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Sophos Endpoint Security and Control

Help

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1 About Sophos Endpoint Security and Control

Sophos Endpoint Security and Control, version 10 is an integrated suite of security software.

Sophos Anti-Virus detects and cleans up viruses, Trojans, worms, and spyware, as well as adware and other potentially unwanted applications. Our HIPS (Host Intrusion Prevention System) technology can also protect your computer from suspicious files and rootkits.

Sophos Behavior Monitoring uses our HIPS technology to protect Windows 2000 and later computers from unidentified or "zero-day" threats and suspicious behavior.

Sophos Live Protection improves detection of new malware without the risk of unwanted detections. This is achieved by doing an instant lookup against the very latest known malware. When new malware is identified, Sophos can send out updates within seconds.

Sophos Web Protection provides enhanced protection against web threats by preventing access to locations that are known to host malware. It blocks endpoints access to such sites by performing a real-time lookup against Sophos's online database of malicious websites.

Sophos Application Control blocks unauthorized applications such as Voice over IP, instant messaging, file sharing, and game software.

Sophos Device Control blocks unauthorized external storage devices and wireless connection technologies.

Sophos Data Control prevents the accidental leakage of personally-identifiable information from managed computers.

Sophos Web Control provides protection, control, and reporting for computers that are located, or roam, outside the corporate network.

Sophos Client Firewall prevents worms, Trojans, and spyware from stealing and distributing sensitive information, and also prevents intrusion from hackers.

Sophos AutoUpdate offers fail-safe updating and can throttle bandwidth when updating over low-speed network connections.

Sophos Tamper Protection prevents unauthorized users (users with limited technical knowledge) and known malware from uninstalling Sophos security software or disabling it through the Sophos Endpoint Security and Control interface.

2 About the Home page

The **Home** page is displayed in the right-hand pane when you open the **Sophos Endpoint Security and Control** window. It enables you to configure and use the software.

As you use Sophos Endpoint Security and Control, the content of the right-hand pane will change. To return to the **Home** page, click the **Home** button on the toolbar.

3 Sophos groups

3.1 About Sophos groups

Sophos Endpoint Security and Control restricts access to certain parts of the software to members of certain Sophos groups.

When Sophos Endpoint Security and Control is installed, each user on this computer is initially assigned to a Sophos group depending on their Windows group.

Windows group	Sophos group
Administrators	SophosAdministrator
Power Users	SophosPowerUser
Users	SophosUser

Users who are not assigned to a Sophos group, including Guest users, can only perform the following tasks:

- On-access scanning
- Right-click scanning

SophosUsers

SophosUsers can perform the tasks above and also perform the following tasks:

- Open the Sophos Endpoint Security and Control window
- Set up and run on-demand scans
- Configure right-click scanning
- Manage (with limited privileges) quarantined items
- Create and configure firewall rules

SophosPowerUsers

SophosPowerUsers have the same rights as SophosUsers, with the addition of the following rights:

- Greater privileges in Quarantine manager
- Access to Authorization manager

SophosAdministrators

SophosAdministrators can use and configure any part of Sophos Endpoint Security and Control.

Note: If tamper protection is enabled, a SophosAdministrator must know the tamper protection password to perform the following tasks:

- Configure on-access scanning.
- Configure suspicious behavior detection.
- Disable tamper protection.

For more information, see *About tamper protection on this computer* (page 87).

3.2 Add a user to a Sophos group

If you are a domain administrator or a member of the Windows Administrators group on this computer, you can change the Sophos group in which a user has membership. You would typically do this in order to change their access rights to Sophos Endpoint Security and Control.

To add a user to a Sophos group:

1. Using Windows, open Computer Management.
2. In the console tree, click **Users**.
3. Right-click the user's account, and then click **Properties**.
4. On the **Member Of** tab, click **Add**.
5. In **Enter the object names to select**, type one of the Sophos group names:
   - **SophosAdministrator**
   - **SophosPowerUser**
   - **SophosUser**
6. If you want to validate the Sophos group name, click **Check Names**.

When the user next logs on to the computer, they will find that their access rights to Sophos Endpoint Security and Control have changed.

Notes

- To open Computer Management, click **Start**, and then click **Control Panel**. Double-click **Administrative Tools**, and then double-click **Computer Management**.
- To remove the user from a Sophos user group, on the **Member Of** tab, select the group in **Member of**, and then click **Remove**.

3.3 Configure user rights for Quarantine manager

If you are a member of the SophosAdministrator group, you can configure the user rights for Quarantine manager.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **User rights for Quarantine manager** .

2. Select the user type that may perform each type of action.

   Note: With the exception of the **Authorize** option, the rights you set here apply only to **Quarantine manager**.

Option	Description
Clean up sectors	Users can clean up floppy disk boot sectors.
Clean up files	Users can clean up documents and programs.
Delete files	Users can delete infected files.
Move files	Users can move infected files to another folder.
Authorize	Users can authorize suspicious items, adware, and PUAs in order to allow them to run on the computer. This option applies to both **Authorization manager** and **Quarantine manager**.

4 Sophos Anti-Virus

4.1 About on-access and on-demand scanning

On-access scanning

On-access scanning is your main method of protection against viruses and other threats.

Whenever you 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 computer or has been authorized for use.

Sophos Administrators may additionally specify that files must be scanned when they are saved, created, or renamed.

For more information, see *Configure on-access scanning* (page 8) .

On-demand scanning

On-demand scans provide additional protection. As the name suggests, you initiate an on-demand scan. You can scan anything from a single file to your entire computer.

For more information, see *Types of on-demand scan* (page 15).

4.2 On-access scanning

4.2.1 About on-access scanning

We recommend that you use the default on-access scan settings, as they represent the best balance between protecting your computer against threats and overall system performance.

Note: On-access scanning may not detect viruses if certain encryption software is installed. Change the startup processes to ensure that files are decrypted when on-access scanning begins. For more information on how to use anti-virus and HIPS policy with encryption software, see Sophos support knowledgebase article 12790 *http://www.sophos.com/support/knowledgebase/article/12790.html*.

4.2.2 Configure on-access scanning

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

By default, Sophos Anti-Virus detects and cleans up the following threats during an on-access scan:

- viruses
- Trojans

- worms
- spyware

To configure on-access scanning:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. To change when on-access scanning occurs, under **Check files on**, set the options as described below.

Option	Description
Read	Scan files when they are copied, moved, or opened.
Rename	Scan files when they are renamed.
Write	Scan files when they are saved or created.

3. Under **Scan for**, set the options as described below.

Option	Description
Adware and PUAs	Adware displays advertising (for example, pop-up messages) that may affect user productivity and system efficiency. PUAs (Potentially Unwanted Applications) are not malicious, but are generally considered unsuitable for business networks.
Suspicious files	Suspicious files exhibit a combination of characteristics that are commonly, but not exclusively, found in viruses.

4. Under **Other scanning options**, set the options as described below.

Option	Description
Allow access to drives with infected boot sectors	Turn on this option to allow access to an infected bootable removable medium or device such as a bootable CD, floppy disk, or USB flash drive. Use this option only if advised to by Sophos technical support. See also the *Troubleshooting* topic *Allow access to drives with infected boot sectors* (page 95).
Scan all files	We recommend that you scan all files only during a weekly scan, as scanning all files will affect computer performance adversely.
Scan inside archive files	Turn on this option to scan the contents of archives or compressed files before they are downloaded or emailed from your computer. We recommend that you leave this option turned **off**, as it makes scanning significantly slower. You will still be protected against any threats in archives or compressed files, as any components of an archive or compressed file that may be malware will be blocked by on-access scanning: ■ When you open a file extracted from the archive file, the extracted file is scanned. ■ Files compressed with dynamic compression utilities such as PKLite, LZEXE, and Diet are scanned.
Scan system memory	Turn on this option to automatically run an hourly background scan that detects malware hiding in the computer's system memory (the memory that is used by the operating system).

4.2.3 Temporarily disable on-access scanning

If you are a member of the SophosAdministrator group, you may need to temporarily disable on-access scanning for maintenance or troubleshooting, and then re-enable it. You can disable on-access protection and still run on-demand scans on your computer.

Sophos Endpoint Security and Control retains the settings you make here, even after you restart your computer. If you disable on-access scanning, your computer is unprotected until you re-enable it.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. Clear the **Enable on-access scanning for this computer** check box.

4.2.4 Configure on-access cleanup

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To configure on-access cleanup:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. Click the **Cleanup** tab.
3. To automatically clean up infected items, under **Viruses/spyware**, select the **Automatically clean up items that contain virus/spyware** check box.

   Note: If you turn on this option, cleaning up some viruses/spyware will trigger a full system scan, which tries to clean up *all* the viruses on your computer. This might take a long time.

4. Under **Viruses/spyware**, select an action for Sophos Anti-Virus to take against infected items if you have disabled automatic cleanup, or if automatic cleanup fails:

Option	Description
Deny access only	Sophos Anti-Virus asks you what to do before continuing. This is the default setting.
Delete **Deny access and move to**	Use these settings only if advised to by Sophos technical support. Otherwise, use Quarantine Manager to clean your computer of viruses/spyware found by Sophos Anti-Virus. See *Deal with viruses/spyware in quarantine* (page 36).

5. Under **Suspicious files**, select an action for Sophos Anti-Virus to take when it finds files containing code that is commonly used in malware:

Option	Description
Deny access	Sophos Anti-Virus asks you what to do before continuing. This is the default setting.
Delete **Deny access and move to**	Use these settings only if advised to by Sophos technical support. Instead, use Quarantine Manager to clean your computer of suspicious files found by Sophos Anti-Virus. See *Deal with suspicious files in quarantine* (page 38).

4.2.5 Reset scanned file checksums

The list of scanned file checksums is reset when a Sophos Anti-Virus update occurs, or when you restart your computer. The list is then rebuilt with new data as files are scanned by Sophos Anti-Virus.

You can reset the list of scanned file checksums from within Sophos Endpoint Security and Control if you do not want to restart your computer.

To reset scanned file checksums:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. On the **Scanning** tab, click **Purge cache**.

4.2.6 Specify on-access scanning file extensions

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

You can specify which file extensions are scanned during on-access scanning.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. Click the **Extensions** tab, set the options as described below.

   Scan all files

   Click this to enable scanning of all files, regardless of the filename extension.

   Allow me to control exactly what is scanned

   Click this to restrict scanning to only files with a particular filename extension, specified in the extension list.

   Caution: The extension list includes file types that we recommend are scanned. Be careful if you alter the list as explained below.

   To add a filename extension to the list, click **Add**. You can use the wildcard ? to match any single character.

   To remove a filename extension from the list, select the extension and click **Remove**.

   To change a filename extension in the list, select the extension and click **Edit**.

   When you select **Allow me to control exactly what is scanned**, **Scan files with no extension** is selected by default. To disable scanning of files with no filename extension, deselect **Scan files with no extension**.

4.2.7 Add, edit, or delete on-access scanning exclusions

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To edit the list of files, folders, and drives that are excluded from on-access scanning:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. Click the **Exclusions** tab, and then choose one of the following options.
   - To specify a file, folder, or drive that should be excluded from on-access scanning, click **Add**.
   - To delete an exclusion, click **Remove**.
   - To change an exclusion, click **Edit**.
3. To add or edit an excluded item, in the **Exclude item** dialog box, In the **Exclude item** dialog box, select the **Item type**.
4. Specify the **Item name** by using the **Browse** button or typing in the text box.

   Note: If you work on a 64-bit platform, the **Browse** button will not be visible in the **Exclude item** dialog.

