

Independent Tests of Anti-Virus Software



Factsheet Business Test

TEST PERIOD: MARCH – APRIL 2022

LAST REVISION: 16TH MAY 2022

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Introduction

This is a short fact sheet for our Business Main-Test Series¹, containing the results of the Business Malware Protection Test (March) and Business Real-World Protection Test (March-April). The full report, including the Performance Test and product reviews, will be released in July. To be certified in July 2022 as an “Approved Business Product” by AV-Comparatives, the tested products must score at least 90% in the Malware Protection Test, with zero false alarms on common business software, and an FP rate on non-business files below the *Remarkably High* threshold. Additionally, products must score at least 90% in the overall Real-World Protection Test (i.e. over the course of four months), with less than one hundred false alarms on any clean software/websites, and zero false alarms on common business software. Tested products must also avoid major performance issues (impact score must be below 40) and have fixed all reported bugs in order to gain certification.

Tested Products

The following products² were tested under Windows 10 64-bit and are included in this factsheet:

Vendor	Product	Version March	Version April
Acronis	Cyber Protect Cloud with Advanced Security pack	15.0	15.0
Avast	Ultimate Business Security	22.1	22.2
Bitdefender	GravityZone Elite	7.4	7.5
Cisco	Secure Endpoint Essentials	7.5	7.5
CrowdStrike	Falcon Pro	6.34	6.37
Cybereason	Enterprise	21.2	21.2
Elastic	Security	7.16	7.16
ESET	PROTECT Entry with ESET PROTECT Cloud	9.0	9.0
G Data	Endpoint Protection Business	15.1	15.1
K7	On-premises Enterprise Security Advanced	14.2	14.2
Kaspersky	Endpoint Security for Business – Select, with KSC	11.8	11.8
Malwarebytes	EDR	1.2	1.2
Microsoft	Defender Antivirus with Microsoft Endpoint Manager	4.18	4.18
Sophos	Intercept X Advanced	10.8	10.8
Trellix	FireEye Endpoint Security	34.28	34.28
VIPRE	Endpoint Protection Cloud	12.3	12.3
VMware	Carbon Black Cloud Endpoint Standard	3.8	3.8
WatchGuard	Endpoint Protection Plus on Aether	8.0	8.0

¹ Please note that the results of the Business Main-Test Series cannot be compared with the results of the Consumer Main-Test Series, as the tests are done at different times, with different sets, different settings, etc.

² Information about additional third-party engines/signatures used by some of the products: **Acronis**, **Cisco**, **Cybereason**, **G Data**, **Trellix** and **VIPRE** use the **Bitdefender** engine (in addition to their own protection features). **VMware** uses the **Avira** engine (in addition to their own protection features). **G Data's** OutbreakShield is based on **Cyren**.

Settings

In business environments, and with business products in general, it is usual for products to be configured by the system administrator, in accordance with vendor's guidelines, and so we invited all vendors to configure their respective products.

Only a few vendors provide their products with optimal default settings which are ready to use, and did therefore not change any settings.

Please keep in mind that the results reached in the Enterprise Main-Test Series were only achieved by applying the respective product configurations described here. Any setting listed here as enabled might be disabled in your environment, and vice versa. This influences the protection rates, false alarm rates and system impact. The applied settings are used across all our Enterprise Tests over the year. That is to say, we do not allow a vendor to change settings depending on the test. Otherwise, vendors could e.g. configure their respective products for maximum protection in the protection tests (which would reduce performance and increase false alarms), and maximum speed in the performance tests (thus reducing protection and false alarms). Please note that some enterprise products have all their protection features disabled by default, so the admin has to configure the product to get any protection.

Below we have listed **relevant deviations from default settings** (i.e. setting changes applied by the vendors):

Acronis: "Backup", "Vulnerability assessment", "Patch management", "Device control", "Data Loss Prevention" and "Data protection map" disabled. "Third-party scan engine" enabled.

Avast: "Scan for potentially unwanted programs (PUPs)" was enabled in "File Shield", "Web Shield" and "Mail Shield".

