact on the system, with the expected decent detection rates and just a single stability issue,

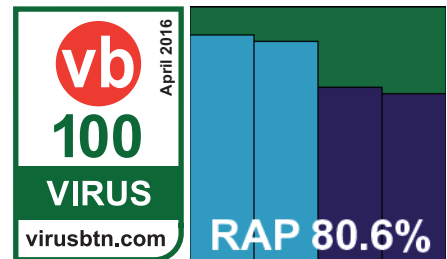
a freeze during installation in one round of tests. The certification sets were covered properly, and a VB100 award goes to *ThreatTrack*.

Total Defense Internet Security

Main version: 9.0.0.422
 Update versions: 3.0.2.1015/2016.2.17.9, 2016.3.9.13,
 2016.3.18.7, 2016.3.23.11
 Last 6 tests: 3 passed, 0 failed, 3 no entry
 Last 12 tests: 5 passed, 0 failed, 7 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Stable

Total Defense is another name with a long and complicated history in our tests, and another product that is now built around the *Bitdefender*



engine. This month we saw impressively low performance impact scores alongside the unsurprisingly decent detection levels. Stability was also decent, with just a few big scans crashing out, and a clean run over the core sets, earns *Total Defense* another VB100 award.

UtilTool Antivirus

Main version: 3.3.96
 Update versions: 3.64.0/5.23, 5.24, 5.25, 5.25
 Last 6 tests: 1 passed, 0 failed, 5 no entry
 Last 12 tests: 1 passed, 0 failed, 11 no entry

ItW on demand: 100.00% **ItW on access:** 100.00%
False positives: 0 **Stability:** Fair

The final product to cover this month will be familiar to some regular readers, having been a regular participant up until a couple of years ago. At that point it used the now-defunct *VirusBuster* engine, which has since been replaced by that of *Sophos* in an otherwise fairly similar-looking product. We saw a number of stability issues, mainly scans getting stuck, and had some trouble getting enough detection data to be usable. In the end we gave up, so no detection numbers are listed. Resource usage was



fairly low, but our set of tasks was quite seriously slowed down. The certification sets mercifully did complete without problems, well enough to earn *UtilTool* a VB100 award on its return to the fold.

CONCLUSIONS

This test report has been somewhat abbreviated to help clear a backlog, but hopefully includes enough detail to give some guidance as to which products are performing well and which need improvement. We saw another good rate of passes in this comparative, with a few products clearly falling short of the required standard, a couple hit by bouts of false positives upsetting otherwise good scores, and a couple very near but not quite there. For the most part though, we saw impressive performances, with speed measures particularly encouraging on this now well-established platform.

The RAP scores were a little below the levels we normally see, which may be due to some adjustments to the way the sets are compiled, tweaking our methods for determining the significance of samples at selection time. In the very near future we hope to move this entire process over to the AMTSO RTTL (Real-Time Threat List), which should reduce the workload involved in determining how widespread a given sample is, as well as making it significantly more accurate. This will not be in the next test, which should closely follow the publication of this report, but should we hope be ready in time for our August comparative on *Windows 10*.

Technical details

All tests were run on identical systems with AMD A6-3670K Quad Core 2.7GHz processors, 4GB DUAL DDR3 1600MHz RAM, dual 500GB and 1TB SATA hard drives and gigabit networking, running *Microsoft Windows 8.1 64-bit Professional Edition*.

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Certification tests - business products	On demand	On access	Clean sets		VB100
	Standard WildList	Standard WildList	FP	Warnings	
Avira Pro	100.00%	100.00%			
ESTsoft ALYac	100.00%	100.00%			
Fortinet FortiClient	100.00%	100.00%			
Hammock AssetView	100.00%	100.00%		2	
Ikarus anti.virus	100.00%	100.00%	16		X
iSheriff Security from the Cloud	100.00%	100.00%	161		X
Microsoft System Center Endpoint Protection	100.00%	100.00%			
MSecure DenyWall Antivirus	100.00%	2.75%	47		X
Quick Heal Seqrite Endpoint Security	100.00%	100.00%			
TrustPort Antivirus 2015	100.00%	100.00%		3	

Product information - business products	Install time (m)*	Reboot required	Fully 64-bit	Third-party engine technology †	Stability score	Stability rating
Avira Pro	3:30				0	Solid
ESTsoft ALYac	21:15		√	Bitdefender	6	<i>Fair</i>
Fortinet FortiClient	3:15				0	Solid
Hammock AssetView	N/A			Kaspersky	0	Solid
Ikarus anti.virus	1:15				5	<i>Fair</i>
iSheriff Security from the Cloud	4:30			Bitdefender	5	<i>Fair</i>
Microsoft System Center Endpoint Protection	2:30				0	Solid
MSecure DenyWall Antivirus	2:00			‡	10	<i>Fair</i>
Quick Heal Seqrite Endpoint Security	23:30		√		0	Solid
TrustPort Antivirus 2015	7:15				1	<i>Stable</i>

0 = Solid 0.1 – 4.9 = Stable 5 – 14.9 = Fair 15 – 29.9 = Buggy 30+ = Flaky

* Install time includes initial updates and time to enable on-access protection (assuming reasonable typing speed and familiarity with product operation)

