# System Center 2012

## Endpoint Protection for Mac

Installation Manual and User Guide

Microsoft®

Microsoft® System Center 2012 Endpoint Protection

# Contents

# System Center 2012 Endpoint Protection

As the popularity of Unix-based operating systems increases, malware authors are developing more threats to target Mac users. System Center 2012 Endpoint Protection offers powerful and efficient protection against these emerging threats. System Center 2012 Endpoint Protection also includes the ability to deflect Windows threats, protecting Mac users as they interact with Windows users and vice versa. Although Windows malware does not pose a direct threat to Mac, disabling malware that has infected a Mac machine will prevent its spread to Windows-based computers through a local network or the Internet.

## System requirements

For optimal performance of System Center 2012 Endpoint Protection, your system should meet the following hardware and software requirements:

System Center 2012 Endpoint Protection:

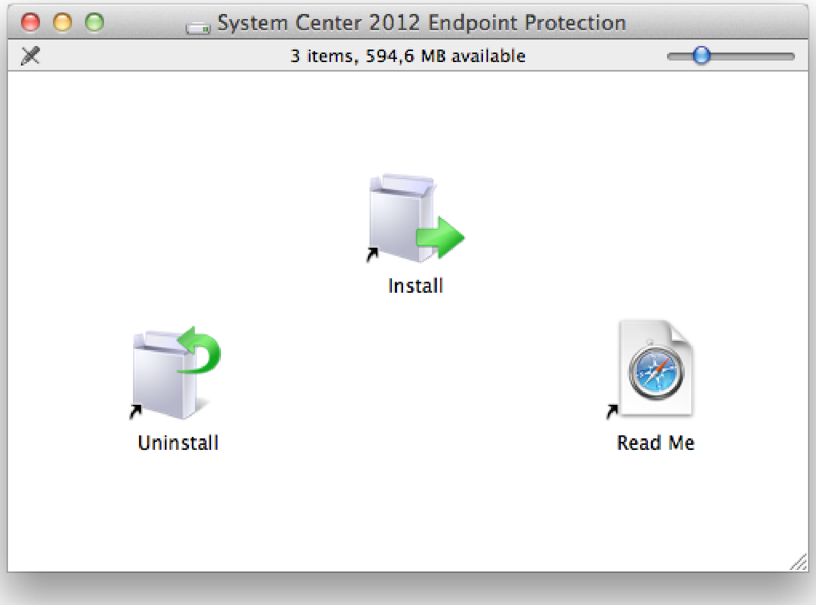
| | System requirements |
|---|---|
| Processor architecture | 32bit, 64bit Intel® |
| Operating system | Mac OS X 10.6 and later |
| Memory | 512 MB |
| Free disk space | 100 MB |

# Installation

Before you begin the installation process, please close all open programs on your computer. System Center 2012 Endpoint Protection contains components that may conflict with other antivirus programs that may already be installed on your computer. It is strongly recommended to remove any other antivirus programs to prevent potential problems. You can install System Center 2012 Endpoint Protection from an installation CD/DVD or from a file downloaded from our website.

To launch the installation wizard, do one of the following:

- If you are installing from the installation CD/DVD, insert it into your computer, open it from your desktop or Finder window and double-click on the **Install** icon.
- If you are installing from a downloaded file, open the file you downloaded and double-click on the **Install** icon.


System Center 2012 Endpoint Protection
3 items, 594,6 MB available
Install
Uninstall
Read Me

Launch the installer and the installation wizard will guide you through the basic setup. After agreeing to the Software License Agreement and reading the Privacy Statement, you can choose from the following installation types:

- Typical 4
- Custom 5

## Typical installation

Typical installation mode includes configuration options that are appropriate for most users. These settings provide maximum security combined with excellent system performance. Typical installation is the default option and is recommended if you do not have particular requirements for specific settings.

After selecting **Typical** installation mode, configure the **Detection of potentially unwanted applications**. Potentially unwanted applications are not necessarily malicious, but can often negatively affect the behavior of your operating system. These applications are often bundled with other programs and may be difficult to notice during the installation process. Although these applications usually display a notification during installation, they can easily be installed without your consent.

After installing System Center 2012 Endpoint Protection, you should perform a computer scan for malicious code. From the main program window, click **Computer scan** and then click **Smart scan**. For more information about On-demand computer scan, see the section On-demand computer scan 11.

## Custom installation

Custom installation mode is designed for experienced users who wish to modify advanced settings during the installation process.

After selecting **Custom** installation mode, you will be prompted to configure the **Proxy server** settings. If you are using a proxy server, you can define its parameters by selecting the **I use a proxy server** option. Enter the IP address or URL of your proxy server in the **Address** field. In the port field, specify the port where the proxy server accepts connections (3128 by default). In the event that the proxy server requires authentication, enter a valid **Username** and **Password** to grant access to the proxy server. If you are sure that no proxy server is used, choose the **I do not use a proxy server** option. If you are not sure, you can use your current system settings by selecting **Use system settings (Recommended)**.

In the next step you can **Define privileged users** that will be able to edit the program configuration. From the list of users on the left side, select the users and **Add** them to the **Privileged Users** list. To display all system users, select the **Show all users** option.

The next step in the installation process is to configure **Detection of potentially unwanted applications**. Potentially unwanted applications are not necessarily malicious, but can often negatively affect the behavior of your operating system. These applications are often bundled with other programs and may be difficult to notice during the installation process. Although these applications usually display a notification during installation, they can easily be installed without your consent.

After installing System Center 2012 Endpoint Protection, you should perform a computer scan for malicious code. From the main program window, click **Computer scan** and then click **Smart scan**. For more information about On-demand computer scans, see the section On-demand computer scan 11.

## Uninstallation

If you wish to uninstall System Center 2012 Endpoint Protection from your computer, do one of the following:

- insert the System Center 2012 Endpoint Protection installation CD/DVD into your computer, open it from your desktop or Finder window and double-click on the **Uninstall** icon,
- open the System Center 2012 Endpoint Protection installation file (*.dmg*) and double-click on the **Uninstall** icon or
- launch **Finder**, open the **Applications** folder on your hard drive, press ctrl and click on the **System Center 2012 Endpoint Protection** icon and select the **Show Package Contents** option. Open the **Resources** folder and double-click on the **Uninstaller** icon.

# Beginners guide

This chapter provides an initial overview of System Center 2012 Endpoint Protection and its basic settings.

## User interface

The main program window of System Center 2012 Endpoint Protection is divided into two main sections. The primary window on the right displays information that corresponds to the option selected from the main menu on the left.

The following is a description of options within the main menu:

- **Protection status** – Provides information about the protection status of System Center 2012 Endpoint Protection. If **Advanced mode** is activated, the **Statistics** submenu will display.
- **Computer scan** – This option allows you to configure and launch the On-demand computer scan.
- **Update** – Displays information about updates to the virus signature database.
- **Setup** – Select this option to adjust your computer's security level. If **Advanced mode** is activated, the **Antivirus and antispyware** submenu will display.
- **Tools** – Provides access to **Log files**, **Quarantine** and **Scheduler**. This option only displays in **Advanced mode**.
- **Help** – Provides program information and access to help files.

The System Center 2012 Endpoint Protection user interface allows users to toggle between Standard and Advanced mode. Standard mode provides access to features required for common operations. It does not display any advanced options. To toggle between modes, click the plus icon (**+**) next to **Activate advanced mode**/**Activate standard mode** in the bottom left corner of the main program window or press cmd-M.

