Anti-Virus Comparative No.19

On-demand detection of malicious software

contains also

False alarm and on-demand scanning speed results

Date: August 2008 (2008-08)

Last revision of this report: 19th September 2008

Website: http://www.av-comparatives.org

1. Conditions for participation and test methodology

The conditions for participation in our tests are listed in the methodology document at http://www.av-comparatives.org/seiten/ergebnisse/methodology.pdf. Before proceeding with to this report, readers are advised to first read the above mentioned document.

Products included in our tests constitute already some very good anti-virus software with relatively high on-demand detection rates, as this is one of the requirements needed to be included in our tests. The participation is currently limited to about 16 well-known and worldwide used high-quality anti-virus products with high detection rates, which vendors agreed to get tested and included in this public report.

2. Tested products

The Malware sets and system Test-beds were frozen at the begin of August 2008. All products were updated on the 4th August 2008.
The following products were included in this test:
avast! Professional Edition 4.8.1229
AVG Anti-Virus 8.0.156
AVIRA AntiVir Premium 8.1.0.362
BitDefender Anti-Virus 11.0.17
eScan Anti-Virus 9.0.824.217
ESET NOD32 Antivirus 3.0.669.0
F-Secure Anti-Virus 9.00.148
G DATA AntiVirusKit (AVK) 19.0.0.49
Kaspersky Anti-Virus 8.0.0.454
McAfee VirusScan Plus 12.1.110 (5300)
McAfee VirusScan Enterprise 8.7[1] (with Artemis)
Microsoft Live OneCare 2.5.2900.03
Norman Antivirus & Anti-Spyware 7.10
Sophos Endpoint Protection 7.5.1
Symantec Norton Anti-Virus 16.0.0.125
Trustport Antivirus 2.8.0.3006
VBA32 Scanner for Windows 3.12.8.2

Some products may offer additional options/features e.g. to provide additional protection against malware during its execution (if not detected in advance on-access or on-demand). Please try them on your own system before making a purchase decision based on these tests. There are also many other program features and important factors (e.g. price, ease of use, compatibility, graphical user interface, language, price, update frequency, ease of management, HIPS / behaviour blocker functions, etc.) to consider. Although extremely important, the detection rate of a product is only one aspect of a complete Anti-Virus product. AV-Comparatives will in future expand its testing range to cover also other areas which are of interest for users. We suggest readers to research also other independent test results, as results provided by independent labs are usually quite consistent and do not differ much from each other – depending on the type of test, the used settings and the type/quality of the test samples. We also encourage our readers to have a look at various types of tests, to get a better overview of the detection and protection capabilities of the various security products.

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[1] a separate detailed report of McAfee with Artemis will be released in some weeks. This enterprise product is an exception in this report as there could be a potential time advantage due the online connection to McAfee's servers (its inclusion is therefore noncompetitive).

3. **Comments**

This time we tested also with default settings and not only with highest settings. Below some important notes about the various products and their detection/heuristic settings (scan of all files etc. is always enabled):

Avast: avast! switches automatically to highest settings when an infection is found. Due that, the results with default settings and highest settings are the same.

AVG: AVG runs with highest settings by default.

AVIRA: AVIRA runs with medium heuristic by default. With highest settings, the heuristic is set to high and all extended threat categories are enabled (e.g. recognition of suspicious packers, etc.).

BitDefender: BitDefender runs with highest settings by default. BitDefender asked to list the 2008 version in the report, as the engine inside the new 2009 version is the same and its detection rates are therefore identical.

eScan: eScan runs with highest settings by default.

ESET: The highest setting (webfilter) is enabled by default.

F-Secure: F-Secure runs with highest settings by default.

GDATA: GDATA runs with highest settings by default.

Kaspersky: Kaspersky runs with low heuristic settings by default. With highest settings the heuristic is set to high.

McAfee: McAfee runs with highest settings by default. McAfee VirusScan Plus 12.1.110 does currently not include Artemis. This report contains also a note about the score of McAfee VirusScan Enterprise with Artemis in Email mode. We plan to run more comprehensive tests of this technology in a few weeks.

Microsoft: Microsoft runs with highest settings by default.

Norman: Norman runs with highest settings by default.

Sophos: on request of Sophos, we tested the Endpoint Protection version, which has "Suspicious" detection enabled by default.

Symantec: With highest settings, advanced heuristic is set to high.

Trustport: on request of Trustport, we tested Trustport with only two engines (AVG and Norman), to avoid performance and false alarms problems. With highest settings the sandbox is enabled. Users are advised to do not enable in Trustport more than 2 engines at the same time (increases false alarms and scan times).

VBA32: on request of VBA32, excessive heuristic and thorough mode was not enabled, in order to avoid false alarms and performance problems. VBA32 runs by default with maximum heuristic, which is in this case the highest setting. Users are advised to do not enable in excessive heuristic and thorough mode (increases false alarms and scan times).

4. Test results

You can find the percentages reached with default settings inside the tables.

Company		AVIRA		G DATA Security		Alwil Software		AVG Technologies	
Product		**AntiVir Premium**		**AntiVirusKit (AVK)**		**avast! Professional**		**AVG Anti-Virus**	
Program version		8.1.0.362		19.0.0.49		4.8.1229		8.0.156	
Engine / signature version		8.01.01.15/7.00.05.212		N/A		080804-0		270.5.12/1590	
Number of virus records		1.533.821		unknown		unknown		unknown	
Certification level reached in this test		**ADVANCED+**		**ADVANCED+**		**ADVANCED+**		**ADVANCED+**	
Number of false positives'		many		many		many		many	
On-demand scanning speed*		fast		average		average		fast	
On-demand detection of virus/malware:									
SET A (Aug 05 - Sep 07)	1.190.818	*PASSED*		*PASSED*		*PASSED*		*PASSED*	
SET B (Oct07-Jul08), highest settings:									
Windows viruses	42.845	42.700	99,7%	42.789	99,9%	42.657	99,6%	41.767	97,5%
Macro viruses	2.571	2.558	99,5%	2.571	100%	2.571	100%	2.333	90,7%
Script malware	10.405	10.029	96,4%	10.087	96,9%	9.810	94,3%	5.931	57,0%
Worms	63.115	62.730	99,4%	62.783	99,5%	61.914	98,1%	59.828	94,8%
Backdoors/Bots	256.749	255.066	99,3%	254.800	99,2%	250.335	97,5%	243.842	95,0%
Trojans	707.230	701.627	99,2%	700.031	99,0%	686.885	97,1%	670.168	94,8%
other malware	13.287	12.784	96,2%	12.824	96,5%	12.672	95,4%	10.153	76,4%
TOTAL	**1.096.202**	1.087.494	**99,2%**	1.085.885	**99,1%**	1.066.844	**97,3%**	1.034.022	**94,3%**
SET B (Oct07-Jul08), default settings:			~98,6%		~99,1%		~97,3%		~94,3%
SET A + B (highest settings)	~2,3 millions		~99,6%		~99,5%		~98,7%		~97,3%

Notes:

	SET B	SET A+B
GDATA 2008	98,5%	99,3%
GDATA 2009	99,2%	99,5%

Company		BitDefender		MicroWorld		ESET		F-Secure	
Product		**BitDefender AV**		**eScan Anti-Virus**		**ESET NOD32 Antivirus**		**F-Secure Anti-Virus**	
Program version		11.0.17		9.0.824.217		3.0.669.0		9.00.148	
Engine / signature version		N/A		N/A		3325		8.10.14240	
Number of virus records		1.414.639		unknown		unknown		unknown	
Certification level reached in this test		**ADVANCED**		**ADVANCED**		**ADVANCED**		**ADVANCED**	
Number of false positives'		many		few		few		few	
On-demand scanning speed*		average		slow		fast		average	
On-demand detection of virus/malware:									
SET A (Aug 05 - Sep 07)	1.190.818	*PASSED*		*PASSED*		*PASSED*		*PASSED*	
SET B (Oct07-Jul08), highest settings:									
Windows viruses	42.845	41.344	96,5%	41.944	97,9%	42.137	98,3%	41.994	98,0%
Macro viruses	2.571	2.335	90,8%	2.551	99,2%	2.558	99,5%	2.551	99,2%
Script malware	10.405	8.947	86,0%	9.883	95,0%	8.893	85,5%	9.885	95,0%
Worms	63.115	60.595	96,0%	60.020	95,1%	59.918	94,9%	60.054	95,2%
Backdoors/Bots	256.749	229.342	89,3%	236.835	92,2%	243.280	94,8%	237.081	92,3%
Trojans	707.230	659.101	93,2%	634.302	89,7%	652.205	92,2%	635.055	89,8%
other malware	13.287	11.538	86,8%	12.394	93,3%	10.472	78,8%	12.408	93,4%
TOTAL	**1.096.202**	1.013.202	**92,4%**	997.929	**91,0%**	1.019.463	**93,0%**	999.028	**91,1%**
SET B (Oct07-Jul08), default settings:			~92,4%		~91,0%		~93,0%		~91,1%
SET A + B (highest settings)	~2,3 millions		~96,4%		~95,7%		~96,6%		~95,8%

Notes:

Bitdefender v2008 scores like v2009. The improvements are in other areas and new added features.

F-Secure v2009 scores slightly better than v2008. The improvements are mainly in e.g. its performance.

Company	Kaspersky Labs		McAfee		Microsoft		Norman ASA	
Product	**Kaspersky AV**		**McAfee VirusScan+**		**Microsoft OneCare**		**Norman AV+AS**	
Program version	8.0.0.454		12.1.110		2.5.2900.03		7.10	
Engine / signature version	N/A		5300.2777 / 5352		1.3807 / 1.41.18.0		5.93.01	
Number of virus records	1.045.550		437.316		753.216		1.979.741	
Certification level reached in this test	ADVANCED+		STANDARD		STANDARD		ADVANCED	
Number of false positives'	many		very few		very few		many	
On-demand scanning speed*	fast		fast		average		average	
On-demand detection of virus/malware:								
SET A (Aug 05 - Sep 07)	1.190.818	*PASSED*		*PASSED*		*PASSED*		*PASSED*
SET B (Oct07-Jul08), highest settings:								
Windows viruses	42.845	42.479	99,1%	41.340	96,5%	41.129	96,0%	37.032	86,4%
Macro viruses	2.571	2.551	99,2%	2.569	99,9%	2.244	87,3%	2.348	91,3%
Script malware	10.405	9.883	95,0%	8.023	77,1%	7.686	73,9%	5.711	54,9%
Worms	63.115	61.580	97,6%	54.943	87,1%	55.789	88,4%	55.882	88,5%
Backdoors/Bots	256.749	247.518	96,4%	220.460	85,9%	214.523	83,6%	233.846	91,1%
Trojans	707.230	665.540	94,1%	587.419	83,1%	596.541	84,3%	627.162	88,7%
other malware	13.287	12.590	94,8%	10.243	77,1%	8.932	67,2%	8.234	62,0%
TOTAL	**1.096.202**	1.042.141	**95,1%**	924.997	**84,4%**	926.844	**84,6%**	970.215	**88,5%**
SET B (Oct07-Jul08), default settings:		~94,4%		~84,4%		~84,6%		~88,5%	
SET A + B (highest settings)	~2,3 millions	~97,6%		~92,5%		~92,6%		~94,5%	

Notes:

Microsoft and McAfee got this time only a STANDARD rating, but they were also the only two vendors that were able to have only very few false alarms, which is a very good achievement.

Current McAfee VirusScan 12.1.110 does <u>not</u> have Artemis while next McAfee consumer product will have it (currently in beta). The table below shows the detection difference of McAfee with Artemis technology (e.g. in the enterprise version) and without. A separate detailed test report about Artemis will be released soon on our website.
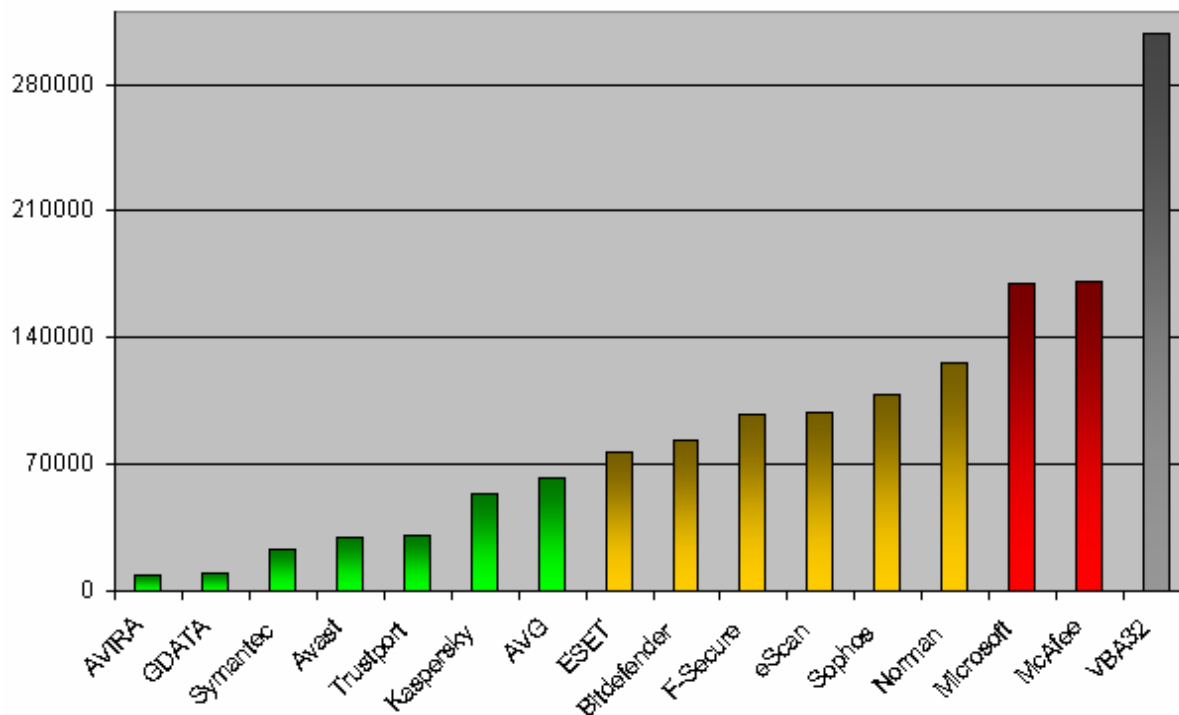
	SET B	SET A+B
McAfee without Artemis	84,4%	92,5%
McAfee with Artemis	97,8%	99,0%

