

Mac Security Review



Mac Security Review

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Outline

Is security software for Macs really necessary?

Mac users can often be heard to say “I don’t need antivirus software, I have an Apple”. Unfortunately, this is a misguided conclusion. Whilst the dangers are certainly much less than with Windows computers, they do exist nonetheless. If nothing else, the recent spread of Mac Trojans proves this. Mac users who think they do not need to concern themselves have created an illusion. The claim that Apple users are less threatened than Windows users is currently still correct, but could change rapidly. It was the low market share of Macs that limited the attentions of online criminals; now that Macs are becoming more popular, this state of affairs is changing. Apple computers are being targeted more and more by cybercriminals. Something that many people forget is that phishing works equally well on any device with an integrated browser, regardless of whether this is Windows, Mac, Apple TV, Android, Symbian or Internet TV; phishing affects everyone equally.

The largest single case was the Flashback-Botnet, which affected over half a million Macs at the beginning of 2012. This may not sound like much, and indeed is not very much compared to the world of Windows computers, but only shows the tip of the iceberg. Macs are being attacked more and more by cybercriminals, who take advantage of the complacency towards malware threats amongst Mac users. Unlike Windows users, most Mac users do not have any additional protection against viruses on their computers.

As in the world of Windows, free antivirus programs are available for the Mac.¹ However, the security of personal data should be worth paying for, just as with backup services.

Making the Mac more secure

As with Windows computers, security on the Mac can be improved by employing good practices and appropriate settings²:

1. Never use an administrator account for day-to-day computing
2. Use a sandboxed browser such as Google Chrome
3. Uninstall/disable the standalone Flash Player
4. Uninstall/disable the Java Player
5. Keep your Mac operating system up-to-date with the latest patches
6. Use secure passwords (the Mac includes the KeyChain password manager)
7. Deactivate any services such as Airport, Bluetooth or IPv6 that you don’t use
8. Despite what you may hear, you should use security software

Apple’s own instructions on optimal security configuration can be found here: <http://www.apple.com/support/security/guides/>

¹ avast! and Avira provide free security software for the Mac.

² Further tips are available here: <http://osxdaily.com/2012/04/07/tips-secure-mac-from-virus-trojan/>

Tested/Reviewed Products

The following products were reviewed in this report. The most up-to-date version available at the beginning of September was used.

- **avast! Free Antivirus for Mac 7.0**
- **AVIRA Free Mac Security 1.0**
- **eScan Anti-Virus for Mac 5.5-5**
- **ESET Cyber Security Pro 5.0**
- **F-Secure Anti-Virus for Mac B11291.C105**
- **Kaspersky Security for Mac 13.0.2.458**
- **ZeoBit MacKeeper 2012**



Detection of Mac malware

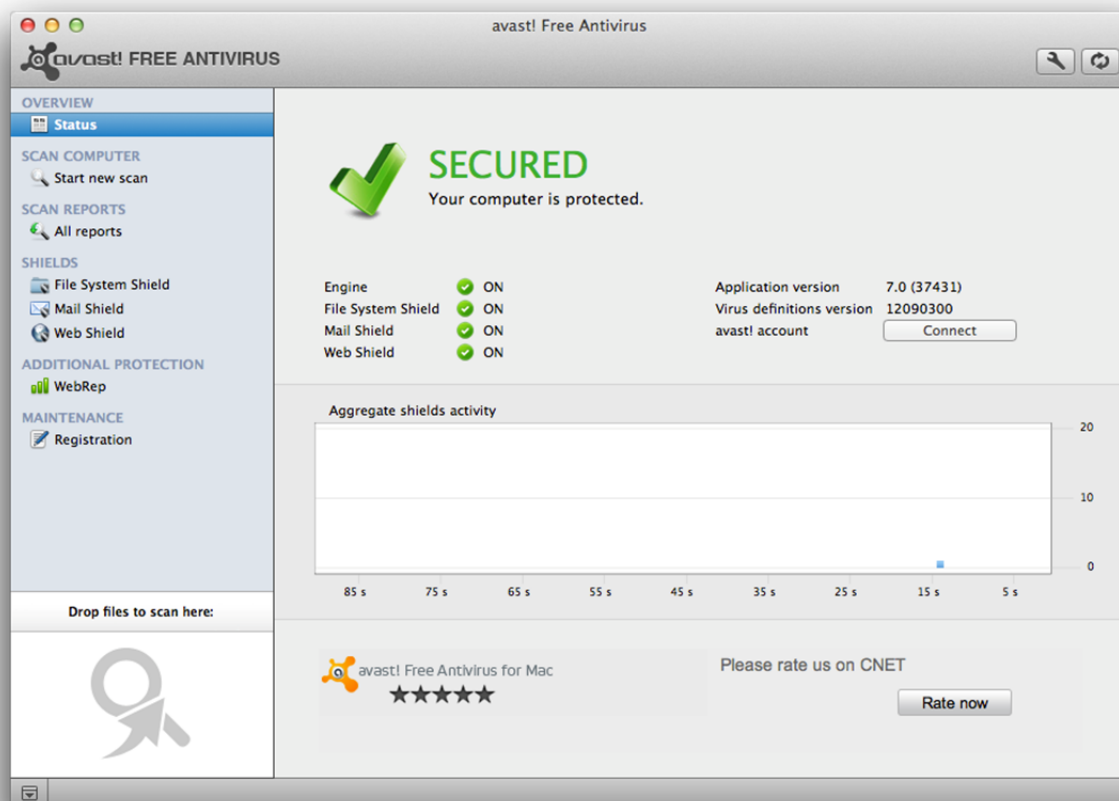
In this test, we used Mac samples from 2011 and 2012. The test set consisted of 477 Mac samples (most of them belonging to the FlashBack and FakeAlert families)³. The Mac security products were last updated on the 12th September 2012 and had an active connection to the cloud while scanning the samples on-demand. For the false-positive test, we scanned the machine of a real-life Mac power user (~500GB of data); no false alarm was encountered.

Test results

- | | |
|-------------------------|-------|
| 1. Avast, AVIRA, ZeoBit | 100% |
| 2. Kaspersky | 98,5% |
| 3. ESET | 96,9% |
| 4. F-Secure | 90,6% |
| 5. eScan | 83,4% |

³ Most of the recent malware can be handled by the anti-malware features included in current Mac OS X versions (<http://support.apple.com/kb/HT5290>).

avast! Free Antivirus for Mac



Installation

avast! Free Antivirus for Mac was available for download on Avast's home page. After you run the installation file and accept the license agreement, avast! Free Antivirus for Mac is installed and then launched. No options are offered during installation.