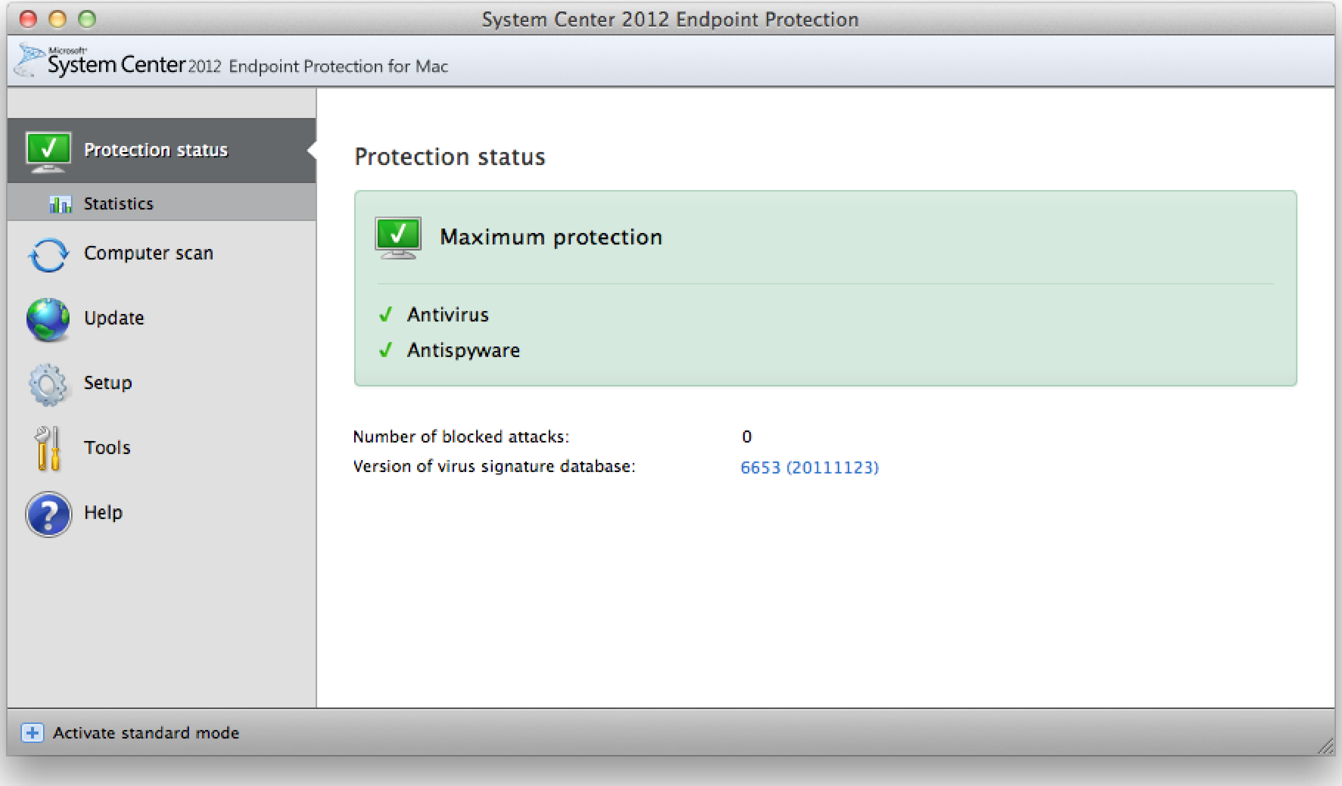
The Standard mode provides access to features required for common operations. It does not display any advanced options.

Toggling to Advanced mode adds the **Tools** option to the main menu. The **Tools** option allows you to access the submenus for **Log files**, **Quarantine** and **Scheduler**.

**NOTE:** All remaining instructions in this guide take place in **Advanced mode**.

## Checking operation of the system

To view the **Protection status**, click the top option from the main menu. A status summary about the operation of System Center 2012 Endpoint Protection will display in the primary window as well as a submenu with **Statistics**. Select it to view more detailed information and statistics about computer scans that have been performed on your system. The Statistics window is available only in advanced mode.


System Center 2012 Endpoint Protection
Microsoft System Center 2012 Endpoint Protection for Mac
Protection status
Statistics
Computer scan
Update
Setup
Tools
Help
Activate standard mode

Protection status

Maximum protection

✓ Antivirus

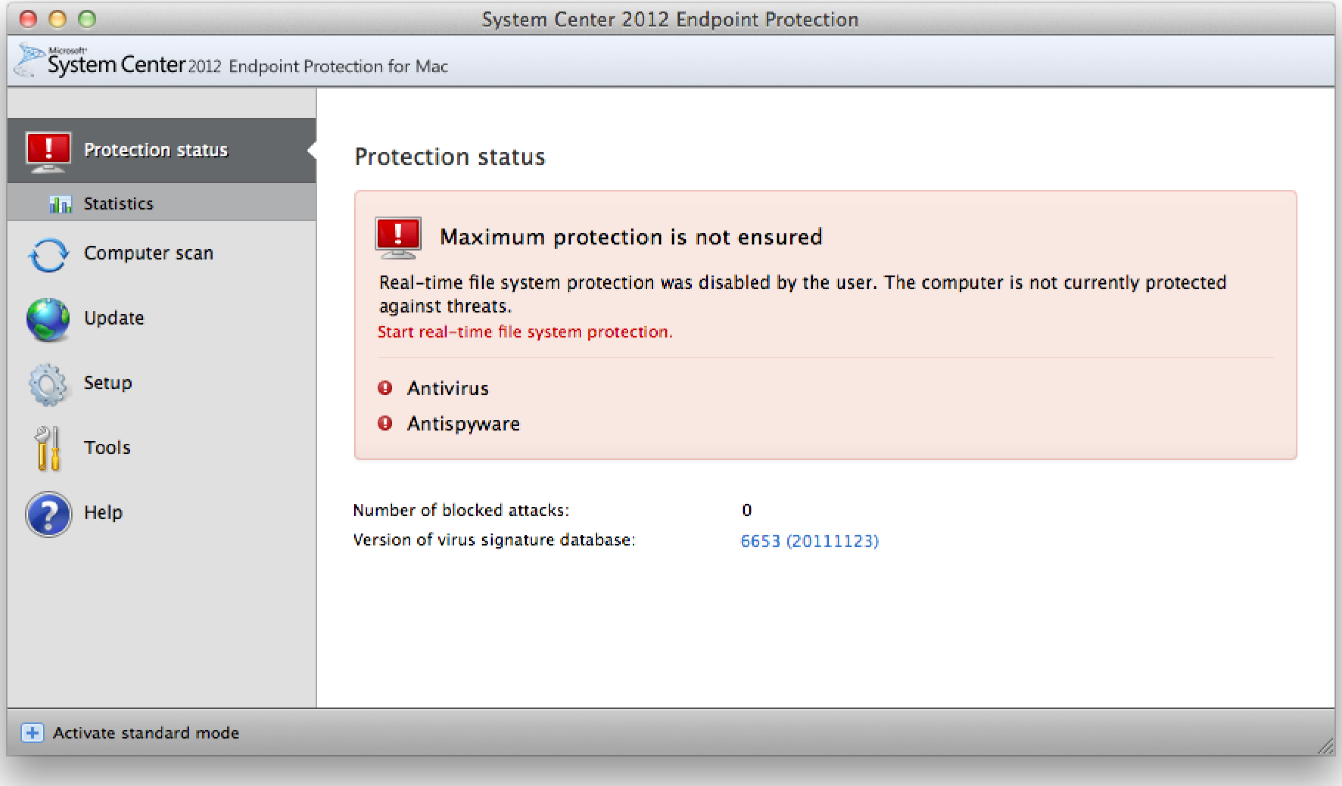
✓ Antispyware

Number of blocked attacks: 0

Version of virus signature database: 6653 (20111123)

## What to do if the program does not work properly

If the modules enabled are working properly, they are assigned a green check icon. If not, a red exclamation point or orange notification icon is displayed, and additional information about the module is shown in the upper part of the window. A suggested solution for fixing the module is also displayed. To change the status of individual modules, click **Setup** in the main menu and click on the desired module.



System Center 2012 Endpoint Protection
Microsoft System Center 2012 Endpoint Protection for Mac
Protection status
Statistics
Computer scan
Update
Setup
Tools
Help
Activate standard mode

Protection status

Maximum protection is not ensured

Real-time file system protection was disabled by the user. The computer is not currently protected against threats.

Start real-time file system protection.

- Antivirus
- Antispyware

| | |
|---|---|
| Number of blocked attacks: | 0 |
| Version of virus signature database: | 6653 (20111123) |

# Work with System Center 2012 Endpoint Protection

## Antivirus and antispyware protection

Antivirus protection guards against malicious system attacks by modifying files that pose potential threats. If a threat with malicious code is detected, the Antivirus module can eliminate it by blocking it and then cleaning it, deleting it or moving it to quarantine.

## Real-time file system protection

Real-time file system protection controls all antivirus-related events in the system. All files are scanned for malicious code when they are opened, created or run on your computer. Real-time file system protection is launched at system startup.

### Real-time Protection setup

Real-time file system protection checks all types of media and triggers a scan based on various events. Real-time file system protection may vary for newly created files and existing files. For newly created files, it is possible to apply a deeper level of control.

By default, Real-time protection launches at system startup and provides uninterrupted scanning. In special cases (e.g., if there is a conflict with another Real-time scanner), Real-time protection can be terminated by clicking the System Center 2012 Endpoint Protection icon located in your menu bar (top of the screen) and then selecting the **Disable Real-time File System Protection** option. Real-time protection can also be terminated from the main program window (**Setup** > **Antivirus and Antispyware** > **Disable**).

To modify advanced settings of the Real-time protection, go to **Setup** > **Enter application preferences ...** > **Protection** > **Real-Time Protection** and click the **Setup...** button next to **Advanced Options** (described in the section titled Advanced scan options 9).

### Scan on (Event triggered scanning)

By default, all files are scanned upon **File opening**, **File creation** or **File execution**. We recommend that you keep the default settings, as these provide the maximum level of Real-time protection for your computer.

### Advanced scan options

In this window you can define object types to be scanned by the scanning engine and enable/disable **Advanced heuristics** as well as modify settings for archives and file cache.

We do not recommend changing the default values in the **Default archives settings** section unless needed to resolve a specific issue, as higher archive nesting values can impede system performance.

You can toggle Advanced heuristics scanning for executed, created and modified files separately by clicking the **Advanced heuristics** checkbox in each of the respective engine parameters sections.

