

**SOPHOS**

Security made simple.

# Sophos Anti-Virus for Mac OS X

For networked and standalone Macs running Mac OS X

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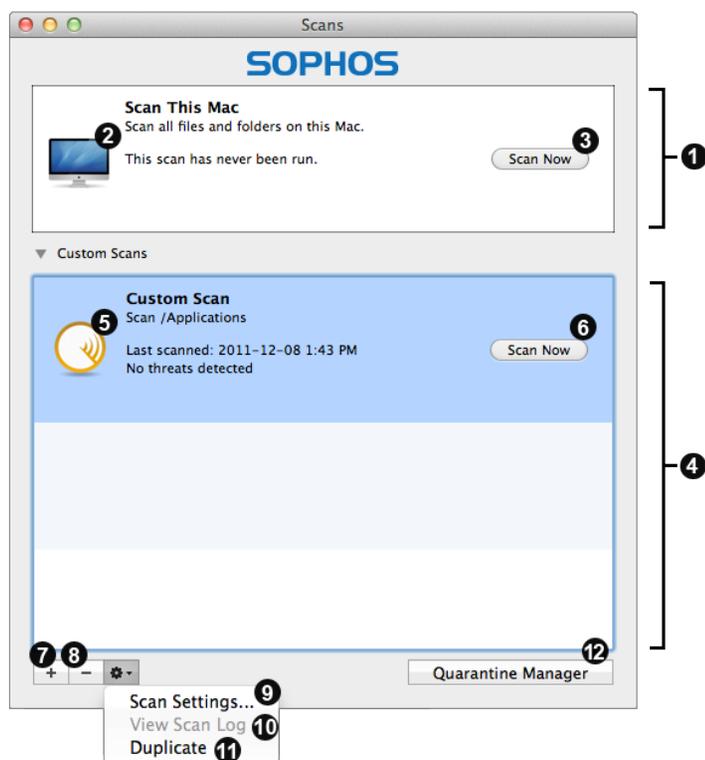
# 1 About Sophos Anti-Virus

Sophos Anti-Virus for Mac OS X is software that detects and deals with threats (viruses, worms, and Trojans) on your Mac or network. As well as being able to detect Mac OS X threats, it can also detect Windows threats that might be stored on your Mac or network and transferred to Windows computers.

Sophos Anti-Virus is preconfigured with the recommended settings for protection. We recommend that you don't make changes to the settings unless there is a specific need or problem that you are aiming to address.

## 1.1 About the Scans window

The elements of the **Scans** window are shown below:



- |   |  |
|---|--|
| 1 | The main scan of local drives that Sophos provides as standard. For more information, see <a href="#">Scanning your Mac</a> (section 2.3). |
|---|--|

<b>2</b>	Double-click this to open preferences. For more information, see <a href="#">Configuring scans</a> (section 2.3.2).
<b>3</b>	Click this to scan your Mac. For more information, see <a href="#">Scan This Mac</a> (section 2.3.1).
<b>4</b>	The list of scans that you have added. For more information, see <a href="#">Custom scans</a> (section 2.4). The first time that you open the window, you must click the disclosure triangle next to <b>Custom Scans</b> to reveal the list.
<b>5</b>	Double-click this to configure the custom scan. For more information, see <a href="#">Configuring a custom scan</a> (section 2.4.5).
<b>6</b>	Click this to run the custom scan.
<b>7</b>	Click this to add a custom scan. For more information, see <a href="#">Add a custom scan</a> (section 2.4.2).
<b>8</b>	Click this to delete a custom scan.
<b>9</b>	Choose <b>Scan Settings</b> to configure the selected custom scan. For more information, see <a href="#">Configuring a custom scan</a> (section 2.4.5).
<b>10</b>	Choose <b>View Scan Log</b> to view the log of the selected custom scan in Console.
<b>11</b>	Choose <b>Duplicate</b> to use the selected custom scan as the basis for a new scan. For more information, see <a href="#">Copy a custom scan</a> (section 2.4.4).
<b>12</b>	Click <b>Quarantine Manager</b> to open the <b>Quarantine Manager</b> window. For more information, see <a href="#">About Quarantine Manager</a> (section 3.2).

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## 2 Scanning for threats

### 2.1 About scanning for threats

**On-access scanning** is your main method of protection against threats. Whenever you access (copy, move, or open) a file, Sophos Anti-Virus scans the file and grants access to it only if it does not pose a threat to your Mac. By default, on-access scanning is turned on and preconfigured with the recommended settings for protection. We recommend that you don't make changes to the settings unless there is a specific need or problem that you are aiming to address.

**On-demand scans** provide additional protection. An on-demand scan is a scan that you initiate. You can scan anything from a single file to everything on your Mac to which you have access:

#### ■ Scan This Mac

Scan all files to which you have access on local volumes. If you authenticate as an administrator, files to which you do not have access are scanned as well. Any removable storage devices that are inserted are included.

You might want to run this scan for one of the following reasons: you want to deal with a threat that Sophos Anti-Virus has detected, you're not running on-access scanning on this Mac because it's a server, or you want to discover that files are infected *before* you need to use them.

#### ■ Custom scans

Scan specific sets of files, folders, or volumes.

You might want to run a custom scan because you want to scan only suspicious parts of a disk or you want to discover that files are infected *before* you need to use them.

#### ■ Finder item scans

Scan a file, folder, or volume that you have selected in Finder.

You might want to run a Finder item scan for one of the following reasons: you want to scan the contents of an archive or compressed file *before* you need to open it, you want to scan something before you email it, or you want to scan a CD or DVD.

You can set up **email alerts** so that any scan type can warn of threats or serious errors.

You can also use **Terminal** to run scans from the command line.

### 2.2 On-access scanning

On-access scanning is your main method of protection against threats. Whenever you access (copy, move, or open) a file, Sophos Anti-Virus scans the file and grants access to it only if it does not pose a threat to your Mac. By default, on-access scanning is turned on and preconfigured with

the recommended settings for protection. We recommend that you don't make changes to the settings unless there is a specific need or problem that you are aiming to address.

## 2.2.1 Turn on-access scanning on or off

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

By default, on-access scanning is turned on when you start your Mac.

To turn on-access scanning on or off:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Change the setting as follows:
  - To turn on-access scanning *on*, click **Start Scanning**. The status changes to **on** and the Sophos Anti-Virus icon in the menu bar turns black.



- To turn on-access scanning *off*, click **Stop Scanning**. The status changes to **off** and the Sophos Anti-Virus icon in the menu bar turns gray.



**Important:** If you turn on-access scanning off, Sophos Anti-Virus does not scan files that you access for threats. This puts your Mac at risk.

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## 2.2.2 Configuring on-access scanning

### 2.2.2.1 Add an on-access exclusion

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

You can exclude files, folders, or volumes from on-access scanning. For example, you might want to exclude:

- Files that are large and therefore take a long time to scan
- Files that cause a scanning error
- Files that cause a false-positive
- Backup volumes because the files that are stored on them are scanned when they're backed up anyway

**Important:** Excluding files, folders, or volumes from scanning reduces your protection against threats.

To add an on-access exclusion:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Excluded Items**.
5. Do one of the following:
  - Drag the item(s) to be excluded to the list of excluded items.
  - Click **Add (+)** and choose the item(s) to be excluded from the dialog.