Bitdefender: "Sandbox Analyzer" (for Applications and Documents) enabled. "Analysis mode" set to "Monitoring". "Scan SSL" enabled for HTTP and RDP. "HyperDetect" and "Device Control" disabled. "Update ring" changed to "Fast ring". "Web Traffic Scan" and "Email Traffic Scan" enabled for Incoming emails (POP3). "Ransomware Mitigation" enabled. "Process memory Scan" for "On-Access scanning" enabled. All "AMSI Command-Line Scanner" settings enabled for "Fileless Attack Protection".

Cisco: "On Execute File and Process Scan" set to Active; "Exploit Prevention: Script Control" set to "Block"; "TETRA Deep Scan File" disabled; "Exclusions" set to "Microsoft Windows Default"; Engines "ETHIS", "ETHOS", "SPERO" and "Step-Up" disabled.

CrowdStrike: everything enabled and set to maximum, i.e. "Extra Aggressive". "Sensor Visibility" for "Firmware" disabled. Uploading of "Unknown Detection-Related Executables" and "Unknown Executables" disabled.

Cybereason: "Anti-Malware" enabled; "Signatures mode" set to "Disinfect"; "Behavioral document protection" disabled; "Artificial intelligence" and "Anti-Exploit" set to "Moderate"; "Exploit protection", "PowerShell and .NET", "Anti-Ransomware" and "App Control" enabled and set to "Prevent"; "Exploit protection set to "Cautious"; all "Collection features" enabled; "Scan archives on access" enabled; Update interval set to 1 minute.

Elastic: MalwareScore (“windows.advanced.malware.threshold”) set to “aggressive”.

ESET: All “Real-Time & Machine Learning Protection” settings set to “Aggressive”.

G Data: “BEAST Behavior Monitoring” set to “Halt program and move to quarantine”. “G DATA WebProtection” add-on for Google Chrome installed and activated. “Malware Information Initiative” enabled.

Kaspersky: “Adaptive Anomaly Control” disabled; “Detect other software that can be used by criminals to damage your computer or personal data” enabled;

Malwarebytes: “Expert System Algorithms”, “Block penetration testing attacks”, “Disable IE VB Scripting”, “Java Malicious Inbound/outbound Shell Protection”, “Earlier RTP blocking”, “Enhanced sandbox protection” and “Thorough scan” enabled; “RET ROP Gadget detection”, “Malicious LoadLibrary Protection” and “Protected applications” enabled for all applications; “Protection for MessageBox Payload” enabled for MS Office; “Malwarebytes Browser Guard” Chrome extension enabled.

Microsoft: Google Chrome extension “Windows Defender Browser Protection” installed and enabled; “CloudExtendedTimeOut” set to 55; “PuaMode” enabled.

Sophos: “Threat Case creation” and “Web Control” disabled.

Trellix: “Real-Time Indicator Detection” disabled, “Exploit Guard” and “Malware Protection” enabled.

VIPRE: “Firewall” and “IDS” enabled and set to “Block With Notify”.