Starting the Programme

When you first start the software, a message appears, informing you that you should register the scanner to continue to receive updates for the virus database. avast! allows the user a grace period of 30 days in which he/she can perform this step.

When the installation is finished, the suite's home screen appears. The large, green

message "SECURED" catches your attention as well as the monitor, which graphically shows the activity of the shields, which comprise the various protection modules.

On the left-hand side of the window is a menu, which lists all the features available. Underneath, there is a field in which you may place individual files to be scanned manually.

On a positive note, it should be pointed out that all protection features are already active from the start, without further configuration on the part of the user.

Start new scan

After clicking on this menu item, the user is offered six different scan types to choose from. The difference between the types is in

the target drives or directories. This way, the scan, in addition to a complete system scan on the local hard drives, can be restricted to network drives, removable media or the home directory. Furthermore, the user can choose a custom directory to be scanned. After a successfully completed scan, the results are listed under the menu item *Scan Reports*.

Should the scanner detect a virus in the file system, a small red sign appears next to the corresponding scan. The status of "Secured" still appears on the home screen. Here, at least, a precise warning would be appropriate because no further steps have yet been taken and the infected file is unchanged in the file system.

Scan Reports

The previous scans are listed here under this menu item. After selecting the respective scan, all infections that were found are listed and further steps offered. Thus, the infected files can be fixed, deleted, moved or displayed in the Finder. In addition, a very large report in the *pfile* format can be exported, which will only be usable for advanced users.

Shields

avast! Free Antivirus for Mac offers three different Shields - File System Shield, Mail Shield and Web Shield. There are no descriptions available, so that you must surmise the functionality of the individual Shields by name only.

If you choose one of the Shields, you will be shown a graph, which plots the frequency of the recent scans. We are familiar with this kind of display from the home screen where all three shields are graphically depicted. In addition, all previous findings will be listed in the same style as in the on-demand scanner.

File System Shield

File System Shield monitors the file system for possible threats. This feature is known by other vendors under the moniker "Real-time" file system protection or scan.

In File System Shield, particular files may be defined as exceptions, which are then exempt from the Shield. This can be useful, for example, if there are false detections from the scanner.

Mail Shield

Mail Shield monitors email traffic for threats. In preferences, mail server can be set as SSL-only, which addresses all these servers via SSL only.

Web Shield

The Web Shield protects the user from threats when surfing the Internet. Additional setting options are not available.

WebRep

Under the abbreviation *WebRep*, you will find the collection of browser plugins provided by avast!. These are available for the Safari, Firefox and Google Chrome browsers.



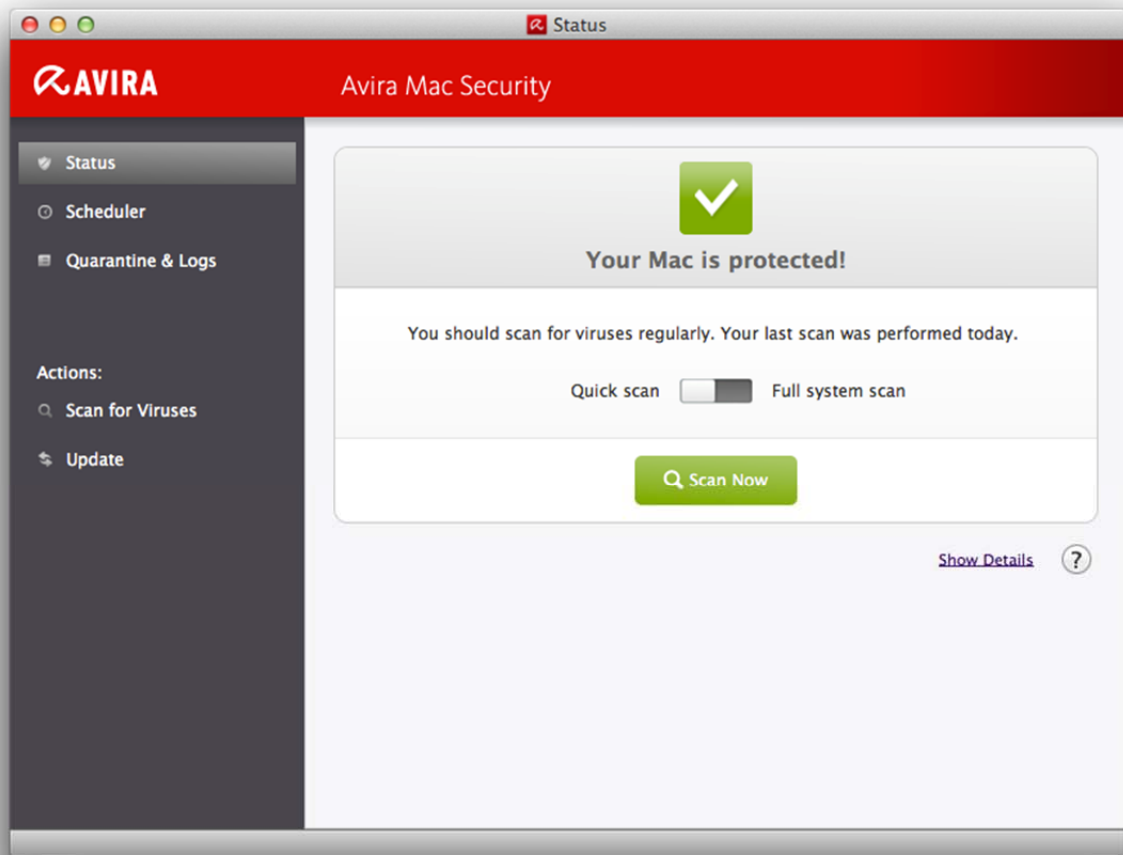
After installation, an icon will appear next to the address bar in the browser, which displays the reputation of the current web page. This rating is determined by user ratings. By

clicking on the icon a pop-up appears in which the user can rate the page and can assign the contents to a genre.

Conclusion

With Free Antivirus for Mac, avast! offers a worry-free antivirus product which requires almost no configuration by the user and is available free of charge. The browser add-ons complete the free security solution.

Avira Free Mac Security



Installation

We downloaded Avira Free Mac Security from the official Web site of Avira. After a short introduction and accepting the license agreement, the user can choose where to install it. After that, the installation process begins and the suite starts running automatically.