For information about specifying which items are excluded, see [Exclusion rules](#) (section 2.2.2.3).

### 2.2.2.2 Edit an on-access exclusion

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To edit an on-access exclusion:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.

3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Excluded Items**.
5. In the list of excluded items, double-click an item and edit the item.
 

For information about specifying which items are excluded, see [Exclusion rules](#) (section 2.2.2.3).

### 2.2.2.3 Exclusion rules

When you add or edit an exclusion, you can type any POSIX path, whether it is a volume, folder, or file. To specify which items are excluded, use the following rules:

Item(s) to exclude	Syntax to use
A folder and sub-folders recursively	Suffix the exclusion with a slash
A folder but not sub-folders	Suffix the exclusion with a double slash
A file	Do <i>not</i> suffix the exclusion with a slash or double slash
A folder or file in a specific location	Prefix the exclusion with a slash
A folder or file anywhere locally or on the network	Do <i>not</i> prefix the exclusion with a slash
A file whose name has a specific filename extension	Substitute an asterisk (*) for the filename stem

### Examples

Exclusion path	Item(s) that are excluded
/MyFolder/MyApplication	The file MyApplication in a specific location
/MyFolder/	All files in the folder MyFolder in a specific location and sub-folders recursively
/MyFolder//	All files in the folder MyFolder in a specific location but not sub-folders
MyFolder/MyApplication	The file MyApplication in any folder that is called MyFolder, locally or on the network

Exclusion path	Item(s) that are excluded
MyFolder/	All files in any folder that is called MyFolder, locally or on the network, and sub-folders recursively
MyFolder//	All files in any folder that is called MyFolder, locally or on the network, but not sub-folders
MyApplication	The file MyApplication anywhere locally or on the network
*.mov	All files whose filename extension is .mov anywhere locally or on the network
/MyFolder/*.mov	All files whose filename extension is .mov in a specific location

#### 2.2.2.4 Delete an on-access exclusion

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To delete an on-access exclusion:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Excluded Items**.
5. In the list of excluded items, select the exclusion that you want to delete and click **Delete (-)**.

#### 2.2.2.5 Enable on-access scanning inside archives and compressed files

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

By default, on-access scanning inside archives and compressed files is disabled. However, you might want to enable the option if you are dealing with several such files at a time and the cost of not detecting a threat is high. For example, you might be emailing some archives or compressed files to an important contact.

**Note:** Sophos recommends that you do not enable this option, for the following reasons:

- Scanning inside archives and compressed files makes scanning significantly slower.
- Whether you enable this option or not, when you open a file extracted from an archive, the extracted file is scanned.
- Whether you enable this option or not, files compressed with dynamic compression utilities (PKLite, LZEXE and Diet) are scanned.

To enable on-access scanning inside archives and compressed files:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Options**.
5. Select “**Inside archives and compressed files**”.

#### **2.2.2.6 Enable on-access scanning of files on network volumes**

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

By default, scanning of files that you access on network volumes is disabled because it can slow down access.

To enable on-access scanning of files on network volumes:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Options**.
5. Select “**Files on network volumes**”.

**Note:** Files on network volumes that you access through an alias are not scanned.

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### 2.2.2.7 Configure on-access scanning to automatically clean up threats

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure on-access scanning to automatically clean up threats that it detects.

**Important:** Sophos Anti-Virus does not ask for confirmation before cleaning up a threat.

To configure on-access scanning to automatically clean up threats:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Choose “**Clean up threat**” from the “**When a threat is found**” pop-up menu.
5. From the “**If cleanup fails**” pop-up menu, choose what action Sophos Anti-Virus should take if cleanup fails:
  - To deny access to the threat, choose “**Deny access**”.
  - To delete the threat, choose “**Delete threat**”.
  - To move the threat to another folder to prevent it being run, choose “**Deny access and move threat**”.

By default, the threats are moved to `/Users/Shared/Infected/`. To choose a different folder, click **Choose Folder**, and enter the folder in the dialog.

Any actions that Sophos Anti-Virus takes against threats are logged in the Sophos Anti-Virus log.

**Important:** Cleaning up a threat might not be able to undo all the actions the threat has taken on this Mac. For example, if the threat changed the value of a setting, the cleanup process might not know the original setting. You might have to verify the Mac’s configuration. Cleaning up an infected document does not repair any changes the threat has made to the document.

### 2.2.2.8 Configure on-access scanning to automatically move threats

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure on-access scanning to automatically move threats that it detects to another folder. Moving an infected program reduces the likelihood of it being run.

Note that Sophos Anti-Virus always denies access to infected files that it has moved, as long as on-access scanning is turned on.

**Important:** You should use this option only if advised to by Sophos technical support. Sophos Anti-Virus does not ask for confirmation before moving a threat.

To configure on-access scanning to automatically move threats:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Choose “**Deny access and move threat**” from the “**When a threat is found**” pop-up menu.  
By default, the threats are moved to `/Users/Shared/Infected/`. To choose a different folder, click **Choose Folder**, and enter the folder in the dialog.

Any actions that Sophos Anti-Virus takes against threats are logged in the Sophos Anti-Virus log.

#### 2.2.2.9 Configure on-access scanning to automatically delete threats

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure on-access scanning to automatically delete threats that it detects.

**Important:** You should use this option only if advised to by Sophos technical support. Sophos Anti-Virus does not ask for confirmation before deleting a threat.

To configure on-access scanning to automatically delete threats:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Choose “**Delete threat**” from the “**When a threat is found**” pop-up menu.

Any actions that Sophos Anti-Virus takes against threats are logged in the Sophos Anti-Virus log.

**Important:** Deleting a threat does not undo any actions the threat has taken on this Mac.

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### 2.2.2.10 Restore default on-access scanning preferences

You can set the on-access scanning preferences to defaults. If your organization has specified default on-access scanning preferences, the on-access scanning preferences will be set to these defaults. Otherwise, they will be set to defaults recommended by Sophos.

To restore default on-access scanning preferences:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **On-access Scanning**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

### 2.2.2.11 Configure desktop alerts

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

Sophos Anti-Virus displays a desktop alert if a serious error occurs during on-access scanning. By default, it also displays a desktop alert if it detects a threat during on-access scanning. You can configure the desktop alerts that are displayed when a threat is detected.

To configure desktop alerts:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Messaging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Change the preferences as follows:
  - To add your own message to the desktop alerts about threats, type the message in the “**Add custom message**” field.
  - To disable desktop alerts about threats, deselect “**Display a desktop alert when a threat is detected on access**”.

### 2.2.2.12 Restore default alerting preferences

You can restore the alerting preferences to defaults. If your organization has specified default alerting preferences, the alerting preferences will be set to these defaults. Otherwise, they will be set to defaults recommended by Sophos.