   For more information on specifying item names, see *Specifying file names and paths of scanning exclusion items* (page 17).

4.2.8 Specifying file names and paths of scanning exclusion items

Standard naming conventions

Sophos Anti-Virus validates the paths and file names of scanning exclusion items against standard Windows naming conventions. For example, a folder name may contain spaces but may not contain ***only*** spaces.

Exclude a specific file

Specify both the path and file name to exclude a specific file. The path can include a drive letter or network share name:

C:\Documents\CV.doc

\\Server\Users\Documents\CV.doc

Note: To make sure that exclusions are always applied correctly, add both the long and 8.3-compliant file and folder names:

C:\Program Files\Sophos\Sophos Anti-Virus

C:\Progra~1\Sophos\Sophos~1

For more information, see *http://www.sophos.com/support/knowledgebase/article/13045.html*.

Exclude all files with the same name

Specify a file name without a path to exclude all files with that name wherever they are located in the file system:

spacer.gif

Exclude everything on a drive or network share

Specify a drive letter or network share name to exclude everything on that drive or network share:

C:

\\Server

Exclude a specific folder

Specify a folder path including a drive letter or network share name to exclude everything in that folder and below:

D:\Tools\logs\

Exclude all folders with the same name

Specify a folder path without a drive letter or network share name to exclude everything from that folder and below on ***any*** drive or network share. For example, \Tools\logs excludes the following folders:

C:\Tools\logs\

\\Server\Tools\logs\

Note: You must specify the entire path up to the drive letter or network share name. In the example above, specifying \logs would not exclude any files.

The ? and * wildcards

Use the ? wildcard in a file name or extension to match any single character.

At the end of a file name or extension, the ? wildcard matches any single character or no characters: For example, file??.txt matches file.txt, file1.txt, and file12.txt, but not file123.txt.

Use the * wildcard in a file name or extension, in the form [file name].* or *.[extension]:

Correct

file.*

*.txt

Incorrect

file*.txt

file.txt*

file.*txt

Multiple file extensions

File names with multiple extensions are treated as if the last extension is the extension and the rest are part of the file name:

MySample.txt.doc = file name MySample.txt + extension .doc.

4.3 On-demand scanning

4.3.1 Types of on-demand scan

Right-click scan

Scan a file, folder, or drive in Windows Explorer at any time.

- *Run a right-click scan* (page 21)

Custom scan

Scan specific sets of files or folders. You can either manually run a custom scan or schedule it to run unattended.

- *Run a custom scan* (page 25)
- *Schedule a custom scan* (page 25)

Full computer scan

Scan your entire computer, including the boot sector and system memory, at any time.

- *Run a full computer scan* (page 26)

4.3.2 Specify on-demand scanning file extensions

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

You can specify which file extensions are scanned during on-demand scanning.

1. On the **Configure** menu, click **On-demand extensions and exclusions**.

2. Click the **Extensions** tab, set the options as described below.

   Scan all files

   Click this to enable scanning of all files, regardless of the filename extension.

   Allow me to control exactly what is scanned

   Click this to restrict scanning to only files with a particular filename extension, specified in the extension list.

   Caution: The extension list includes file types that we recommend are scanned. Be careful if you alter the list as explained below.

   To add a filename extension to the list, click **Add**. You can use the wildcard ? to match any single character.

   To remove a filename extension from the list, select the extension and click **Remove**.

   To change a filename extension in the list, select the extension and click **Edit**.

   When you select **Allow me to control exactly what is scanned**, **Scan files with no extension** is selected by default. To disable scanning of files with no filename extension, deselect **Scan files with no extension**.

4.3.3 Add, edit, or delete on-demand scanning exclusions

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

The procedure described below applies to ***all*** on-demand scans. For information on excluding specific items from a custom scan, see *Create a custom scan* (page 21).

To edit the list of files, folders, and drives that are excluded from on-demand scanning:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-demand extensions and exclusions** .
2. Click the **Exclusions** tab, and then choose one of the following options.
   - To specify a file, folder, or drive that should be excluded from on-demand scanning, click **Add**.
   - To delete an exclusion, click **Remove**.
   - To change an exclusion, click **Edit**.
3. To add or edit an excluded item, in the **Exclude item** dialog box, select the **Item type**.

4. Specify the **Item name** by using the **Browse** button or typing in the text box.

   Note: If you work on a 64-bit platform, the **Browse** button will not be visible in the **Exclude item** dialog.

   For more information on specifying item names, see *Specifying file names and paths of scanning exclusion items* (page 17).

4.3.4 Specifying file names and paths of scanning exclusion items

Standard naming conventions

Sophos Anti-Virus validates the paths and file names of scanning exclusion items against standard Windows naming conventions. For example, a folder name may contain spaces but may not contain ***only*** spaces.

Exclude a specific file

Specify both the path and file name to exclude a specific file. The path can include a drive letter or network share name:

C:\Documents\CV.doc

\\Server\Users\Documents\CV.doc

Note: To make sure that exclusions are always applied correctly, add both the long and 8.3-compliant file and folder names:

C:\Program Files\Sophos\Sophos Anti-Virus

C:\Progra~1\Sophos\Sophos~1

For more information, see *http://www.sophos.com/support/knowledgebase/article/13045.html*.

Exclude all files with the same name

Specify a file name without a path to exclude all files with that name wherever they are located in the file system:

spacer.gif

Exclude everything on a drive or network share

Specify a drive letter or network share name to exclude everything on that drive or network share:

C:

\\Server

Exclude a specific folder

Specify a folder path including a drive letter or network share name to exclude everything in that folder and below:

D:\Tools\logs\

Exclude all folders with the same name

Specify a folder path without a drive letter or network share name to exclude everything from that folder and below on ***any*** drive or network share. For example, \Tools\logs excludes the following folders:

C:\Tools\logs\

\\Server\Tools\logs\

Note: You must specify the entire path up to the drive letter or network share name. In the example above, specifying \logs would not exclude any files.

The ? and * wildcards

Use the ? wildcard in a file name or extension to match any single character.

At the end of a file name or extension, the ? wildcard matches any single character or no characters: For example, file??.txt matches file.txt, file1.txt, and file12.txt, but not file123.txt.

Use the * wildcard in a file name or extension, in the form [file name].* or *.[extension]:

Correct

file.*

*.txt

Incorrect

file*.txt

file.txt*

file.*txt

Multiple file extensions

File names with multiple extensions are treated as if the last extension is the extension and the rest are part of the file name:

MySample.txt.doc = file name MySample.txt + extension .doc.

4.3.5 Right-click scanning

4.3.5.1 Configure right-click scanning

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it will *not*override any changes you make here.

By default, Sophos Anti-Virus detects and cleans up the following threats during a right-click scan:

- viruses

- Trojans
- worms
- spyware
- adware and other Potentially Unwanted Applications (PUAs)

To configure right-click scanning:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Right-click scanning** .
2. Under **Scan for**, set the options as described below.

Option	Description
Adware and PUAs	Adware displays advertising (for example, pop-up messages) that may affect user productivity and system efficiency. PUAs (Potentially Unwanted Applications) are not malicious, but are generally considered unsuitable for business networks.
Suspicious files	Suspicious files exhibit a combination of characteristics that are commonly, but not exclusively, found in viruses.

3. Under **Other scanning options**, set the options as described below.

Option	Description
Scan all files	We recommend that you scan all files only during a weekly scan, as scanning all files will affect computer performance adversely.
Scan inside archive files	Turn on this option to scan the contents of archives or compressed files before they are downloaded or emailed from your computer. We recommend that you leave this option turned *off*, as it makes scanning significantly slower. You will still be protected against any threats in archives or compressed files, as any components of an archive or compressed file that may be malware will be blocked by on-access scanning: ■ When you open a file extracted from the archive file, the extracted file is scanned. ■ Files compressed with dynamic compression utilities such as PKLite, LZEXE, and Diet are scanned.

4.3.5.2 Configure right-click cleanup

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To configure right-click cleanup:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Right-click scanning** .
2. Click the **Cleanup** tab.
3. To automatically clean up infected items, under **Viruses/spyware**, select the **Automatically clean up items that contain virus/spyware** check box.
4. Select an action for Sophos Anti-Virus to take against infected items if you have not enabled automatic cleanup, or if automatic cleanup fails:

Option	Description
Log only	Sophos Anti-Virus takes no action other than recording the infected items in the scanning log. See *View the scanning log* (page 46). This is the default setting.
Delete **Move to**	Use these settings only if advised to by Sophos technical support. Otherwise, use Quarantine Manager to clean your computer of viruses/spyware found by Sophos Anti-Virus. See *Deal with viruses/spyware in quarantine* (page 36).

5. Under **Suspicious files**, select an action for Sophos Anti-Virus to take when it finds files containing code that is commonly used in malware:

Option	Description
Log only	Sophos Anti-Virus takes no action other than recording the infected items in the scanning log. This is the default setting.
Delete **Move to**	Use these settings only if advised to by Sophos technical support. Otherwise, use Quarantine Manager to clean your computer of viruses/spyware found by Sophos Anti-Virus. See *Deal with suspicious files in quarantine* (page 38).

6. To remove all known components of adware and Potentially Unwanted Applications (PUAs) from the computer for all users, under **Adware and PUAs**, select the **Automatically clean up adware and PUAs** check box.

   Cleanup does not repair any changes the adware or PUA has already made.

   - For information about viewing details on the Sophos website of the adware or PUA's side-effects, see *Get cleanup information* (page 42).
   - For information about cleaning your computer from adware and PUAs using Quarantine Manager, see *Deal with adware and PUAs in quarantine* (page 37).

4.3.5.3 Run a right-click scan

You can scan files, folders and drives from Windows Explorer or the desktop by running a right-click scan.

1. Using Windows Explorer, or on the desktop, select the file, folder or disk drive you want to scan.

   You can select multiple files and folders.

2. Right-click the selection, and then click **Scan with Sophos Anti-Virus** .

If any threats or controlled applications are found, click **More**, and then refer to the *Managing quarantine items* section of this Help file.

4.3.6 Custom scans

4.3.6.1 Create a custom scan

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. Click **Set up a new scan**.
3. In the **Scan name** box, type a name for the scan.
4. In the **Items to scan** panel, select the drives and folders you want to scan. To do this, select the check box to the left of each drive or folder. To learn about the icons that appear in the check boxes, refer to *Representation of items to scan* (page 21).

   Note: Drives or folders that are unavailable (because they are offline or have been deleted) are displayed in a strikethrough font. They are removed from the **Items to scan** panel if they are deselected or if there is a change in the selection of their parent drive or folder(s).

5. To configure the scan further, click **Configure this scan**. (Refer to *Configure a custom scan* (page 22) for more information.)
6. To schedule the scan, click **Schedule this scan**. (Refer to *Schedule a custom scan* (page 25) for more information.)
7. Click **Save** to save the scan or **Save and start** to save and run the scan.

4.3.6.2 Representation of items to scan

In the **Items to scan** panel, different icons are displayed in the check box next to each item (drive or folder), depending on which items will be scanned. These icons are shown below with explanations.

Icon	Explanation
☐	The item and all sub-items *are not* selected for scanning.

Icon	Explanation
	The item and all sub-items *are* selected for scanning.
	The item is partially selected: the item is not selected, but some sub-items are selected for scanning.
	The item and all sub-items are excluded from this particular scan.
	The item is partially excluded: the item is selected, but some sub-items are excluded from this particular scan.
	The item and all sub-items are excluded from all on-demand scans, because of an on-demand exclusion that has been set up. For information, see *Add, edit, or delete on-access scanning exclusions* (page 13).