Starting the Programme

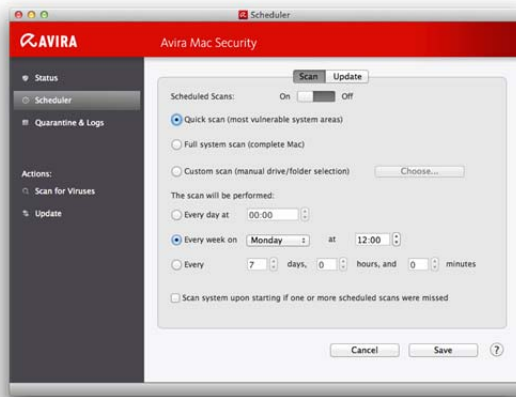
An initial update, a Quick Scan is performed when you first start the program. Following that, the home screen comes up where the current protection status appears. After all these recommended actions have finished it states "Your Mac is protected".

Scheduler

Avira Free Mac Security offers a scheduler, which can automatically perform scans and updates.

The type of scan can be defined for the automated scan. The user is provided the same three possibilities that are available with the scanner. These are discussed later in the review.

Additionally, you can define the interval of automated scans. Available choices are *daily*, *weekly*, and a *user-defined interval*.



Unfortunately, only a single time-scheduled scan can be defined, which restricts the flexibility. Therefore, the generic scenario “Quick Scan on Monday” and “Full Scan on Saturday” would be impossible. In our opinion, the Scheduler should be more flexible.

With automated updates, only the interval can be defined. Again, just one update job can be set, though this is not as annoying as with the scanner.

According to the help file, if an *All-in-one* update is performed, it should update the virus definitions, the engine and the product.

Quarantine & Logs

Quarantine & Logs displays all infected files, as well as the results of all completed scans.

Quarantine

Here all infected files are listed along with any further recommended steps. For the respective files, the choice of actions is *Delete*, *Scan Again*, *Restore* and *Send file to Avira*.

Logs

Logs lists all relevant actions of the product. It is extensively designed and intended more for advanced users.

In order not to lose the overview, Avira makes filter options available. So, the source of the logs can be selected in addition to the period. Available options are *Scanner*, *RT Protection*, *Updater*, and *Quarantine*. The results can be further sorted according to the type of the message filtered out. The available options here are *Virus*, *Error*, *Warning*, and *Info*.

Scan for Viruses

This menu item allows the user to start an immediate scan. Here there are three scan possibilities provided. The *Quick Scan* checks the most critical and vulnerable regions of the Mac. Avira does not specify which regions these are, even in Help. The *Full System Scan* scans the complete Mac system. The *Custom Scan*, however, only checks those directories that the user selects. In Settings, the user can choose the desired action upon detection of an infected file. The possibilities are *Move into Quarantine* and *Delete*. Moreover, the user can decide whether or not to scan archives. In the settings, the detection level can be determined for heuristic detection. In addition, possible hazardous sources can be excluded from being scanned, for example *diallers*, *jokes*, *games* and so on.

Update

All updates are dealt with under this menu item. We were pleased to see that the user is given the choice of whether to perform just a Detection Update, which includes the virus definitions and engine, or an All-In-One Update, which in addition updates the program itself.

Conclusion

With Free Mac Security, Avira offers an easy-to-use antivirus suite which is available free of charge. The Scheduler is very practical, but more options could be provided.

eScan Anti-Virus for Mac



Installation

We started the installation from the setup file provided by eScan. After a short introduction and accepting a licence agreement, the user can choose the installation folder location. eScan is then installed.

Starting the program

When the program is first started, a message is shown stating that there is no valid licence. There is the choice of entering a licence key there and then, or using the product as a time-limited trial version. Finally, the virus database is updated. The home page of the main program window can then be seen, showing the current protection status (*Started*).

It is noticeable that some of the functional links are greyed out, as administrator rights are needed to use them. These can be

obtained from the system tray icon's context menu by clicking on *eScan GUI (root)*. Once the password has been entered, the links are activated.

Some information about this would be helpful, as users may only be able to find out how to activate these functions after some searching.

Protection

The *Protection* button relates to real-time protection. This page shows the current configuration, along with some statistics for previous scans.

The button *View Quarantined Objects* displays quarantined items in an informative table. The user is offered options for restoring or deleting them.

View Statistics displays the information about Real Time Protection Scanning only, while the

View Quarantined Objects contains the infected files detected by Real time protection as well as infected files detected by the On-Demand Scanner. The user is also presented with an attractive graphical display. Unfortunately, this seems not to work quite perfectly, as the number of quarantined items was shown as zero, even though two items were present in quarantine.

The default action to be taken on discovery of malware can be selected in the settings. *Log*, *Disinfect*, *Delete* and *Quarantine* are the available options. We were pleased to see that if an attempted disinfection fails, an alternative action can be selected. Additionally, scan exceptions can be made for specific files and folders. USB storage media can be excluded from real-time protection via a checkbox. Other configurable options include Log-Level and the length of time to keep information messages.

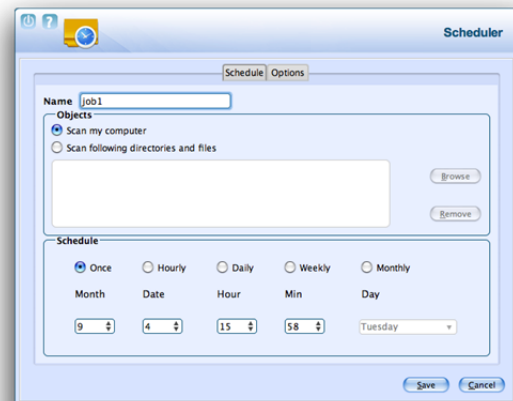
The descriptions in the configuration menu are extremely spartan. For each checkbox, there is only a one-word description such as *Packed* or *Archives*. We note that the online help feature is very informative.

Scan

eScan's malware scanner provides four distinct types of scan: a full system scan, a scan of the home folder, a custom scan (for checking a specific path), and a scan of USB devices.

The action to be taken on malware discovery can be defined in the settings, as it is under *Protection*. Additionally, specific files and folders, as well as individual file types, can be excluded from the scan. There are further options for scan behaviour and logging level. For reasons we do not understand, eScan's standard settings exclude archive files. In our

opinion, it would be desirable to include such files in an on-demand scan.