To restore default alerting preferences:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Messaging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

### 2.2.2.13 Change logging preferences

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

All on-access scanning activity (including threats detected) and all updating activity is logged in the Sophos on-access scanning and updating log. Sophos Anti-Virus can also log such activity in the Mac OS X system log.

To change the logging preferences for on-access scanning and updating:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Logging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Change the preferences as follows:
  - To change the log filename or location, click **Choose Log File** and enter the new filename or location in the dialog.
  - To delete all entries from the log, click **Clear Log**.
  - To log all on-access scanning and updating activity in the system log, select “**Log events to system log**”.

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#### 2.2.2.14 Restore default logging preferences

You can restore the logging preferences for on-access scanning and updating to defaults. If your organization has specified default logging preferences, the logging preferences will be set to these defaults. Otherwise, they will be set to defaults recommended by Sophos.

To restore default logging preferences:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Logging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

#### 2.2.3 View on-access scanning and updating log

To view the log of all on-access scanning activity (including threats detected) and all updating activity:

1. Choose **Sophos Anti-Virus > Preferences** .
2. In the **Logging** pane, click **View Log**.

The log is displayed in Console. At the start of each log entry, there is a tag to show whether the entry was logged by the on-access scanner (com.sophos.intercheck) or AutoUpdate (com.sophos.autoupdate).

### 2.3 Scanning your Mac

You can initiate a scan of your Mac at any time. This will scan all files to which you have access on local volumes. If you authenticate as an administrator, files to which you do not have access are scanned as well. Any removable storage devices that are inserted are included.

You might want to run a scan for one of the following reasons: you want to deal with a threat that Sophos Anti-Virus has detected, you're not running on-access scanning on this Mac because it's a server, or you want to discover files that are infected *before* you need to use them.

#### 2.3.1 Scan This Mac

You can run a scan of all files on this Mac to which you have access. If you are an admin user, this scan also includes all files to which you do *not* usually have access.

- To scan all files on local volumes that you have permission to read, choose **Scan > Scan This Mac**.

Sophos Anti-Virus displays the progress of the scan in the **Scans** window.

**Note:** You can also run the scan in one of the following ways:

- In the **Scans** window, in the **Scan Now** box, click the Play button.
- Click the Sophos Anti-Virus icon on the right-hand side of the menu bar, and then choose **Scan Now** from the shortcut menu.
- Control-click the Sophos Anti-Virus application icon in the Dock, and then choose **Scan This Mac** from the shortcut menu.

## 2.3.2 Configuring scans

### 2.3.2.1 Disable scanning inside archives and compressed files

By default, scanning inside archives and compressed files is enabled when you scan your Mac.

To disable scanning inside archives and compressed files for scans:

1. In the **Scans** window, double-click the **Scan This Mac** box.
2. Select **Options**.
3. Deselect “**Scan inside archives and compressed files**”.

### 2.3.2.2 Configure scans to automatically clean up threats

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure the local drives scan to automatically clean up threats that it detects.

**Important:** Sophos Anti-Virus does not ask for confirmation before cleaning up a threat.

To configure the local drives scan to automatically clean up threats:

1. In the **Scans** window, double-click the **Scan This Mac** box.
2. Select **Options**.
3. Choose “**Clean up threat**” from the “**When a threat is found**” pop-up menu.
4. From the “**If cleanup fails**” pop-up menu, choose what action Sophos Anti-Virus should take if cleanup fails:
  - To take no action, choose “**Log only**”. However, if you have enabled email alerts, Sophos Anti-Virus also sends an email alert.
  - To delete the threat, choose “**Delete threat**”.

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- To move the threat to another folder to prevent it being run, choose “**Move threat**”.

By default, the threats are moved to `/Users/Shared/Infected/`. To choose a different folder, click **Choose Folder**, and enter the folder in the dialog.

Any actions that Sophos Anti-Virus takes against threats are logged in the log of the local drives scan.

**Important:** Cleaning up a threat might not be able to undo all the actions the threat has taken on this Mac. For example, if the threat changed the value of a setting, the cleanup process might not know the original setting. You might have to verify the Mac’s configuration. Cleaning up an infected document does not repair any changes the threat has made to the document.

### 2.3.2.3 Configure scans to automatically move threats

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure scans to automatically move threats that it detects to another folder. Moving an infected program reduces the likelihood of it being run.

**Important:** You should use this option only if advised to by Sophos technical support. Sophos Anti-Virus does not ask for confirmation before moving a threat.

To configure the local drives scan to automatically move threats:

1. In the **Scans** window, double-click the **Scan This Mac** box.
2. Select **Options**.
3. Choose “**Move threat**” from the “**When a threat is found**” pop-up menu.

By default, the threats are moved to `/Users/Shared/Infected/`. To choose a different folder, click **Choose Folder**, and enter the folder in the dialog.

Any actions that Sophos Anti-Virus takes against threats are logged in the scan log.

### 2.3.2.4 Configure scans to automatically delete threats

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure scans to automatically delete detected threats.

**Important:** You should use this option only if advised to by Sophos technical support. Sophos Anti-Virus does not ask for confirmation before deleting a threat.

To configure scans to automatically delete threats:

1. In the **Scans** window, double-click the **Scan This Mac** box.
2. Select **Options**.
3. In the **Scan This Mac** pane, choose “**Delete threat**” from the “**When a threat is found**” pop-up menu.

Any actions that Sophos Anti-Virus takes against threats are logged in the scan log.

**Important:** Deleting a threat does not undo any actions the threat has taken on this Mac.

### 2.3.3 View the log of a scan

- Choose **Scan > View Scan Log**.

The log is displayed in Console.

## 2.4 Custom scans

A custom scan is a scan that you initiate. It is a scan of specific sets of files, folders, or volumes.

You might want to run a custom scan because you want to scan only suspicious parts of a disk or you want to discover files that are infected *before* you need to use them.

**Important:** If your organization uses a management console, additional scheduled scans may appear. You will not be able to edit or disable these scans, although a user who is an administrator can delete scans that have been scheduled from a management console.

### 2.4.1 Run a custom scan

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. In the **Custom Scans** list, select the scan that you want to run.
4. Click the **Scan Now** button.

The progress of the scan is displayed in the **Sophos Anti-Virus** window.

### 2.4.2 Add a custom scan

1. Choose **File > New**.
2. In the scan editor that is displayed, edit the scan as follows:
  - To rename the scan, in the **Scan Name** field, type the new name.
  - To specify what to scan, see [Specify what to scan](#) (section 2.4.5.3).
  - To specify what not to scan, see [Add a custom scan exclusion](#) (section 2.4.5.5), [Edit a custom scan exclusion](#) (section 2.4.5.6), or [Delete a custom scan exclusion](#) (section 2.4.5.8) as appropriate.
  - To disable scanning inside archives and compressed files, see [Disable scanning inside archives and compressed files for a custom scan](#) (section 2.4.5.9).

The scan is added to the **Custom Scans** list in the **Scans** window.