To provide the minimum system footprint when using Real-time protection, you can define the size of the optimization cache. This behavior is active when you are using the **Enable clean file cache** option. If this is disabled, all files are scanned each time they are accessed. Files will not be scanned repeatedly after being cached (unless they have been modified), up to the defined size of the cache. Files are scanned again immediately after each virus signature database update.

Click **Enable clean file cache** to enable/disable this function. To set the amount of files to be cached simply enter the desired value in the input field next to **Cache size**.

Additional scanning parameters can be set in the **Engine Setup** window. You can define what type of **Objects** should be scanned, using which **Options** and **Cleaning** level, as well as defining **Extensions** and file-size **Limits** for Real-time file system protection. You can enter the engine setup window by clicking the **Setup...** button next to **Engine** in the Advanced Setup window. For more detailed information about engine parameters see Engine parameter setup 13.

### Exclusions from scanning

This section enables you to exclude certain files and folders from scanning.

- **Path** - path to excluded files and folders
- **Threat** - if there is a name of a threat next to an excluded file, it means that the file is only excluded for the given threat, but not completely. Therefore, if that file becomes infected later with other malware, it will be detected by the antivirus module.
- **Add...** - excludes objects from detection. Enter the path to an object (you can also use wildcards *and ?) or select the folder or file from the tree structure.
- **Edit...** - enables you to edit selected entries
- **Delete** - removes selected entries
- **Default** - cancels all exclusions.

### When to modify Real-time protection configuration

Real-time protection is the most essential component of maintaining a secure system. Use caution when modifying the Real-time protection parameters. We recommend that you only modify these parameters in specific cases. For example, a situation in which there is a conflict with a certain application or Real-time scanner of another antivirus program.

After installing System Center 2012 Endpoint Protection, all settings are optimized to provide the maximum level of system security for users. To restore the default settings, click the **Default** button located at the bottom-left of the **Real-Time Protection** window ( **Setup** > **Enter application preferences ...** > **Protection** > **Real-Time Protection**).

### Checking Real-time protection

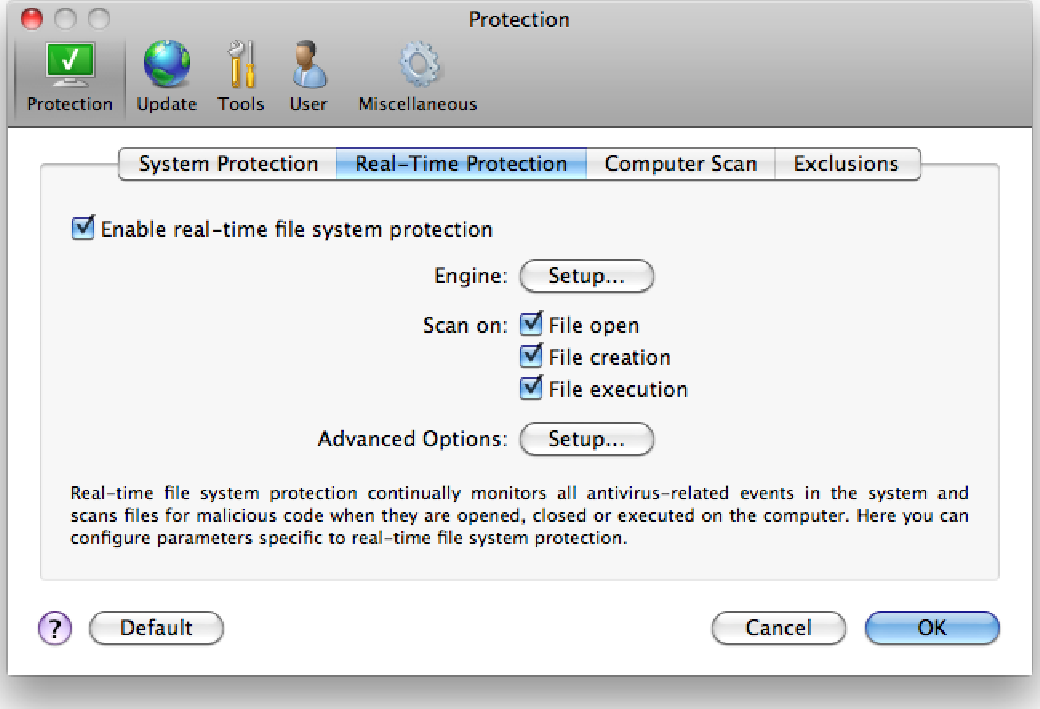
To verify that Real-time protection is working and detecting viruses, use the eicar.com test file. This test file is a special, harmless file detectable by all antivirus programs. The file was created by the EICAR institute (European Institute for Computer Antivirus Research) to test the functionality of antivirus programs.

### What to do if Real-time protection does not work

In this chapter, we describe problem situations that may arise when using Real-time protection, and how to troubleshoot them.

*Real-time protection is disabled*

If Real-time protection was inadvertently disabled by a user, it will need to be reactivated. To reactivate Real-time protection, navigate to **Setup** > **Antivirus and antispyware** and click the **Enable real-time file system protection** link (to the right) in the main program window. Alternatively, you can enable the Real-time file system protection in the Advanced setup window under **Protection** > **Real-Time Protection** by selecting the **Enable real-time file system protection** option.



☑ Enable real-time file system protection

Engine: Setup...

Scan on: ☑ File open
☑ File creation
☑ File execution

Advanced Options: Setup...

Real-time file system protection continually monitors all antivirus-related events in the system and scans files for malicious code when they are opened, closed or executed on the computer. Here you can configure parameters specific to real-time file system protection.

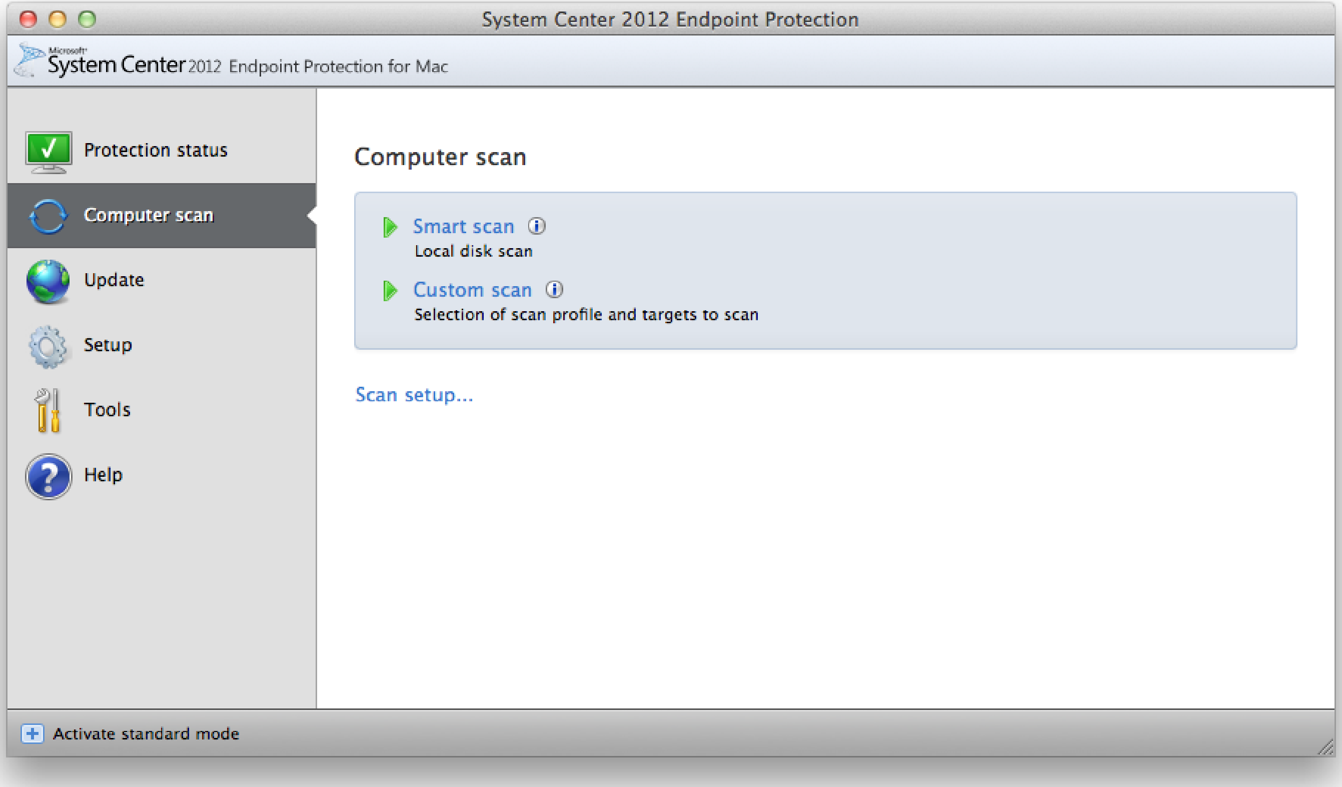
*Real-time protection does not detect and clean infiltrations*
Make sure that no other antivirus programs are installed on your computer. If two real-time protection shields are enabled at the same time, they may conflict with each other. We recommend that you uninstall any other antivirus programs that may be on your system.