† Only records presence of third-party scanning engines, most products will include additional in-house technologies

‡ Identity of third-party engine withheld at vendor's request

Archive scanning - business products		ACE	CAB	EXE-RAR	EXE-ZIP	JAR	LZH	RAR	TGZ	ZIP	7z	TBZ2	ZIPX	EXT*
Avira Pro	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√
ESTsoft ALYac	OD	√	√	X	X	X/1	X	√	X	X/1	√	X	X	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Fortinet FortiClient	OD	√	√	√	√	√	√	√	6	√	√	√	√	√
	OA	√	X	√	√	√	X	X	X	X	X	√	√	√
Hammock AssetView	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
IKARUS anti.virus	OD	√	√	√	2	√	√	√	√	√	√	√	√	√
	OA	√	√	√	2	√	√	√	√	√	√	√	√	√
iSheriff Security	OD	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	√
	OA	X	X	X	X	X/1	X	X	X	X/1	X	X	X/1	√
Microsoft System Center	OD	√	√	√	√	X	X	√	√	X	√	√	X	X
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
MSecure DenyWall	OD	1	1	1	1	X	2	1	1	1	1	1	1	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	X
Quick Heal Seqrite	OD	2/5	X/5	2	2	3/5	3/6	2/5	X/2	3/5	2/5	X/2	3/5	√
	OA	X	X	X	X	2	X	X	X	2	X	X	2	√
TrustPort Antivirus 2015	OD	√	√	√	√	X	X	√	√	X	√	√	X	√
	OA	X/√	X/√	7/√	8/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	√

Key:

√ - Detection of EICAR test file up to ten levels of nesting

X - No detection of EICAR test file

X/√ - default settings/all files








(Please refer to text for full product names.)

1-9 - Detection of EICAR test file up to specified nesting level

If just z-exe detection in ext, then X

*Detection of EICAR test file with randomly chosen file extension

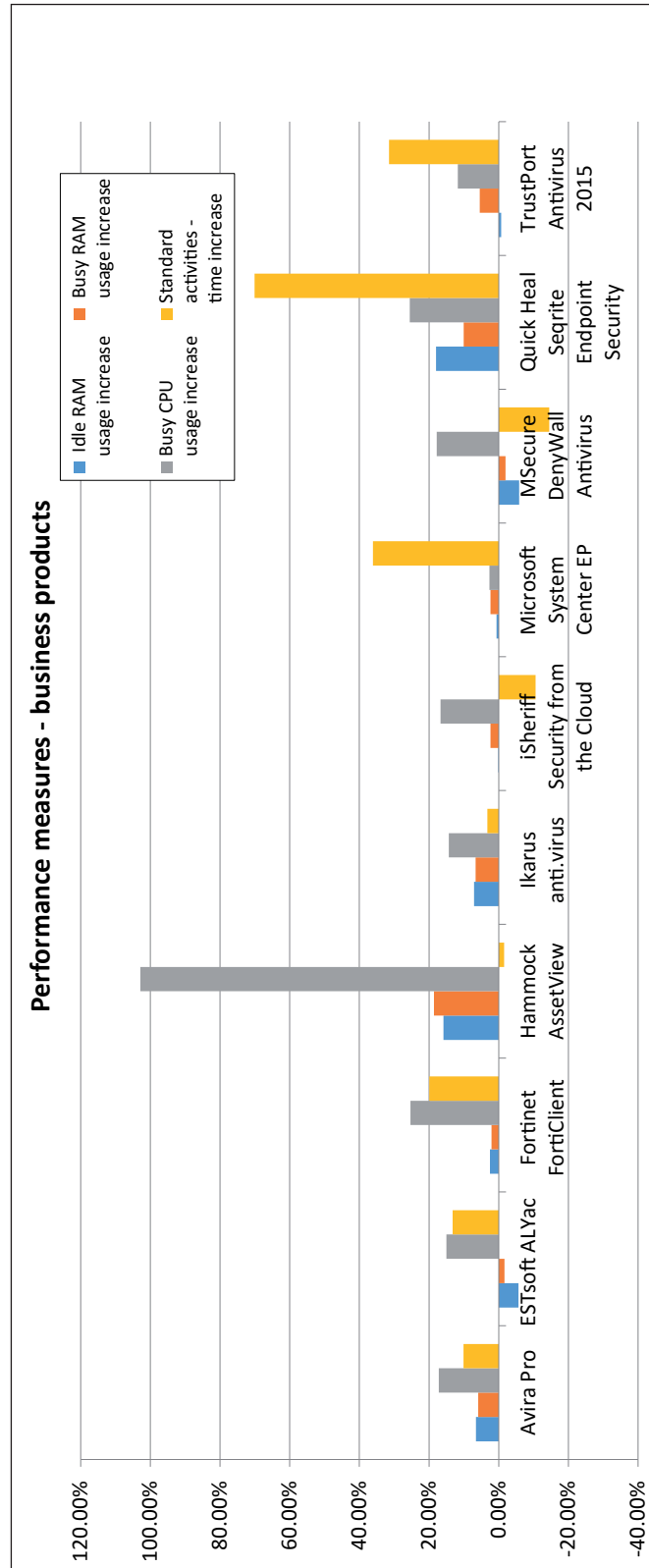
Performance measures - business products	Idle RAM usage increase	Busy RAM usage increase	Busy CPU usage increase	Standard activities - time increase
Avira Pro	6.56%	5.87%	17.21%	10.13%
ESTsoft ALYac	-5.67%	-1.62%	15.01%	13.25%
Fortinet FortiClient	2.52%	2.10%	25.34%	19.94%
Hammock AssetView	15.85%	18.57%	102.86%	-1.57%
Ikarus anti.virus	7.09%	6.65%	14.34%	3.24%
iSheriff Security from the Cloud	0.13%	2.40%	16.69%	-10.56%
Microsoft System Center Endpoint Protection	0.66%	2.38%	2.69%	36.13%
MSecure DenyWall Antivirus	-5.86%	-1.94%	17.78%	-14.49%
Quick Heal Seqrite Endpoint Security	18.01%	10.07%	25.55%	70.11%
TrustPort Antivirus 2015	-0.71%	5.43%	11.74%	31.47%