Company	Symantec		Sophos		Trustport		VirusBlokAda	
Product	**Norton Anti-Virus**		**Sophos E S&C**		**TrustPort AV**		**VBA32 Anti-Virus**	
Program version	16.0.0.125		7.5.1		2.8.0.3006		3.12.8.2	
Engine / signature version	100804c / 84315		2.75.4 / 4.31E+305		N/A		N/A	
Number of virus records	2.043.091		447.478		unknown		unknown	
Certification level reached in this test	ADVANCED+		ADVANCED		ADVANCED+			
Number of false positives'	few		(very many)'		many		many	
On-demand scanning speed*	fast		fast		slow		slow	
On-demand detection of virus/malware:								
SET A (Aug 05 - Sep 07)	1.190.818	*PASSED*		*PASSED*		*PASSED*		*PASSED*
SET B (Oct07-Jul08), highest settings:								
Windows viruses	42.845	42.379	98,9%	41.355	96,5%	42.548	99,3%	35.712	83,4%
Macro viruses	2.571	2.570	~100%	2.347	91,3%	2.373	92,3%	990	38,5%
Script malware	10.405	9.074	87,2%	6.222	59,8%	7.604	73,1%	2.789	26,8%
Worms	63.115	62.131	98,4%	56.398	89,4%	61.727	97,8%	52.001	82,4%
Backdoors/Bots	256.749	253.221	98,6%	231.752	90,3%	252.833	98,5%	159.387	62,1%
Trojans	707.230	690.963	97,7%	640.346	90,5%	687.453	97,2%	529.188	74,8%
other malware	13.287	12.489	94,0%	9.212	69,3%	11.014	82,9%	8.180	61,6%
TOTAL	**1.096.202**	1.072.827	**97,9%**	987.632	**90,1%**	1.065.552	**97,2%**	788.247	**71,9%**
SET B (Oct07-Jul08), default settings:		~97,4%		~90,1%		~96,9%		~71,9%	
SET A + B (highest settings)	~2,3 millions	~99,0%		~95,3%		~98,7%		~86,5%	

Notes:

	SET B	SET A+B
NAV 2008	97,0%	98,6%
NAV 2009	97,9%	99,0%

Graph of missed samples (lower is better):

Please do not miss the second part of the report (will be published in some months) containing the retrospective test (which evaluates how well products are at detecting new/unknown malware).

A good on-demand/on-access detection is still one of the most important, deterministic and reliable features of an antivirus product. Additionally, some products (like for example Bitdefender, F-Secure, Kaspersky, McAfee, Sophos, Symantec, etc.) already provide at least some kind of HIPS-, behaviour-based or other functionalities to block (or at least warn about the possibility of) malicious actions e.g. during the execution of malware, when all other on-access and on-demand detection/protection mechanism failed. Such kind of proactive protection features will be included in our evaluations of 2009.

The results of this on-demand tests are usually applicable 1:1 also for the on-access scanner (if configured the same way), but not for on-execution protection technologies (like HIPS, behaviour blocker, etc.).

Even if we deliver various tests and show different aspects of anti-virus software, users are advised to evaluate the software by themselves and build an own opinion about them. Test data or reviews just give a guidance to some aspects that users cannot evaluate by themselves.

5. **Summary results**

The test-set has been split in two parts. The percentages below refer to SET B, which contain only malware from the last 9 months. **As a result, percentages may look lower than in previous tests**. SET A is covered (this time) very well by all the tested products (>99.5%) and contains malware from September 2005 to November 2007. All percentages below are reached with highest settings.

(a) Detection results over Windows viruses, Macros, Worms and Scripts:		(b) Detection results over Backdoors, Trojans and other malware:	
1. GDATA	99.4%	1. AVIRA	99.2%
2. AVIRA	99.2%	2. GDATA	99.0%
3. Avast	98.3%	*3. McAfee+Artemis²*	*98.0%*
4. Kaspersky	97.9%	4. Symantec	97.9%
5. Symantec	97.7%	5. Trustport	97.3%
6. McAfee+Artemis²	*96.8%*	6. Avast	97.2%
7. F-Secure	96.3%	7. Kaspersky	94.7%
8. eScan	96.2%	8. AVG	94.6%
9. Trustport	96.1%	9. ESET	92.7%
10. ESET	95.4%	10. Bitdefender	92.1%
11. Bitdefender	95.2%	11. F-Secure	90.5%
12. AVG	92.4%	12. eScan	90.4%
13. McAfee	89.9%	13. Sophos	90.2%
14. Microsoft	89.8%	14. Norman	88.9%
15. Sophos	89.4%	15. Microsoft	83.9%
16. Norman	84.9%	16. McAfee	83.7%
17. VBA32	76.9%	17. VBA32	71.3%

(c) Total detection rates:

1.	AVIRA	99.2%	(99.6%)
2.	GDATA	99.1%	(99.5%)
3.	Symantec	97.9%	(99.0%)
3².	*McAfee+Artemis (Enterprise)*	*97.8%*	*(99.0%)*
4.	Avast	97.3%	(98.7%)
5.	TrustPort	97.2%	(98.7%)
6.	Kaspersky	95.1%	(97.6%)
7.	AVG	94.3%	(97.3%)
8.	ESET	93.0%	(96.6%)
9.	BitDefender	92.4%	(96.4%)
10.	F-Secure	91.1%	(95.8%)
11.	eScan	91.0%	(95.7%)
12.	Sophos	90.1%	(95.3%)
13.	Norman	88.5%	(94.5%)
14.	Microsoft	84.6%	(92.6%)
15.	McAfee (Home User version)	84.4%	(92.5%)
16.	VBA32	71.9%	(86.5%)

In parenthesis the percentages with combined test-sets (SET A + B). If you want to try to compare the results of this test with previous tests, you need to take the percentages that are in parenthesis. Anyway, we suggest looking at the awards and not at the percentages. **Please consider also the false alarm rates!**

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[2] *McAfee VirusScan Enterprise with Artemis in Email mode (not a Home-User Product). McAfee Enterprise with Artemis takes part as an unofficial competitor in this report (noncompetitive).*
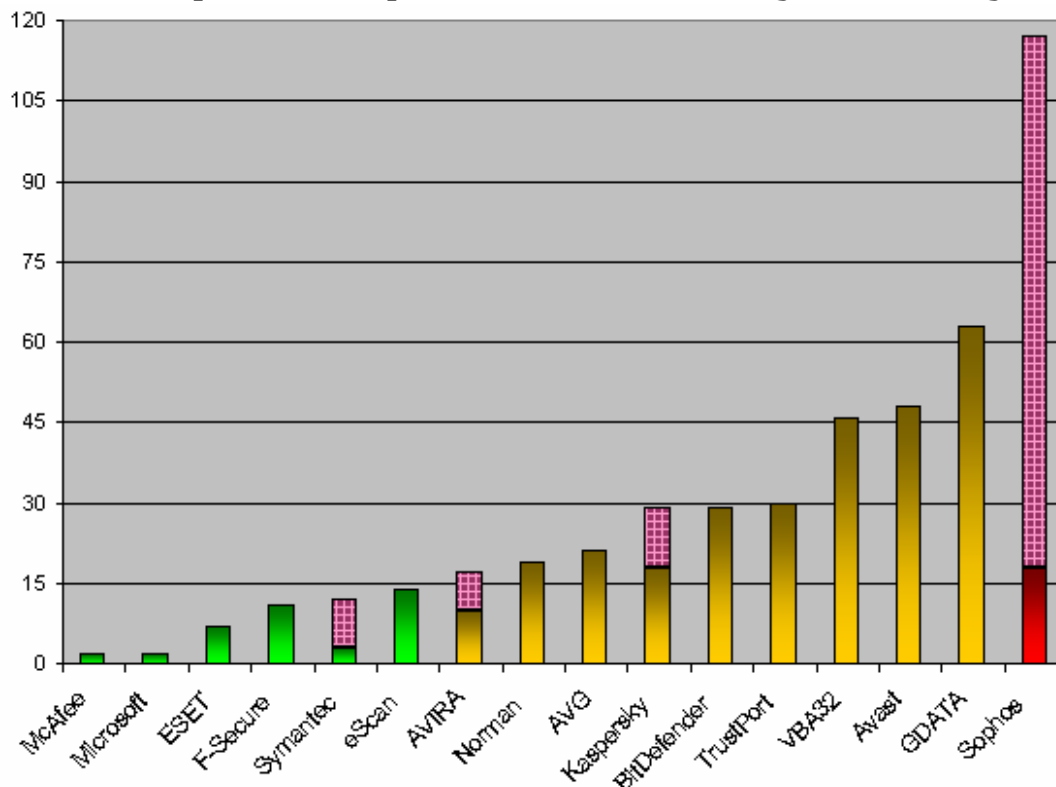
6. False positive/alarm test

In order to better evaluate the quality of the detection capabilities of anti-virus products, we provide also a false alarm test. False alarms can sometimes cause as much troubles like a real infection. Please consider the false alarm rate when looking at the detection rates, as a product which is prone to cause false alarms achieves easier higher scores.