The scanner offers a well-designed scheduler, which enables an effective plan for automated scans to be created. Any number of scan tasks can be created, each with its own target directory and timetable. The available intervals are *once*, *hourly*, *daily*, *weekly* and *monthly*. The scheduler is intuitively designed and should be easy for anyone to use without having to consult the help function.

Update

This view gives the user an overview of the time of the last update, as well as the current settings of the *Run Mode*. Although updates are automatically downloaded by default, there is still the opportunity to update manually. The settings allow the time of automatic updates to be set, along with Internet access configuration.

Conclusion

eScan's Anti-Virus for Mac is a virus scanner with a wide range of configuration options and a well-designed scheduler. eScan for Mac also provides Blocking of USB storage devices. In terms of user-friendliness, there is still some room for optimisation.

ESET Cyber Security Pro



Installation

We started the installation from the setup file provided by ESET. After a brief introduction and accepting the licence agreement, we were pleased to see that the installer checks online for a newer version of itself before proceeding with the actual installation.

Starting the program

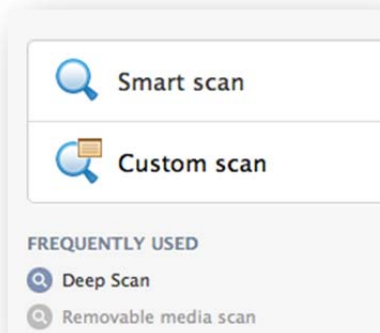
On the first program start, the home page of the program window appears, displaying the current protection status. In the default configuration, the components Computer, Firewall, plus Web and Mail are activated. *Parental Control*, on the other hand, will only be activated once it has been configured. Clicking on the icon for any of the major protection components takes the user to the specific configuration options for that item.

Below the main icons are smaller buttons for the most commonly used functions (update

and scan). Additionally, there is an information area showing the number of objects checked by real-time protection, the version and date of the virus database, and the licence status.

Computer Scan

This component scans the system for dangerous software. ESET offers the user four different scan types: *Smart Scan*, which scans local hard drives; *Custom Scan*, which checks user-defined folders; *Deep Scan*, which is not defined further; and *Removable Media Scan*, for scanning e.g. USB devices.



It is unclear to us why *Deep scan* and *Removable Media Scan* are not mentioned in the Help function, and are assigned very small icons in the user interface. In the upcoming release, the items will be well described in the Help function.

We liked the ability to configure the scanner. ESET enables the user to create scan profiles, which can be assigned to the *Smart Scanner*. For each profile created, the *ThreatSense Engine* can be configured. There is a wide range of settings that can be specified, such as the type of files to be scanned, the detection type, and the *Cleaning Level*. The latter item determines how ESET Cyber Security Pro should react on malware discovery. There are also settings for file types to be excluded from the scan, maximum file size and archive depth to be scanned, plus maximum scanning time for any one file.

Update

This menu item allows updates to be downloaded manually. It will not be of much interest to most users, however, as the default interval for automatic update checks is 60 minutes.

Setup

The *Setup* menu provides configuration for the major components Real-Time Protection, Firewall, Web and Mail Protection and Parental Control. Very usefully, the entire

configuration can be exported and then re-imported, e.g. if the product is reinstalled or upgraded.

Computer

The *Computer* menu item provides options for the real-time protection and a blocker for removable media. ESET provides a wealth of options here too. We found the default settings to be logical, however.

Firewall

The firewall controls access from the computer to the network, and vice versa.

Any number of rules can be set to control firewall access permissions. Rules are assigned to particular profiles, so that different profiles can be created e.g. for Home, Workplace and Public. Configuration of these rules is relatively simple. Applications can be dragged and dropped, and then actions and protocols plus the scope of the rule defined.

ESET enables the creation of zones as well as rules. This makes it possible to manage multiple IP addresses in a logical group.

Web and Email protection

Web access and phishing protection are intended to provide protection while surfing the Internet. In the settings, it is possible to define ports to be monitored. Additionally, lists of URLs can be created that should always be allowed, always blocked, or excluded from automatic protection.

Email Protection steps in before a message has reached the email client, as ESET monitors the incoming data stream. In the settings, the action to be taken on receipt of a dangerous email can be specified. The software can mark an email by means of an addition to the subject line, or as a footnote.

Parental Control

For parents who want their children to be protected when using the Internet, ESET has provided the *Parental Control* component. This is based on the user accounts that have been set up on the Mac. Each account can be associated with one of three categories, namely *Child*, *Teenager* or *Parent*. The pre-defined configuration for the relevant category is then applied, although this can be altered as desired. The parental controls are limited to Internet surfing, whereby parents can define which pre-defined genres can be accessed by children and teenagers. Additionally, specific URLs can be marked as blocked or allowed.

Tools

Log files

This module displays a clear overview of events in the form of a table. The source can be selected and filtered according to log type. It is rather inconvenient that the table cannot be sorted. ESET will fix this in the next upcoming release.

Statistics

This function shows the number of *infected*, *cleaned* and *clean* items. The numbers are presented as a graphic. The display can be set to represent all components or a specific one.

Scheduler

The scheduler further impressed us with its configuration options and the scope of its functionality. The user can create and save any number of tasks, with a choice of *Run Application*, *Update*, *On-demand scan* and *System startup file check*. The task can be started according to a time schedule, with a number of predefined intervals available, or it can be set to *Event Triggered*, using events

such as *User login*, *Threat Detection* and *Successful Update*.

Quarantine

This view shows quarantined files in a table. It can be used to move a file manually into quarantine, or restore a file to its original location.

Running Processes

Process	Risk level	Number of Users	Time of discovery	Application bundle ID
UserEventAgent	Green	1	1 month	
kextd	Green	1	1 month	
taskgated	Yellow	1	1 week	
notifyd	Green	1	1 month	
securityd	Yellow	1	1 week	
diskarbitrationd	Green	1	1 month	
powerd	Yellow	1	2 weeks	
configd	Yellow	1	1 week	
distnoted	Green	1	1 month	
syslogd	Green	1	1 month	
cpured	Green	1	1 month	
opendirectoryd	Green	1	1 month	
warmd	Green	1	1 month	
usbmuxd	Green	1	1 month	

File: /sbin/launchd
File Size: 187.5 KB
File Description: Application Bundle ID:
File Version:
Product Name:

This view shows all running processes. Additionally, statistics are collected online, showing e.g. how many other users are running the same process, in order to judge the prevalence and reputation of the program. The risk level according to ESET is also displayed. We again found it irritating that the columns cannot be sorted, but this be possible in the next release.