Reactive and Proactive (RAP) tests - business products	VB100	Reactive		Proactive		Reactive average	Proactive average	Weighted average [‡]
		Set -2*	Set -1*	Set +1 [†]	Set +2 [†]			
Avira Pro		92.6%	93.2%	69.9%	69.0%	92.9%	69.5%	85.1%
ESTsoft ALYac		91.1%	80.7%	68.8%	67.9%	85.9%	68.3%	80.1%
Fortinet FortiClient		93.7%	93.1%	61.5%	57.4%	93.4%	59.5%	82.1%
Hammock AssetView		80.3%	85.1%	82.4%	63.0%	82.7%	72.7%	79.4%
Ikarus anti.virus	X	94.2%	92.2%	67.6%	64.3%	93.2%	65.9%	84.1%
iSheriff Security from the Cloud	X	86.6%	86.7%	67.8%	66.5%	86.6%	67.1%	80.1%
Microsoft System Center Endpoint Protection		83.7%	82.2%	61.4%	61.1%	83.0%	61.2%	75.7%
MSecure DenyWall Antivirus	X	92.1%	90.1%	66.6%	63.3%	91.1%	64.9%	82.4%
Quick Heal Seqrite Endpoint Security		91.6%	87.9%	N/A	N/A	89.8%	N/A	N/A
TrustPort Antivirus 2015		97.2%	97.3%	71.8%	69.9%	97.2%	70.8%	88.4%

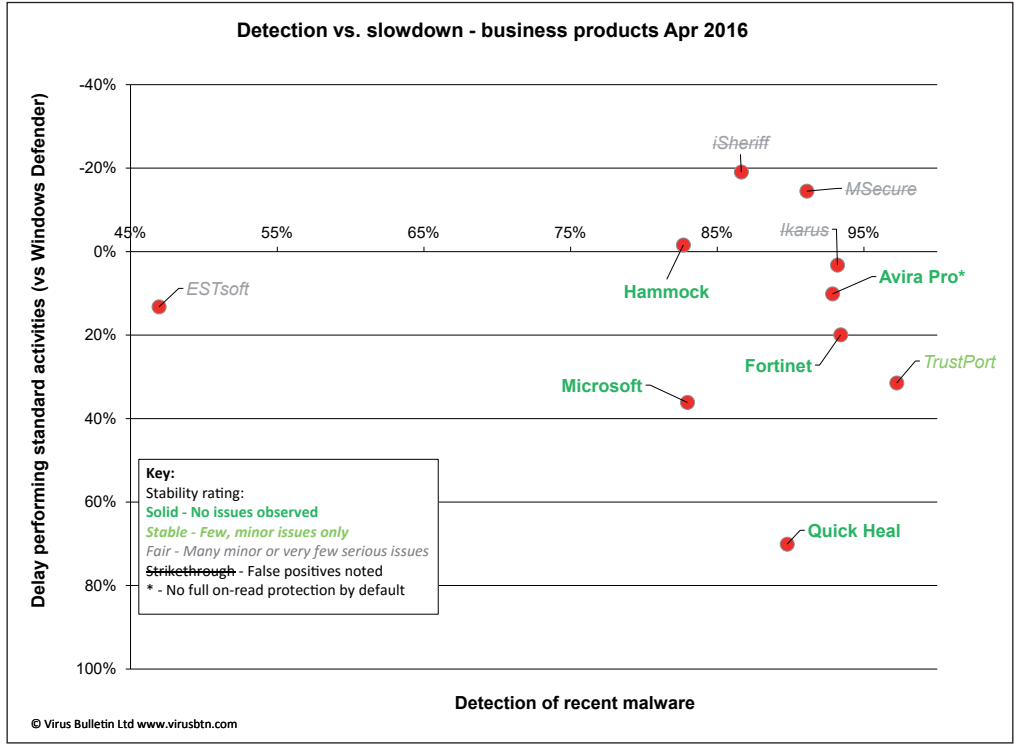
*Set -1 = Samples discovered 1 to 5 days before testing; Set -2 = Samples discovered 6 to 10 days before testing.