4.3.6.3 Configure a custom scan

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

By default, Sophos Anti-Virus detects and cleans up the following threats during a custom scan:

- viruses
- Trojans
- worms
- spyware
- adware and other Potentially Unwanted Applications (PUAs)
- rootkits

To configure a custom scan:

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, select the scan you want to edit, and then click **Edit**.
3. Click **Configure this scan**.

4. Under **Scan for**, set the options as described below.

Option	Description
Adware and PUAs	Adware displays advertising (for example, pop-up messages) that may affect user productivity and system efficiency. PUAs (Potentially Unwanted Applications) are not malicious, but are generally considered unsuitable for business networks.
Suspicious files	Suspicious files exhibit a combination of characteristics that are commonly, but not exclusively, found in viruses.
Rootkits	If you are a member of the SophosAdministrator group, scanning for rootkits is always carried out when you run a full computer scan. You can also scan for rootkits as part of a custom scan.

5. Under **Other scanning options**, set the options as described below.

Option	Description
Scan all files	We recommend that you scan all files only during a weekly scan, as scanning all files will affect computer performance adversely.
Scan inside archive files	Turn on this option to scan the contents of archives or compressed files before they are downloaded or emailed from your computer. We recommend that you leave this option turned **off**, as it makes scanning significantly slower. You will still be protected against any threats in archives or compressed files, as any components of an archive or compressed file that may be malware will be blocked by on-access scanning: ■ When you open a file extracted from the archive file, the extracted file is scanned. ■ Files compressed with dynamic compression utilities such as PKLite, LZEXE, and Diet are scanned.
Scan system memory	Turn on this option to automatically run an hourly background scan that detects malware hiding in the computer's system memory (the memory that is used by the operating system).
Run scan at lower priority	On Windows Vista and above, run the custom scan with lower priority so that it has minimal impact on user applications.

4.3.6.4 Configure cleanup for a custom scan

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To configure cleanup for a custom scan:

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, select the scan you want to edit, and then click **Edit**.
3. Click **Configure this scan**.
4. Click the **Cleanup** tab.
5. To automatically clean up infected files, under **Viruses/spyware**, select the **Automatically clean up files that contain virus/spyware** check box.
6. Select an action for Sophos Anti-Virus to take against infected items if you have not enabled automatic cleanup, or if automatic cleanup fails:

Option	Description
Log only	Sophos Anti-Virus takes no action other than recording the infected items in the log for the custom scan. See *View the log for a custom scan* (page 26). This is the default setting.
Delete **Move to**	Use these settings only if advised to by Sophos technical support. Otherwise, use Quarantine Manager to clean your computer of viruses/spyware found by Sophos Anti-Virus. See *Deal with viruses/spyware in quarantine* (page 36).

7. Under **Suspicious files**, select an action for Sophos Anti-Virus to take when it finds files containing code that is commonly used in malware:

Option	Description
Log only	Sophos Anti-Virus takes no action other than recording the infected items in the scanning log. This is the default setting.
Delete **Move to**	Use these settings only if advised to by Sophos technical support. Otherwise, use Quarantine Manager to clean your computer of viruses/spyware found by Sophos Anti-Virus. See *Deal with suspicious files in quarantine* (page 38).

8. To remove all known components of adware and Potentially Unwanted Applications (PUAs) from the computer for all users, under **Adware and PUAs**, select the **Automatically clean up adware and PUAs** check box.

   Cleanup does not repair any changes the adware or PUA has already made.

   - For information about viewing details on the Sophos website of the adware or PUA's side-effects, see *Get cleanup information* (page 42).
   - For information about cleaning your computer from adware and PUAs using Quarantine Manager, see *Deal with adware and PUAs in quarantine* (page 37).

4.3.6.5 Schedule a custom scan

If you are a member of the SophosAdministrator group, you can schedule a custom scan, or view and edit scheduled scans created by other users.

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, select the scan you want to edit, and then click **Edit**.
3. Click **Schedule this scan**.
4. In the **Schedule scan** dialog box, select **Enable schedule**.

   Select the day(s) on which the scan should run.

   Add the time(s) by clicking **Add**.

   If necessary, remove or edit a time by selecting it and clicking **Remove** or **Edit**, respectively.
5. Type the *user name* and *password*. Make sure that the password is not blank.

   The scheduled scan runs with the access rights of that user.

Note: If the scan detects components of a threat in memory, and you have chosen not to automatically clean up viruses/spyware for the scan, the scan stops. This is because further scanning could enable the threat to spread. You must clean up the threat before running the scan again.

4.3.6.6 Run a custom scan

Note: You cannot manually run scheduled custom scans. Scheduled scans are displayed in the **Available scans** list with a clock icon.

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, select the scan you want to run, and then click **Start**.

   A progress dialog box is displayed and the **Activity summary** panel appears in the Sophos Endpoint Security and Control window.

Note: If the scan detects components of a threat in memory, and you have chosen not to automatically clean up viruses/spyware for the scan, the scan stops. This is because further scanning could enable the threat to spread. You must clean up the threat before running the scan again.

If any threats or controlled applications are found, click **More** and refer to *Managing quarantine items*.

4.3.6.7 Rename a custom scan

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, select the scan you want to edit, and then click **Edit**.
3. In the **Scan name** box, type the new name for the scan.

4.3.6.8 View the log for a custom scan

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, click **Summary** for the custom scan.
3. In the **Summary** dialog box, click the link at the bottom.

From the log page, you can copy the log to the clipboard, or email, or print the log.

To find specific text in the log, click **Find** and enter the text you want to find.

4.3.6.9 View the summary of a custom scan

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, click **Summary** for the custom scan.

4.3.6.10 Delete a custom scan

1. On the **Home** page, under **Anti-virus and HIPS**, click **Scans**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Available scans** list, select the scan you want to delete, and then click **Delete**.

4.3.7 Run a full computer scan

To scan your entire computer system, including the boot sector and system memory:

- On the **Home** page, under **Anti-virus and HIPS**, click **Scan my computer**.
  For information about the **Home** page, see *About the Home page* (page 4).

A progress dialog box is displayed and the **Activity summary** appears in the **Sophos Endpoint Security and Control** window.

Note: If the scan detects components of a threat in memory, the scan stops. This is because further scanning could enable the threat to spread. You must clean up the threat before running the scan again.

If any threats or controlled applications are found, click **More** and refer to the *Managing quarantine items* section.

4.4 Sophos Behavior Monitoring

4.4.1 About behavior monitoring

As part of on-access scanning, Sophos Behavior Monitoring protects Windows 2000 and later computers from unidentified or "zero-day" threats and suspicious behavior.

Runtime detection can intercept threats that cannot be detected before execution. Behavior monitoring uses two runtime detection methods to intercept threats:

- Malicious and suspicious behavior detection
- Buffer overflow detection.

Malicious and suspicious behavior detection

Suspicious behavior detection uses Sophos's Host Intrusion Prevention System (HIPS) to dynamically analyze the behavior of all programs running on the computer to detect and block activity that appears to be malicious. Suspicious behavior may include changes to the registry that could allow a virus to run automatically when the computer is restarted.

Suspicious behavior detection watches all system processes for signs of active malware, such as suspicious writes to the registry or file copy actions. It can be set to warn the administrator and/or block the process.

Malicious behavior detection dynamically analyses all programs running on the computer to detect and block activity that is known to be malicious.

Buffer overflow detection

Buffer overflow detection is important for dealing with zero-day exploits.

It dynamically analyzes the behavior of programs running on the system in order to detect when an attempt is made to exploit a running process using buffer overflow techniques. It will catch attacks targeting security vulnerabilities in both operating system software and applications.

4.4.2 Enable behavior monitoring

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group, you can enable behavior monitoring.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Behavior monitoring** .
2. In the **Configure Behavior Monitoring** dialog box, select the **Enable behavior monitoring** check box.

4.4.3 Block malicious behavior

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

Malicious behavior detection is the dynamic analysis of all programs running on the computer to detect and block activity that is known to be malicious.

If you are a member of the SophosAdministrator group, you can change the settings for detecting and reporting malicious behavior:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Behavior monitoring** .
2. In the **Configure Behavior Monitoring** dialog box, select the **Enable behavior monitoring** check box.
3. To alert the administrator and block malicious behavior, select the **Detect malicious behavior** check box.

4.4.4 Prevent suspicious behavior

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

Suspicious behavior detection watches all system processes for signs of active malware, such as suspicious writes to the registry or file copy actions. It can be set to warn the administrator and/or block the process.

If you are a member of the SophosAdministrator group, you can change the settings for detecting and reporting suspicious behavior:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Behavior monitoring** .
2. In the **Configure Behavior Monitoring** dialog box, select the **Enable behavior monitoring** check box.
3. Select the **Detect malicious behavior** check box.
4. To alert the administrator and block suspicious processes, select the **Detect suspicious behavior** check box.
5. To alert the administrator, but not block suspicious processes, select the **Alert only, do not block suspicious behavior** check box.

For the strongest protection, we advise you to scan for suspicious files. For more information, see the following topics:

- *Configure on-access scanning* (page 8)
- *Configure right-click scanning* (page 18)
- *Configure a custom scan* (page 22)

4.4.5 Prevent buffer overflows

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

Buffer overflow detection dynamically analyzes the behavior of programs running on the system in order to detect when an attempt is made to exploit a running process using buffer overflow techniques.

If you are a member of the SophosAdministrator group, you can change the settings for detecting and reporting buffer overflows:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Behavior monitoring** .
2. In the **Configure Behavior Monitoring** dialog box, select the **Enable behavior monitoring** check box.
3. To alert the administrator and block buffer overflows, select the **Detect buffer overflows** check box.
4. To alert the administrator, but not block buffer overflows, select the **Alert only, do not block** check box.

4.5 Sophos Live Protection

4.5.1 About Sophos Live Protection

Sophos Live Protection decides whether a suspicious file is a threat and, if it is a threat, takes immediate action as specified in the Sophos Anti-Virus cleanup configuration.

Sophos Live Protection improves detection of new malware without the risk of unwanted detections. This is achieved by doing an instant lookup against the very latest known malware. When new malware is identified, Sophos can send out updates within seconds.

Sophos Live Protection uses the following options:

- **Enable Live Protection**

  If the anti-virus scan on an endpoint computer has identified a file as suspicious, but cannot further identify it as either clean or malicious based on the threat identity (IDE) files stored

on the computer, certain file data (such as its checksum and other attributes) is sent to Sophos to assist with further analysis.

The in-the-cloud checking performs an instant lookup of a suspicious file in the SophosLabs database. If the file is identified as clean or malicious, the decision is sent back to the computer and the status of the file is automatically updated.

- **Automatically send sample files to Sophos**

  If a file is considered suspicious, but cannot be positively identified as malicious based on the file data alone, you can allow Sophos to request a sample of the file. If this option is enabled, and Sophos does not already hold a sample of the file, the file will be submitted automatically.

  Submitting sample files helps Sophos to continuously enhance detection of malware without the risk of false positives.

4.5.2 Turn Sophos Live Protection options on or off

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group, you can turn the Sophos Live Protection options on or off:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Sophos Live Protection** .
2. In the **Sophos Live Protection** dialog box:
   - To turn the sending of file data to Sophos on or off, select or clear the **Enable Live Protection** check box.
   - To turn the sending of file samples to Sophos on or off, select or clear the **Automatically send sample files to Sophos** check box.