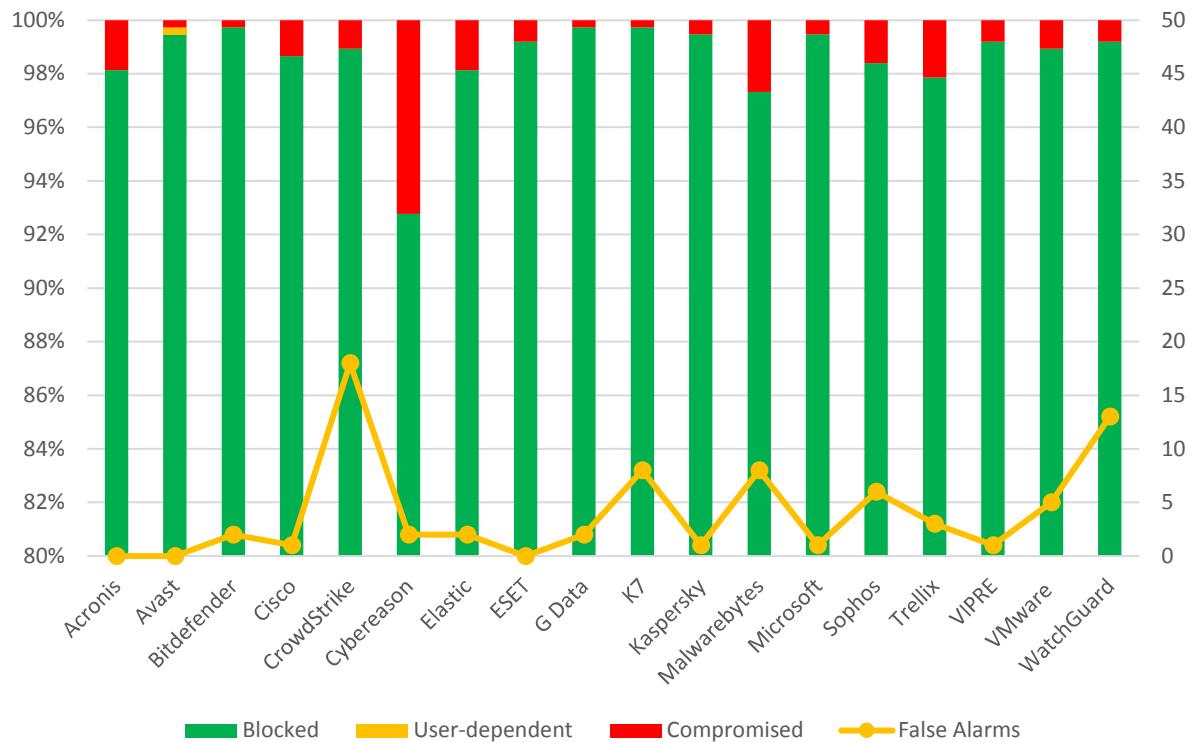
VMware: policy set to “Advanced”.

K7, WatchGuard: default settings.

Results

Real-World Protection Test (March-April)

This fact sheet gives a brief overview of the results of the Business Real-World Protection Test run in March and April 2022. The overall business product reports (each covering four months) will be released in July and December. For more information about this Real-World Protection Test, please read the details available at <https://www.av-comparatives.org>. The results are based on a test set consisting of **373** test cases (such as malicious URLs), tested from the beginning of March till the end of April.



	Blocked	User dependent	Compromised	PROTECTION RATE ³	False Alarms
Bitdefender, G Data	372	-	1	99.7%	2
K7	372	-	1	99.7%	8
Avast	371	1	1	99.6%	0
Kaspersky, Microsoft	371	-	2	99.5%	1
ESET	370	-	3	99.2%	0
VIPRE	370	-	3	99.2%	1
WatchGuard	370	-	3	99.2%	13
VMware	369	-	4	98.9%	5
CrowdStrike	369	-	4	98.9%	17
Cisco	368	-	5	98.7%	1
Sophos	367	-	6	98.4%	6
Acronis	366	-	7	98.1%	1
Elastic	366	-	7	98.1%	2
Trellix	365	-	8	97.9%	3
Malwarebytes	363	-	10	97.3%	8
Cybereason	346	-	27	92.8%	2

³ User-dependent cases are given half credit. For example, if a program blocks 80% by itself, and another 20% of cases are user-dependent, we give half credit for the 20%, i.e. 10%, so it gets 90% altogether.