Number of false alarms found in our clean set (lower is better):

1.	McAfee[3], Microsoft	1	very few FP's
2.	ESET	7	
3.	F-Secure	11	few FP's
4.	Symantec	12	
5.	eScan	14	
6.	AVIRA	17	
7.	Norman	19	
8.	AVG	21	
9.	BitDefender	27	
10.	Kaspersky	28	many FP's
11.	Trustport	30	
12.	VBA32	46	
13.	Avast	47	
14.	GDATA	62	
15.	Sophos[4]	117	very many FP's

The graph below shows the number of false alarms by the various Anti-Virus products, split in default and highest settings:

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[3] McAfee Enterprise with Artemis in email mode has around ~40 (many).
[4] Sophos is a corporate product – please read the comments on page 18.

6.1 Details about the discovered false alarms

All listed false alarms were reported and sent to the Anti-Virus vendors for verification and are now already fixed. False alarms caused by unencrypted data blocks in Anti-Virus related files are not counted. If a product had several false alarms in the same package, it is counted here as only one false alarm. Also the labels for the false alarms categories are quite generous, so even if some few files may be disputed, the false alarm rates were in general anyway quite high this time.

McAfee

False alarm found in some part(s) of	Detected as	Settings
HyperCam package	W32/Sdbot.worm	default

McAfee VirusScan Plus had one false alarm[5].

Microsoft

False alarm found in some part(s) of	Detected as	Settings
Secunia PSI package	Joke:Win32/Fakedel.H	default

Microsoft OneCare had one false alarm.

ESET

False alarm found in some part(s) of	Detected as	Settings
BackFlip package	Win32/Statik	default
DeltaForce package	Win32/Statik	default
IconHider package	Win32/Keylogger.HotKeysHook.A	default
iWin package	Win32/VB.BQA	default
SpotMSN package	Win32/Rbot	default
Visualizer package	Win32/Spy.Agent	default
XPandRally package	Win32/Packed.Autoit.Gen	default

ESET NOD32 had 7 false alarms.

F-Secure

False alarm found in some parts of	Detected as	Settings
Alienstars package	Backdoor.Win32.Rbot.awz	default
Copy2DVD package	Trojan-Spy.Win32.Banker.plh	default
Gothic2 package	Trojan-PSW.Win32.Nilage.dmu	default
GPSPhoto package	Trojan-Dropper.Win32.Joiner.fd	default
HotDish package	Net-Worm.Win32.Kolabc.er	default
HyperCam package	Backdoor.Win32.Rbot.qww	default
IconHider package	Trojan-Spy.Win32.Webmoner.ir	default
NexonPlug package	W32/Zlob!Gemini	default
PicturePatrol package	Trojan-Dropper.Win32.Agent.ute	default
proDAD package	W32/Emailworm	default
RsAutoUp package	Backdoor.Win32.Agent.gkm	default

F-Secure had 11 false alarms.

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[5] McAfee VSE with Artemis in email mode has "many" false alarms (around 40).

Symantec

False alarm found in some part(s) of	Detected as	Settings
3DScreensaver package	Backdoor.Trojan	default
Air2MP3 package	Suspicious.AH.103	highest
AutoStartAdmin package	Suspicious.AH.61	highest
BartPE package	Suspicious.AH.18	highest
CDDVDBurning package	Suspicious.AH.19	highest
Datawest Support package	W32.Waxpow.Worm	default
EvilLyrics package	Suspicious.AH.65	highest
Gothic2 package	Infostealer.Lineage	default
HardDriveWasher package	Suspicious.AH.65	highest
SmartFTP package	Suspicious.AH.64	highest
Splitting package	Suspicious.AH.85	highest
XPY package	Suspicious.AH.11	highest

Symantec Norton Anti-Virus had 12 false alarms.

eScan

False alarm found in some parts of	Detected as	Settings
Alienstars package	Backdoor.Win32.Rbot.awz	default
Copy2DVD package	Trojan-Spy.Win32.Banker.plh	default
DFX package	Trojan.Win32.Shutdowner.xu	default
Gothic2 package	Trojan-PSW.Win32.Nilage.dmu	default
GPSPhoto package	Trojan-Dropper.Win32.Joiner.fd	default
HotDish package	Net-Worm.Win32.Kolabc.er	default
HyperCam package	Backdoor.Win32.Rbot.qww	default
IconHider package	Trojan-Spy.Win32.Webmoner.ir	default
OfflineUpdater package	Trojan.Win32.Starter.dw	default
PicturePatrol package	Trojan-Dropper.Win32.Agent.ute	default
proDAD package	W32/Emailworm	default
RsAutoUp package	Backdoor.Win32.Agent.gkm	default
VirtualEarth package	Trojan-Dropper.Win32.Joiner.fa	default
Wann package	Trojan-Dropper.Win32.Joiner.ff	default

eScan had 14 false alarms.

AVIRA

False alarm found in some part(s) of	Detected as	Settings
CDSearch package	HEUR/HTML.Malware	highest
Dr.Web package	HEUR/HTML.Malware	highest
FolderSizes package	Worm.IrcBot.2653872	default
GameXP package	HEUR/Malware	highest
IconHider package	TR/Spy.Webmoner.IR	default
INCA package	Worm.Smallworm.BSY	default
Maulwurfsmover package	PCK/FSG	highest
MSN package	HEUR/HTML.Malware	highest
NexonPlug package	BDS/IRCBOT.DML	default
PCanywhere package	HEUR/Malware	highest
proDAD package	Worm/Agent.789056	default
RBTray package	TR/Crypt.XPACK.Gen	default

RogueSpear package	TR/MasterParad.Srv	highest
SpotMSN package	Worm/Rbot.794232	default
TCPview package	TR/PSW.LdPinch.xqk	default
WackGet package	DR/Dldr.Murlo.OB	default
X-Cleaner package	TR/Lineage.748560	default

AVIRA had in total 17 false alarms.

Norman

False alarm found in some part(s) of	Detected as	Settings
AOpen driver package	W32/Malware	default
Downtube package	W32/Agent.GRRU	default
Dr.Web package	W32/Malware	default
DriveVar package	W32/Delf.AXPS	default
FolderSizes package	Ircbot.ABXA	default
HotDish package	Malware.CGZJ	default
HyperCam package	Spybot.CWFS	default
INCA package	W32/Smallworm.BSY	default
LastManStanding package	W32/Agent.GRRU	default
MS Base Cryptographic Provider	W32/Smalltroj.DJIF	default
NexonPlug package	W32/Ircbot.AAZG	default
proDAD package	W32/Emailworm.BGY	default
RaBiT package	W32/Malware	default
RestaurantReport package	W32/Smalltroj.EQUX	default
ThrottleWatch package	W32/Malware	default
TwonkyMedia package	W32/Malware	default
WinAmp package	W32/Malware	default
X-Cleaner package	W32/Lineage.BCYW	default
XPY package	W32/Suspicious_U.gen	default

Norman had 19 false alarms.