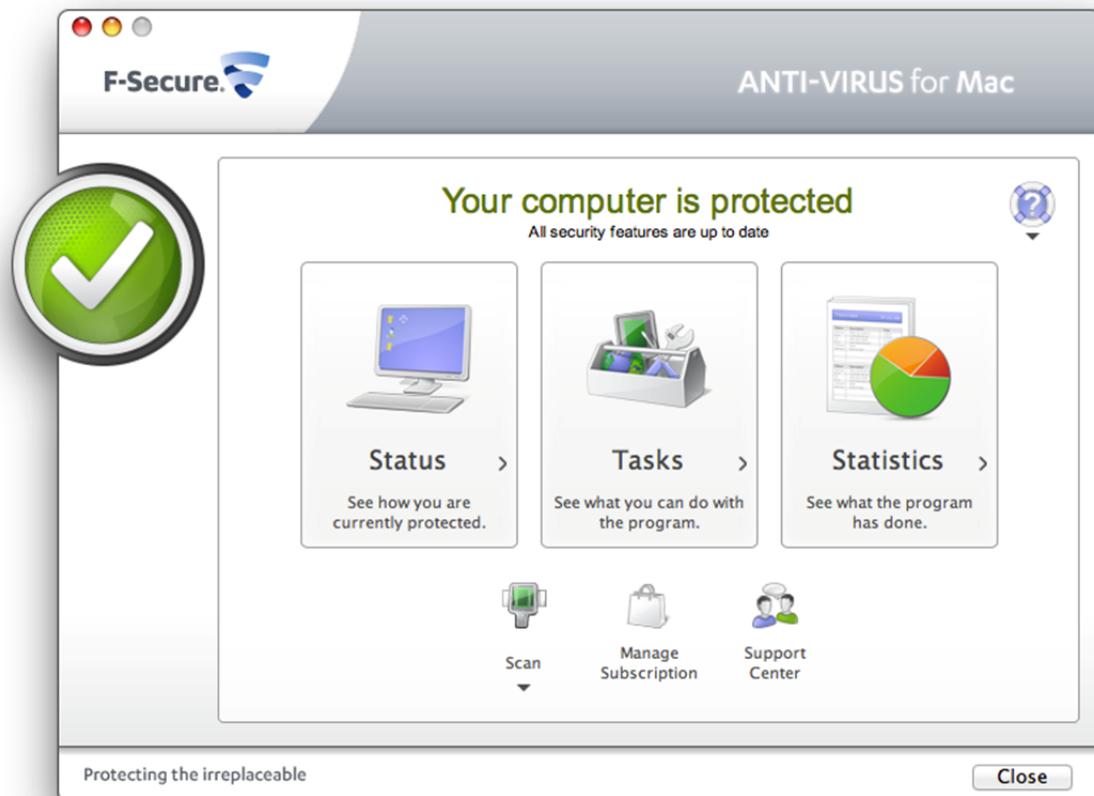
Submit file for analysis

This form allows files to be sent to ESET in order to be checked. Comments and a reply email address can be added.

Conclusion

ESET's Cyber Security Pro is more than just a virus scanner. The security suite additionally offers a firewall, parental controls and a powerful scheduler as well as innovative functions such as *Running Processes*. It is a very well thought-out product.

F-Secure Anti-Virus for Mac



Installation

The installation was run from the setup file provided by F-Secure. After a short introduction and acceptance of the licence agreement, the software was installed and the program started.

Starting the program

When the program is first started, a message is shown that the suite's firewall is active, and an additional window appears, which informs the user that a licence key has not been activated. This enables a key to be purchased, an existing key to be entered, or the use of the program as a trial version.

When the licence key has been dealt with, the attractive graphic design of the program's home page appears. The three main buttons *Status*, *Tasks* and *Statistics* catch the eye,

along with a green tick (checkmark) showing the current secure status.

Status

The Status screen shows the status of the available components. The number of entries is limited, however. In our test, the *Virus and Spyware Scanner* was shown as active, and there was an entry for the firewall, which can be deactivated from this view.

Tasks

Tasks shows the available actions that can be taken by the user. *Scan* provides the options *Scan Home Folder* and *Choose what to scan*. The latter opens a dialog box from which the folders to be scanned can be selected. Although this allows the entire hard disk to be selected, there is no explicit option for a complete system scan. Adding such an option

would not be a challenge for the manufacturers, but would definitely be an advantage for inexperienced home users.

When a scan has been completed, a summary of the items found is presented in a table. As this cannot be either enlarged or sorted, making sense of the report is rather awkward. The event list cannot be exported and is not saved by F-Secure, making it impossible to consult the table again later.

Tasks includes the licence administration, where the key necessary for product and signature updates can be added or changed.

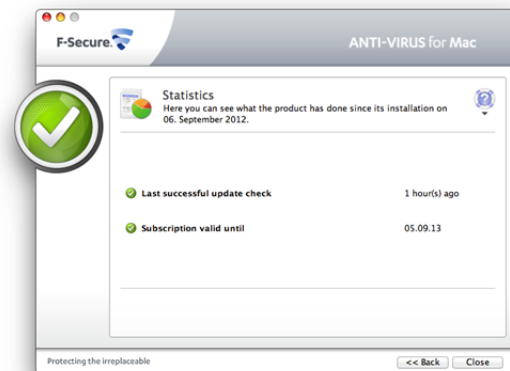
The *Support Center* shows the user an overview of the program and operating system versions. There is also a link to the online help service, and another link that leads directly to F-Secure's upload area, where suspicious files can be submitted for analysis.

The *Tasks* view includes a menu item named *Virus and Spyware History*. This allows only threats identified in real-time by F-Secure Anti-Virus for Mac to be shown, along with the action taken to resolve the threat.

Block all traffic enables all network traffic in and out of the computer to be stopped. This

status is indicated by a prominent message on the home page of the program window.

Statistics



Statistics displays information on the status of the antivirus software. Users should not expect very useful data or statistics, however. The only information shown is the date of installation, time since the last signature update, and the expiry date of the licence.

Conclusion

Anti-Virus for Mac is an antivirus program plus firewall, with a clear and easy-to-use interface and simple configuration options. Power users would benefit from more detailed reports of virus scans.

Kaspersky Security for Mac



Installation

The setup wizard of Kaspersky Security for Mac displays a brief overview of the suite, and then requires the acceptance of the licence agreement and the Security Network Statement. Details of the installation can then be configured. It is possible to choose the components to be installed, though for our test we left the default settings, which include the complete range of features.