     This option is available only if you have already selected **Enable Live Protection**.

Note

When a file sample is sent to Sophos for online scanning, the file data is always sent with the sample.

4.5.3 View the log for Sophos Live Protection

The file data sent to Sophos for online scanning and file status updates after the scanning is complete are recorded in the scanning log for this computer.

If Sophos Live Protection is enabled, the log shows:

- The path of each file for which data was sent to Sophos.
- The time when the data was sent.

- The reason for failure (if known) if sending the data failed.
- The current status of the file (for example, "virus/spyware" if the file has been identified as malicious).

To view the scanning log:

- On the **Home** page, under **Anti-virus and HIPS**, click **View anti-virus and HIPS log**.
  For information about the **Home** page, see *About the Home page* (page 4).

From the log page, you can copy the log to the clipboard, or email, or print the log.

To find specific text in the log, click **Find** and enter the text you want to find.

4.6 Sophos Web Protection

4.6.1 About Sophos 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.

The following browsers support web protection:

- Internet Explorer
- Firefox
- Google Chrome
- Safari
- Opera

When access to a malicious website is blocked, the event is recorded in the scanning log. For information about viewing the scanning log, see *View the scanning log* (page 46).

4.6.2 Unblock access to malicious websites

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To unblock access to malicious websites:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Web protection** .
2. In the **Block access to malicious websites** list, click **Off**.

   For information on how to authorize a website that is classified as malicious, see *Authorize a website for use* (page 33).

3. In the **Download scanning** list, click **Off**, **On** or **As on access scanning**.
   The **As on access scanning** setting will preserve your existing *on-access* scan settings.

4.7 Authorizing items for use

4.7.1 Authorize adware and PUAs for use

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you want to run adware or an application that Sophos Anti-Virus has classified as potentially unwanted, you can authorize it.

To authorize adware and PUAs for use:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Authorization** .
2. On the **Adware or PUAs** tab, in the **Known adware or PUAs** list, select the adware or PUA.
3. Click **Add**.

The adware or PUA appears in the **Authorized adware or PUAs** list.

Note: You can also authorize adware and PUAs in Quarantine manager. For information on how to do this, see *Deal with adware and PUAs in quarantine* (page 37).

4.7.2 Block authorized adware and PUAs

To prevent currently-authorized adware and PUAs from running on your computer:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Authorization** .
2. On the **Adware or PUAs** tab, in the **Authorized adware or PUAs** list, select the adware or PUA you want to block.
3. Click **Remove**.

4.7.3 Authorize suspicious items for use

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you want to allow an item that Sophos Anti-Virus has classified as suspicious, you can authorize it as follows.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Authorization** .

2. Click the tab for the type of item that has been detected (for example, **Buffer overflow**).
3. In the **Known** list, select the suspicious item.
4. Click **Add**.

The suspicious item appears in the **Authorized** list.

Note: You can also authorize suspicious items in Quarantine manager. For information on how to do this, see the following topics:

- *Deal with suspicious files in quarantine* (page 38)
- *Deal with suspicious behavior in quarantine* (page 40)

4.7.4 Pre-authorize suspicious items

If you want to allow an item that Sophos Endpoint Security and Control has not yet classified as suspicious, you can pre-authorize it.

To pre-authorize a suspicious item:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Authorization** .
2. Click the tab for the type of item that has been detected (for example, **Buffer overflow**).
3. Click **New entry**.
4. Locate the suspicious item, and then double-click it.

The suspicious item appears in the **Authorized** list.

4.7.5 Authorize a website for use

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you want to unblock a website that Sophos has classified as malicious, you can add it to the list of authorized sites. Authorizing a website will prevent URLs from that website being verified with Sophos online web filtering service.

Caution: Authorizing a website that has been classified as malicious could expose you to threats, so make sure that it is safe to access the website before you authorize it.

To authorize a website for use:

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **Authorization** .
2. Click the **Websites** tab.
3. Click **Add**.
4. Type the domain name or IP address.

The website appears in the **Authorized websites** list.

4.8 Managing quarantine items

4.8.1 About Quarantine manager

Quarantine manager enables you to deal with the items found by scanning that were not eliminated automatically during scanning. Each item is here for one of the following reasons.

- No cleanup options (clean up, delete, move) were chosen for the type of scan that found the item.
- A cleanup option was chosen for the type of scan that found the item but the option failed.
- The item is multiply-infected and still contains additional threats.
- The threat has only been partially detected, and a full computer scan is needed to fully detect it. To find out how to do this, refer to *Run a full computer scan* (page 26).
- The item exhibits suspicious behavior.
- The item is a controlled application.

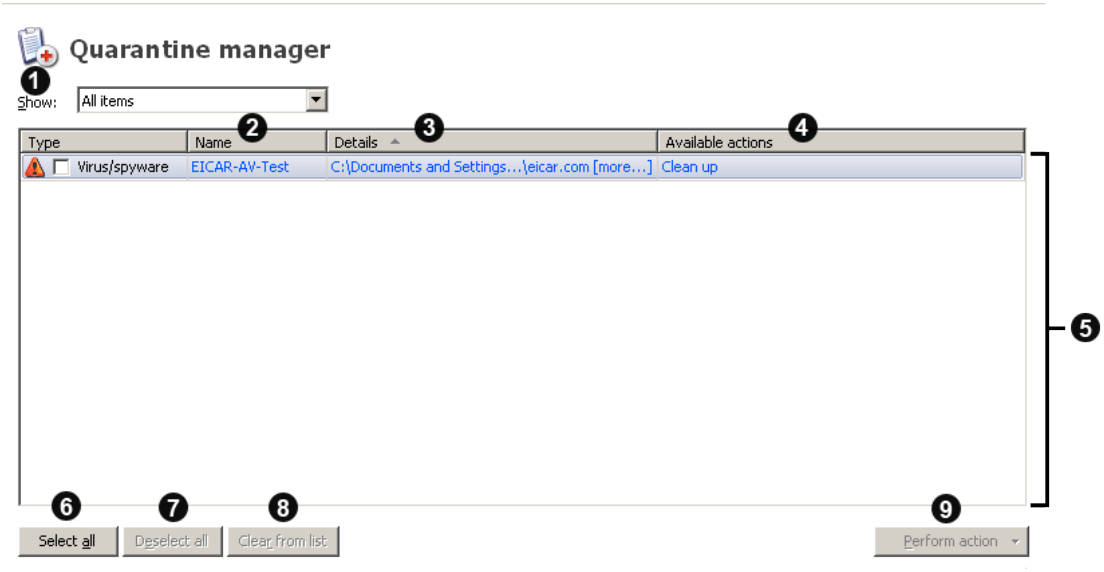
Note: Adware, PUAs, and multi-component infections detected during on-access scanning are always listed in Quarantine manager. Automatic cleanup of adware, PUAs, and multi-component infections is not available for on-access scanning.

A cleanup option may have failed because of insufficient access rights. If you have greater rights, you can use Quarantine manager to deal with the item(s).

Threats that are detected during web page scanning are not listed in Quarantine manager because the threats are not downloaded to your computer. Therefore, there is no need to take any action.

4.8.2 Quarantine Manager layout

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



❶	Click the **Show** list to filter the type of items that are displayed.
❷	The identity of the item, including a link to its analysis on the Sophos website.
❸	The file name and location of the item. If the item is associated with a rootkit, it is displayed as **Hidden**. If a **more** link is displayed next to the filename, this means that the item is infected with a multi-component infection. Click the link to see the list of other components that are part of the infection. If some components are associated with a rootkit, the dialog box indicates that they are hidden.
❹	The action that you can take to deal with the item. Unless the item is hidden, there are three actions: **Clean up**, **Delete**, and **Move**. If you click one of the actions, the action is performed on the item immediately, following confirmation. Hidden files can only be cleaned up.
❺	The list of items that have been detected. To sort the items, click one of the column headings.
❻	Click **Select all** to perform the same action on all the items. To deselect an item, clear its check box in the **Type** column.
❼	If you have selected all the items and then want to clear the selection, click **Deselect all**. To select an item, click its check box in the **Type** column.

8	Click **Clear from List** to remove selected items from the list **without** dealing with them. This action does not delete the items from disk.
9	Click **Perform action** to display a list of actions that you can perform on the selected items.

4.8.3 Deal with viruses/spyware in quarantine

Note: *Virus* here is used to refer to any virus, worm, Trojan, or other malicious software.

1. On the **Home** page, under **Anti-virus and HIPS**, click **Manage quarantine items**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Show** list, click **Viruses/spyware**.

Information about each item is shown in the columns.

Name displays the identity that Sophos Anti-Virus has detected. To learn more about the virus/spyware, click the identity, and Sophos Anti-Virus connects you to the analysis of the virus/spyware on the Sophos website.

Details displays the name and location of the item. If the item is associated with a rootkit, it is displayed as "Hidden". If a **more** link is displayed next to the filename, this means that the item is infected with a multi-component infection. Click the link to see the list of other components that are part of the infection. If any of the components are associated with a rootkit, the dialog box indicates that some components are hidden.

Available actions displays actions that you can perform on the item. Unless the item is hidden, there are three actions: Clean up, Delete, and Move, described below. If you click one of the actions, the action is performed on the item, following confirmation. Hidden files can only be cleaned up.

Dealing with the infected items

To deal with the viruses/spyware, use the buttons described below.

Select all/Deselect all

Click these buttons to select or deselect all the items. This enables you to perform the same action on a group of items. To select or deselect a particular item, select the check box to the left of the item type.

Clear from list

Click this to remove selected items from the list, if you are sure that they do not contain a virus or spyware. This does not delete the items from disk, however.

Perform action

Click this to display a list of actions that you can perform on the selected items.

- Click **Clean up** to remove a virus or item of spyware from the selected items. Cleanup of documents does not repair any side-effects of the virus in the document.

  Note: To fully clean some viruses/spyware consisting of several components from your computer, or to clean up hidden files, you will need to restart the computer. If this is the case, you will be given an option to restart your computer immediately or later. The final cleanup steps will be performed after the computer is restarted.

  Note: Cleanup of some viruses causes a full system scan to be run, which tries to clean up *all* the viruses. This might take a long time. The available action changes to **Cleaning up** until the scan has finished.

- Click **Delete** to delete the selected items from your computer. Use this function with care.
- Click **Move** to move the selected items to another folder. The items are moved to the folder that was specified when cleanup was set up. Moving an executable file reduces the likelihood of it being run. Use this function with care.

Caution: Sometimes, if you delete or move an infected file, your computer may stop working properly because it cannot find the file. Also, an infected file may only be part of a multiple infection, in which case deleting or moving this particular file will not clean the infection from your computer. In this case, contact Sophos technical support to get assistance in dealing with the items.

For information about contacting technical support, see *Technical support* (page 106).

To configure what action you can perform, refer to *Configure user rights for Quarantine manager* (page 6).

4.8.4 Deal with adware and PUAs in quarantine

1. On the **Home** page, under **Anti-virus and HIPS**, click **Manage quarantine items**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. In the **Show** list, click **Adware or PUAs**.

Information about each item is shown in the columns.

Name displays the identity that Sophos Anti-Virus has detected. To learn more about the adware or PUA, click the identity, and Sophos Anti-Virus connects you to the analysis of the adware or PUA on the Sophos website.

Details displays the subtype of the adware or PUA. If the item is associated with a rootkit, it is displayed as "Hidden". If a **more** link is displayed next to the subtype, this means that the item is a multi-component item of adware or PUA. Click the link to see the list of other components that are part of the adware or PUA. If any of the components are associated with a rootkit, the dialog box indicates that some components are hidden.