*Real-time protection does not start*
If Real-time protection is not initiated at system startup, it may be due to conflicts with other programs. If this is the case, please consult your Customer Care specialists.

## On-demand computer scan

If you suspect that your computer is infected (it behaves abnormally), run **Computer scan** > **Smart scan** to examine your computer for infiltrations. For maximum protection, computer scans should be run regularly as part of routine security measures, not just run when an infection is suspected. Regular scanning can detect infiltrations that were not detected by the Real-time scanner when they were saved to the disk. This can happen if the Real-time scanner was disabled at the time of infection, or if the virus signature database is not up-to-date.

We recommend that you run an On-demand computer scan at least once a month. Scanning can be configured as a scheduled task from **Tools** > **Scheduler**.


System Center 2012 Endpoint Protection
Microsoft System Center 2012 Endpoint Protection for Mac
Protection status
Computer scan
Update
Setup
Tools
Help
Computer scan
Smart scan
Local disk scan
Custom scan
Selection of scan profile and targets to scan
Scan setup...
Activate standard mode

You can also drag and drop selected files and folders from your desktop or Finder window to the System Center 2012 Endpoint Protection main screen, dock icon, menu bar icon (top of the screen) or the application icon (located in the */Applications* folder).

### Type of scan

Two types of On-demand computer scans are available. **Smart scan** quickly scans the system with no need for further configuration of the scan parameters. **Custom scan** allows you to select any of the predefined scan profiles, as well as choose specific scan targets.

### Smart scan

Smart scan allows you to quickly launch a computer scan and clean infected files with no need for user intervention. Its main advantage is easy operation with no detailed scanning configuration. Smart scan checks all files in all folders and automatically cleans or deletes detected infiltrations. The cleaning level is automatically set to the default value. For more detailed information on types of cleaning, see the section on Cleaning 14.

### Custom scan

**Custom scan** is optimal if you would like to specify scanning parameters such as scan targets and scanning methods. The advantage of running a Custom scan is the ability to configure the parameters in detail. Different configurations can be saved as user-defined scan profiles, which can be useful if scanning is repeatedly performed with the same parameters.

To select scan targets, select **Computer scan** > **Custom scan** and select specific **Scan Targets** from the tree structure. A scan target can also be more precisely specified by entering the path to the folder or file(s) you wish to include. If you are only interested in scanning the system without additional cleaning actions, select the **Scan without cleaning** option. Furthermore, you can choose from three cleaning levels by clicking **Setup...** > **Cleaning**.

Performing computer scans with Custom scan is recommended for advanced users with previous experience using antivirus programs.

### Scan targets

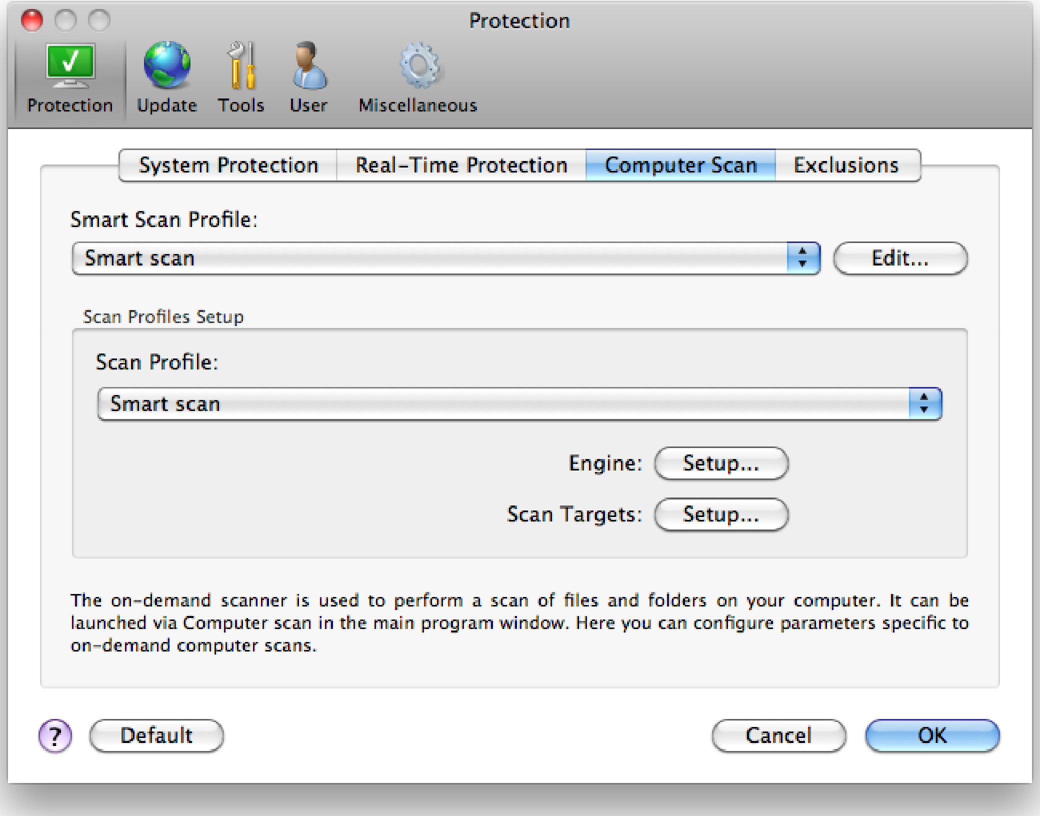
The Scan targets tree structure allows you to select files and folders to be scanned for viruses. Folders may also be selected according to a profile's settings.

A scan target can be more precisely defined by entering the path to the folder or file(s) you wish to include in scanning. Select targets from the tree structure that lists all available folders on the computer.

### Scan profiles

Your preferred scan settings can be saved for future scanning. We recommend that you create a different profile (with various scan targets, scan methods and other parameters) for each regularly used scan.

To create a new profile, go to **Setup** > **Enter application preferences ...** > **Protection** > **Computer Scan** and click **Edit...** next to the list of current profiles.



Smart Scan Profile: Smart scan

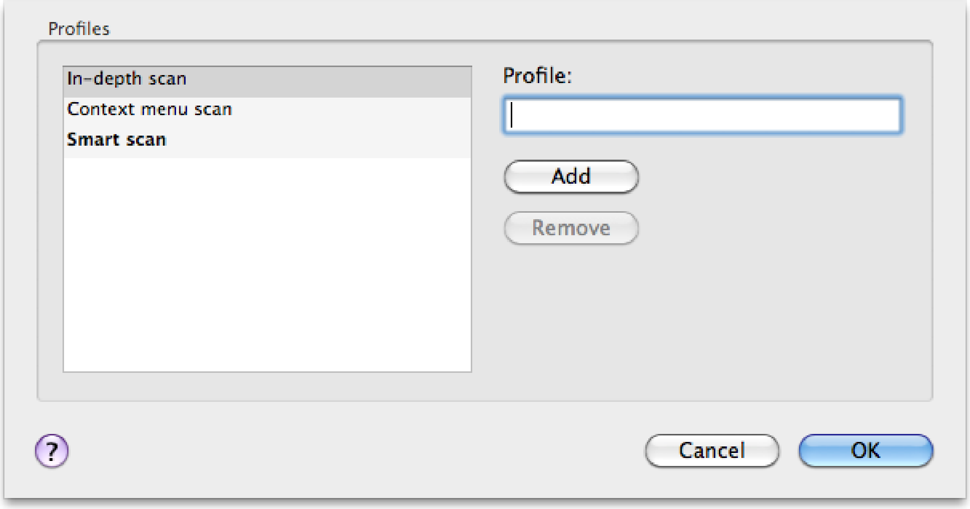
Scan Profile: Smart scan

The on-demand scanner is used to perform a scan of files and folders on your computer. It can be launched via Computer scan in the main program window. Here you can configure parameters specific to on-demand computer scans.

To help you create a scan profile to fit your needs, see the Engine parameters setup 13 section for a description of each parameter of the scan setup.

Example: Suppose that you want to create your own scan profile and the Smart scan configuration is partially suitable, but you do not want to scan runtime packers or potentially unsafe applications and you also want to apply Strict cleaning. In the **On-demand**

**Scanner Profiles List** window, type the profile name, click the **Add** button and confirm by clicking **OK**. Then adjust the parameters to meet your requirements by setting **Engine** and **Scan Targets**.



## Engine parameters setup

Scanning technology used in System Center 2012 Endpoint Protection is proactive, which means it also provides protection during the early hours of the spread of a new threat. It uses a combination of several methods (code analysis, code emulation, generic signatures, virus signatures) which work in concert to significantly enhance system security. The scanning engine is capable of controlling several data streams simultaneously, maximizing the efficiency and detection rate. This technology also successfully prevents rootkits.