Starting the program

When the program is first started, the user is asked to activate a commercial licence, or opt to use the software as a 30-day free trial.

Before the actual home page is displayed, an overview of the functionality and licence status is shown.

The home page of the main program window has been very suitably designed in a futuristic style. The protection status, along with the activation state of individual features, is clear to see.

Scan

Clicking on the magnifying glass symbol displays three icons, representing the available scan options. *Full Scan* runs a complete system scan, whilst *Quick Scan* only checks the critical areas of the Mac, namely folders containing operating-system files and libraries. The *Virus Scan* entry can be used to run user-defined scans of freely selectable files and folders. We feel that a more specific name would help to avoid confusion, given that the name "Virus Scan" applies equally to all three options.

In the settings, the scope of individual scan types, along with the action to be taken when malware is found, can be defined.

We were a little surprised to find that Kaspersky's otherwise very well-designed scanner does not have a scheduler to enable automatic scans to be carried out.

Protection

Protection groups together all the functions relating to real-time protection of the system. Kaspersky makes a distinction between *File Anti-Virus* and *Web Anti-Virus*. The settings allow the standard action to be defined for each of these. For *File Anti-Virus*, it is additionally possible to define a *Protection Scope*, which specifies the extent of the checks.

Reports

Reports displays details of completed scans, downloaded updates, and protection statistics. These can be exported to a text file using the export function. Whilst the update log is very comprehensive, the logs of virus scans are rather meagre; for example, the folder being scanned is not noted. Only the status and the date are recorded.

The scope of *Reports* includes a list of infected and quarantined files. This view can be used to take further steps in the event of an infection.

The menu item *Backup* can be used to make copies of potentially dangerous files to be disinfected or deleted, so that they can be recovered if necessary.

Browser extensions

Kaspersky provides extensions for the browsers Safari, Firefox and Chrome. The *URL*

Adviser warns users of potentially dangerous websites when surfing the Internet.

The *Virtual Keyboard* feature allows passwords and other confidential information to be entered securely. This is done by displaying an on-screen keyboard which can be operated with the mouse, thus avoiding the possibility of data entered being captured by a keylogger.

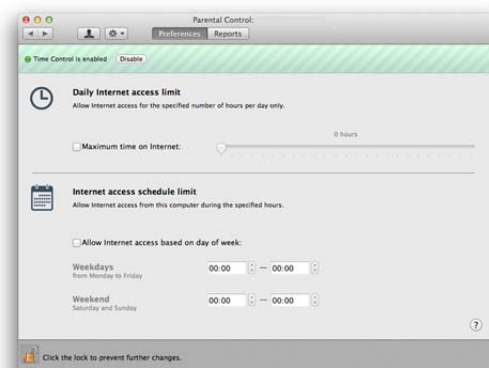
Parental Control

For users with children who use the Internet, Kaspersky provide the *Parental Control* feature, which may be described as accomplished. The individual elements are described below.

Web Control

Web Control dictates which content can be viewed and/or downloaded. Parents can block content in pre-defined categories, which include pornography, social networks, weapons, and others. Downloads can be limited by file type, so that downloading e.g. video files can be prohibited.

Time Control



Time Control makes it possible for parents to regulate the total amount of time their children spend surfing the Internet. Alternatively, specific times can be entered, during which Internet access for the children

is allowed. Different times of day can be specified for weekdays and weekends.

Personal Data Control

Personal Data Control prevents children from making public any information that ought to be kept private. Kaspersky allows parents room to define this content themselves. This results in a clear interface, with an editable list of data items to be restricted, and a short description of each one.

Social Network Control

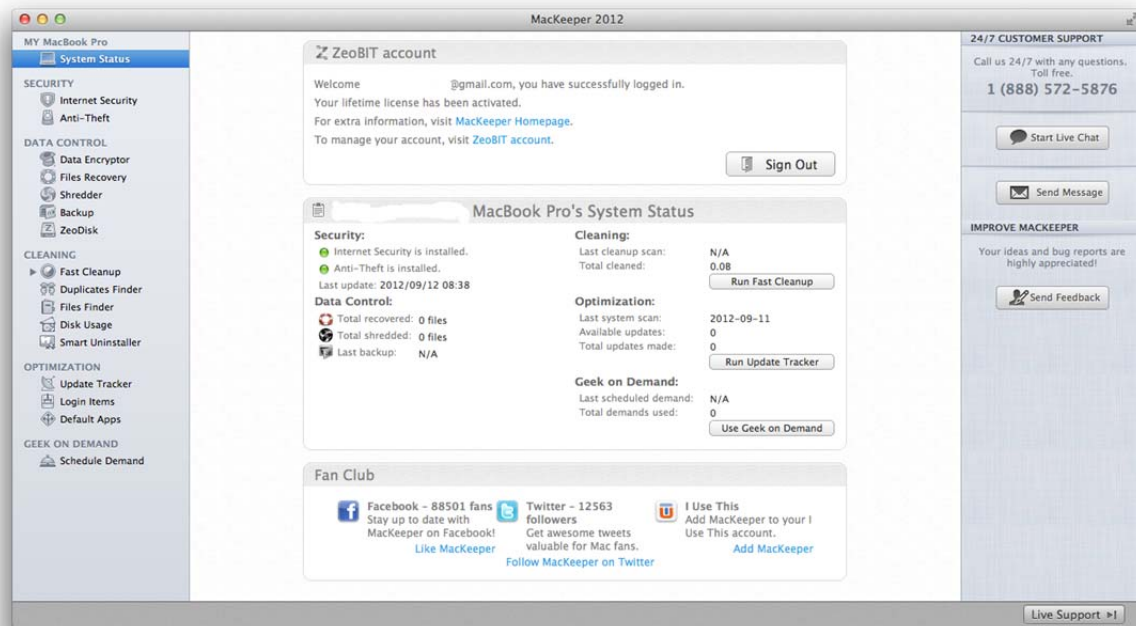
This component protects children who are active in social networks. Kaspersky does not specify any particular social network, but uses generally applicable menu items. There is a list of contacts with whom all contact should be blocked (blacklist). This involves entering a

user ID that specifies the logon name of the undesirable contact. Additionally, a name can be entered that represents the real-world name of the person concerned. Kaspersky allows the blacklist to be converted to a whitelist by means of a checkbox; all contacts are then blocked, except those that are on the list.