AVG

False alarm found in some part(s) of	Detected as	Settings
0190warner package	PSW.Banker4.AKLY	default
AmoK package	Agent.VZA	default
BattleMages package	Win32/Heur	default
Bitdefender package	Wnsock.A	default
CDDVDBurning package	Generic10.AOTM	default
Cubes package	Win32/Heur	default
Dr.Web package	Generic3.EKV	default
DriveVar package	Generic3.FGK	default
EasyBurning package	Generic10.TQD	default
eScan package	Generic9.BDGF	default
Glückskeks package	SHeur.BHSC	default
HyperCam package	Generic_c.QSZ	default
Image package	Agent.RNE	default
Kaspersky package	SymbOS/Drever.B	default
MobileNetSwitch package	PSW.Delf.BGF	default
MS Base Cryptographic Provider package	Generic10.BBI	default
NexonPlug package	Backdoor.Ircbot.DML	default

```
NOD32 package                    Generic.VDY                            default
SpotMSN package                  Dropper.Agent.IBW                      default
TCPfilter package                Agent.SQN                              default
Vice package                     Win32/Fujacks.J                       default
```

AVG had 21 false alarms.

BitDefender

False alarm found in some part(s) of	Detected as	Settings
3DScreensaver package	Trojan.Generic.248412	default
AcerUSB package	Dialer.1000.I	default
Amasvid package	Trojan.Script.757	default
AmoK package	Trojan.Generic.205372	default
Anonymizer package	Trojan.Generic.215592	default
Backflip package	Virtool.8598	default
DesktopNotes package	Generic.Malware.M!H@mm.62540566	default
DivXPlay package	DeepScan:Generic.Zlog.7.A8FA4D3C	default
DriveVar package	Trojan.DC	default
FreeMusicZilla package	Trojan.Generic.93164	default
GatewayServer package	DeepScan:Generic.PWStealer.FFE1D3BA	default
Gothic2 package	Trojan.Generic.103850	default
Hotkey package	Trojan.Generic.91399	default
IntelligentAgent package	Trojan.Generic.93188	default
iWin package	Backdoor.Generic.47188	default
NetControl package	Generic.Malware.SL!g.EAEAF616	default
RsAutoUp package	Backdoor.Generic.90924	default
SmartBarXP package	Trojan.Generic.79790	default
Spellforce package	Backdoor.Bot.20129	default
SSM package	Trojan.Genric.109005	default
Tracker package	Trojan.Generic.215592	default
TrafMeter package	Worm.Padobot.C	default
Vispa package	Backdoor.Bot.4737	default
WormRadar package	Generic.XPL.IIS.6F805DCB	default
X-Cleaner package	GenPack:Generic.Lineage.ED6971FA	default
XPTweaker package	Trojan.Generic.100406	default
XPY package	Trojan.Generic.113577	default

Bitdefender had 27 false alarms.

Kaspersky

False alarm found in some parts of	Detected as	Settings
Alienstars package	Backdoor.Win32.Rbot.awz	default
AmoK package	Suspicious.Packer	highest
ArxFatalis package	Backdoor.Win32.Hupigon.cvky	default
Browster package	Heur.Trojan.Generic	default
Copy2DVD package	Trojan-Spy.Win32.Banker.plh	default
DFX package	Trojan.Win32.Shutdowner.xu	default
DiaShow package	Suspicious.Packer	highest
FlashJester package	Heur.Invader	highest
FotoWorks package	Suspicious.Packer	highest
Gothic2 package	Trojan-PSW.Win32.Nilage.dmu	default

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GPSPhoto package	Trojan-Dropper.Win32.Joiner.fd	default
HotDish package	Net-Worm.Win32.Kolabc.er	default
HyperCam package	Backdoor.Win32.Rbot.qww	default
IconHider package	Trojan-Spy.Win32.Webmoner.ir	default
MousOmeter package	Multi.Packed	highest
OfflineUpdater package	Trojan.Win32.Starter.dw	default
OmniPage package	Heur.KillFiles	highest
PDF995 package	Heur.Worm.Generic	default
PEHead package	Suspicious.Packer	highest
PicturePatrol package	Trojan-Dropper.Win32.Agent.ute	default
RSAutoUp package	Backdoor.Win32.Agent.gkm	default
SimplyZIP package	Suspicious.Packer	highest
StarshipUnlimited package	Trojan-Proxy.Win32.Ranky.ma	highest
VirtualEarth package	Trojan-Dropper.Win32.Joiner.fa	default
Vista package	Heur.Invader	highest
Wann package	Trojan-Dropper.Win32.Joiner.ff	default
WipeTrace package	Multi.Packed	highest

Kaspersky had 28 false alarms.

TrustPort

False alarm found in some part(s) of	Detected as	Settings
0190warner package	PSW.Banker4.AKLY	default
AmoK package	Agent.VZA	default
AOpen driver package	W32/Malware	default
CDDVDBurning package	Generic10.AOTM	default
Downtube package	W32/Agent.GRRU	default
Dr.Web package	W32/Malware	default
DriveVar package	Generic3.FGK	default
eScan package	Generic9.BDGF	default
FarCry package	Generic3.EGK	default
FIFA package	Generic3.KHJ	default
FolderSizes package	Ircbot.ABXA	default
HotDish package	Malware.CGZJ	default
HyperCam package	Spybot.CWFS	default
Image package	Agent.RNE	default
INCA package	W32/Smallworm.BSY	default
LastManStanding package	W32/Agent.GRRU	default
MS Base Cryptographic Provider package	W32/Smalltroj.DJIF	default
NexonPlug package	BackDoor.Ircbot.DML	default
proDAD package	W32/EMailWorm.BGY	default
RaBiT package	W32/Malware	default
RestaurantReport package	W32/Smalltroj.EQUX	default
SpotMSN package	Dropper.Agent.IBW	default
TCPfilter package	Agent.SQN	default
ThrottleWatch package	W32/Malware	default
TwonkyMedia package	W32/Malware	default
Vice package	Win32/Fujacks.J	default
WinAmp package	W32/Malware	default
X-Cleaner package	W32/Lineage.BCYW	default
XPY package	W32/Suspicious_U.gen	default

TrustPort had 30 false alarms.