†Set +1 = Samples discovered 1 to 5 days after updates frozen; Set +2 = Samples discovered 6 to 10 days after updates frozen.

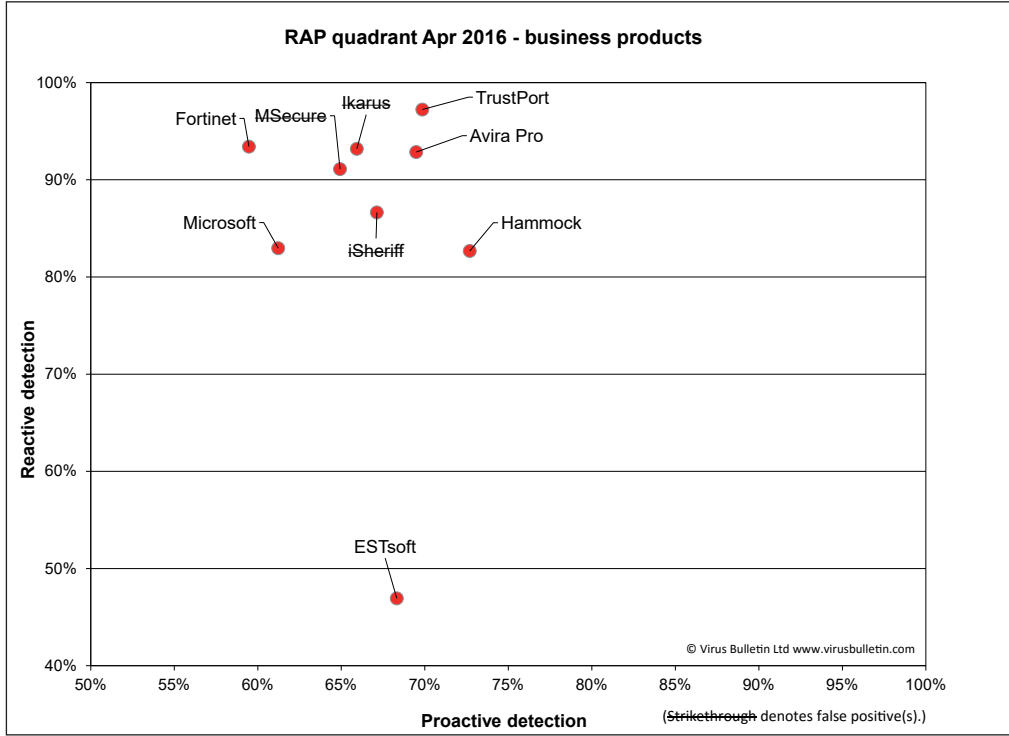
‡ Weighted average gives equal emphasis to the two reactive weeks and the whole proactive part.



(Please refer to text for full product names.)
















(Please refer to text for full product names.)



(Please refer to text for full product names.)

Certification tests - consumer products	On demand	On access	Clean sets		VB100
	Standard WildList	Standard WildList	FP	Warnings	
ALLIT Service Zillya! Internet Security	76.17%	75.03%	48	32	X
Avast Free Antivirus	100.00%	100.00%		50	
AVG AntiVirus	100.00%	100.00%			
Avira Free Antivirus	100.00%	100.00%			
Bitdefender Antivirus Plus 2016	100.00%	100.00%			
BullGuard Antivirus	100.00%	100.00%			
Checkpoint Zone Alarm Extreme Security	100.00%	100.00%		2	
CompuClever Antivirus Plus	100.00%	100.00%			
CYREN Command Anti-Malware	100.00%	100.00%			
Emsisoft Anti-Malware	100.00%	100.00%			
eScan Internet Security Suite for Windows	100.00%	100.00%			
ESET NOD32 Antivirus	100.00%	100.00%			
Essentware PCKeeper Antivirus PRO	100.00%	100.00%			
G Data Antivirus	100.00%	100.00%			
Inca nProtect AVS V4.0	100.00%	100.00%			

Certification tests - consumer products contd.	On demand	On access	Clean sets		VB100
	Standard WildList	Standard WildList	FP	Warnings	
K7 Total Security	100.00%	100.00%		1	
Kaspersky Internet Security	100.00%	100.00%		2	
Lavasoft Ad-Aware Free Antivirus +	100.00%	100.00%			
Lavasoft Ad-Aware Pro Security	100.00%	100.00%			
Maya PremiumIS	21.22%	N/A	1	1	X
NANO Antivirus Pro	100.00%	100.00%			
Panda Internet Security 2016	100.00%	100.00%			
PC Pitstop PC Matic Home Security	88.25%	62.53%	101		X
Qihoo 360	100.00%	100.00%			
Quick Heal Total Security	100.00%	100.00%			
REVE Antivirus	100.00%	100.00%			
Tencent PC Manager	100.00%	100.00%			
ThreatTrack VIPRE Internet Security Pro 2016	100.00%	100.00%			
Total Defense Internet Security	100.00%	100.00%			
UtilTool Antivirus	100.00%	100.00%			