Available actions displays actions that you can perform on the item. There are two actions: Authorize and Clean up, described below. If you click one of the actions, the action is performed on the item, following confirmation.

Dealing with the adware and PUAs

To deal with the adware and PUAs, use the buttons described below.

Select all/Deselect all

Click these buttons to select or deselect all the items. This enables you to perform the same action on a group of items. To select or deselect a particular item, select the check box to the left of the item type.

Clear from list

Click this to remove selected items from the list, if you trust them. This does not delete the items from disk, however.

Perform action

Click this to display a list of actions that you can perform on the selected items.

- Click **Authorize** to authorize the selected items on the computer, if you trust them. This adds the items to the list of authorized adware and PUAs so that Sophos Anti-Virus does not prevent them from running on your computer.
- Click **Clean up** to remove all known components of selected items from the computer for all users. To clean adware and PUAs from the computer, you must be a member of both Windows Administrators and SophosAdministrator groups.

Note: To fully clean some adware and PUAs consisting of several components from your computer, or to clean up hidden files, you will need to restart the computer. If this is the case, you will be given an option to restart your computer immediately or later. The final cleanup steps will be performed after the computer is restarted.

To configure what actions you can perform, refer to *Configure user rights for Quarantine manager* (page 6).

To see the list of known and authorized adware and PUAs, click **Configure authorization**.

4.8.5 Deal with suspicious files in quarantine

A *suspicious file* is a file that exhibits a combination of characteristics that are commonly, but not exclusively, found in viruses.

1. On the **Home** page, under **Anti-virus and HIPS**, click **Manage quarantine items**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. In the **Show** list, click **Suspicious files**.

Information about each item is shown in the columns.

Name displays the identity that Sophos Anti-Virus has detected. To learn more about the suspicious file, click the identity, and Sophos Anti-Virus connects you to the analysis of the suspicious file on the Sophos website.

Details displays the name and location of the item. If the item is associated with a rootkit, it is displayed as "Hidden".

Available actions displays actions that you can perform on the item. Unless the item is hidden, there are three actions: Authorize, Delete and Move, described below. If you click one of the actions, the action is performed on the item, following confirmation. Hidden files can only be authorized.

Dealing with the suspicious files

To deal with the suspicious files, use the buttons described below.

Select all/Deselect all

Click these buttons to select or deselect all the items. This enables you to perform the same action on a group of items. To select or deselect a particular item, select the check box to the left of the item type.

Clear from list

Click this to remove selected items from the list, if you trust them. This does not delete the items from disk, however.

Perform action

Click this to display a list of actions that you can perform on the selected items.

- Click **Authorize** to authorize the selected items on the computer, if you trust them. This adds the items to the list of authorized suspicious items so that Sophos Anti-Virus does not prevent them from being accessed.
- Click **Delete** to delete the selected items from your computer. Use this function with care.
- Click **Move** to move the selected items to another folder. The items are moved to the folder that was specified when cleanup was set up. Moving an executable file reduces the likelihood of it being run. Use this function with care.

Caution: Sometimes, if you delete or move an infected file, your computer may stop working properly because it cannot find the file.

To configure what actions you can perform, refer to *Configure user rights for Quarantine manager* (page 6).

To see the list of authorized suspicious files, click **Configure authorization**.

4.8.6 Deal with suspicious behavior in quarantine

Suspicious behavior is activity that appears to be malicious.

1. On the **Home** page, under **Anti-virus and HIPS**, click **Manage quarantine items**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Show** list, click **Suspicious behavior**.

Information about each item is shown in the columns.

Name displays the identity that Sophos Anti-Virus has detected. To learn more about the behavior, click the identity, and Sophos Anti-Virus connects you to the analysis of the behavior on the Sophos website.

Details displays the name and location of the item.

Available actions displays actions that you can perform on the item. If you have enabled blocking of suspicious behavior, there is one action: Authorize, described below. If you click the action, the action is performed on the item, following confirmation.

Dealing with the suspicious behavior

To deal with the suspicious behavior, use the buttons described below.

Select all/Deselect all

Click these buttons to select or deselect all the items. This enables you to perform the same action on a group of items. To select or deselect a particular item, select the check box to the left of the item type.

Clear from list

Click this to remove selected items from the list, if you trust them. This does not delete the items from disk, however.

Perform action

Click this to display a list of actions that you can perform on the selected items.

- Click **Authorize** to authorize the selected items on the computer, if you trust them. This adds the items to the list of authorized suspicious items so that Sophos Anti-Virus does not prevent the behavior.

To configure what actions you can perform, refer to *Configure user rights for Quarantine manager* (page 6).

To see the list of authorized suspicious behavior, click **Configure authorization**.

4.8.7 Deal with controlled applications in quarantine

A *controlled application* is an application that is prevented from running on your computer by your organisation's security policy.

1. On the **Home** page, under **Anti-virus and HIPS**, click **Manage quarantine items**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Show** list, click **Controlled applications**.

Information about each item is shown in the columns.

Name displays the identity that Sophos Anti-Virus has detected. To learn more about the controlled application, click the identity, and Sophos Anti-Virus connects you to the analysis of the controlled application on the Sophos website.

Details displays the subtype of the controlled application. If a **more** link is displayed next to the subtype, click it to see the list of other components that are part of the controlled application.

Available actions displays actions that you can perform on the item. However, there are no actions available for controlled applications apart from clearing the item from the list, described below.

Dealing with the controlled applications

To deal with the controlled applications, use the buttons described below.

Select all/Deselect all

Click these buttons to select or deselect all the items. This enables you to perform the same action on a group of items. To select or deselect a particular item, select the check box to the left of the item type.

Clear from list

Click this to remove selected items from the list. This does not delete the items from disk, however. Controlled applications must be authorized by the central console before you can use them.

4.9 Cleaning up

4.9.1 About cleanup

Cleanup eliminates threats on your computer by doing one of the following:

- Removing the virus/spyware from floppy disk boot sectors, documents, programs, and anything else that is selected for scanning
- Moving or deleting the suspicious file
- Deleting the item of adware or PUA

When Sophos Anti-Virus automatically cleans up items that contain virus/spyware, it will delete any items that are purely malware and will try to disinfect any items that have been infected. These disinfected files should be considered permanently damaged, as the virus scanner cannot know what the file contained before it was damaged.

Cleaning up documents

Cleaning up documents does not repair any side-effects of the virus/spyware in the document. See *Get cleanup information* (page 42) to find out how to view details on the Sophos website of the virus/spyware's side-effects.

Cleaning up programs

Cleaning up programs should be used only as a temporary measure. You should subsequently replace cleaned programs from the original disks or a clean backup.

Cleaning up web page threats

Cleanup is not required for threats that are detected by web page scanning, because the threats are not downloaded to your computer.

Notes

- Cleanup does not undo any actions the threat has already taken.
- Any actions that Sophos Anti-Virus takes against infected items are recorded in the log for this computer or log for the custom scan. See *View the scanning log* (page 46) or *View the log for a custom scan* (page 26).
- To fully clean some multi-component infections from your computer, you will need to restart your computer. If this is the case, you will be given an option to restart your computer immediately or later. The final cleanup steps will be performed after the computer is restarted.

4.9.2 Get cleanup information

When a threat is found on your computer, it is very important that you check the threat analysis on the Sophos website for information on the threat and cleanup advice. You can do this from the following places:

- The desktop alert (on-access scanning)
- The scan progress dialog box (custom and right-click scanning)
- Quarantine manager (all scanning types)

Get information via the desktop alert

If on-access scanning is enabled on your computer, Sophos Anti-Virus displays a desktop alert when a threat is found.

In the message box, click the name of the threat that you want to find out about. Sophos Anti-Virus connects you to the analysis of the threat on the Sophos website.

Get information via the scan progress dialog box

For custom and right-click scans, in the log that is displayed in the scan progress dialog box (or scan summary dialog box, displayed after the scan has finished), click the name of the threat that you want to find out about.

Sophos Anti-Virus connects you to the analysis of the threat on the Sophos website.

Get information via Quarantine manager

1. On the **Home** page, under **Anti-virus and HIPS**, click **Manage quarantine items**. For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Name** column, click the name of the threat that you want to find out about.

Sophos Anti-Virus connects you to the analysis of the threat on the Sophos website.

4.10 Configuring alerts

4.10.1 Configure anti-virus desktop messaging

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To enable Sophos Anti-Virus to display desktop messages when a threat is found, do as follows. This applies only to on-access scanning.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Alerting** > **Messaging** .
2. In the **Messaging** dialog box, click the **Desktop messaging** tab. Set the options as described below.

   Enable desktop messaging

   Select this to enable Sophos Anti-Virus to display desktop messages when a threat is found.

   Messages to send

   Select the events for which you want Sophos Anti-Virus to display desktop messages.

   User-defined message

   In this text box, you can type a message that will be added to the end of the standard message.

4.10.2 Configure anti-virus email alerting

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To enable Sophos Anti-Virus to send email alerts when a threat is found or an error occurs, do as follows. This applies to on-access, on-demand and right-click scanning.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Alerting** > **Messaging** .
2. In the **Messaging** dialog box, click the **Email alerting** tab. Set the options as described below.

   Enable email alerting

   Select this to enable Sophos Anti-Virus to send email alerts.

   Messages to send

   Select the events for which you want Sophos Anti-Virus to send email alerts. **Scanning errors** include instances when Sophos Anti-Virus is denied access to an item that it attempts to scan.

   Sophos Anti-Virus does not send email alerts for threats that are detected by web page scanning because the threats are not downloaded to your computer. Therefore, there is no need to take any action.

   Recipients

   Click **Add** or **Remove** to add or remove, respectively, email addresses to which email alerts should be sent. Click **Edit** to change an email address you have added.

   Configure SMTP

   Click this to change the settings for the SMTP server and the language of the email alerts. (Refer to the table below.)

Configure SMTP settings	
SMTP server	In the text box, type the host name or IP address of the SMTP server. Click **Test** to test that a connection to the SMTP server can be made. (This does *not* send a test email.)
SMTP 'sender' address	In the text box, type an email address to which bounces and non-delivery reports can be sent.
SMTP 'reply to' address	As email alerts are sent from an unattended mailbox, you can type in the text box an email address to which replies to email alerts can be sent.
Language	Click the drop-down arrow, and select the language in which email alerts should be sent.

4.10.3 Configure anti-virus SNMP messaging

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

To enable Sophos Anti-Virus to send SNMP messages when a threat is found or an error occurs, do as follows. This applies to on-access, on-demand and right-click scanning.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Alerting** > **Messaging** .
2. In the **Messaging** dialog box, click the **SNMP messaging** tab. Set the options as described below.

   Enable SNMP messaging

   Select this to enable Sophos Anti-Virus to send SNMP messages.

   Messages to send

   Select the events for which you want Sophos Anti-Virus to send SNMP messages. **Scanning errors** include instances when Sophos Anti-Virus is denied access to an item that it attempts to scan.

   Sophos Anti-Virus does not send SNMP messages for threats that are detected by web page scanning because the threats are not downloaded to your computer. Therefore, there is no need to take any action.

   SNMP trap destination

   In the text box, type the IP address or name of the computer to which alerts are sent.

   SNMP community name

   In the text box, type the SNMP community name.

   Test

   Click this to send a test SNMP message to the SNMP trap destination you have specified.