VBA32

False alarm found in some part(s) of	Detected as	Settings
0190warner package	Trojan.Rootkit	default
3COM driver package	Net-Worm.Win32.Autooter.a	default
AnyTV package	Trojan.PWS.Banker	default
ClamWin package	Trojan-Downloader.Win32.QQHelper.gt	default
DataPilot package	VirusConstructor.Helpxsite	default
DVDAuthor package	Trojan-PSW.Win32.OnLineGames.asai	default
Eulalyzer package	Backdoor.Win32.Rbot.kkd	default
FileAnalyser package	BackDoor.Pigeon.12879	default
FolderSizes package	Backdoor.Win32.IRCBot.cjw	default
F-Secure package	Unknown.Win32Virus	default
GPSPhoto package	Trojan-Dropper.Win32.Joiner.fd	default
HotDish package	Net-Worm.Win32.Kolabc.er	default
HyperCam package	Backdoor.Win32.Rbot.qww	default
IconHider package	Trojan-Spy.Win32.Webmoner.ir	default
Image package	Trojan.PWS.Banker	default
ImageGrabber package	Backdoor.PcClient.23	default
IrfanView package	Embedded.BackDoor.BOrifice.203	default
iWin package	Backdoor.Win32.VB.bqa	default
Kaspersky package	Trojan.ProAgent.29	default
Lexmark Driver package	Trojan-PSW.Win32.Lmir.bvk	default
LyWLAN package	Downloader.Win32.SetupFactory.f	default
Matroska package	Embedded.Trojan.Hanspy	default
MediaConverter package	Backdoor.Win32.Small.eqi	default
MPEG2Schnitt package	Exploit.Win32.MS05-039.aw	default
MS RegMon package	Malware-Dropper.Win32.MC	default
NeverBall package	Virus.Win32.Z0mbieMistfall	default
OperaTor package	Trojan-Downloader.Win32.Injecter.wm	default
PasswordRecovery package	Trojan-PSW.Win32.LdPinch.ucl	default
PiVi package	Email-Worm.VB.3	default
RegCool package	BackDoor.Pigeon.12879	default
SlimXP package	Downloader.Win32.SetupFactory.f	default
SpamKiller package	Downloader.Small.159	default
SpeakyChat package	BackDoor.Pcik	default
SpotMSN package	Backdoor.Win32.Rbot.kiq	default
SuperVisionView package	Win32.Trojan-Downloader	default
Swedge package	Trojan-Clicker.VB.3	default
SystemExplorer package	Trojan.DownLoader.58316	default
Tint package	Trojan.Win32.Shutdowner.nx	default
TrafficMonitor package	Backdoor.Win32.Hupigon.cjbo	default
UPXshell package	Trojan.Win32.Delf.cbf	default
VistaAeroSwitch package	Backdoor.Win32.Raid.bc	default
WackGet package	Trojan-Downloader.Win32.Murlo.ob	default
WinRAR package	Virus.Win32.Xorer.a	default
WorldRacing package	Trojan-Proxy.Win32.Ranky.jd	default
XAMPP package	Trojan-PSW.Win32.LdPinch.ugd	default
Zattoo package	Trojan.Win32.Shutdowner.vz	default

VBA32 had 46 false alarms.

Avast

False alarm found in some part(s) of	Detected as	Settings
AmoK package	Win32:Trojan-gen {Other}	default
AWRC package	Win32:Trojan-gen {Other}	default
CDDVDBurning package	Win32:Trojan-gen {Other}	default
ColorfulTetrix package	Win32:Trojan-gen {Other}	default
CPU-Control package	Win32:Trojan-gen {Other}	default
CrystalLike package	Win32:PoisonIvy-EY [Trj]	default
Cubase VST32 package	Win32:Sysbopt-E [Trj]	default
EggDrop package	Win32:Agent-XNW [Trj]	default
eMusic package	Win32:Trojan-gen {Other}	default
eScan package	Win32:Trojan-gen {Other}	default
Failover-Route package	Win32:VB-JZO [Trj]	default
FileAnalyser package	Win32:Trojan-gen {Other}	default
Flash2Video package	Win32:Klone-BAS [Trj]	default
GPSPhoto package	Win32:Trojan-gen {Other}	default
HDCleaner package	Win32:Agent-AALE [Trj]	default
Hopster package	Win32:Neptunia-YN [Trj]	default
HotDish package	Win32:Kolabc-CN	default
HyperCam package	Win32:Rbot-GDH [Trj]	default
IceSword package	Win32:Agent-AAUC [Trj]	default
Image package	Win32:Trojan-gen {Other}	default
Kaspersky package	Other:Malware-gen	default
MagicalOptimizer package	Win32:Trojan-gen {Other}	default
MobileAssistant package	Win32:Delf-JXM [Trj]	default
MS Base Cryptographic Provider package	Win32:Trojan-gen {Other}	default
NexonPlug package	Win32:Trojan-gen {Other}	default
NiceMC package	Win32:Trojan-gen {Other}	default
NortonIS package	Win32:Trojan-gen {Other}	default
Notepad2 package	Win32:Microjoin-BX [Trj]	default
NXPlite package	Win32:Trojan-gen {Other}	default
Oblivion package	Win32:Downloader-BKV [Trj]	default
OnlineNews package	Win32:Delf-IRG [Drp]	default
PCanywhere package	Win32:Rootkit-gen	default
Perl package	Win32:Luder-L [Trj]	default
RapportService package	Win32:Rootkit-gen	default
RegCool package	Win32:Trojan-gen {Other}	default
Slacker package	Win32:Trojan-gen {Other}	default
SmartProtector package	Win32:Trojan-gen {Other}	default
SpeakyChat package	Win32:Trojan-gen {Other}	default
Symantec driver package	Win32:Junkpoly	default
TCPfilter package	Win32:Trojan-gen {Other}	default
TrafficMonitor package	Win32:Trojan-gen {Other}	default
VBA32 package	Win32:Trojan-gen {Other}	default
Vize package	Win32:Bifrose-DNO [Trj]	default
WinPLOSION package	Win32:Hooker-G [Trj]	default
WormRadar package	Win32:Doomjuice [Wrm]	default
X-Cleaner package	Win32:Trojan-gen {Other}	default
XPUserManager package	Win32:Inject-HS [Trj]	default

Avast had in total 47 false alarms.

G DATA

False alarm found in some part(s) of	Detected as	Settings
0190warner package	Win32:Rootkit-gen [Rtk]	default
3DScreensaver package	Trojan.Generic.248412	default
AcerUSB package	Dialer.1000.I	default
Amasvid package	Trojan.Script.757	default
AmoK package	Trojan.Generic.205372	default
Anonymizer package	Trojan.Generic.215592	default
AWRC package	Win32:Trojan-gen {Other}	default
Backflip package	Virtool.8598	default
CDDVDBurning package	Win32:Trojan-gen {Other}	default
ColorfulTetrix package	Win32:Trojan-gen {Other}	default
CrystalLike package	Win32:PoisonIvy-EY [Trj]	default
Cubase VST32 package	Win32:Sysbopt-E [Trj]	default
DesktopNotes package	Generic.Malware.M!H@mm.62540566	default
DriveVar package	Trojan.DC	default
EggDrop package	Win32:Agent-XNW [Trj]	default
eMusic package	Win32:Trojan-gen {Other}	default
eScan package	Win32:Trojan-gen {Other}	default
Failover-Route package	Win32:VB-JZO [Trj]	default
FileAnalyser package	Win32:Trojan-gen {Other}	default
GatewayServer package	DeepScan:Generic.PWStealer.FFE1D3BA	default
Gothic2 package	Trojan.Generic.103850	default
GPSPhoto package	Win32:Trojan-gen {Other}	default
HDCleaner package	Win32:Agent-AALE [Trj]	default
HotDish package	Win32:Kolabc-CN	default
Hotkey package	Trojan.Generic.91399	default
HyperCam package	Win32:Rbot-GDH [Trj]	default
Image package	Win32:Trojan-gen {Other}	default
iWin package	Backdoor.Generic.47188	default
Kaspersky package	Other:Malware-gen	default
MagicalOptimizer package	Win32:Trojan-gen {Other}	default
MobileAssistant package	Win32:Delf-JXM [Trj]	default
MS Base Cryptographic Provider package	Win32:Trojan-gen {Other}	default
NetControl package	Generic.Malware.SL!g.EAEAF616	default
NexonPlug package	Win32:Trojan-gen {Other}	default
NortonIS package	Win32:Trojan-gen {Other}	default
Notepad2 package	Win32:Microjoin-BX [Trj]	default
NXPlite package	Win32:Trojan-gen {Other}	default
OnlineNews package	Win32:Delf-IRG [Drp]	default
PCanywhere package	Win32:Rootkit-gen	default
Philips package	Trojan.Generic.93188	default
RapportService package	Win32:Rootkit-gen	default
RSAutoUp package	Backdoor.Generic.90924	default
SmartBarXP package	Trojan.Generic.79790	default
SmartProtector package	Win32:Trojan-gen {Other}	default
SpeakyChat package	Win32:Trojan-gen {Other}	default
Spellforce package	Backdoor.Bot.20129	default
SSM package	Trojan.Genric.109005	default
Symantec driver package	Win32:JunkPoly	default
TCPfilter package	Win32:Trojan-gen {Other}	default
Tracker package	Trojan.Generic.215592	default