Conclusion

Kaspersky's Security for Mac is a well-designed security product, which stands out particularly because of the parental control features. Other plus points include the browser extensions and the intuitive user interface.

Zeobit MacKeeper



Installation

The installer of ZeoBit MacKeeper 2012 was downloaded from the manufacturer's official website and run. There are no options available during installation other than the location of the program folder. When installation is complete, the program starts.

Starting the program

When the program is started, the feature-rich home page is displayed. We decided to activate the program before doing anything else, which is done by clicking the appropriate button. This opens a window in which the product key can be entered. The user is then asked to enter an email address and password for their Zeobit account. A message box informs us that proper functioning of the product requires the user to be logged in to the account.

The start page of the program displays red warning messages to inform the user that neither the Internet security nor the theft protection are active. The statistics displayed

for system cleanup, optimisation and *Geek on Demand* are all set to zero, as the features have not been run yet.

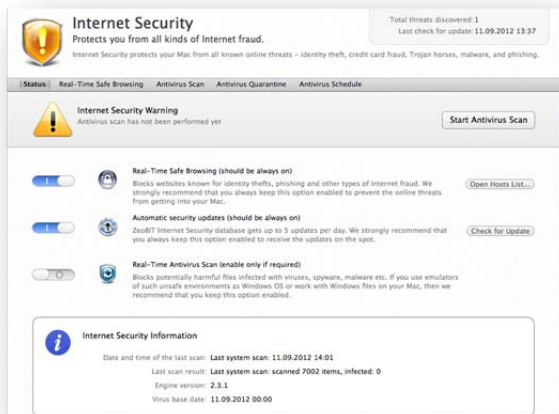
Support

The comprehensive support is so feature-rich that we would ideally like to devote an entire section of the review to it. On the right-hand side of the window, a panel is shown which is devoted to user assistance. There are links to help videos, along with usage instructions and a free telephone support number. There are also buttons to start a live chat session and a contact form.

Internet Security

Clicking on the appropriate menu item displays a large sign, and a button that enables the user to install components not included in the original installation. After downloading a 64 MB package, the start page of *Internet Security* appears; this could be regarded as an independent program. The window warns that no scan has been run, but indicates that *Real-Time Safe Browsing* and

automatic updates are both active. Real-time file protection is disabled by default. In the documentation, Zeobit state that it should only be activated if working with Windows files/emulators.



Real-Time Safe Browsing

This component allows the user to create whitelists and blacklists of websites, meaning that the specified URLs will always be allowed/blocked respectively.

Antivirus Scan

This menu item enables on-demand scans to be run. When the scan has finished, infected items are listed, and can then be either quarantined or deleted. *Antivirus Scan* (full system scan) and *Custom Scan* (specific folders) options are available.

Antivirus Quarantine

As the name suggests, this lists all the objects that have been quarantined. Actions to be taken can be specified file by file, with a choice of restore and delete.

Antivirus Schedule

The scheduler allows any number of scan tasks to be set up. When the items to be scanned have been selected, the default schedule is set to *manually*, but this can be set

to the pre-defined intervals *minutely*, *hourly*, *daily*, *weekly*, *monthly*.

The opportunity is given to run the newly created scan task immediately, regardless of the next scheduled start.

Anti-Theft

Zeobit includes a theft-protection component as standard, although this is not activated by default. After clicking on *Install*, a message quickly appears stating that installation was successful, along with instructions on what to do if the computer is stolen.

The website <http://account.zeobit.com> can be used to register the protected Mac, and then report it as stolen if necessary. A telephone number has to be given when reporting a theft; an automated call to this number informs the user that they will be called again when the stolen Mac has been located.

We did not receive such a call, but found the report in the Anti-Theft area of the website to be very informative. As well as the IP address, the physical location with co-ordinates is given, which was very accurate. Additionally, detailed information on the network connection is given, along with all WLAN access points in the vicinity. Traceroute is run to an unknown server and the information listed. As well as the information listed above, the website can display a picture of the thief if the device stolen has an integrated webcam.

Data Control

Data Encryptor

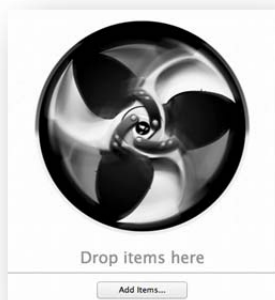
The Data Encryptor requires a password to be assigned before it can be used. Once this has been done, a table is displayed to which files and folders can be added via a Browse dialog box. These items can then be hidden, whereupon they disappear from the normal

file system view. The password has to be entered to make them visible again.

Files Recovery

This module allows deleted files to be restored. The hard drive to be scanned can be selected, and then all deleted files that have been located by the program are listed in a table. The user can then pick out individual items to be restored.

Shredder



The shredder can be likened to a paper shredder, which securely destroys documents, except that it works with electronic files. Documents to be shredded can be selected via a browse dialog box, or drag and drop. The algorithm for overwriting the files can be selected in the program settings.

Backup

Zeobit MacKeeper2012 includes a backup solution. Via the backup manager, multiple backup destinations can be selected for the storage of backup data. A table allows for the creation of multiple backup jobs, each with its own configuration of source data and automatic backup interval.

ZeoDisk

ZeoDisk is a cloud solution that allows data to be saved on Zeobit's servers. The feature has not yet been brought into operation, but is

due to be unveiled in the third quarter of 2012.

Cleaning

Fast Cleanup

This component cleans up unnecessary files from the Mac. There are four different categories of data that can be selected: unnecessary program files, cache files, unused language files, and log files.

Duplicates Finder

Duplicates finder, as the name suggests, searches for files that have multiple copies on the computer. These duplicates often have no useful function and simply waste storage space. Zeobit gives the user the opportunity to delete unwanted duplicate files.

Files Finder

Files Finder allows searches to be made for particular file categories, for example movie files or recently used documents. If the predefined categories are not adequate, users can enter their own customised search criteria instead.

Disk Usage

This component shows folders on the hard disk with different colours, according to the amount of disk space each one uses. This makes it easy e.g. to find large files.

Smart Uninstaller

The Smart Uninstaller provides safe removal of applications. It removes not just the program files, but all associated settings, caches, log files and so on.

Optimization

Update Tracker

The Update Tracker checks whether updates are available for any installed programs. In a clearly laid-out table, the status of applications is shown in colour-coded form. If an update is available for a program, this can be installed directly from Update Tracker.