The engine technology setup options allow you to specify several scan parameters:

- File types and extensions that are to be scanned
- The combination of various detection methods
- Levels of cleaning, etc.

To enter the setup window, click **Setup** > **Antivirus and antispyware** > **Advanced Antivirus and antispyware protection setup** and then click the **Setup...** button located in the **System Protection**, **Real-Time Protection** and **Computer Scan** wildcards. Different security scenarios could require different configurations. With this in mind, engine parameters are individually configurable for the following protection modules:

- **System Protection** > Automatic startup file check
- **Real-Time Protection** > Real-time file system protection
- **Computer Scan** > On-demand computer scan

The engine parameters are specifically optimized for each module, and their modification can significantly influence system operation. For example, changing settings to always scan runtime packers, or enabling advanced heuristics in the Real-time file system protection module could result in a slower system. Therefore, we recommend that you leave the default engine parameters unchanged for all modules except Computer scan.

### Objects

The **Objects** section allows you to define which computer files will be scanned for infiltrations.

- **Files** – provides scanning of all common file types (programs, pictures, audio, video files, database files, etc.).
- **Symbolic links** - (On-demand scanner only) scans special type of files that contain a text string that is interpreted and followed by the operating system as a path to another file or directory.
- **Email files** - (not available in Real-time protection) scans special files where email messages are contained.
- **Mailboxes** - (not available in Real-time protection) scans user mailboxes in the system. Incorrect use of this option may result in a conflict with your email client.
- **Archives** - (not available in Real-time protection) provides scanning of files compressed in archives (.rar, .zip, .arj, .tar, etc.).
- **Self-extracting archives** - (not available in Real-time protection) scans files which are contained in self-extracting archive files.
- **Runtime packers** - unlike standard archive types, runtime packers decompress in memory, in addition to standard static packers (UPX, yoda, ASPack, FGS, etc.).

## Options

In the **Options** section, you can select the methods used during a scan of the system for infiltrations. The following options are available:

- **Heuristics** – Heuristics use an algorithm that analyzes the (malicious) activity of programs. The main advantage of heuristic detection is the ability to detect new malicious software which did not previously exist, or was not included in the list of known viruses (virus signatures database).
- **Advanced heuristics** – Advanced heuristics is comprised of a unique heuristic algorithm optimized for detecting computer worms and trojan horses written in high-level programming languages. The program's detection ability is significantly higher as a result of advanced heuristics.
- **Potentially unwanted applications** – These applications are not necessarily intended to be malicious, but may affect the performance of your computer in a negative way. Such applications usually require consent for installation. If they are present on your computer, your system behaves differently (compared to the way it behaved before these applications were installed). The most significant changes include unwanted pop-up windows, activation and running of hidden processes, increased usage of system resources, changes in search results, and applications communicating with remote servers.
- **Potentially unsafe applications** – these applications refer to commercial, legitimate software that can be abused by attackers, if it was installed without user's knowledge. The classification includes programs such as remote access tools, which is why this option is disabled by default.

## Cleaning

The cleaning settings determine the manner in which the scanner cleans infected files. There are 3 levels of cleaning:

- **No cleaning** – Infected files are not cleaned automatically. The program will display a warning window and allow you to choose an action.
- **Standard cleaning** – The program will attempt to automatically clean or delete an infected file. If it is not possible to select the correct action automatically, the program will offer a choice of follow-up actions. The choice of follow-up actions will also be displayed if a predefined action could not be completed.
- **Strict cleaning** – The program will clean or delete all infected files (including archives). The only exceptions are system files. If it is not possible to clean them, you will be offered an action to take in a warning window.

***Warning:*** In the Default Standard cleaning mode, the entire archive file is deleted only if all files in the archive are infected. If the archive also contains legitimate files, it will not be deleted. If an infected archive file is detected in Strict cleaning mode, the entire archive will be deleted, even if clean files are present.

## Extensions

An extension is the part of the file name delimited by a period. The extension defines the type and content of the file. This section of the engine parameter setup lets you define the types of files to be excluded from scanning.

By default, all files are scanned regardless of their extension. Any extension can be added to the list of files excluded from scanning. Using the **Add** and **Remove** buttons, you can enable or prohibit scanning of desired extensions.

Excluding files from scanning is sometimes necessary if scanning certain file types prevents the program from functioning properly. For example, it may be advisable to exclude the *.log*, *.cfg* and *.tmp* extensions.

## Limits

The **Limits** section allows you to specify the maximum size of objects and levels of nested archives to be scanned:

- **Maximum Size:** Defines the maximum size of objects to be scanned. The antivirus module will then scan only objects smaller than the size specified. We do not recommend changing the default value, as there is usually no reason to modify it. This option should only be changed by advanced users who have specific reasons for excluding larger objects from scanning.
- **Maximum Scan Time:** Defines the maximum time allotted for scanning an object. If a user-defined value has been entered here, the antivirus module will stop scanning an object when that time has elapsed, whether or not the scan has finished.
- **Maximum Nesting Level:** Specifies the maximum depth of archive scanning. We do not recommend changing the default value of 10; under normal circumstances, there should be no reason to modify it. If scanning is prematurely terminated due to the number of nested archives, the archive will remain unchecked.
- **Maximum File Size:** This option allows you to specify the maximum file size for files contained in archives (when they are extracted) that are to be scanned. If scanning is prematurely terminated as a result of this limit, the archive will remain unchecked.

### Others

With Smart Optimization enabled, the most optimal settings are used to ensure the most efficient scanning level, while simultanneously maintaining the highest scanning speeds. The various protection modules scan intelligently, making use of different scanning methods while applying them to specific file types. Smart Optimization is not rigidly defined within the product. Our development team is continuously implementing new changes which then get integrated into your System Center 2012 Endpoint Protection via the regular updates. If Smart Optimization is disabled, only the user-defined settings in the engine core of the particular module are applied when performing a scan.

**Scan alternative data streams** (On-demand scanner only)
Alternate data streams (resource/data forks) used by the file system are file and folder associations which are invisible from ordinary scanning techniques. Many infiltrations try to avoid detection by disguising themsleves as alternative data streams.

## An infiltration is detected

Infiltrations can reach the system from various entry points: webpages, shared folders, email or removable computer devices (USB, external disks, CDs, DVDs, diskettes, etc.).

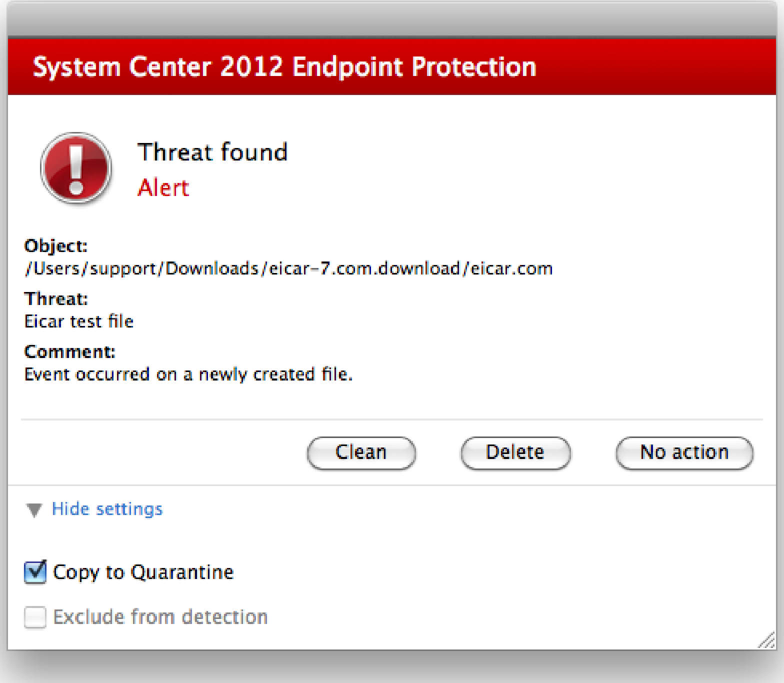
If your computer is showing signs of malware infection, e.g., it is slower, often freezes, etc., we recommend the following steps:

1. Open System Center 2012 Endpoint Protection and click **Computer scan**.
2. Click **Smart scan** (for more information, see the Smart scan 11 section).
3. After the scan has finished, review the log for the number of scanned, infected and cleaned files.

If you only wish to scan a certain part of your disk, click **Custom scan** and select targets to be scanned for viruses.

As a general example of how infiltrations are handled in System Center 2012 Endpoint Protection, suppose that an infiltration is detected by the Real-time file system monitor, which uses the default cleaning level. It will attempt to clean or delete the file. If there is no predefined action available for the Real-time protection module, you will be asked to select an option in an alert window. Usually, the options **Clean**, **Delete** and **No action** are available. Selecting **No action** is not recommended, since the infected file(s) would be left untouched. An exception to this is when you are sure that the file is harmless and has been detected by mistake.

Cleaning and deleting – Apply cleaning if a file has been attacked by a virus that has attached malicious code to it. If this is the case, first attempt to clean the infected file in order to restore it to its original state. If the file consists exclusively of malicious code, it will be deleted.