4.10.4 Configure anti-virus event logging

To enable Sophos Anti-Virus to add alerts to the Windows 2000 or later event log when a threat is found or an error occurs, do as follows. This applies to on-access, on-demand and right-click scanning.

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Alerting** > **Messaging** .

2. In the **Messaging** dialog box, click the **Event log** tab. Set the options as described below.

   Enable event logging

   Select this to enable Sophos Anti-Virus to send messages to the Windows event log.

   Messages to send

   Select the events for which you want Sophos Anti-Virus to send messages. **Scanning errors** include instances when Sophos Anti-Virus is denied access to an item that it attempts to scan.

   Sophos Anti-Virus does not send messages for threats that are detected by web page scanning because the threats are not downloaded to your computer. Therefore, there is no need to take any action.

4.11 Scanning log

4.11.1 Configure the scanning log

The scanning log for this computer is stored in the following locations.

Windows Vista, Windows 7	C:\ProgramData\Sophos\Sophos Anti-Virus\logs\SAV.txt
Other Windows platforms	C:\Documents and Settings\All Users\Application Data\Sophos\Sophos Anti-Virus\logs\SAV.txt

1. Click **Home** > **Anti-virus and HIPS** > **View anti-virus and HIPS log** > **Configure log** .
2. In the **Configure logging for this computer** dialog box, set the options as described below.

   Logging level

   To stop anything being logged, click **None**. To log summary information, error messages and so on, click **Normal**. To log most information, including files scanned, major stages of a scan, and so on, click **Verbose**.

   Log archiving

   To enable the log file to be archived monthly, select **Enable archiving**. The archive files are stored in the same folder as the log file. Select the **Number of archive files** to store before the oldest one is deleted. Select **Compress log** to reduce the size of the log file.

4.11.2 View the scanning log

- On the **Home** page, under **Anti-virus and HIPS**, click **View anti-virus and HIPS log**.

For information about the **Home** page, see *About the Home page* (page 4).

From the log page, you can copy the log to the clipboard, or email, or print the log.

To find specific text in the log, click **Find** and enter the text you want to find.

5 Sophos Application Control

5.1 About scanning for controlled applications

A *controlled application* is an application that is prevented from running on your computer by your organisation's security policy.

Scanning for controlled applications is enabled or disabled by a management console as part of an application control policy, and is included as part of on-access scanning.

For information about on-access scanning, see *About on-access and on-demand scanning* (page 8).

5.2 Disable scanning for controlled applications

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If scanning for controlled applications is enabled, it might prevent you from uninstalling some applications. If you are a member of the SophosAdministrator group, you can temporarily disable scanning for controlled applications on this computer.

To disable scanning for controlled applications:

1. On the **Configure** menu, click **Application control**.
2. Clear the **Enable on-access scanning** check box.

6 Sophos Device Control

6.1 About device control on this computer

Sophos Device Control blocks unauthorized external storage devices and wireless connection technologies.

Note: This feature is not included with all licenses. If you want to use it, you might need to change your license.

If a management console is not used to administer Sophos Endpoint Security and Control on this computer, the device control functionality is *not* included.

Device control is enabled or disabled by a management console. If device control is enabled, it might prevent you from connecting a device to this computer for maintenance or troubleshooting. If this is the case, you can temporarily disable device control on this computer. For information, see *Temporarily disable device control* (page 50).

6.2 What types of device are controlled?

Device control blocks or allows three types of device on this computer: *storage*, *network*, and *short range*.

Storage

- Removable storage devices (for example, USB flash drives, PC Card readers, and external hard disk drives)
- Optical media drives (CD-ROM/DVD/Blu-ray drives)
- Floppy disk drives
- Secure removable storage devices (for example, hardware-encrypted USB flash drives)

Network

- Modems
- Wireless (Wi-Fi interfaces, 802.11 standard)

The device control policy for this computer may be in **Block bridged** mode, which disables wireless or modem network adapters when the computer is connected to a physical network (typically through an Ethernet connection). Once the computer is disconnected from the physical network, the wireless or modem network adapters are seamlessly re-enabled.

Short range

- Bluetooth interfaces
- Infrared (IrDA infrared interfaces)

6.3 Temporarily disable device control

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group and you want to connect a device to this computer for maintenance or troubleshooting (for example, to install software from a CD), you can temporarily disable device control.

To disable device control on this computer:

1. On the **Configure** menu, click **Device control**.
2. Clear the **Enable Sophos Device Control** check box.

6.4 Configure the device control log

1. On the **Configure** menu, click **Device control**.
2. Under **Logging level**, select one of the options:
   - Click **None** to stop anything being logged.
   - Click **Normal** to log summary information, error messages, and so on.
   - Click **Verbose** to provide information on many more activities than usual. Use this setting only when you need detailed logging for troubleshooting, since the log will grow in size rapidly.
3. Under **Log archiving**, follow the instructions on the screen.

6.5 View the device control log

- On the **Home** page, under **Device control**, click **View device control log**.
  For information about the **Home** page, see *About the Home page* (page 4).

From the log page, you can copy the log to the clipboard, or email, or print the log.

To find specific text in the log, click **Find** and enter the text you want to find.

7 Sophos Data Control

7.1 About data control on this computer

Sophos Data Control prevents the accidental leakage of personally-identifiable information from managed computers.

Note: This feature is not included with all licenses. If you want to use it, you might need to change your license.

If a management console is not used to administer Sophos Endpoint Security and Control on this computer, the data control functionality is *not* included.

Data control is enabled or disabled by a policy issued by a management console. However, if you are a member of the SophosAdministrator group, you can temporarily disable data control on this computer for maintenance or troubleshooting. For information, see *Temporarily disable data control* (page 51).

7.2 Temporarily disable data control

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group, you can temporarily disable data control on this computer for maintenance or troubleshooting:

1. On the **Configure** menu, click **Data control**.
2. Clear the **Enable Sophos Data Control** check box.

7.3 How do I add a file to a storage device?

If data control is enabled on this computer, the data control policy may block any attempt to add a file to a monitored storage device using the following methods:

- Saving data from within a program
- Using the DOS copy command
- Creating a new file on the device using Windows Explorer

If you see a desktop alert that warns you about this, you should save the file to your hard disk or to a network drive, and then use Windows Explorer to copy it to the storage device.

7.4 Configure the data control log

1. On the **Configure** menu, click **Data control**.

2. Under **Logging level**, select one of the options:
   - Click **None** to stop anything being logged.
   - Click **Normal** to log summary information, error messages, and so on.
   - Click **Verbose** to provide information on many more activities than usual. Use this setting only when you need to test new data control rules, since the log will grow in size rapidly.
3. Under **Log archiving**, follow the instructions on the screen.

7.5 View the data control log

- On the **Home** page, under **Data control**, click **View data control log**.
  For information about the **Home** page, see *About the Home page* (page 4).

From the log page, you can copy the log to the clipboard, or email, or print the log.

To find specific text in the log, click **Find** and enter the text you want to find.

8 Sophos Web Control

8.1 About web control on this computer

Sophos Web Control provides protection, control, and reporting for computers that are located, or roam, outside the corporate network.

Note: This feature is not included with all licenses. If you want to use it, you might need to change your license.

If a management console is not used to administer Sophos Endpoint Security and Control on this computer, the web control functionality is *not* included.

Web control is enabled or disabled by a policy issued by a management console. However, if you are a member of the SophosAdministrator group, you can temporarily disable web control on this computer. For information on how to do this, see *Temporarily disable web control* (page 53).

8.2 Temporarily disable web control

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group, you may need to temporarily disable web control for maintenance or troubleshooting, and then re-enable it.

To disable web control on this computer:

1. On the **Configure** menu, click **Web control**.
2. Clear the **Enable web control** check box.

9 Sophos Client Firewall

9.1 Getting started with the firewall

When the firewall is first installed, you may need to configure it. Whether you need to do this depends on how it has been installed. There are two types of installation:

- Installed on a network computer and managed from a management console
- Installed on a standalone computer and managed from the computer

Firewall managed from a management console

If the firewall is installed and managed from a management console, it allows or blocks applications and traffic according to rules set by policy.

Unless the policy has put the firewall into interactive mode (see below), you will not be prompted with any messages and do not need to configure the firewall in any way.

Firewall managed from this computer

If the firewall is managed on this computer, we recommend that you start by creating rules to allow network access for common applications and services such as Web browsers and email clients.

For information on creating rules, see *About configuring the firewall* (page 55).

The firewall will also initially be in interactive mode (see below). Leave the firewall in interactive mode for a period of time so that you can allow or block other applications and services you use.

Once you have configured the firewall, and it recognizes the applications you commonly use, we recommend that you change to one of the non-interactive modes.

For information, see *Change to a non-interactive mode* (page 62).

What's interactive mode?

In interactive mode, the firewall prompts you to allow or block any applications and traffic for which it does not have a rule.

For information about how to deal with messages from the firewall, see *About interactive mode* (page 61).

9.2 Configuring the firewall

9.2.1 About configuring the firewall

You can configure the firewall in many different ways and then enable it. However, if a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make.

A few common functions are listed below:

- *Enable interactive mode* (page 62)
- *Filter ICMP messages* (page 60)
- *Allow all traffic on a LAN* (page 57)
- *Allow FTP downloads* (page 56)
- *Create a global rule* (page 69)
- *Allow an application* (page 59)
- *Allow applications to launch hidden processes* (page 73)
- *Allow applications to use rawsockets* (page 74)
- *Use checksums to authenticate applications* (page 74)

9.2.2 Temporarily disable the firewall

If you are a member of the SophosAdministrator group, you may need to temporarily disable the firewall for maintenance or troubleshooting, and then re-enable it.

Sophos Endpoint Security and Control retains the settings you make here, even after you restart your computer. If you disable the firewall, your computer is unprotected until you re-enable it.

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. Under **Configurations**, select the **Allow all traffic** check box next to the primary or secondary location.

9.2.3 Allow email

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Click **Add**, locate the email application, and then double-click it.

The email application is allowed as a trusted application.

Trusted applications are allowed full and unconditional network access, including access to the internet. For greater security, you can apply the preset rules supplied by Sophos:

1. In the list of allowed applications, click the email application.
2. Click **Custom** > **Add rules from preset** > **Email Client** .

9.2.4 Allow the use of a web browser

Note: If you allow the use of a web browser, you also allow FTP access.

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Click **Add**, locate the web browser application, and then double-click it.

The web browser application is allowed as a trusted application.

Trusted applications are allowed full and unconditional network access, including access to the internet. For greater security, you can apply the preset rules supplied by Sophos:

1. In the list of allowed applications, click the web browser application.
2. Click **Custom** > **Add rules from preset** > **Browser** .

9.2.5 Allow FTP downloads

Note: If you have allowed the use of a web browser which can access FTP servers, you do not need to allow FTP downloads as well.

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Click **Add**, locate the FTP application, and then double-click it.

The FTP application is allowed as a trusted application.

Trusted applications are allowed full and unconditional network access, including access to the internet. For greater security, you can apply the preset rules supplied by Sophos:

1. In the list of allowed applications, click the FTP application.
2. Click **Custom** > **Add rules from preset** > **FTP Client** .

9.2.6 Allow all traffic on a LAN

To allow all traffic between computers on a LAN (Local Area Network):

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **LAN** tab, do one of the following:
   - Click **Detect** to detect the LAN that your computer is on and add it to the list of network addresses.
   - Click **Add**. In the **Select address** dialog box, select the **Address format**, type the domain name or IP address, and then click **Add**.

