Introduction

This is a short fact sheet for our Business Main-Test Series, 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 products were tested under Windows 10 64-bit and are included in this factsheet:

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

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 not 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):


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


**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.

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

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:
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.

<table>
<thead>
<tr>
<th>FP rate</th>
<th>Number of FPs on non-business files</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very Low</td>
<td>0-5</td>
</tr>
<tr>
<td>Low</td>
<td>6-15</td>
</tr>
<tr>
<td>Medium/Average</td>
<td>16-35</td>
</tr>
<tr>
<td>High</td>
<td>36-80</td>
</tr>
<tr>
<td>Very High</td>
<td>81-125</td>
</tr>
<tr>
<td>Remarkably High</td>
<td>&gt;125</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>FP rate on non-business files</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acronis, ESET, Kaspersky, Microsoft</td>
</tr>
<tr>
<td>Avast, Bitdefender, Cybereason, Sophos, VIPRE, VMware, WatchGuard</td>
</tr>
<tr>
<td>K7, Trellix</td>
</tr>
<tr>
<td>Cisco, CrowdStrike, Elastic, G Data</td>
</tr>
<tr>
<td>-</td>
</tr>
<tr>
<td>Malwarebytes</td>
</tr>
</tbody>
</table>

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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