System Center 2012 Endpoint Protection

Threat found
Alert

**Object:**
/Users/support/Downloads/eicar-7.com.download/eicar.com
**Threat:**
Eicar test file
**Comment:**
Event occurred on a newly created file.

☑ Copy to Quarantine
□ Exclude from detection

**Deleting files in archives** – In the default cleaning mode, the entire archive will be deleted only if it contains infected files and no clean files. In other words, archives are not deleted if they also contain harmless clean files. However, use caution when performing a **Strict cleaning** scan – with Strict cleaning the archive will be deleted if it contains at least one infected file, regardless of the status of other files in the archive.

## Updating the program

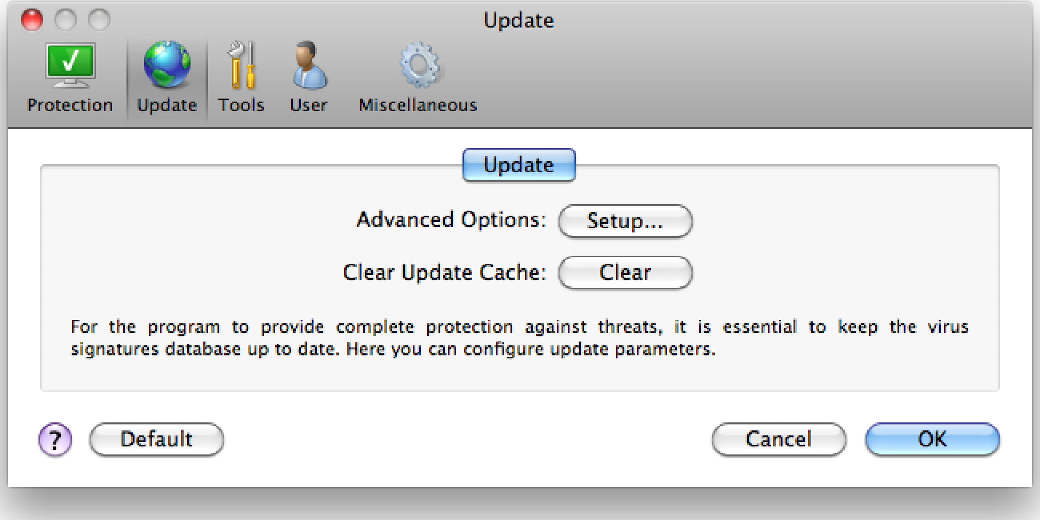
Regularly updating System Center 2012 Endpoint Protection is necessary to maintain the maximum level of security. The Update module ensures that the program is always up to date by downloading the most recent virus signature database.

By clicking **Update** from the main menu, you can find the current update status, including the date and time of the last successful update and if an update is needed. To begin the update process manually, click the **Update virus signature database**.

Under normal circumstances, when updates are downloaded properly, the message **Virus signature database is up to date** will appear in the Update window.

The Update window also contains the information about the virus signature database version. This numeric indicator is an active link to the website listing all signatures added during the given update.

### Update setup



For the program to provide complete protection against threats, it is essential to keep the virus signatures database up to date. Here you can configure update parameters.

To enable the use of test mode (downloads pre-release updates) click the **Setup...** button next to **Advanced Options** and select the **Enable pre-release updates** checkbox. To disable system tray notifications displaying after each successful update, select the **Do not display notification about successful update** checkbox.

To delete all temporarily stored update data, click the **Clear** button next to **Clear Update Cache**. Use this option if you are experiencing difficulty while updating.

### How to create update tasks

Updates can be triggered manually by clicking **Update virus signature database** in the primary window displayed after clicking **Update** from the main menu.

Updates can also be run as scheduled tasks. To configure a scheduled task, click **Tools** > **Scheduler**. By default, the following tasks are activated in System Center 2012 Endpoint Protection:

- **Regular automatic update**
- **Automatic update after user logon**

Each of the update tasks can be modified to meet your needs. In addition to the default update tasks, you can create new update tasks with a user-defined configuration. For more details about creating and configuring update tasks, see the Scheduler 17 section.

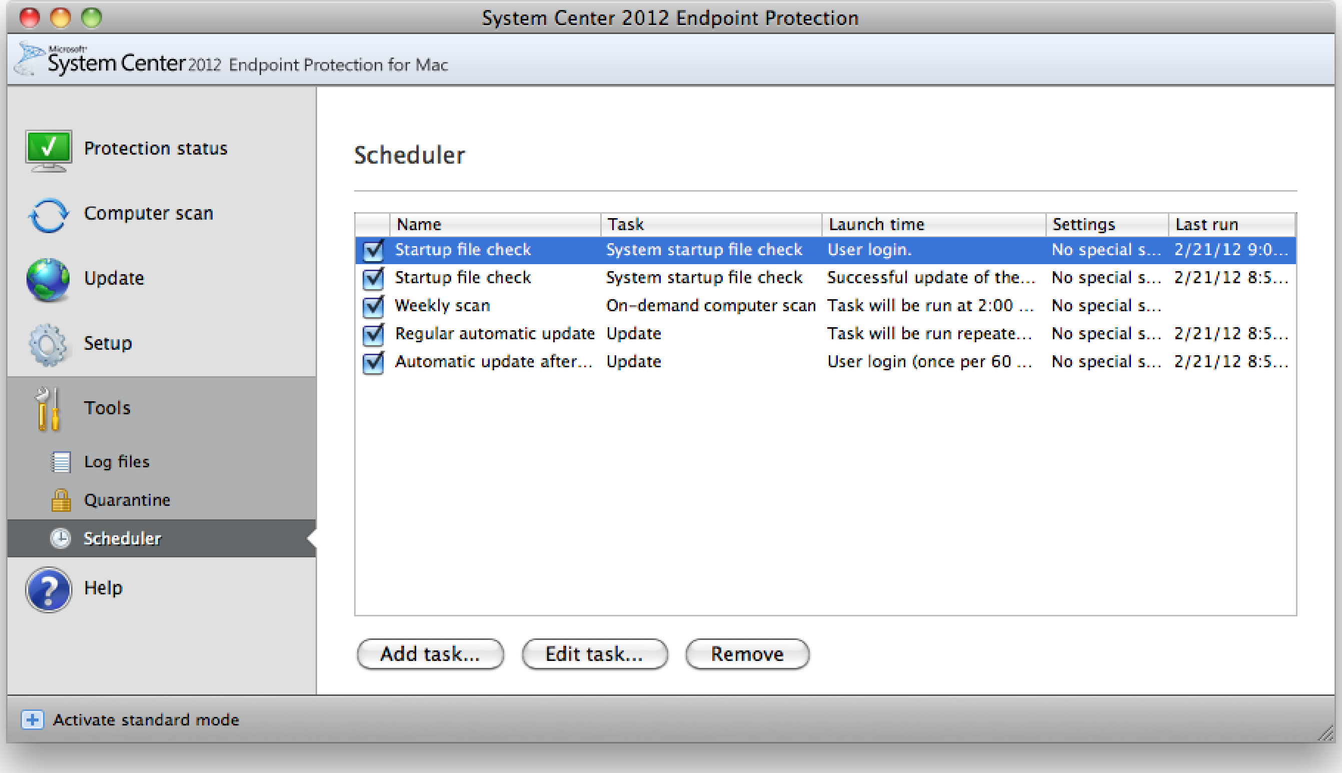
## Upgrading to a new build

For maximum protection, it is important to use the latest build of System Center 2012 Endpoint Protection. To check for a new version, click **Update** from the main menu on the left. If a new build is available, a message that says *A new version of the product is available!* will be displayed at the bottom of the window. Click **Learn more...** to display a new window containing the version number of the new build and the changelog.

Click **Download** to download the latest build. Click **Close** to close the window and download the upgrade later.

## Scheduler

The **Scheduler** is available if Advanced mode in System Center 2012 Endpoint Protection is activated. The Scheduler can be found in the System Center 2012 Endpoint Protection main menu under **Tools**. The **Scheduler** contains a list of all scheduled tasks and configuration properties such as the predefined date, time, and scanning profile used.



| | Name | Task | Launch time | Settings | Last run |
|---|---|---|---|---|---|
| ☑ | Startup file check | System startup file check | User login. | No special s... | 2/21/12 9:0... |
| ☑ | Startup file check | System startup file check | Successful update of the... | No special s... | 2/21/12 8:5... |
| ☑ | Weekly scan | On-demand computer scan | Task will be run at 2:00 ... | No special s... | |
| ☑ | Regular automatic update | Update | Task will be run repeate... | No special s... | 2/21/12 8:5... |
| ☑ | Automatic update after... | Update | User login (once per 60 ... | No special s... | 2/21/12 8:5... |

By default, the following scheduled tasks are displayed in the Scheduler:

- Regular automatic update
- Automatic update after user logon
- Startup file check after user logon
- Startup file check after successful update of the virus signature database
- Log maintenance (after enabling the **Show system tasks** option in the scheduler setup)
- Weekly scan

To edit the configuration of an existing scheduled task (both default and user-defined), press ctrl, click the task you wish to modify and select **Edit...** or select the task and click the **Edit task...** button.