Product information - consumer products	Install time (m)*	Reboot required	Fully 64-bit	Third-party engine technology †	Stability score	Stability rating
ALLIT Service Zillya! Internet Security	5:15	√			7	<i>Fair</i>
Avast Free Antivirus	2:00		√		0	Solid
AVG AntiVirus	3:00				0	Solid
Avira Free Antivirus	3:15				0	Solid
Bitdefender Antivirus Plus 2016	5:15		√		0	Solid
BullGuard Antivirus	7:00		√	Bitdefender	0	Solid
Check Point Zone Alarm Extreme Security	17:30			Kaspersky	4	<i>Stable</i>
CompuClever Antivirus Plus	12:00	√	√	Bitdefender	0	Solid
CYREN Command Anti-Malware	2:30		√		3	<i>Stable</i>
Emsisoft Anti-Malware	8:00	√	√	Bitdefender	5	<i>Fair</i>
eScan Internet Security Suite for Windows	13:00	√		Bitdefender	5	<i>Fair</i>
ESET NOD32 Antivirus	5:45	√	√		1	<i>Stable</i>
Essentware PCKeeper Antivirus PRO	10:30		√	Avira	0	Solid
G Data Antivirus	6:15	√		Bitdefender	0	Solid
Inca nProtect AVS	7:15			Bitdefender	5	<i>Fair</i>
K7 Total Security	3:45				0	Solid
Kaspersky Internet Security	8:45				1	<i>Stable</i>
Lavasoft Ad-Aware Free Antivirus +	10:00	√		Bitdefender	0	Solid
Lavasoft Ad-Aware Pro Security	9:45	√	√	Bitdefender	0	Solid
Maya PremiumIS	2:00	√			20	<i>Buggy</i>
NANO Antivirus Pro	6:30		√		3	<i>Stable</i>
Panda Internet Security 2016	1:30				6	<i>Fair</i>
PC Pitstop PC Matic Home Security	3:30				10	<i>Fair</i>
Qihoo 360	3:00		√	Bitdefender	0	Solid
Quick Heal Total Security	25:45		√		1	<i>Stable</i>
REVE Antivirus	5:00		√	Bitdefender	7	<i>Fair</i>
Tencent PC Manager	11:30			Bitdefender	0	Solid
ThreatTrack VIPRE Internet Security Pro 2016	4:00			Bitdefender	2	<i>Stable</i>
Total Defense Internet Security	10:00		√	Bitdefender	4	<i>Stable</i>
UtilTool Antivirus	1:30			Sophos	5	<i>Fair</i>

0 = Solid 0.1 – 4.9 = Stable 5 – 14.9 = Fair 15 – 29.9 = Buggy 30+ = Flaky

* Install time includes initial updates and time to enable on-access protection (assuming reasonable typing speed and familiarity with product operation)

† Only records presence of third-party scanning engines, most products will include additional in-house technologies

Archive scanning - consumer products		ACE	CAB	EXE-RAR	EXE-ZIP	JAR	LZH	RAR	TGZ	ZIP	7z	TBZ2	ZIPX	EXT*
ALLIT Service Zillya!	OD	√	√	√	1	√	X	√	X	√	√	√	X	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Avast Free	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X/√	X/√	1/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√
AVG AntiVirus	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X	X	7	8	X	X	X	X	X	X	X	X	√
Avira Free Antivirus	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√
Bitdefender Antivirus	OD	√	√	7	7	√	√	√	7	√	√	7	√	√
	OA	X/2	X/2	X/1	X/1	1/2	X/3	X/2	X/1	1/2	X/2	X/1	1/2	√
BullGuard Antivirus	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X	X	X/√	X/√	1	X	X	X	1	X	X	1	√
Check Point ZoneAlarm	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X	X	1	1	X	X	X	X	X	X	X	X	√
CompuClever	OD	√	√	7	7	√	√	√	7	√	√	7	√	√
	OA	X/2	X/2	X/1	X/1	1/2	X/3	X/2	X/1	1/2	X/2	X/1	1/2	√
CYREN Command	OD	5	5	5	X	X	X	5	X	3	X	3	X	√
	OA	2/4	2/4	2/4	X	X	X	2/4	X	X	1	1/2	X	√
Emsisoft Anti-Malware	OD	√	√	8	8	√	√	√	8	√	√	8	√	√
	OA	X	X	X	X	1	X	X	X	1	X	X	X	X
eScan Internet Security	OD	X/√	X/√	5/√	X	X	X	X/√	X	X	X/√	X/√	X	√
	OA	X/√	X/√	X/√	X	X	X	X/√	X	X	X/√	X/√	X	√
ESET NOD32	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Essentware PCKeeper	OD	√	√	5	5	7	9	√	7	7	8	6	9	X
	OA	X/1	X/1	X/1	X/1	X/1	X/2	X/1	X	X/1	X/1	X	X/1	√
G Data Antivirus	OD	√	√	√	√	√	√	√	8	√	√	8	√	√
	OA	3/√	2/√	√	√	2/√	3/√	3/√	1/8	2/√	2/√	1/8	2/√	√
Inca nProtect AVS	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X	X	√	√	√	X	X	√	X	X	X	√	√

Key:

√ - Detection of EICAR test file up to ten levels of nesting

X - No detection of EICAR test file

X/√ - default settings/all files

(Please refer to text for full product names.)