**Note:**

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You can also add a scan in one of the following ways:

- Click **Add (+)** at the bottom of the **Scans** window.
- From Finder, drag items to be scanned to a blank space in the **Custom Scans** list.

### 2.4.3 Add a custom scan of a threat

If a threat is listed in Quarantine Manager, you can add a custom scan of that threat.

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. If the **Quarantine Manager** window is not open, choose **Window > Quarantine Manager** to open it.
4. In Quarantine Manager, do one of the following:
  - In the list of threats, select the threats that you want to add to a new custom scan.  
Drag the selected threats to a blank space in the **Custom Scans** list.
  - In the **Threat Details** box, select the files that you want to add to a new custom scan.  
Drag the selected files to a blank space in the **Custom Scans** list.
  - In the **Threat Details** box, click **Path and Filename**, and then choose “**Create a Custom Scan of These Files**” from the pop-up menu.
5. In the scan editor that is displayed, to rename the scan, in the **Scan Name** field, type the new name.
6. In the **Options** pane, choose “**Delete threat**” from the “**When a threat is found**” pop-up menu.

The scan is added to the **Custom Scans** list.

### 2.4.4 Copy a custom scan

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. In the **Custom Scans** list, select the scan that you want to copy.
4. Choose **File > Duplicate**.
5. Double-click the new scan, then edit the scan as follows:
  - To rename the scan, in the **Scan Name** field, type the new name.
  - To specify what to scan, see [Specify what to scan](#) (section 2.4.5.3).
  - To specify what not to scan, see [Add a custom scan exclusion](#) (section 2.4.5.5), [Edit a custom scan exclusion](#) (section 2.4.5.6), or [Delete a custom scan exclusion](#) (section 2.4.5.8) as appropriate.

- To disable scanning inside archives and compressed files, see [Disable scanning inside archives and compressed files for a custom scan](#) (section 2.4.5.9).

The scan is added to the **Custom Scans** list in the **Scans** window.

**Note:** You can also copy a selected scan in the **Scans** window in one of the following ways:

- Press Command-D.
- At the bottom of the window, choose **Duplicate** from the Action pop-up menu.

## 2.4.5 Configuring a custom scan

### 2.4.5.1 Open the custom scan editor

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. In the **Custom Scans** list, double-click the scan that you want to edit.

**Note:** You can also open the editor in one of the following ways:

- Select the scan that you want to edit and click the Edit button.
- Select the scan that you want to edit and choose **Edit Scan** from the Action pop-up menu at the bottom of the window.

### 2.4.5.2 Rename a custom scan

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the scan editor, in the **Scan Name** field, type the new name.

### 2.4.5.3 Specify what to scan

- Do one of the following:
    - From Finder, drag items to be scanned to the custom scan in the **Scans** window.
    - In the scan editor, click **Add (+)** and choose the items to be scanned from the dialog.
- To find out how to open the scan editor, see [Open the custom scan editor](#) (section 2.4.5.1).

**Note:** If you do not have sufficient privileges to see the contents of a folder that you add, Sophos Anti-Virus displays the folder with a No Access symbol and does not scan it.

---

#### 2.4.5.4 Add a threat to a custom scan

If a threat is listed in Quarantine Manager, you can add it to an existing custom scan.

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. If the **Quarantine Manager** window is not open, choose **Window > Quarantine Manager** to open it.
4. In Quarantine Manager, do one of the following:
  - In the list of threats, select the threats that you want to add to an existing custom scan.  
Drag the selected threats to your chosen scan in the **Custom Scans** list.
  - In the **Threat Details** box, select the files that you want to add to an existing custom scan.  
Drag the selected files to your chosen scan in the **Custom Scans** list.

**Note:** If the editor for your chosen scan is already open, you can drag the selected threats or files to that.

#### 2.4.5.5 Add a custom scan exclusion

You can exclude files, folders, or volumes from a custom scan. For example, you might want to exclude:

- Files that are large and therefore take a long time to scan
- Files that cause a scanning error
- Files that cause a false-positive
- Backup volumes because the files that are stored on them are scanned when they're backed up anyway

**Important:** Excluding files, folders, or volumes from scanning reduces your protection against threats.

To add a custom scan exclusion:

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Excluded Items** pane, do one of the following:
  - Drag the item(s) to be excluded to the list of excluded items.
  - Click **Add (+)** and choose the item(s) to be excluded from the dialog.

For information about specifying which items are excluded, see [Exclusion rules](#) (section 2.4.5.7).

### 2.4.5.6 Edit a custom scan exclusion

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Excluded Items** pane, double-click an item and edit the item.  
For information about specifying which items are excluded, see [Exclusion rules](#) (section 2.4.5.7).

### 2.4.5.7 Exclusion rules

When you add or edit an exclusion, you can type any POSIX path, whether it is a volume, folder, or file. To specify which items are excluded, use the following rules:

Item(s) to exclude	Syntax to use
A folder and sub-folders recursively	Suffix the exclusion with a slash
A folder but not sub-folders	Suffix the exclusion with a double slash
A file	Do <i>not</i> suffix the exclusion with a slash or double slash
A folder or file in a specific location	Prefix the exclusion with a slash
A folder or file anywhere locally or on the network	Do <i>not</i> prefix the exclusion with a slash
A file whose name has a specific filename extension	Substitute an asterisk (*) for the filename stem

### Examples

Exclusion path	Item(s) that are excluded
/MyFolder/MyApplication	The file MyApplication in a specific location
/MyFolder/	All files in the folder MyFolder in a specific location and sub-folders recursively
/MyFolder//	All files in the folder MyFolder in a specific location but not sub-folders
MyFolder/MyApplication	The file MyApplication in any folder that is called MyFolder, locally or on the network
MyFolder/	All files in any folder that is called MyFolder, locally or on the network, and sub-folders recursively

Exclusion path	Item(s) that are excluded
MyFolder//	All files in any folder that is called MyFolder, locally or on the network, but not sub-folders
MyApplication	The file MyApplication anywhere locally or on the network
*.mov	All files whose filename extension is .mov anywhere locally or on the network
/MyFolder/*.mov	All files whose filename extension is .mov in a specific location

#### 2.4.5.8 Delete a custom scan exclusion

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Excluded Items** pane, select the item that you want to delete and click **Delete (-)**.

#### 2.4.5.9 Disable scanning inside archives and compressed files for a custom scan

By default, scanning inside archives and compressed files is enabled.

To disable scanning inside archives and compressed files for a custom scan:

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Options** pane, deselect “**Inside archives and compressed files**”.

#### 2.4.5.10 Schedule a custom scan to run at specific times

Users who are administrators can configure a custom scan to run automatically at scheduled times. Scans can be scheduled to run on every day of the week at a specific time or times.

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Schedule** pane, select the “**Enable Schedule**” checkbox.
3. Select the days on which you want the custom scan to run.
4. Click **Add (+)** to add a new time.
5. Set the new entry to the time you want the scan.

**Note:** You can add additional times by clicking **Add (+)**, and remove times by clicking **Delete (-)**.

#### 2.4.5.11 Configure a custom scan to automatically clean up threats

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure a custom scan to automatically clean up threats that it detects.