     Note: If you select **Local network (detected automatically)**, you do not need to type anything. For information about local network detection, see *About local network detection* (page 67).
4. Click **OK** to close the **Select address** dialog box.
5. In the **LAN settings** list, select the **Trusted** check box for a network.

Note

- If you allow all traffic between the computers on a LAN, you also allow file and printer sharing on it.

9.2.7 Allow all file and printer sharing on a LAN

Note: If you have already allowed all traffic between computers on a LAN (Local Area Network), you do not need to allow file and printer sharing as well.

To allow all file and printer sharing on a LAN:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **LAN** tab, do one of the following:
   - Click **Detect** to detect the LAN that your computer is on and add it to the list of network addresses.

- Click **Add**. In the **Select address** dialog box, select the **Address format**, type the domain name or IP address, and then click **Add**.

  Note: If you select **Local network (detected automatically)**, you do not need to type anything. For information about local network detection, see *About local network detection* (page 67).

4. Click **OK** to close the **Select address** dialog box.
5. In the **LAN settings** list, select the **NetBIOS** check box for a LAN to allow file and printer sharing on it.

For information on how to block or allow file and printer sharing on other LANs than those in the **LAN settings** list, see the following topics:

- *Block unwanted file and printer sharing* (page 58)
- *Allow flexible control of file and printer sharing* (page 58)

For information on how to allow all traffic on a LAN, see *Allow all traffic on a LAN* (page 57).

9.2.8 Allow flexible control of file and printer sharing

If you want more flexible control of file and printer sharing on your networks (for example, uni-directional NetBIOS traffic), you can do the following:

1. Allow file and printer sharing on other LANs (Local Area Networks) than those in the **LAN settings** list. This allows NetBIOS traffic on those LANs to be processed by the firewall rules.
2. Create high-priority global rules which allow communication to/from hosts with the appropriate NetBIOS ports and protocols. We recommend that you create global rules to explicitly block all unwanted file and printer sharing traffic rather than let it be handled by the default rule.

To allow file and printer sharing on other LANs than those in the **LAN settings** list:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **LAN** tab, clear the **Block file and printer sharing for other networks** check box.

9.2.9 Block unwanted file and printer sharing

To block file and printer sharing on LANs other than those specified in the **LAN settings** list on the **LAN** tab:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.

3. On the **LAN** tab, select the **Block file and printer sharing for other networks** check box.

9.2.10 Allow an application

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Click **Add**, locate the application, and then double-click it.

The application is allowed as trusted.

Trusted applications are allowed full and unconditional network access, including access to the internet. For greater security, you can apply one or more *application rules* to specify the conditions under which the application can run.

- *Create an application rule* (page 71)
- *Apply preset application rules* (page 71)

9.2.11 Block an application

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. If the application is not in the list, click **Add**, locate the application, and then double-click it.
5. Select the application in the list, and then click **Block**.

9.2.12 Turn blocking of modified processes on or off

Malware may attempt to evade the firewall by modifying a process in memory that has been initiated by a trusted program, and then using the modified process to access the network on its behalf.

You can configure the firewall to detect and block processes that have been modified in memory.

To turn blocking of modified processes on or off:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.

3. On the **General** tab, under **Blocking**, clear the **Block processes if memory is modified by another application** check box to turn blocking of modified processes off.

   To turn blocking of modified processes on, select the check box.

If the firewall detects that a process has been modified in memory, it adds rules to prevent the modified process from accessing the network.

Notes

- We do not recommend that you turn blocking of modified processes off permanently. You should turn it off only when you need to.
- Blocking of modified processes is not supported on 64-bit versions of Windows.
- Only the modified process is blocked. The modifying program is not blocked from accessing the network.

9.2.13 Filter ICMP messages

Internet Control Message Protocol (ICMP) messages allow the computers on a network to share error and status information. You can allow or block specific types of incoming or outgoing ICMP message.

You should only filter ICMP messages if you are familiar with networking protocols. For explanations of the ICMP message types, see *Explanation of ICMP message types* (page 60).

To filter ICMP messages:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **ICMP** tab, select the **In** or **Out** check box to allow incoming or outgoing messages of the specified type.

9.2.14 Explanation of ICMP message types

Echo Request, Echo Reply	Used to test destination accessibility and status. A host sends an **Echo Request** and listens for a corresponding **Echo Reply**. This is most commonly done using the **ping** command.
Destination Unreachable, Echo Reply	Sent by a router when it cannot deliver an IP datagram. A datagram is the unit of data, or packet, transmitted in a TCP/IP network.
Source Quench	Sent by a host or router if it is receiving data too quickly for it to handle. The message is a request that the source reduce its rate of datagram transmission.

Redirect	Sent by a router if it receives a datagram that should have been sent to a different router. The message contains the address to which the source should direct future datagrams. This is used to optimize the routing of network traffic.
Router Advertisement, Router Solicitation	Allow hosts to discover the existence of routers. Routers periodically broadcast their IP addresses via **Router Advertisement** messages. Hosts may also request a router address by broadcasting a **Router Solicitation** message to which a router will reply with a **Router Advertisement**.
Time Exceeded for a Datagram	Sent by a router if the datagram has reached the maximum limit of routers through which it can travel.
Parameter Problem for a Datagram	Sent by a router if a problem occurs during the transmission of a datagram such that it cannot complete processing. One potential source of such a problem is invalid datagram header.
Timestamp Request, Timestamp Reply	Used to synchronize the clocks between hosts and to estimate transit time.
Information Request, Information Reply	Obsolete. These messages were used earlier by hosts to determine their inter-network addresses, but are now considered outdated and should not be used.
Address Mask Request, Address Mask Reply	Used to find the mask of the subnet (i.e. what address bits define the network). A host sends an **Address Mask Request** to a router and receives an **Address Mask Reply** in return.

9.2.15 Restore the firewall default settings

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Managing configuration**, click **Restore defaults**.

9.3 Working in interactive mode

9.3.1 About interactive mode

In interactive mode, the firewall displays a *learning dialog* each time an unknown application or service requests network access. The learning dialog asks you whether to allow the traffic once, block it once, or whether to create a rule for that type of traffic.

In interactive mode, you will see the following types of learning dialog:

- *Hidden process learning dialogs* (page 62)
- *Protocol learning dialogs* (page 63)
- *Application learning dialogs* (page 63)
- *Rawsocket learning dialogs* (page 63)
- *Checksum learning dialogs* (page 64)

9.3.2 Enable interactive mode

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **General** tab, under **Working mode**, click **Interactive**.

9.3.3 Change to a non-interactive mode

There are two non-interactive modes:

- Allow by default
- Block by default

In the non-interactive modes, the firewall deals with network traffic automatically using your rules. Network traffic which has no matching rule is either all allowed (if it is outbound) or all blocked.

To change to a non-interactive mode:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **General** tab, under **Working mode**, click **Allow by default** or **Block by default**.

9.3.4 Hidden process learning dialogs

A hidden process is when one application launches another one to perform some network access for it. Malicious applications sometimes use this technique to evade firewalls: they launch a trusted application to access the network rather than doing it themselves.

The hidden process learning dialog displays information about the hidden process and the application that launched it.

- *Enable hidden process learning dialogs* (page 63)

9.3.5 Enable hidden process learning dialogs

If you are using interactive mode, the firewall can display a learning dialog when it detects a new launcher.

If you are using interactive mode and this option is not selected, new launchers are blocked from launching hidden processes.

To enable hidden process learning dialogs:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Processes** tab.
4. Select the **Warn about new launchers** check box.

9.3.6 Protocol learning dialogs

If the firewall detects network activity by the system that it cannot relate to a specific application, it prompts for the creation of a protocol rule.

The protocol learning dialog displays information about the unrecognized network activity, i.e. the protocol and remote address.

9.3.7 Application learning dialogs

If the firewall detects an application attempting to access the network in a way that is not covered by any existing rule, it prompts for the creation of an application rule.

The application learning dialog displays information about the unrecognized network activity, i.e. the remote service and the remote address.

9.3.8 Rawsocket learning dialogs

Rawsockets allow processes to control all aspects of the data they send over the network and can be used for malicious purposes.

If the firewall detects a rawsocket attempting to access the network in a way that is not covered by any existing rule, it prompts for the creation of a rawsocket rule.

The rawsocket learning dialog displays information about the rawsocket.

- *Enable rawsocket learning dialogs* (page 64)

9.3.9 Enable rawsocket learning dialogs

If you are using interactive mode, the firewall can display a learning dialog when it detects a rawsocket attempting to access the network in a way that is not covered by any existing rule.

If you are using interactive mode and this option is not selected, rawsockets are blocked from accessing the network.

To enable rawsocket learning dialogs:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Processes** tab.
4. Select the **Warn about the use of rawsockets** check box.

9.3.10 Checksum learning dialogs

If the firewall detects a new or modified application, it displays a checksum learning dialog.

If you want to allow the application to access the network, you must add its checksum (a unique identifier) to the list of recognized checksums.

Select one of the following options:

- **Add the checksum to existing checksums for this application** allows multiple versions of this application.
- **Replace any existing checksum for this application** replaces all existing checksums for the application with the one requesting access, and thereby allows only the latest version of this application.
- **Block this application until it is restarted** blocks the application on this occasion.

9.3.11 Enable checksum learning dialogs

If you are using interactive mode, the firewall can display a learning dialog when it detects a new or modified application.

If you are using interactive mode and this option is not selected, applications are blocked from accessing the network.

To enable checksum learning dialogs:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.

3. Under **Blocking**, select the **Use checksums to authenticate applications** check box.

9.4 Firewall configuration files

9.4.1 About firewall configuration files

Sophos Client Firewall enables you to export the firewall general settings and rules as a configuration file. You can use this feature to do the following:

- Back up and restore your entire firewall configuration.
- Save a general settings configuration and install it on multiple computers.
- Create rules for applications on one computer and export them for use on other computers running the same set of applications.
- Use the management console to merge configurations created on several different computers to create a policy that is valid for all computers on the network.

9.4.2 Export a firewall configuration file

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Click **Export**.
3. Give your configuration file a name and location, and then click **Save**.

9.4.3 Import a firewall configuration file

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Click **Import**.
3. Select a configuration file and click **Open**.
4. Follow the instructions on the screen.

9.5 Firewall rules

9.5.1 About firewall rules

Global rules

Global rules apply to all network communications and to applications even if they have application rules.

Application rules

You can have one or more rules for an application. You can either use preset rules created by Sophos or create custom rules to give you fine control over the access allowed for an application.

9.5.2 About the order in which rules are applied

For connections that use rawsockets, only the global rules are checked.

For connections that do *not* use rawsockets, various rules are checked, depending on whether the connection is to a network address that is listed on the **LAN** tab or not.

If the network address is listed on the **LAN** tab, the following rules are checked:

- If the address has been marked as **Trusted**, all traffic on the connection is allowed with no further checks.
- If the address has been marked as **NetBIOS**, file and printer sharing on any connection that meets the following criteria is allowed:

Connection	Port	Range
TCP	Remote	137-139 or 445
TCP	Local	137-139 or 445
UDP	Remote	137 or 138
UDP	Local	137 or 138

If the network address is *not* listed on the **LAN** tab, other firewall rules are checked in the following order:

1. Any **NetBIOS** traffic that has not been allowed using the **LAN** tab is dealt with according to the setting of the **Block file and printer sharing for other networks** check box:
   - If the check box is selected, the traffic is blocked.
   - If the check box is cleared, the traffic is processed by the remaining rules.
2. The high-priority global rules are checked, in the order in which they are listed.
3. If the connection has not already had rules applied to it, the application rules are checked.
4. If the connection has still not been handled, the normal-priority global rules are checked, in the order in which they are listed.
5. If no rules have been found to handle the connection:
   - In **Allow by default** mode, the traffic is allowed (if it is outbound).
   - In **Block by default** mode, the traffic is blocked.