1-9 - Detection of EICAR test file up to specified nesting level

If just z-exe detection in ext, then X

* Detection of EICAR test file with randomly chosen file extension

Archive scanning - consumer products contd.		ACE	CAB	EXE-RAR	EXE-ZIP	JAR	LZH	RAR	TGZ	ZIP	7z	TBZ2	ZIPX	EXT*
K7 Total Security	OD	1	1	X	X	1	X	1	X	1	1	X	1	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Kaspersky I.S.	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	X/√	X/√	1/√	1/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	X/√	√
Lavasoft Ad-Aware Free	OD	√	√	8	8	√	√	√	8	√	√	8	√	√
	OA	X/√	X/√	X/8	X/8	X/√	X/√	X/√	X/8	X/√	X/√	X/8	X/√	√
Lavasoft Ad-Aware Pro	OD	√	√	8	8	√	√	√	8	√	√	8	√	√
	OA	X/√	X/√	X/8	X/8	1/√	X/√	X/√	X/8	1/√	X/√	X/8	1/√	√
Maya PremiumIS	OD	√	√	X	X	√	X	√	X	√	X	X	√	√
	OA	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex
NANO Antivirus Pro	OD	8/√	8/√	4/√	4/√	8/√	X	8/√	4/√	8/√	8/√	4/√	8/√	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Panda Internet Security	OD	√	√	√	√	√	√	√	√	√	√	√	√	√
	OA	√	√	√	√	√	√	√	√	√	X	√	X	X
PC Pitstop PC Matic	OD	X	X	√	√	X	X	X	X	X	X	X	X	X
	OA	X	X	8	5	X	X	X	X	X	X	X	X	√
Qihoo 360	OD	X	X	√	√	X	X	X	√	X	√	3	1	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	X
Quick Heal Total Security	OD	2/5	X/5	2	2	3/5	3/6	2/5	X/2	3/5	2/5	X/2	3/5	√
	OA	X	X	X	X	2	X	X	X	2	X	X	2	√
REVE Antivirus	OD	√	√	7	7	√	√	√	7	√	√	6	√	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Tencent PC Manager	OD	√	√	7	7	√	√	√	7	√	√	7	√	√
	OA	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex	Ex/√
ThreatTrack VIPRE	OD	√	√	8	8	√	√	√	8	√	√	8	√	√
	OA	X	X	X	X	X	X	X	X	X	X	X	X	√
Total Defense IS	OD	√	√	5	5	√	√	√	5	√	√	5	√	√
	OA	√	√	5	5	√	√	√	5	√	√	5	√	√
UtilTool Antivirus	OD	√	√	7	7	√	√	√	7	√	√	7	√	√
	OA	3/5	2/5	5	5	X/5	X/6	3/5	X/5	2/5	2/5	2/5	X/5	X/√

Key:

√ - Detection of EICAR test file up to ten levels of nesting

X - No detection of EICAR test file

X/√ - default settings/all files

(Please refer to text for full product names.)














Ex - Works on execute

1-9 - Detection of EICAR test file up to specified nesting level

If just z-exe detection in ext, then X

*Detection of EICAR test file with randomly chosen file extension













Performance measures - consumer products	Idle RAM usage increase	Busy RAM usage increase	Busy CPU usage increase	Standard activities - time increase
ALLIT Service Zillya! Internet Security	7.46%	10.40%	3.15%	3.40%
Avast Free Antivirus	6.30%	-4.28%	-77.72%	605.91%
AVG AntiVirus	6.80%	3.87%	-20.51%	68.91%
Avira Free Antivirus	6.58%	2.20%	24.44%	7.50%
Bitdefender Antivirus Plus 2016	8.79%	8.69%	-7.15%	15.38%
BullGuard Antivirus	5.24%	8.01%	8.50%	1.77%
Check Point Zone Alarm Extreme Security	9.62%	8.65%	-4.11%	80.46%
CompuClever Antivirus Plus	7.45%	7.99%	1.47%	4.31%
CYREN Command Anti-Malware	-0.38%	-3.16%	32.24%	137.71%
Emsisoft Anti-Malware	-4.04%	0.50%	10.85%	15.31%
eScan Internet Security Suite for Windows	2.13%	2.53%	3.85%	47.42%
ESET NOD32 Antivirus	4.04%	5.17%	0.76%	32.20%
Essentware PCKeeper Antivirus PRO	30.03%	31.93%	-4.69%	34.29%
G Data Antivirus	4.61%	3.63%	24.51%	4.50%
Inca nProtect AVS V4.0	2.40%	0.66%	265.10%	108.95%
K7 Total Security	-0.97%	1.55%	-6.92%	42.56%
Kaspersky Internet Security	5.16%	6.62%	22.02%	55.65%
Lavasoft Ad-Aware Free Antivirus +	10.38%	3.63%	-92.44%	1934.82%
Lavasoft Ad-Aware Pro Security	9.94%	3.23%	-92.10%	2016.34%
Maya PremiumIS	N/A	N/A	N/A	N/A
NANO Antivirus Pro	8.68%	7.39%	20.88%	35.37%
Panda Internet Security 2016	0.44%	-1.26%	34.37%	40.67%
PC Pitstop PC Matic Home Security	12.85%	7.20%	14.38%	51.25%
Qihoo 360	3.00%	5.94%	21.92%	-1.15%
Quick Heal Total Security	24.86%	12.49%	26.46%	89.46%
REVE Antivirus	0.60%	3.44%	5.64%	-5.00%
Tencent PC Manager	4.79%	5.69%	2.96%	28.75%
ThreatTrack VIPRE Internet Security Pro 2016	4.43%	7.06%	14.66%	27.59%
Total Defense Internet Security	5.58%	6.31%	0.48%	3.09%
UtilTool Antivirus	4.95%	4.16%	11.04%	156.58%