TrafficMonitor package	Win32:Trojan-gen {Other}	default
TrafMeter package	Worm.Padobot.C	default
UPACK compression tool package	Worm.Generic.23238	default
VBA32 package	Win32:Trojan-gen {Other}	default
Vispa package	Backdoor.Bot.4737	default
Vize package	Win32:Bifrose-DNO [Trj]	default
WinPLOSION package	Win32:Hooker-G [Trj]	default
WormRadar package	Generic.XPL.IIS.6F805DCB	default
X-Cleaner package	Win32:Trojan-gen {Other}	default
XPTweaker package	Trojan.Generic.100406	default
XPUserManager package	Win32:Inject-HS [Trj]	default
XPY package	Trojan.Generic.113577	default

GDATA AVK had 62 false alarms.

Sophos

False alarm found in some parts of	Detected as	Settings
0190warner package	Sus/Madcode-A	default
ABCAmber package	Sus/ComPack-E	default
AdvancedRemoteInfo package	Sus/Behav-1021	default
AdvancedZIPPwdRecoverypackage	Sus/Behav-194	default
AmericasArmy package	Sus/UnkPacker	default
AmoK package	Sus/UnkPacker	default
ArxFatalis package	Sus/Dropper-A	default
AvantBrowser package	Mal/Behav-053	default
BattlePets package	Sus/ComPack-C	default
BattleStation package	Sus/UnkPacker	default
BootXP package	Sus/UnkPacker	default
BrandAwareness package	Sus/Emogen-AB	default
BrotherInArmy package	Sus/UnkPacker	default
BxAutozip package	Sus/Madcode-A	default
CableMon package	Sus/ComPack-C	default
CardScan package	Sus/VB-H	default
CastlesAndCatapults package	Sus/UnkPacker	default
CFMiniBar package	Mal/Reload-A	default
Civilization package	Sus/UnkPacker	default
CleanRAM package	Sus/ComPack	default
CodeStuff package	Sus/Behav-1009	default
ConnectionWatch package	Sus/ComPack-E	default
CPUcool package	Sus/ComPack-C	default
CryptoCrat package	Sus/UnkPacker	default
CryptoLock package	Mal/EncPk-DH	default
Daemon package	Sus/Behav-1005	default
DaViDeo package	Sus/UnkPacker	default
DeadMansHand package	Mal/Behav-204	default
DeltaForce package	Sus/ComPack-C	default
Dialog package	Sus/UnkPacker	default
DreamMail package	Sus/Behav-113	default
DriveVar package	Mal/Generic-A	default
EasyBurning package	Mal/Packer	default
EasyScreenRecorder package	Sus/Behav-113	default
EncryptOnClick package	Sus/Behav-1012	default

EquationWizard package	Sus/ComPack	default
eScan package	Istbar (PUA)	default
Executor package	Mal/Emogen-I	default
Eye package	Mal/Heuri-D	default
FastStoneViewer package	Sus/Behav-113	default
FolderGuide package	Sus/Behav-113	default
FotoAlbumMaker package	Sus/AutoInf-A	default
FotoWorks package	Mal/EncPk-M	default
FoxMail package	Sus/Behav-113	default
FruitLockers package	Sus/UnkPacker	default
GalleryConstructor package	Sus/ComPack-C	default
GetThePictures package	Sus/Dbot-A	default
Glass2k package	Sus/UnkPacker	default
Glückskeks package	Sus/Behav-1016	default
GooWiBa package	Mal/Heuri-E	default
GTA package	Sus/Dropper-A	default
HotDish package	Sus/ComPack-C	default
HyperCam package	Mal/Generic-A	default
ICQPlus package	Sus/UnkPacker	default
ImperialGlory package	Sus/UnkPacker	default
InternetTimer package	Sus/UnkPacker	default
InternetWatcher package	Sus/ComPack-E	default
iSQLviewer package	Sus/ComPack-C	default
iWin package	Sus/ComPack	default
JAlbum package	Sus/ComPack-C	default
Joshua package	Sus/ComPack-C	default
JPEGimager package	Sus/ComPack	default
JustCause package	Sus/UnkPacker	default
LANTool package	Mal/Heuri-D	default
Lauge package	Sus/Behav-269	default
LegoStarWars package	Sus/UnkPacker	default
LimeWire package	Sus/ComPack-C	default
LogitechDriver package	Sus/Behav-1018	default
Magic package	Sus/UnkPacker	default
MailTaX package	Sus/UnkPacker	default
MakeNSIS package	Sus/Dropper-A	default
MorsePilot package	Sus/UnkPacker	default
MP3toAll package	Sus/Behav-113	default
MusicBase package	Sus/ComPack-C	default
NetTransport package	Sus/UnkPacker	default
NewsPro package	Sus/UnkPacker	default
Norton package	Sus/UnkPacker	default
NotepadLite package	Sus/ComPack-E	default
OneClickDVDCopy package	Sus/ComPack	default
PacSpam package	Sus/Behav-1001	default
PCrecall package	Sus/ComPack-C	default
PCWizard package	Sus/Behav-1021	default
PlacemarkManager package	Mal/Behav-010	default
PopAdFilter package	Sus/Behav-113	default
PrivacyInspector package	Sus/Dropper-A	default
QuickMenuBuilder package	Sus/UnkPacker	default
RapportService package	Sus/Behav-1012	default
RollOrDont package	Sus/ComPack-C	default

RoseUtilities package	Sus/UnkPacker	default
RunWithParameters package	Mal/Packer	default
Scout package	Sus/Dropper-R	default
SeriousSam package	Sus/UnkPacker	default
Shareholder package	Sus/UnkPacker	default
SKSUtilities package	Sus/ComPack-C	default
SliceNSave package	Sus/UnkPacker	default
SopChast package	Mal/Behav-034	default
SSCUtility package	Sus/Dropper-A	default
Starter package	Sus/Behav-1009	default
SuperCopier package	Sus/Madcode-A	default
SwordOfStars package	Sus/Behav-1011	default
TaskMan package	Sus/Behav-1004	default
ThirdReich package	Sus/ComPack-C	default
TuneUpUtilities package	Sus/Madcode-A	default
UliDriver package	Sus/Behav-1014	default
USBaccess package	Sus/Behav-166	default
Vampeer package	Sus/Madcode-A	default
Video2Brain package	Sus/UnkPacker	default
Vispa package	Mal/EncPk-C	default
Webbit package	Mal/TibsPak	default
WinCon package	Sus/UnkPacker	default
WISOSecurity package	Sus/UnkPacker	default
WormRadar package	W32/Deadhat-A	default
XPKonfig package	Sus/Behav-1014	default
XPlite package	Sus/Behav-1016	default
YAW package	Mal/Behav-053	default
YourUninstaller package	Sus/Behav-113	default
Zuma package	Sus/UnkPacker	default

Sophos had 117 false alarms, of which nearly 100 were "Sus" detections[6], on files packed with unusual packers[7]. Sophos products are mainly for corporate/enterprises. These systems are managed by Administrators and home user software rarely gets installed. When a suspicious application is found, Sophos issues an alert and the Administrator decides to continue to block it or to authorize it.
Sophos is an exception in our tests, because while the other products are targeted for the home user and corporate market, Sophos products are designed exclusively the corporate market, where Administrators would in fact like to get informed about the above misdetections[8] (which we have to count here as false alarms).