Login Items

This page displays programs that are run automatically at system startup. It is possible to add new programs to the list, or delete existing ones.

Default Apps

Default Apps lists file types whose standard application can be defined. This means that

the program that opens a file when it is double-clicked can be defined.

Geek on Demand

Geek on Demand enables users to send their technical queries to Zeobit. These do not have to relate to Zeobit's products, but can cover any technical area. Zeobit guarantees to provide an answer within 48 hours.

Conclusion

Zeobit MacKeeper 2012 is a very comprehensive suite, which can be seen more as a system-optimisation tool than a pure security suite. The Internet Security component offers everything that could be expected from an antivirus suite. Zeobit is the only manufacturer in our test to offer a convincing anti-theft component.

Summary

The products we have tested here all do their jobs adequately. The functionality is mostly very limited in comparison with similar suites for Windows, and some suites offer only very basic protection. We leave it up to users to select one of the products based on their own individual requirements. We recommend trying out any apparently suitable product as a test version, or starting off with one of the suites that are available free of charge. We are happy to certify all of the products covered in this test with our Approved Award.



avast! Free Antivirus for Mac and **Avira Free Mac Security** are provided free of charge and have clear, easy-to-use interfaces. Both products can be regarded as being in the same league as paid-for products.

eScan Anti-Virus for Mac offers a wealth of configuration options for scanning and dealing with threats. The task planner also proved itself in our test.

ESET Cyber Security Pro impressed us with its range of features. With its virus scanner, firewall, parental controls and other functionality, the ESET suite is one of the most comprehensive products we have tested, but the user interface is still clear and easy to use.

F-Secure Anti-Virus for Mac is a clear, attractively designed antivirus suite. As well as a virus scanner, it includes a firewall, albeit without any configuration options.

Kaspersky Security for Mac is a security product, which as well as providing a virus scanner and web protection also impresses with comprehensive parental controls.

ZeoBit MacKeeper is a product with a very comprehensive range of features. As well as antivirus components and theft protection, a wide range of system optimisation features is included.

Feature/ist Mac	FREE	FREE	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL	COMMERCIAL
Product name:	avast! Free Antivirus for Mac	Avira Free Mac Security	eScan Anti-Virus for Mac	ESET Cyber Security Pro	ESET Cyber Security	F-Secure Anti-Virus for Mac	Kaspersky Security for Mac	ZeoBit MacKeeper
Supported operating systems:	Mac OS X 10.5 and up	Mac OS X 10.6 and up	Mac OS X 10.6 and up	Mac OS X 10.6 and up		Mac OS X 10.6 and up	Mac OS X 10.6 and up	Mac OS X 10.5 and up
Supported Program languages:	Czech, English, French, German, Italian, Portuguese, Spanish	German, English	English, Latin Spanish, German, Greek, Spanish, French, Italian, Dutch, and Russian	English, Spanish, French, German, Chinese, Russian, Polish, Portuguese, Italian, Dutch, Swedish, Finnish, Danish, Norwegian, Thai, Japanese, Slovak, Czech, Turkish, Korean, Serbian		Chinese, Czech, Danish, German, English, Spanish, Estonian, Finnish, French, Hungarian, Italian, Japanese, Dutch, Norwegian, Polish, Portuguese, Romanian, Russian, Slovenian, Swedish, Turkish	English, Russian, Italian, German, French, Spanish, Portuguese,	English, French, German, Japanese, Spanish, Italian, Dutch, Russian, Portuguese, Danish, Swedish, Korean, Finnish, Czech, Norwegian, Polish, Chinese, Turkish
Protection								
Real-Time protection	•	•	•	•	•	•	•	•
On-demand scanner	•	•	•	•	•	•	•	•
Detects also threats for other platforms (e.g. Windows malware)	•	•	•	•	•	partially	•	•
Cloud Scanning (requires internet connection)							•	•
Scheduled On Demand Scan		•	•	•	•		•	•
Scheduled Update		•	•	•	•	•	•	•
Quarantine		•	•	•	•	•	•	•
Whitelisting for specific files/folders	•		•	•	•		•	•
Statistics	•		•	•	•		•	•
Prevent access to malicious and phishing web sites	•			•	•		•	•
Mail Protection	•		•	•	•			
Eventtriggered Tasks				•	•			
Applications Audit / Security info about installed programs				•	•			
Game/Presentation mode				•	•			
Block all network traffic				•		•		
Firewall				•				
Safe search		•						
Parental Control								
Explicit URL blocking/allowing				•			•	•
Category blocker for website contents				•			•	
Age profiles								
Daily Internet time limit							•	
Scheduled Internet access							•	
Log all visited URLs							•	
Personal data blocker							•	
Social network control							•	
Anti-Theft								
Remote location								•
Remote snapshot of thief								•
Support								
Online Help and User Forum	•	•	•	•	•	•	•	•
Email Support	•	•	•	•	•	•	•	•
User manual		•	•	•	•	•	•	•
Phone Support		•	•	•	•	•	•	•
Online Chat			•				•	•
Supported languages (of support)	English, German, French, Spanish, Portuguese, Russian, Japanese, Turkish, Ukrainian, Czech, Slovak, Italian, Polish	English, German, French, Italian, Dutch, Russian, Spanish, Portuguese, Chinese, Japanese, Malay	English	All		English, Finnish, French, Dutch, Danish, German, Chinese, Italian, Norwegian, Polish, Swedish	Norwegian, English, Swedish, Finnish, Danish, German, Dutch, Polish, French, Italian, Spanish, Portuguese, Russian, Turkish, Chinese, Malay, Hindi, Korean, Japanese	English
Additional features								
Keep programs up-to-date (report new versions of third party programs)				•	•			•
Removable media blocking			•	•	•			
Taskmanager (display running processes)				•	•			
Backup (including scheduled data backup)								•
Mac optimization features and utilities (remove junk files, uninstall programs, find duplicates/files, recover deleted files, file shredder, disk usage statistics, etc.)								•
Price (may vary)								
Price 1 Mac / 1 year (USD/EUR)	FREE	FREE	30 USD / 25 EUR	46 USD / 36 EUR	34 USD / 27 EUR	50 USD / 40 EUR	60 USD / 50 EUR	50 USD / 40 EUR
Price 2 Macs / 2 years (USD/EUR)	FREE	FREE	60 USD / 47 EUR	81 USD / 63 EUR	60 USD / 47 EUR	60 USD / 50 EUR	240 USD / 200 EUR	80 EUR / 60 EUR

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