Reactive and Proactive (RAP) tests - consumer products	VB100	Reactive		Proactive		Reactive average	Proactive average	Weighted average [‡]
		Set -2 [*]	Set -1 [*]	Set +1 [†]	Set +2 [†]			
ALLIT Service Zillya! Internet Security	X	56.0%	56.9%	44.2%	40.8%	56.4%	42.5%	51.8%
Avast Free Antivirus		91.8%	90.5%	63.6%	61.2%	91.2%	62.4%	81.6%
AVG AntiVirus		93.9%	94.3%	62.0%	61.0%	94.1%	61.5%	83.2%
Avira Free Antivirus		92.6%	93.2%	69.9%	69.0%	92.9%	69.5%	85.1%
Bitdefender Antivirus Plus 2016		88.1%	86.8%	68.9%	67.9%	87.4%	68.4%	81.1%
BullGuard Antivirus		87.2%	86.4%	69.0%	67.9%	86.8%	68.4%	80.7%
Check Point Zone Alarm Extreme Security		83.2%	82.4%	65.7%	61.5%	82.8%	63.6%	76.4%
CompuClever Antivirus Plus		88.6%	86.8%	59.2%	56.7%	87.7%	58.0%	77.8%
CYREN Command Anti-Malware		94.3%	91.4%	55.5%	53.2%	92.9%	54.3%	80.0%
Emsisoft Anti-Malware		89.8%	87.6%	68.5%	67.7%	88.7%	68.1%	81.8%
eScan Internet Security Suite for Windows		87.4%	86.4%	68.1%	67.6%	86.9%	67.8%	80.5%
ESET NOD32 Antivirus		93.0%	93.6%	68.4%	65.7%	93.3%	67.1%	84.6%
Essentware PCKeeper Antivirus PRO		92.3%	93.8%	60.9%	62.0%	93.0%	61.5%	82.5%
G Data Antivirus		96.4%	96.6%	69.9%	68.5%	96.5%	69.2%	87.4%

*Set -1 = Samples discovered 1 to 5 days before testing; Set -2 = Samples discovered 6 to 10 days before testing.

†Set +1 = Samples discovered 1 to 5 days after updates frozen; Set +2 = Samples discovered 6 to 10 days after updates frozen.

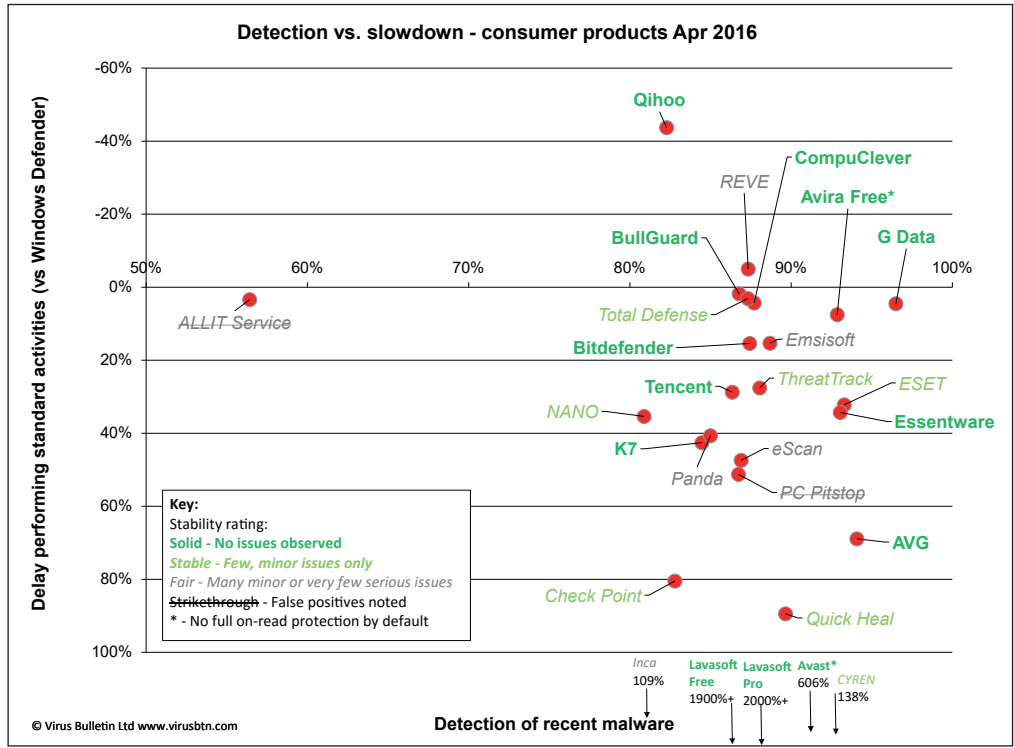
‡Weighted average gives equal emphasis to the two reactive weeks and the whole proactive part.