### Purpose of scheduling tasks

The Scheduler manages and launches scheduled tasks with predefined configurations and properties. The configuration and properties contain information such as the date and time as well as specified profiles to be used during execution of the task.

## Creating new tasks

To create a new task in the Scheduler, click the **Add task...** button or press ctrl, click in the blank field and select **Add...** from the context menu. Five types of scheduled tasks are available:

- **Run application**
- **Update**
- **Log maintenance**
- **On-demand computer scan**
- **System startup file check**

Since Update is one of the most frequently used scheduled tasks, we will explain how to add a new update task.

From the **Scheduled task** drop-down menu, select **Update**. Enter the name of the task into the **Task name** field. Select the frequency of the task from the **Run task** drop-down menu. The following options are available: **User-defined**, **Once**, **Repeatedly**, **Daily**, **Weekly** and **Event triggered**. Based on the frequency selected, you will be prompted with different update parameters.

If you select **User-defined**, you will be prompted to specify date/time in cron format (see the Creating user-defined task 18 section for more details).

In the next step, define what action to take if the task cannot be performed or completed at the scheduled time. The following three options are available:

- **Wait until the next scheduled time**
- **Run the task as soon as possible**
- **Run the task immediately if the time since its last execution exceeds specified interval** (the interval can be defined using the **Minimum task interval** option)

In the next step, a summary window with information about the current scheduled task is displayed. Click the **Finish** button.

The new scheduled task will be added to the list of currently scheduled tasks.

The system, by default, contains essential scheduled tasks to ensure correct product functionality. These should not be altered, and are hidden by default. To change this option and make these tasks visible, enter the **Setup** > **Enter application preferences ...** > **Tools** > **Scheduler** and select the **Show system tasks** option.

## Creating user-defined task

Date and time of the **User-defined** task has to be entered in year-extended cron format (a string comprising 6 fields separated by white space):

```
minute(0-59) hour(0-23) day of month(1-31) month(1-12) year(1970-2099) day of week(0-7)(Sunday = 0 or 7)
```

Example:

```
30 6 22 3 2012 4
```

Special characters supported in cron expressions:

- asterisk (`*`) - expression will match for all values of the field; e.g. asterisk in the 3rd field (day of month) means every day
- hyphen (`-`) - defines ranges; e.g. `3-9`
- comma (`,`) - separates items of a list; e.g. `1,3,7,8`
- slash (`/`) - defines increments of ranges; e.g. `3-28/5` in the 3rd field (day of month) means 3rd day of the month and then every 5 days.

Day names (Monday-Sunday) and month names (January-December) are not supported.

**NOTE:** If you define both day of month and day of week, command will be executed only when both fields match.

## Quarantine

The main task of the quarantine is to safely store infected files. Files should be quarantined if they cannot be cleaned, if it is not safe or advisable to delete them, or if they are being falsely detected by System Center 2012 Endpoint Protection.

You can choose to quarantine any file. This is advisable if a file behaves suspiciously but is not detected by the antivirus scanner.

Files stored in the quarantine folder can be viewed in a table which displays the date and time of quarantine, the path to the original location of the infected file, its size in bytes, reason (e.g., added by user…) and number of threats (e.g., if it is an archive containing multiple infiltrations). The quarantine folder with quarantined files (*/Library/Application Support/Microsoft/Microsoft_scep/cache/quarantine*) remains in the system even after uninstalling System Center 2012 Endpoint Protection. Quarantined files are stored in a safe encrypted form and can be restored again after installing System Center 2012 Endpoint Protection.

### Quarantining files

System Center 2012 Endpoint Protection automatically quarantines deleted files (if you have not cancelled this option in the alert window). If desired, you can quarantine any suspicious file manually by clicking the **Quarantine...** button. The context menu can also be used for this purpose – press ctrl, click in the blank field, select **Quarantine...**, choose file you want to quarantine and click the **Open** button.

### Restoring from Quarantine

Quarantined files can also be restored to their original location. Use the **Restore** button for this purpose. Restore is also available from the context menu by pressing ctrl, clicking on the given file in the **Quarantine** window, then clicking **Restore**. The context menu also offers the option **Restore to...**, which allows you to restore a file to a location other than the one from which it was deleted.

## Log files

The Log files contain information about all important program events that have occurred and provide an overview of detected threats. Logging acts as an essential tool in system analysis, threat detection and troubleshooting. Logging is performed actively in the background with no user interaction. Information is recorded based on the current log verbosity settings. It is possible to view text messages and logs directly from the System Center 2012 Endpoint Protection environment, as well as to archive logs.

Log files are accessible from the System Center 2012 Endpoint Protection main menu by clicking **Tools** > **Log files**. Select the desired log type using the **Log** drop-down menu at the top of the window. The following logs are available:

1. **Detected threats** – Use this option to view all information about events related to the detection of infiltrations.
2. **Events** – This option is designed for system administrators and users to solve problems. All important actions performed by System Center 2012 Endpoint Protection are recorded in the Event logs.
3. **Computer scan** – Results of all completed scans are displayed in this window. Double-click any entry to view details of the respective On-demand computer scan.

In each section, the displayed information can be directly copied to the clipboard by selecting the entry and clicking on the **Copy** button.

### Log maintenance

The logging configuration for System Center 2012 Endpoint Protection is accessible from the main program window. Click **Setup** > **Enter application preferences ...** > **Tools** > **Log Files**. You can specify the following options for log files:

- **Delete old log records automatically** - log entries older than the specified number of days are automatically deleted.
- **Optimize log files automatically** - enables automatic defragmentation of log files if the specified percentage of unused records has been exceeded.

To configure the **Log Records Default Filter** click the **Edit...** button and select/deselect log types as required.

### Log filtering

Logs store information about important system events. The log filtering feature allows you to display records about a specific type of event.

The most frequently used log types are listed below:

- **Critical warnings** – critical system errors (e.g., Antivirus protection failed to start)
- **Errors** - error messages such as "*Error downloading file*" and critical errors
- **Warnings** – warning messages
- **Informative records** - informative messages including successful updates, alerts, etc.
- **Diagnostic records** - information needed for fine-tuning the program as well as all records described above.

## User interface

The user interface configuration options in System Center 2012 Endpoint Protection allow you to adjust the working environment to fit your needs. These configuration options are accessible from the **Setup** > **Enter application preferences ...** > **User** > **Interface**.

In this section, the Advanced mode option gives users the ability to allow toggling to Advanced mode. Advanced mode displays more detailed settings and additional controls for System Center 2012 Endpoint Protection.

To enable the startup splash screen functionality, select the **Show splash-screen at startup** option.

In the **Use standard menu** section you can select the **In standard mode/In advanced mode** options to enable the use of the standard menu in the main program window in the respective display mode(s).

To enable tool tips, select the **Show tooltips** option. The **Show hidden files** option allows you to see and select hidden files in the **Scan Targets** setup of a **Computer scan**.

## Alerts and notifications

The **Alerts and Notifications** section allows you to configure how threat alerts and system notifications are handled in System Center 2012 Endpoint Protection.

Disabling the **Display alerts** option will cancel all alert windows and is only suitable in specific situations. For most users, we recommend that this option be left to its default setting (enabled).

Selecting the **Display notifications on desktop** option will enable alert windows that do not require user interaction to display on desktop (by default in the upper-right corner of your screen). You can define the period for which a notification will be displayed by adjusting the **Close notifications automatically after** X **seconds** value.

### Alerts and notifications advanced setup

**Display only notifications requiring user interaction**
With this option, you can toggle the display of messages requiring user interaction.

**Display only notifications requiring user interaction when running applications in full screen mode**
This option is useful while doing presentations or doing other activities that require the entire screen.

## Privileges

System Center 2012 Endpoint Protection settings can be very important to your organization’s security policy. Unauthorized modifications may endanger the stability and protection of your system. Consequently, you can choose which users will have permission to edit the program configuration.

To specify privileged users, enter the **Setup** > **Enter application preferences ...** > **User** > **Privileges**.

In order to provide maximum security for your system, it is essential that the program be correctly configured. Unauthorized modifications could result in the loss of important data. To set a list of privileged users, simply select them from the **Users** list on the left side and click the **Add** button. To remove a user, simply select their name from the **Privileged Users** list on the right side and click **Remove**.

**NOTE:** If the list of privileged users is empty, all users of the system will have permission to edit the program settings.