**Important:** Sophos Anti-Virus does not ask for confirmation before cleaning up a threat.

To configure a custom scan to automatically clean up threats:

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Options** pane, choose “**Clean up threat**” from the “**When a threat is found**” pop-up menu.
3. From the “**If cleanup fails**” pop-up menu, choose what action Sophos Anti-Virus should take if cleanup fails:
  - To take no action, choose “**Log only**”. However, if you have enabled email alerts, Sophos Anti-Virus also sends an email alert.
  - To delete the threat, choose “**Delete threat**”.
  - To move the threat to another folder to prevent it being run, choose “**Move threat**”.

By default, the threats are moved to `/Users/Shared/Infected/`. To choose a different folder, click **Choose Folder**, and enter the folder in the dialog.

Any actions that Sophos Anti-Virus takes against threats are logged in the log of the custom scan.

**Important:** Cleaning up a threat might not be able to undo all the actions the threat has taken on this Mac. For example, if the threat changed the value of a setting, the cleanup process might not know the original setting. You might have to verify the Mac’s configuration. Cleaning up an infected document does not repair any changes the threat has made to the document.

#### 2.4.5.12 Configure a custom scan to automatically move threats

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure a custom scan to automatically move threats that it detects to another folder. Moving an infected program reduces the likelihood of it being run.

**Important:** You should use this option only if advised to by Sophos technical support. Sophos Anti-Virus does not ask for confirmation before moving a threat.

To configure a custom scan to automatically move threats:

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Options** pane, choose “**Move threat**” from the “**When a threat is found**” pop-up menu.

By default, the threats are moved to `/Users/Shared/Infected/`. To choose a different folder, click **Choose Folder**, and enter the folder in the dialog.

---

Any actions that Sophos Anti-Virus takes against threats are logged in the log of the custom scan.

#### 2.4.5.13 Configure a custom scan to automatically delete threats

To deal with threats, we recommend that you use Quarantine Manager (see [Dealing with threats](#) (section 3)). However, you can configure a custom scan to automatically delete threats that it detects.

**Important:** You should use this option only if advised to by Sophos technical support. Sophos Anti-Virus does not ask for confirmation before deleting a threat.

To configure a custom scan to automatically delete threats:

1. If the scan editor is not open, open it. To find out how to do this, see [Open the custom scan editor](#) (section 2.4.5.1).
2. In the **Options** pane, choose “**Delete threat**” from the “**When a threat is found**” pop-up menu.

Any actions that Sophos Anti-Virus takes against threats are logged in the log of the custom scan.

**Important:** Deleting a threat does not undo any actions the threat has taken on this Mac.

#### 2.4.6 Delete a custom scan

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. In the **Custom Scans** list, select the scan that you want to delete.
4. Click **Delete (-)**.

#### 2.4.7 View a custom scan log

1. If the **Scans** window is not open, choose **Window > Scans** to open it.
2. If the **Custom Scans** list is not displayed, click the disclosure triangle next to **Custom Scans**.
3. In the **Custom Scans** list, select the scan for which you want to view the log.
4. At the bottom of the window, choose **View Scan Log** from the Action pop-up menu.

The log is displayed in Console.

### 2.5 Configure email alerts

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

Sophos Anti-Virus can send an email if it detects a threat or a serious error occurs. This applies to on-access scanning, user-initiated scans, custom scans, and Finder item scans. By default, email alerts are disabled.

To configure email alerts:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Messaging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Select “**Send an email alert when a threat is detected or an error occurs**”.
5. Change the preferences as follows:
  - To enable Sophos Anti-Virus to send an email alert only if it detects a threat, select **Threats**.
  - To enable Sophos Anti-Virus to send an email alert if it detects a threat or a serious error occurs, select “**Threats and errors**”.
  - To specify the email address *to* which email alerts should be sent, type the address in the **Recipient** field.
  - To specify the address of the email server from which email alerts should be sent, type the address in the **Outgoing Email Server** field.
  - To specify the email address *from* which email alerts should be sent, type the address in the **Sender** field.

**Note:** You can use more than one email address, by separating addresses with commas.

## 2.6 Restore default alerting preferences

You can restore the alerting preferences to defaults. If your organization has specified default alerting preferences, the alerting preferences will be set to these defaults. Otherwise, they will be set to defaults recommended by Sophos.

To restore default alerting preferences:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Messaging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

---

## 2.7 Live Protection

Live Protection enables real-time online lookups of potential threats. With Live Protection enabled, Sophos Anti-Virus will check suspicious files against the extensive SophosLabs cloud database to determine whether the file should be blocked or allowed. To configure Live Protection:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Live Protection**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Move the toggle switch to "On" to enable Live Protection.

## 2.8 Restore default Live Protection setting

You can restore the Live Protection setting to its default. If your organization has specified a default Live Protection setting, Live Protection will be set to this default. Otherwise, it will be set to the default recommended by Sophos.

To restore the default Live Protection setting:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Live Protection**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

## 2.9 Web Protection

Sophos Web Protection provides enhanced protection against web threats. It works by looking up website URLs in the Sophos online database of infected websites, and then blocking access to any websites that are known to host malware.

## 2.9.1 Supported Browsers

The following browsers support web protection:

- Firefox
- Google Chrome
- Safari
- Opera

## 2.9.2 General Settings

Web Protection can be configured to block access to malicious websites, scan downloads to help protect against malicious content, or both. To configure Web Protection:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Select **Web Protection**.
3. Click **General** on the **Web Protection** panel.
4. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
5. Move the upper toggle switch to **On** to protect your Mac from sites that Sophos has identified to be hosting malicious content.
6. Move the lower toggle switch to **On** to block malicious downloads before they reach your browser. This will perform an additional check by passing downloads through the content scanning engine.

## 2.9.3 Allowed Websites

You may want to exclude certain websites from Web Protection. You can add a domain name to bypass Web Protection filtering for an entire domain. You can also add an IPv4 address to bypass Web Protection filtering for that address. To add an allowed website:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Select **Web Protection**.
3. Click **Allowed Websites** on the **Web Protection** panel.
4. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.

- 
- If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
5. Click the + button to add a site that will be excluded from Web Protection. Enter the domain name, IP address, or IP address range in CIDR notation that you want to exclude from Web Protection. You cannot enter a specific path.

Examples of valid allowed websites:

- **example.com** will allow all of the **example.com** domain.
- **address.example.com** will allow **address.example.com** or **this.address.example.com**, but not **different.example.com**.
- **192.0.2.0** will allow only **192.0.2.0**.
- **192.0.2.0/24** will allow all addresses from **192.0.2.0** to **192.0.2.255**.

**Note:** Local addresses are automatically included in the list of allowed websites.

## 2.10 Use Sophos Anti-Virus from Terminal

You can run a scan from Terminal, Mac OS X's command-line interface. To display the command-line Help for this feature:

1. Open Terminal.  
To do this, find the folder `/Applications/Utilities` and double-click Terminal.
2. At the command prompt, type:

```
sweep -h
```

## 3 Dealing with threats

If a threat is detected on your Mac, it is listed in a component of Sophos Anti-Virus called Quarantine Manager. You should open Quarantine Manager and deal with the threat there.