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[6] http://www.sophos.com/security/blog/2008/05/1324.html
[7] http://www.sophos.com/security/blog/2008/09/1640.html
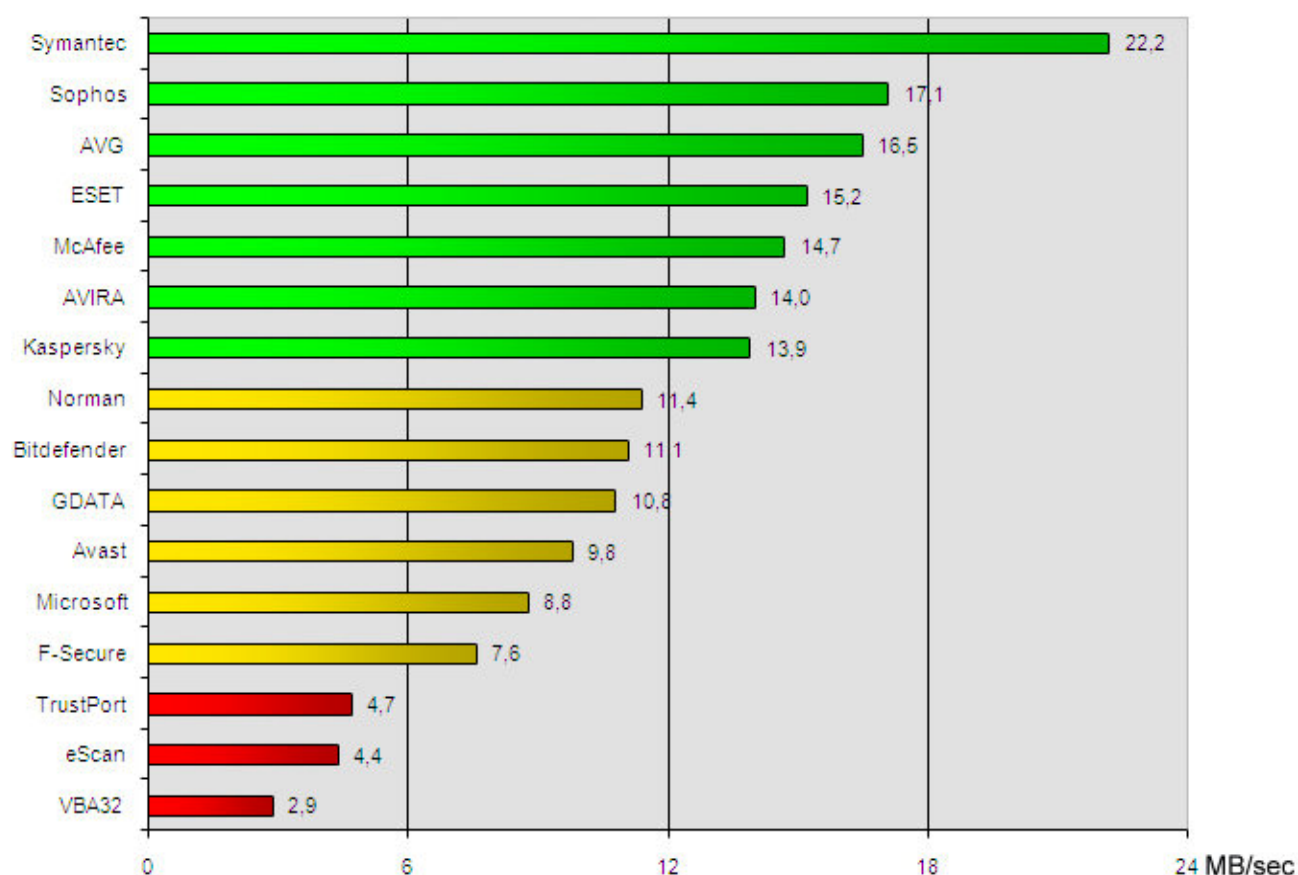[8] http://www.sophos.com/security/blog/2008/06/1485.html

7. Scanning speed test

Some scanners may be slower than others due various reasons. It has to be taken in account how reliable the detection rate of an Anti-Virus is; if the Anti-Virus product uses code emulation, if it is able to detect difficult polymorphic viruses, if it does a deep heuristic scan analysis and active rootkit scan, how depth and thorough the unpacking and unarchiving support is, additional security scans, etc. Furthermore, some products have technologies to decrease scan times on subsequent scans by skipping previously already scanned files (here ignored due the testing scope).

The following graph shows the throughput rate in MB/sec (higher is faster) of the various Anti-Virus products when scanning (on-demand) with highest settings our whole set of clean files (used for the false alarm testing). The scanning throughput rate will vary based on the set of clean files[9], the settings and the hardware used.

Product	MB/sec
Symantec	22,2
Sophos	17,1
AVG	16,5
ESET	15,2
McAfee	14,7
AVIRA	14,0
Kaspersky	13,9
Norman	11,4
Bitdefender	11,1
GDATA	10,8
Avast	9,8
Microsoft	8,8
F-Secure	7,6
TrustPort	4,7
eScan	4,4
VBA32	2,9

The average scanning throughput rate (scan speed) is calculated by size of the clean-set in MB's divided by time needed to finish the scan in seconds. The scanning throughput rate of this test cannot be compared with future tests or with other tests, as it varies from the set of files, hardware used etc.

The scanning speed tests were done under Windows XP SP3, on identical Intel Core 2 Duo E8300/2.83GHz 2GB RAM, SATA II disks and without network connection.

In near future (we do not give a date yet), AV-Comparatives may provide a separate test which tries to measure the impact on system performance of the various products.

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[9] to know how fast the various products would be on *your* PC at scanning *your* files, try yourself the products

8. Award levels reached in this test

AV-Comparatives provides a 3-level-ranking-system (STANDARD, ADVANCED and ADVANCED+). Overviews of levels reached in past can be found on our website (http://www.av-comparatives.org/seiten/overview.html).

AWARD LEVELS	PRODUCTS
ADVANCED+ ★★★ Aug 08 on-demand detection test	**AVIRA** **GDATA** **Symantec** *McAfee* (with Artemis)[10] **Avast** **TrustPort** **Kaspersky** **AVG**
ADVANCED ★★ Aug 08 on-demand detection test	**ESET** **BitDefender** **F-Secure** **eScan** **Sophos** **Norman**
STANDARD ★ Aug 08 on-demand detection test	**Microsoft** **McAfee** (without Artemis)
NO AWARD	**VBA32**

All products in the ADVANCED+ category offer a very high level of on-demand/on-access detection. Selection of a product from this category should anyway not be based on detection score alone. For example the false alarm rate, quality of support, ease of use and system resources consumed when the product is in use should be considered when selecting a product (as well as other protection mechanism offered, like e.g. behaviour blockers, etc.). Products in the ADVANCED category offer a high level of detection, but slightly less than those in the ADVANCED+. These products are suitable for many users. Products in the STANDARD category or below are suitable for use if they also are ICSA certified (www.icsalabs.com) or Checkmark certified (www.westcoastlabs.org), or consistently achieve Virus Bulletin 100% awards (www.virusbtn.com).

Normal home users cannot rely on a product that causes often false alarms - also because it is much easier to score high in tests with a product which is more prone to false alarms than other products. Due that, next year false alarms may lead to lower awards.

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[10] we awarded the home user product of McAfee (without Artemis) STANDARD, and the Enterprise product (with Artemis in Email mode) ADVANCED+ (noncompetitive).

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