## Context menu

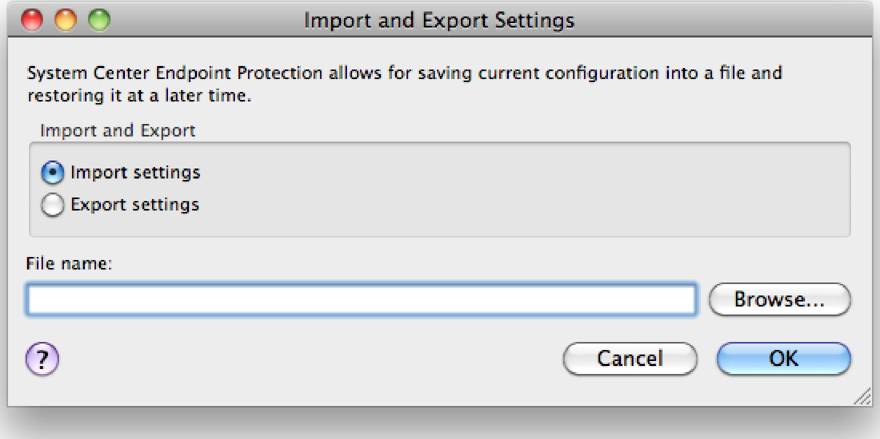
The context menu integration can be enabled in the **Setup** > **Enter application preferences ...** > **User** > **Context Menu** section by enabling the **Integrate into the context menu** check box.

# Advanced user

## Import and export settings

Importing and exporting configurations of System Center 2012 Endpoint Protection is available in Advanced mode under **Setup**.

Both Import and Export use archive files to store the configuration. Import and export are useful if you need to backup the current configuration of System Center 2012 Endpoint Protection to be able to use it later. The export settings option is also convenient for users who wish to use their preferred configuration of System Center 2012 Endpoint Protection on multiple systems - they can easily import the configuration file to transfer the desired settings.



System Center Endpoint Protection allows for saving current configuration into a file and restoring it at a later time.

Import and Export

● Import settings
○ Export settings

File name:

## Import settings

Importing a configuration is very easy. From the main menu, click **Setup** > **Import and export settings ...** and then select the **Import settings** option. Enter the name of the configuration file or click the **Browse...** button to browse for the configuration file you wish to import.

## Export settings

The steps to export a configuration are very similar. From the main menu, click **Setup** > **Import and export settings ...** Select the **Export settings** option and enter the name of the configuration file. Use the browser to select a location on your computer to save the configuration file.

## Proxy server setup

Proxy server settings can be configured under **Miscellaneous** > **Proxy Server**. Specifying the proxy server at this level defines global proxy server settings for all System Center 2012 Endpoint Protection functions. Parameters here will be used by all modules requiring connection to the Internet.

To specify proxy server settings for this level, select the **Use proxy server** check box and then the IP address or URL of your proxy server in the **Address** field. In the port field, specify the port where the proxy server accepts connections (3128 by default). If communication with the proxy server requires authentication, select the **Proxy server requires authentication** checkbox and enter a valid **Username** and **Password** into the respective fields.

## Removable media blocking

Removable media (i.e., CD or USB key) may contain malicious code and put your computer at risk. To block removable media, check the **Enable removable media blocking** option. To allow access to certain types of media, uncheck desired media volumes.

# Glossary

## Types of infiltrations

An Infiltration is a piece of malicious software trying to enter and/or damage a user's computer.

### Viruses

A computer virus is an infiltration that corrupts existing files on your computer. Viruses are named after biological viruses, because they use similar techniques to spread from one computer to another.

Computer viruses mainly attack executable files, scripts and documents. To replicate, a virus attaches its "body" to the end of a target file. In short, this is how a computer virus works: after execution of the infected file, the virus activates itself (before the original application) and performs its predefined task. Only after that is the original application allowed to run. A virus cannot infect a computer unless a user, either accidentally or deliberately, runs or opens the malicious program.

Computer viruses can range in purpose and severity. Some of them are extremely dangerous because of their ability to purposely delete files from a hard drive. On the other hand, some viruses do not cause any damage – they only serve to annoy the user and demonstrate the technical skills of their authors.

It is important to note that viruses (when compared to trojans or spyware) are increasingly rare because they are not commercially enticing for malicious software authors. Additionally, the term "virus" is often used incorrectly to cover all types of infiltrations. This usage is gradually being overcome and replaced by the new, more accurate term "malware" (malicious software).

If your computer is infected with a virus, it is necessary to restore infected files to their original state – i.e., to clean them by using an antivirus program.

Examples of viruses are: *OneHalf*, *Tenga* and *Yankee Doodle*.

### Worms

A computer worm is a program containing malicious code that attacks host computers and spreads via a network. The basic difference between a virus and a worm is that worms have the ability to replicate and travel by themselves – they are not dependent on host files (or boot sectors). Worms spread through email addresses in your contact list or exploit security vulnerabilities in network applications.

Worms are therefore much more viable than computer viruses. Due to the wide availability of the Internet, they can spread across the globe within hours of their release – in some cases, even in minutes. This ability to replicate independently and rapidly makes them more dangerous than other types of malware.

A worm activated in a system can cause a number of inconveniences: It can delete files, degrade system performance, or even deactivate programs. The nature of a computer worm qualifies it as a "means of transport" for other types of infiltrations.

If your computer is infected with a worm, we recommend you delete the infected files because they likely contain malicious code.

Examples of well-known worms are: *Lovsan/Blaster*, *Stration/Warezov*, *Bagle* and *Netsky*.

### Trojan horses

Historically, computer trojan horses have been defined as a class of infiltrations which attempt to present themselves as useful programs, tricking users into letting them run. Today, there is no longer a need for trojan horses to disguise themselves. Their sole purpose is to infiltrate as easily as possible and accomplish their malicious goals. "Trojan horse" has become a very general term describing any infiltration not falling under any specific class of infiltration.

Since this is a very broad category, it is often divided into many subcategories:

- Downloader – A malicious program with the ability to download other infiltrations from the Internet.
- Dropper – A type of trojan horse designed to drop other types of malware onto compromised computers.
- Backdoor – An application which communicates with remote attackers, allowing them to gain access to a system and to take control of it.
- Keylogger – (keystroke logger) – A program which records each keystroke that a user types and sends the information to remote attackers.

- Dialer – Dialers are programs designed to connect to premium-rate numbers. It is almost impossible for a user to notice that a new connection was created. Dialers can only cause damage to users with dial-up modems, which are no longer regularly used.
- Trojan horses usually take the form of executable files. If a file on your computer is detected as a trojan horse, we recommend deleting it, since it most likely contains malicious code.

Examples of well-known trojans are: *NetBus*, *Trojandownloader.Small.ZL*, *Slapper*.

## Adware

Adware is a shortened term for advertising-supported software. Programs displaying advertising material fall under this category. Adware applications often automatically open a new pop-up window containing advertisements in an Internet browser, or change the browser's home page. Adware is frequently bundled with freeware programs, allowing creators of freeware programs to cover development costs of their (usually useful) applications.

Adware itself is not dangerous – users may only be bothered by the advertisements. The danger lies in the fact that adware may also perform tracking functions (as spyware does).

If you decide to use a freeware product, please pay particular attention to the installation program. The installer will most likely notify you of the installation of an extra adware program. Often you will be allowed to cancel it and install the program without adware.

Some programs will not install without adware, or their functionality will be limited. This means that adware may often access the system in a "legal" way, because users have agreed to it. In this case, it is better to be safe than sorry. If there is a file detected as adware on your computer, it is advisable to delete it, since there is a high probability that it contains malicious code.

## Spyware

This category covers all applications which send private information without user consent/awareness. Spyware uses tracking functions to send various statistical data such as a list of visited websites, email addresses from the user's contact list, or a list of recorded keystrokes.

The authors of spyware claim that these techniques aim to find out more about users' needs and interests and allow better-targeted advertisement. The problem is that there is no clear distinction between useful and malicious applications and no one can be sure that the retrieved information will not be misused. The data obtained by spyware applications may contain security codes, PINs, bank account numbers, etc. Spyware is often bundled with free versions of a program by its author in order to generate revenue or to offer an incentive for purchasing the software. Often, users are informed of the presence of spyware during a program's installation to give them an incentive to upgrade to a paid version without it.

Examples of well-known freeware products which come bundled with spyware are client applications of P2P (peer-to-peer) networks. Spyfalcon or Spy Sheriff (and many more) belong to a specific spyware subcategory – they appear to be antispyware programs, but in fact they are spyware programs themselves.

If a file is detected as spyware on your computer, we recommend deleting it, since there is a high probability that it contains malicious code.

## Potentially unsafe applications

There are many legitimate programs whose function is to simplify the administration of networked computers. However, in the wrong hands they may be misused for malicious purposes. System Center 2012 Endpoint Protection provides the option to detect such threats.

"Potentially unsafe applications" is the classification used for commercial, legitimate software. This classification includes programs such as remote access tools, password-cracking applications, and keyloggers (a program that records each keystroke a user types).

If you find that there is a potentially unsafe application present and running on your computer (and you did not install it), please consult your network administrator or remove the application.

## Potentially unwanted applications

Potentially unwanted applications are not necessarily intended to be malicious, but may affect the performance of your computer in a negative way. Such applications usually require consent for installation. If they are present on your computer, your system behaves differently (compared to the way it behaved before their installation). The most significant changes are:

- new windows you haven’t seen previously are opened
- activation and running of hidden processes
- increased usage of system resources
- changes in search results
- application communicates with remote servers.