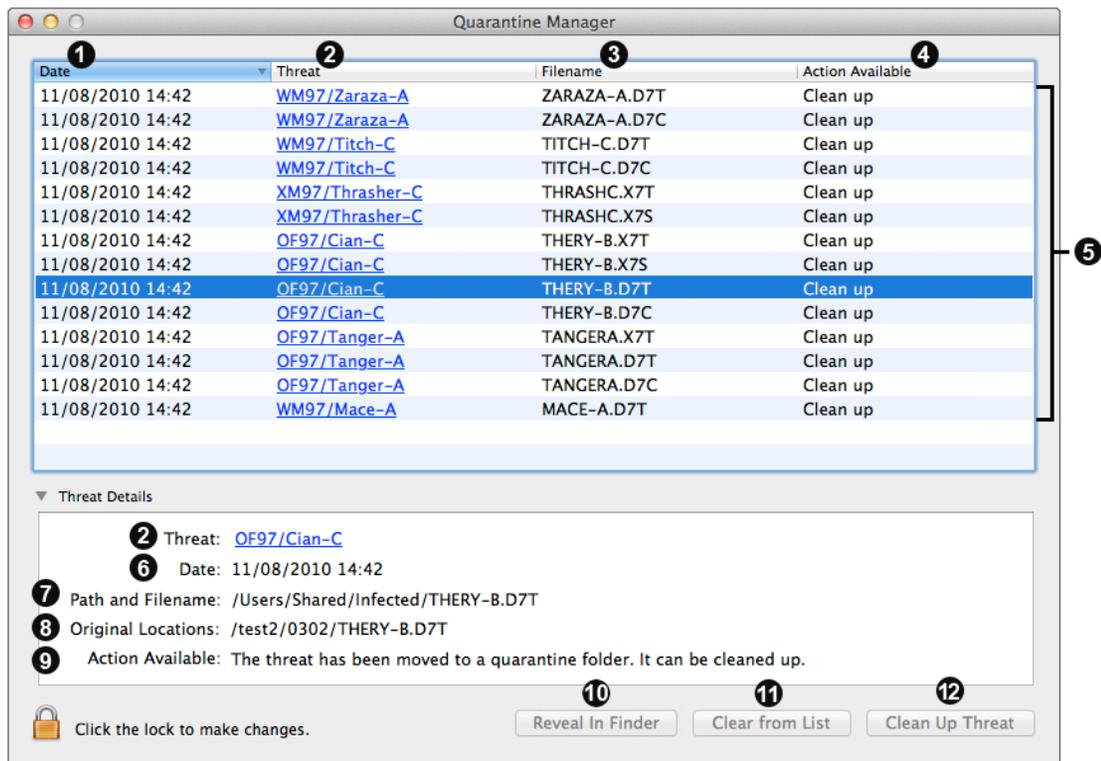
### 3.1 Open Quarantine Manager

To open Quarantine Manager, do one of the following:

- Choose **Window > Quarantine Manager**.
- Click the Sophos Anti-Virus icon on the right-hand side of the menu bar, and then choose **Open Quarantine Manager** from the shortcut menu.
- In the Scans window, click **Quarantine Manager**.

### 3.2 About Quarantine Manager

Quarantine Manager lists all the threats that have been detected by scanning and enables you to deal with them. The elements of the **Quarantine Manager** window are shown below:



1	The date and time of detection. If the threat has been detected multiple times, only the first detection is included here.
2	The name of the threat, including a link to the analysis on the Sophos website.
3	The main file associated with the threat.
4	The action that you can take to deal with the threat.
5	The list of threats that have been detected. You can sort the threats by clicking any of the column headings. You can select one or more threats to deal with at a time. The maximum number of threats listed is 200. If this limit is reached, the newest threats replace the oldest.
6	The date and time of detection. If the threat has been detected multiple times, only the first and last detections are included here.
7	The locations and names of all the files that comprise the threat.
8	If the threat has been moved during scanning or partially removed, this element is displayed. All the original files that comprise the threat are listed.
9	The action that you can take to deal with the threat and a summary of what action has been taken so far, if applicable.
10	Click <b>Reveal In Finder</b> to open the finder at the location of the file associated with the selected threat. For more information, see <a href="#">Deal with threats in Quarantine Manager</a> (section 3.4).
11	Click “ <b>Clear from List</b> ” to clear a selected threat from Quarantine Manager without dealing with the threat itself. For more information, see <a href="#">Clear a threat from Quarantine Manager</a> (section 3.6).
12	Click <b>Clean Up Threat</b> to clean up a selected threat. For more information, see <a href="#">Deal with threats in Quarantine Manager</a> (section 3.4).

### 3.3 View threat details in Quarantine Manager

In Quarantine Manager, you can view more details on how a threat has affected your Mac, for example all the files that comprise the threat.

Some details are hidden unless you authenticate by clicking the lock icon at the bottom of the **Quarantine Manager** window.

To view details of a threat in Quarantine Manager:

1. In Quarantine Manager, select the threat for which you want to view the details.  
You can select more than one threat but the details that are displayed are less specific.
2. Click the disclosure triangle next to **Threat Details**.

The threat details are displayed in the **Threat Details** box. For a description of each field, see [About Quarantine Manager](#) (section 3.2).

If the paths of the files that comprise the threat are shortened because they're too long to display, you can copy the paths to the Clipboard so that you can paste them into a text editor. To copy the paths, in the **Threat Details** box, click "**Path and Filename**", and then choose "**Copy the Paths of These Files**" from the pop-up menu.

### 3.4 Deal with threats in Quarantine Manager

1. In Quarantine Manager, click the **Action Available** column heading to sort the list of threats according to the action available.
2. Select all the threats for which the action available is "**Clean up**".
3. Click **Clean Up Threat**.

You must authenticate by clicking the lock icon at the bottom of the **Quarantine Manager** window.

Any threats that are cleaned up are cleared from the list.

4. Click the **Action Available** column heading to sort the list of threats.
5. If there are any threats for which the action available is **Restart**, restart your Mac to complete the cleanup.
6. Click the **Action Available** column heading to sort the list of threats.
7. If there are any threats for which the action available is "**Scan this Mac**", run a scan of local drives (see [Scan This Mac](#) (section 2.3.1)).
8. Click the **Action Available** column heading to sort the list of threats.
9. If there are any threats for which the action available is "**Clean up**", go back to step 3.
10. If there are any threats for which the action available is "**Clean up manually**":
  - a) Add a new custom scan of the threats, as explained in [Add a custom scan of a threat](#) (section 2.4.3).
  - b) Run the scan, as explained in [Run a custom scan](#) (section 2.4.1).

**Important:** Cleaning up a threat might not be able to undo all the actions the threat has taken on this Mac. For example, if the threat changed the value of a setting, the cleanup process might not know the original setting. You might have to verify the Mac's configuration. Cleaning up an infected document does not repair any changes the threat has made to the document.