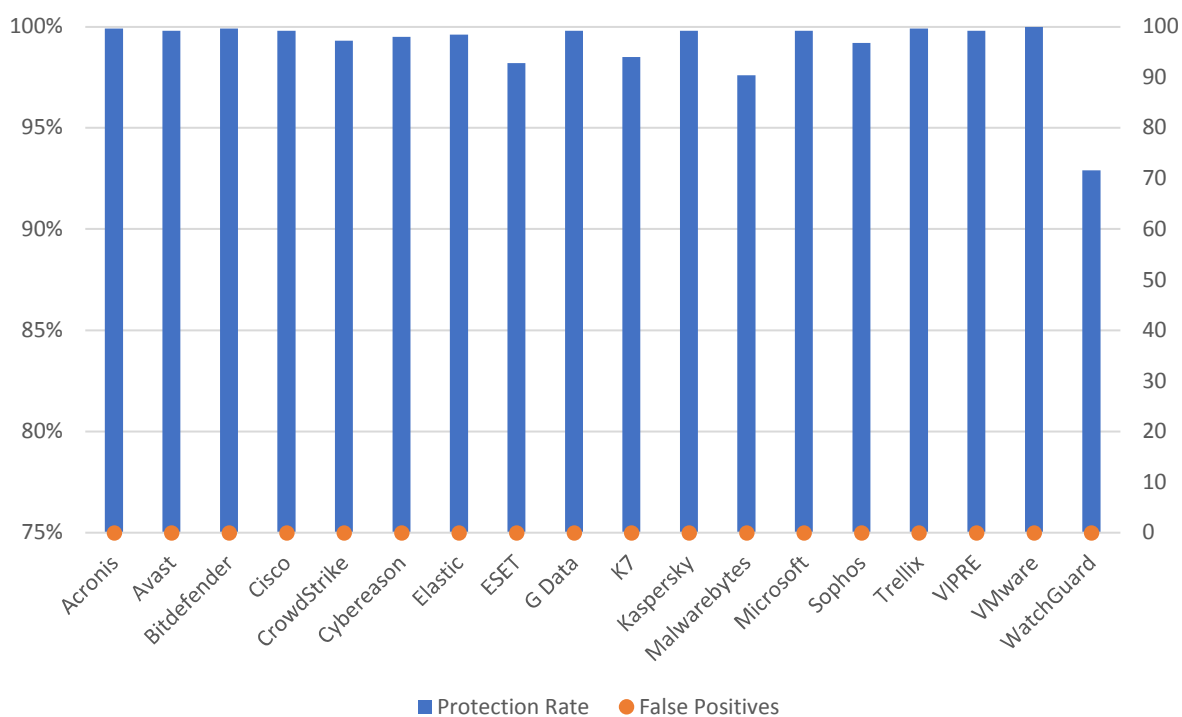
Malware Protection Test (March)

The Malware Protection Test assesses a security program’s ability to protect a system against infection by malicious files before, during or after execution. The methodology used for each product tested is as follows. Prior to execution, all the test samples are subjected to on-access scans (if this feature is available) by the security program (e.g. while copying the files over the network). Any samples that have not been detected by the on-access scanner are then executed on the test system, with Internet/cloud access available, to allow e.g. behavioural detection features to come into play. If a product does not prevent or reverse all the changes made by a particular malware sample within a given time period, that test case is considered to be a miss. For this test, **1,007** recent malware samples were used.

False positive (false alarm) test with common business software

A false alarm test done with common business software was also performed. All tested products had **zero** false alarms on common business software.

The following chart shows the results of the Business Malware Protection Test:



	Malware Protection Rate	False Alarms on common business software
VMware	100%	0
Acronis, Bitdefender, Trellix	99.9%	0
Avast, Cisco, G Data, Kaspersky, Microsoft, VIPRE	99.8%	0
Elastic	99.6%	0
Cybereason	99.5%	0
CrowdStrike	99.3%	0
Sophos	99.2%	0
K7	98.5%	0
ESET	98.2%	0
Malwarebytes	97.6%	0
WatchGuard	92.9%	0

In order to better evaluate the products' detection accuracy and file detection capabilities (ability to distinguish good files from malicious files), we also performed a false alarm test on non-business software and uncommon files. Results are shown in the tables below; the false alarms found were promptly fixed by the respective vendors. However, organisations which often use uncommon or non-business software, or their own self-developed software, might like to consider these results. From this year onwards, products are required to have an FP rate on non-business files below the *Remarkably High* threshold in order to be approved (as announced last year). This is to ensure that tested products do not achieve higher protection scores by using settings that cause excessive levels of false positives.

FP rate	Number of FPs on non-business files
Very Low	0-5
Low	6-15
Medium/Average	16-35
High	36-80
Very High	81-125
Remarkably High	>125

	FP rate on non-business files
Acronis, ESET, Kaspersky, Microsoft	Very Low
Avast, Bitdefender, Cybereason, Sophos, VIPRE, VMware, WatchGuard	Low
K7, Trellix	Medium/Average
Cisco, CrowdStrike, Elastic, G Data	High
-	Very High
Malwarebytes	Remarkably High

It should be noted that Malwarebytes had *Remarkably High* levels of false positives on non-business files. Administrators should consider whether this might create problems in their respective organisations' specific environments.

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