Reactive and Proactive (RAP) tests - consumer products contd.	VB100	Reactive		Proactive		Reactive average	Proactive average	Weighted average [‡]
		Set -2 [*]	Set -1 [*]	Set +1 [†]	Set +2 [†]			
Inca nProtect AVS V4.0		81.0%	79.7%	68.4%	67.7%	80.3%	68.0%	76.2%
K7 Total Security		84.7%	84.2%	58.3%	55.6%	84.5%	57.0%	75.3%
Lavasoft Ad-Aware Free Antivirus +		88.2%	87.6%	68.9%	67.9%	87.9%	68.4%	81.4%
Lavasoft Ad-Aware Pro Security		88.5%	87.8%	69.0%	67.9%	88.2%	68.4%	81.6%
Maya PremiumIS	X	29.6%	39.5%	24.9%	26.1%	34.6%	25.5%	31.5%
NANO Antivirus Pro		83.8%	78.0%	58.3%	54.4%	80.9%	56.3%	72.7%
Panda Internet Security 2016		85.4%	84.6%	N/A	N/A	85.0%	N/A	N/A
PC Pitstop PC Matic Home Security	X	86.3%	87.2%	89.3%	86.1%	86.7%	87.7%	87.1%
Qihoo 360		83.0%	81.5%	77.3%	76.4%	82.3%	76.9%	80.5%
Quick Heal Total Security		91.4%	87.9%	N/A	N/A	89.7%	N/A	N/A
REVE Antivirus		88.4%	86.3%	68.9%	67.9%	87.3%	68.4%	81.0%
Tencent PC Manager		86.6%	86.0%	68.7%	67.8%	86.3%	68.3%	80.3%
ThreatTrack VIPRE Internet Security Pro 2016		88.8%	87.3%	68.7%	67.7%	88.0%	68.2%	81.4%
Total Defense Internet Security		88.6%	86.1%	68.4%	65.8%	87.3%	67.1%	80.6%

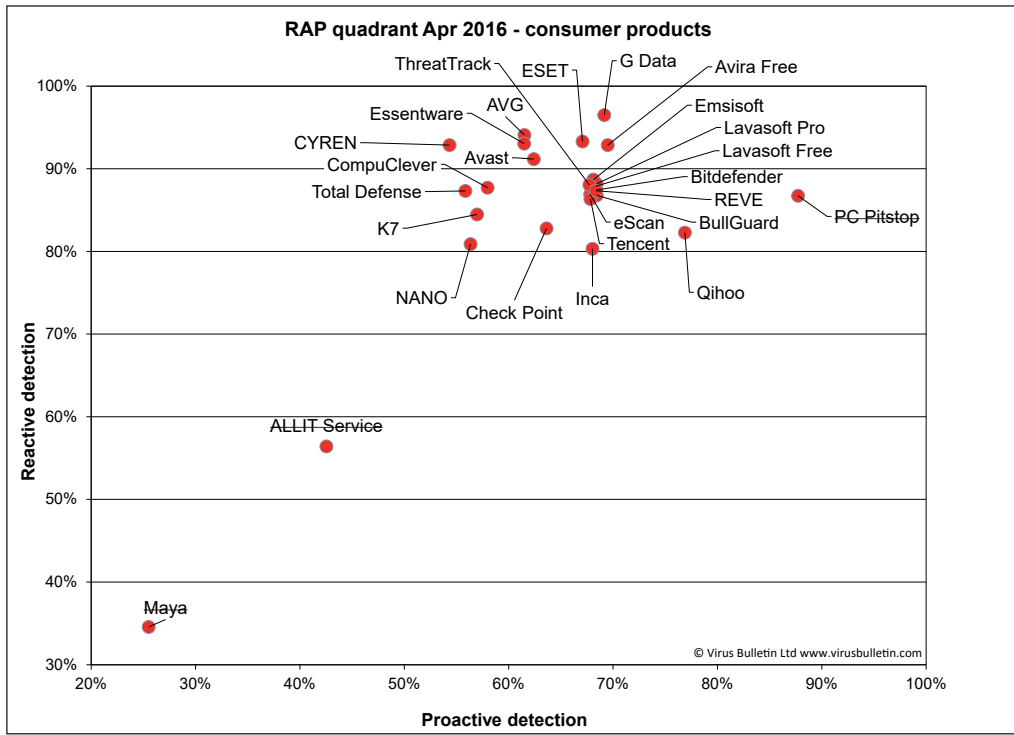
*Set -1 = Samples discovered 1 to 5 days before testing; Set -2 = Samples discovered 6 to 10 days before testing.

†Set +1 = Samples discovered 1 to 5 days after updates frozen; Set +2 = Samples discovered 6 to 10 days after updates frozen.

‡Weighted average gives equal emphasis to the two reactive weeks and the whole proactive part.



(Please refer to text for full product names.)



(Please refer to text for full product names.)