### 3.5 Disable cleanup warning

By default, Sophos Anti-Virus warns you before it cleans up threats in Quarantine Manager.

To disable the cleanup warning:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **Messaging**.

---

3. If some settings are gray:

- If the lock icon  is displayed, click it and type an administrator name and password.
- If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.

4. Deselect “**Warn before cleaning up threats in Quarantine Manager**”.

**Note:** You can also disable the cleanup warning by selecting “**Do not show this message again**” in the warning dialog.

## 3.6 Clear a threat from Quarantine Manager

To clear a threat, you must authenticate by clicking the lock icon at the bottom of the **Quarantine Manager** window.

You might want to clear a threat because:

- It’s been confirmed as a false-positive
- You are confident that you have successfully cleaned it up manually
- You have removed infected removable media
- You want to clear the list of threats before running a scan of local drives

To clear a threat from Quarantine Manager:

1. In Quarantine Manager, select the threat that you want to clear.  
You can select more than one threat at a time.
2. Click “**Clear from List**”.

Clearing a threat does not delete any files.

## 4 Updating

### 4.1 Update Sophos Anti-Virus immediately

By default, Sophos Anti-Virus updates every hour. However, you can update it immediately.

To update Sophos Anti-Virus immediately, do one of the following:

- Choose **Sophos Anti-Virus > Update Now** .
- Click the Sophos Anti-Virus icon on the right-hand side of the menu bar, and then choose **Update Now** from the shortcut menu.
- Control-click the Sophos Anti-Virus application icon in the Dock, and then choose **Update Now** from the shortcut menu.

The Sophos Anti-Virus icon on the right-hand side of the menu bar will display a moving arrow to indicate that an update is being performed.

### 4.2 Configuring updating

#### 4.2.1 Set a source for updates

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To specify where Sophos Anti-Virus downloads updates from:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **AutoUpdate**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Change the preferences as follows:
  - To enable Sophos Anti-Virus to update directly from Sophos, choose **Sophos** from the “**Update from Primary Location**” pop-up menu. In the **User Name** and **Password** fields, type the updating credentials that were given to you by Sophos.

- 
- To enable Sophos Anti-Virus to update from your company web server, choose “**Company Web Server**” from the “**Update from Primary Location**” pop-up menu. In the **Address** field, type the web address of the location from which updates will be downloaded. In the **User Name** and **Password** fields, type the updating credentials that are needed to access the server.
  - To enable Sophos Anti-Virus to update from a network volume, choose “**Network Volume**” from the “**Update from Primary Location**” pop-up menu. In the **Address** field, type the network address of the location from which updates will be downloaded. In the **User Name** and **Password** fields, type the updating credentials that are needed to access the volume.

The following are examples of the address. Replace the text inside the brackets with the appropriate names:

**http://<server>/<web share>/Sophos Anti-Virus/ESCOSX**

**smb://<server>/<Samba share>/Sophos Anti-Virus/ESCOSX**

**afp://<server>/<AppleShare share>/Sophos Anti-Virus/ESCOSX**

You can use an IP address or NetBIOS name instead of a domain or host name to refer to the server. Using an IP address can be better if you have any DNS problems.

If Sophos Anti-Virus must access the update source through the proxy that has been set up in System Preferences, see [Enable updating through the system proxy](#) (section 4.2.3). If Sophos Anti-Virus must access the update source through another proxy, see [Enable updating through a custom proxy](#) (section 4.2.4).

## 4.2.2 Set an alternative source for updates

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

To specify where Sophos Anti-Virus downloads updates from if it cannot contact its usual source:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **AutoUpdate**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Select “**Use a secondary location**”. Then, change the preferences as follows:
  - To enable Sophos Anti-Virus to update directly from Sophos, choose **Sophos** from the “**Update from Secondary Location**” pop-up menu. In the **User Name** and **Password** fields, type the updating credentials that were given to you by Sophos.

- To enable Sophos Anti-Virus to update from your company web server, choose “**Company Web Server**” from the “**Update from Secondary Location**” pop-up menu. In the **Address** field, type the web address of the location from which updates will be downloaded. In the **User Name** and **Password** fields, type the updating credentials that are needed to access the server.
- To enable Sophos Anti-Virus to update from a network volume, choose “**Network Volume**” from the “**Update from Secondary Location**” pop-up menu. In the **Address** field, type the network address of the location from which updates will be downloaded. In the **User Name** and **Password** fields, type the updating credentials that are needed to access the volume.

The following are examples of the address. Replace the text inside the brackets with the appropriate names:

**http://<server>/<web share>/Sophos Anti-Virus/ESCOSX**

**smb://<server>/<Samba share>/Sophos Anti-Virus/ESCOSX**

**afp://<server>/<AppleShare share>/Sophos Anti-Virus/ESCOSX**

You can use an IP address or NetBIOS name instead of a domain or host name to refer to the server. Using an IP address can be better if you have any DNS problems.

If Sophos Anti-Virus must access the update source through the proxy that has been set up in System Preferences, see [Enable updating through the system proxy](#) (section 4.2.3). If Sophos Anti-Virus must access the update source through another proxy, see [Enable updating through a custom proxy](#) (section 4.2.4).

### 4.2.3 Enable updating through the system proxy

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

You can specify that you want Sophos Anti-Virus to update through the proxy that has been set up in System Preferences.

To enable updating through the system proxy:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **AutoUpdate**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Choose “**Use System Proxy Settings**” from the pop-up menu at the bottom of the “**Primary Location**” section or the “**Secondary Location**” section, as required.

---

## 4.2.4 Enable updating through a custom proxy

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

You can specify the settings of a proxy through which you want Sophos Anti-Virus to update.

To enable updating through a custom proxy:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **AutoUpdate**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Choose “**Use Custom Proxy Settings**” from the pop-up menu at the bottom of the “**Primary Location**” section or the “**Secondary Location**” section, as required.
5. In the dialog that appears, type the address and port number of the proxy in the **Address** fields. In the **User Name** and **Password** fields, type the credentials that are needed to access the proxy.

## 4.2.5 Schedule updates

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

By default, Sophos Anti-Virus updates every hour. However, you can change when or how often it updates.

To schedule updates:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **AutoUpdate**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Change the preferences as follows:
  - To enable Sophos Anti-Virus to update at regular intervals, select “**Check for updates every**” and enter the time period.
  - To enable Sophos Anti-Virus to update every time that a network connection is established, select “**Check for updates on connection to network or Internet**”.

## 4.2.6 Restore default updating preferences

You can restore the updating preferences to defaults. If your organization has specified default updating preferences, the updating preferences will be set to these defaults. Otherwise, they will be set to defaults recommended by Sophos.

To restore default updating preferences:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **AutoUpdate**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

## 4.2.7 Change logging preferences

**Important:** If your organization has specified default preferences, these defaults might override changes that you make here.

All on-access scanning activity (including threats detected) and all updating activity is logged in the Sophos on-access scanning and updating log. Sophos Anti-Virus can also log such activity in the Mac OS X system log.

To change the logging preferences for on-access scanning and updating:

1. Choose **Sophos Anti-Virus > Preferences**.
2. Click **Logging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Change the preferences as follows:
  - To change the log filename or location, click **Choose Log File** and enter the new filename or location in the dialog.
  - To delete all entries from the log, click **Clear Log**.
  - To log all on-access scanning and updating activity in the system log, select “**Log events to system log**”.

---

## 4.2.8 Restore default logging preferences

You can restore the logging preferences for on-access scanning and updating to defaults. If your organization has specified default logging preferences, the logging preferences will be set to these defaults. Otherwise, they will be set to defaults recommended by Sophos.

To restore default logging preferences:

1. Choose **Sophos Anti-Virus > Preferences** .
2. Click **Logging**.
3. If some settings are gray:
  - If the lock icon  is displayed, click it and type an administrator name and password.
  - If the Tamper Protection icon  is displayed, click it and enter the Tamper Protection password.
4. Click **Restore Defaults**.

## 4.3 Check the progress of an update

- When an update is being performed, the Sophos Anti-Virus icon on the right-hand side of the menu bar will indicate this by displaying a moving arrow. Or, to check the progress of an update, click the Sophos Anti-Virus icon on the right-hand side of the menu bar, and then choose **Show AutoUpdate Window** from the shortcut menu.

**Note:** To view a log of all updating activity, see [View on-access scanning and updating log](#) (section 2.2.3).

## 4.4 View on-access scanning and updating log

To view the log of all on-access scanning activity (including threats detected) and all updating activity:

1. Choose **Sophos Anti-Virus > Preferences** .
2. In the **Logging** pane, click **View Log**.

The log is displayed in Console. At the start of each log entry, there is a tag to show whether the entry was logged by the on-access scanner (com.sophos.intercheck) or AutoUpdate (com.sophos.autoupdate).

## 5 Solving problems

### 5.1 Sophos Anti-Virus does not update

#### Symptoms

Sophos Anti-Virus is unable to update or does not attempt to do so. If it is unable to update, a cross is superimposed on the Sophos Anti-Virus icon on the right-hand side of the menu bar.



#### Causes

To find out why this is happening, view the updating log. For information, see [View on-access scanning and updating log](#) (section 2.2.3).

#### Resolve the problem

- If Sophos Anti-Virus is contacting the wrong source for updates, see [Set a source for updates](#) (section 4.2.1). Check that the settings are correct.
- If Sophos Anti-Virus cannot use your proxy server, see [Enable updating through the system proxy](#) (section 4.2.3) or [Enable updating through a custom proxy](#) (section 4.2.4), depending on which type of proxy you are using. Check that the settings are correct.
- If Sophos Anti-Virus is not attempting to update when you expect it to, see [Schedule updates](#) (section 4.2.5). Check that the settings are correct.

### 5.2 Update Now menu command is dimmed

#### Symptoms

The **Update Now** menu command is dimmed in the **Sophos Anti-Virus** menu, the menu bar icon shortcut menu, or the Dock icon shortcut menu.

#### Causes

Updating is not configured.

#### Resolve the problem

See [Configuring updating](#) (section 4.2).

---

## 5.3 Sophos Anti-Virus icon is gray

### Symptoms

The Sophos Anti-Virus icon on the right-hand side of the menu bar is gray.



### Causes

Your Mac is not protected by on-access scanning.

### Resolve the problem

Turn on on-access scanning. For information about how to do this, see [Turn on-access scanning on or off](#) (section 2.2.1).

## 5.4 “Scan with Sophos Anti-Virus” menu command is not present

### Symptoms

If you try to run a Finder item scan from a shortcut menu, the menu doesn't contain the command “Scan with Sophos Anti-Virus”.

### Causes

The command isn't contained in the menu immediately after you install Sophos Anti-Virus.

### Resolve the problem

Log in to your Mac again.

## 5.5 Manual cleanup required

### Symptoms

A threat is displayed in Quarantine Manager with the available action “Clean up manually”.

### Causes

This could be for one of the following reasons:

- Sophos Anti-Virus does not have threat data to clean up the threat.
- The threat is on a write-protected volume.

## Resolve the problem

Depending on the reason for the threat not being cleaned up, do one of the following:

- If Sophos Anti-Virus does not have threat data to clean up the threat, you must clean up the threat manually:
  1. Add a new custom scan of the threats, as explained in [Add a custom scan of a threat](#) (section 2.4.3).
  2. Run the scan, as explained in [Run a custom scan](#) (section 2.4.1).

**Important:** Cleaning up a threat might not be able to undo all the actions the threat has taken on this Mac. For example, if the threat changed the value of a setting, the cleanup process might not know the original setting. You might have to verify the Mac's configuration.

- If you can turn on write access to the volume:
  1. Clear the threat from Quarantine Manager (see [Clear a threat from Quarantine Manager](#) (section 3.6)).
  2. Scan for the threat again.
  3. Turn on write access to the volume.
  4. Clean up the threat in Quarantine Manager (see [Deal with threats in Quarantine Manager](#) (section 3.4)).

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## 6 Technical support

You can find technical support for Sophos products in any of these ways:

- Visit the SophosTalk community at [community.sophos.com/](https://community.sophos.com/) and search for other users who are experiencing the same problem.
- Visit the Sophos support knowledgebase at [www.sophos.com/en-us/support.aspx](https://www.sophos.com/en-us/support.aspx).
- Download the product documentation at [www.sophos.com/en-us/support/documentation/](https://www.sophos.com/en-us/support/documentation/).
- Send an email to [support@sophos.com](mailto:support@sophos.com), including your Sophos software version number(s), operating system(s) and patch level(s), and the text of any error messages.

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## References

<http://www.cs.wustl.edu/~schmidt/ACE.html>  
<http://www.cs.wustl.edu/~schmidt/TAO.html>  
<http://www.dre.vanderbilt.edu/CIAO/>  
<http://www.dre.vanderbilt.edu/cosmic/>  
<http://www.dre.vanderbilt.edu/~schmidt/>  
<http://www.cs.wustl.edu/~schmidt/ACE-members.html>  
<http://www.wustl.edu/>  
<http://www.uci.edu/>  
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[mailto:doc\\_group@cs.wustl.edu](mailto:doc_group@cs.wustl.edu)  
<http://www.cs.wustl.edu/~schmidt/ACE-users.html>  
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<http://www.cs.wustl.edu/~schmidt/ACE.html>  
<http://www.cs.wustl.edu/~schmidt/TAO.html>  
<http://www.dre.vanderbilt.edu/CIAO/>  
<http://www.dre.vanderbilt.edu/cosmic/>  
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<http://www.cs.wustl.edu/~schmidt/doc-center.html>

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## **Loki**

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[www.sourceforge.net/projects/tinyxml](http://www.sourceforge.net/projects/tinyxml)

Original code by Lee Thomason ([www.grinninglizard.com](http://www.grinninglizard.com))

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