- In **Interactive** mode, the user is asked to decide.

Note: If you have not changed the working mode, the firewall will be in **Block by default** mode.

9.5.3 About local network detection

You can assign the local network for this computer to firewall rules.

The firewall determines this computer's local network when it starts, and then monitors for any changes whilst it is running. If any change is detected, the firewall updates any local network rules with the new local network address range.

Caution: We strongly advise caution when using local network rules as part of configurations that may be used in "out of office" locations. For more information, see *Create a secondary configuration* (page 76).

9.5.4 Global rules

9.5.4.1 Default global rule settings

This topic describes the conditions and actions for the default global rules. Use these settings if you want to create a new default global rule.

Allow DNS Resolving (TCP)

- Protocol: TCP
- Direction: Outbound
- Remote port: DOMAIN
- Action: Allow

Allow DNS Resolving (UDP)

- Protocol: UDP
- Direction: Outbound
- Remote port: DNS
- Action: Allow Stateful inspection

Allow Outgoing DHCP

- Protocol: UDP
- Local port: BOOTPS,BOOTPC,546,547
- Action: Allow

Allow Inbound Identification

- Protocol: TCP
- Direction: Inbound
- Local port: AUTH
- Action: Allow

Allow Loopback

- Protocol: TCP
- Direction: Inbound
- Local port: 127.0.0.0 (255.255.255.0)
- Action: Allow

Allow GRE Protocol

- Protocol: TCP
- Protocol type: Outbound
- Action: Allow

Allow PPTP Control Connection

- Protocol: TCP
- Direction: Outbound
- Remote port: PPTP
- Local port: 1024-65535
- Action: Allow

Block RPC Call (TCP)

- Protocol: TCP
- Direction: Inbound
- Local port: DCOM
- Action: Block

Block RPC Call (UDP)

- Protocol: UDP
- Local port: 135
- Action: Block

Block Server Message Block Protocol (TCP)

- Protocol: TCP
- Direction: Inbound
- Local port: MICROSOFT_DS
- Action: Block

Block Server Message Protocol (UDP)

- Protocol: TCP
- Local port: 445
- Action: Block

Allow Localhost UDP Connection

- Protocol: UDP
- Remote host: 255.255.255.255 (0.0.0.0)
- Local host: 255.255.255.255 (0.0.0.0)
- Where the local port is equal to the remote port: True
- Action: Allow

9.5.4.2 Create a global rule

Important: We recommend that you create global rules only if you are familiar with networking protocols.

Global rules apply to all network communications and to applications which do not already have a rule.

To create a global rule:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Global Rules** tab.
4. Click **Add**.
5. Under **Rule name**, type a name for the rule.
   The rule name must be unique within the list of rules. Two global rules cannot have the same name.
6. To apply the rule before any application rules or normal priority global rules, select the **High priority rule** check box.
   For information on the order in which rules are applied, see *About the order in which rules are applied* (page 66).

7. Under **Select the events the rule will handle**, select the conditions that the connection must match for the rule to apply.
8. Under **Select the actions with which the rule will respond**, select either **Allow it** or **Block it**.
9. Do one of the following:
   - To allow other connections to and from the same remote address while the initial connection exists, select **Concurrent connections**.

     Note: This option is only available for TCP rules, which are stateful by default.
   - To intelligently allow replies from the remote computer based on the initial connection, select **Stateful inspection**.
10. Under **Rule description**, click an underlined value. For example, if you click the **TCP** link, the **Select Protocol** dialog box opens.

9.5.4.3 Edit a global rule

Important: We recommend that you change global rules only if you are familiar with networking protocols.

To edit a global rule:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Global Rules** tab.
4. In the **Rule** list, select the rule that you want to edit.
5. Click **Edit**.
   For information on the global rule settings, see *Create a global rule* (page 69).

9.5.4.4 Copy a global rule

To copy a global rule and append it to the list of rules:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Global Rules** tab.
4. In the **Rule** list, select the rule that you want to copy.
5. Click **Copy**.

9.5.4.5 Delete a global rule

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).

2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Global Rules** tab.
4. In the **Rule** list, select the rule that you want to delete.
5. Click **Remove**.

9.5.4.6 Change the order in which global rules are applied

Global rules are applied in the order in which they appear from top to bottom in the list of rules.

To change the order in which the global rules are applied:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Global Rules** tab.
4. In the **Rule** list, click the rule that you want to move up or down in the list.
5. Click **Move Up** or **Move Down**.

9.5.5 Application rules

9.5.5.1 Apply preset application rules

A preset is a set of application rules created by Sophos. To append preset rules to the list of rules for an application:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Select the application in the list, and then click the arrow next to **Custom** .
5. Point to **Add rules from preset**, and then click a preset.

9.5.5.2 Create an application rule

To create a custom rule which allows fine control over the access allowed for an application:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Select the application in the list, and then click **Custom**.
   You can also double-click the application in the list.
5. In the **Application Rules** dialog box, click **Add**.

6. Under **Rule name**, type a name for the rule.

   The rule name must be unique within the list of rules. Two application rules cannot have the same name, but two applications can each have a rule with the same name.

7. Under **Select the events the rule will handle**, select the conditions that the connection must match for the rule to apply.
8. Under **Select the actions with which the rule will respond**, select either **Allow it** or **Block it**.
9. To intelligently allow replies from the remote computer based on the initial connection, select **Stateful inspection**.
10. Under **Rule description**, click an underlined value. For example, if you click the **TCP** link, the **Select Protocol** dialog box opens.

9.5.5.3 Edit an application rule

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Select the application in the list, and then click **Custom**.

   You can also double-click the application in the list.

5. In the **Application Rules dialog box**, click **Edit**.
6. Under **Rule name**, type a name for the rule.

   The rule name must be unique within the list of rules. Two application rules cannot have the same name, but two applications can each have a rule with the same name.

7. Under **Select the events the rule will handle**, select the conditions that the connection must match for the rule to apply.
8. Under **Select the actions with which the rule will respond**, select either **Allow it** or **Block it**.
9. To intelligently allow replies from the remote computer based on the initial connection, select **Stateful inspection**.
10. Under **Rule description**, click an underlined value. For example, if you click the **TCP** link, the **Select Protocol** dialog box opens.

9.5.5.4 Copy an application rule

To copy an application rule and append it to the list of rules:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Select the application in the list, and then click **Custom**.

   You can also double-click the application in the list.

5. In the **Application Rules dialog box**, click **Copy**.

9.5.5.5 Delete an application rule

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Select the application in the list, and then click **Custom** .
5. In the **Application Rules** dialog box, click **Remove**.

9.5.5.6 Change the order in which application rules are applied

Application rules are applied in the order in which they appear from top to bottom in the list of rules.

To change the order in which the application rules are applied:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Applications** tab.
4. Select the application in the list, and then click **Custom**.
   You can also double-click the application in the list.
5. In the **Rule** list, click the rule that you want to move up or down in the list.
6. Click **Move Up** or **Move Down**.

9.5.5.7 Allow applications to launch hidden processes

An application sometimes launches another hidden process to perform some network access for it.

Malicious applications can use this technique to evade firewalls: they launch a trusted application to access the network rather than doing so themselves.

The firewall sends an alert to the management console, if one is being used, the first time a hidden process is detected.

To allow applications to launch hidden processes:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Processes** tab.
4. In the upper area, click the **Add** button.
5. Locate the application, and then double-click it.

If you are using interactive mode, the firewall can display a learning dialog when it detects a new launcher.

- *Enable interactive mode* (page 62)
- *Enable hidden process learning dialogs* (page 63)

9.5.5.8 Allow applications to use rawsockets

Some applications can access a network through rawsockets, which gives them control over all aspects of the data they send over the network.

Malicious applications can exploit rawsockets by faking their IP address or send deliberately corrupt messages.

The firewall sends an alert to the management console, if one is being used, the first time a rawsocket is detected.

To allow applications to access the network through rawsockets:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Processes** tab.
4. In the lower area, click the **Add** button.
5. Locate the application, and then double-click it.

If you are using interactive mode, the firewall can display a learning dialog when a rawsocket is detected.

- *Enable interactive mode* (page 62)
- *Enable rawsocket learning dialogs* (page 64)

9.5.5.9 Use checksums to authenticate applications

Each version of an application has a unique checksum. The firewall can use this checksum to decide whether an application is allowed or not.

By default, the firewall checks the checksum of each application that runs. If the checksum is unknown or has changed, the firewall blocks it or (in interactive mode) asks the user what to do.

The firewall also sends an alert to the management console, if one is being used, the first time a new or modified application is detected.

To add a checksum to the list of allowed checksums:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. Click the **Checksums** tab.

4. Click **Add**.
5. Locate the application, and then double-click it.

If you are using interactive mode, the firewall can display a learning dialog when it detects a new or modified application.

- *Enable interactive mode* (page 62)
- *Enable hidden process learning dialogs* (page 63)

9.6 Location awareness

9.6.1 About location awareness

Location awareness is a feature of Sophos Client Firewall that assigns a firewall configuration to each network adapter on your computer, depending on the current location of the network adapter.

The most common scenario in which this feature is used is where you have a company laptop and you work from home. You are using two network connections simultaneously:

- For work use, you connect to your office network through a VPN client and a **virtual network adapter**.
- For personal use, you connect to your ISP through a network cable and a **physical network adapter**.

In this scenario, you need the office configuration to be applied to the virtual office connection and the non-office, generally more restrictive, configuration to be applied to the non-office ISP connection.

Note: The non-office configuration will require sufficient rules to allow the "virtual" office connection to be established.

9.6.2 Set up location awareness

1. Define the list of gateway MAC addresses or domain names of your primary locations. Typically, these are your office networks.
2. Create the firewall configuration that will be used for your primary locations. Typically, this configuration is less restrictive.
3. Create a secondary firewall configuration. Typically, this configuration is more restrictive.
4. Choose a configuration to apply.

Depending on the detection method you are using, the firewall obtains the DNS or gateway address for each of your computer's network adapters, and then matches it against your list of addresses.

- If any of the addresses in your list matches the address of a network adapter, the adapter is assigned the configuration for the **primary location**.

- If none of the addresses in your list matches the address of a network adapter, the adapter is assigned the policy for the **secondary location**.

The active location is displayed in the **Status** panel in the **Sophos Endpoint Security and Control** window. If both configurations have been applied, **Active** = **Both**.

Important: The secondary configuration switches from **Interactive** mode to **Block by default** mode when both the following conditions are met:

- Both locations are active.
- The primary configuration is *not* interactive.

9.6.3 Define your primary locations

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Click the **Location detection** tab.
3. Under **Detection method**, click **Configure** next to the method that you want to use to define your primary locations:

Option	Description
Identify location by DNS	You create a list of domain names and expected IP addresses that correspond to your primary locations.
Identify location by gateway MAC address	You create a list of gateway MAC addresses that correspond to your primary locations.

4. Follow the instructions on the screen.

9.6.4 Create a secondary configuration

The firewall uses your secondary configuration when it detects that you are not connected to your primary location.

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Select the **Add configuration for a second location** check box.

Now set up the configuration for your secondary location. For information on how to do this, see *About configuring the firewall* (page 55) and the other topics in the *Configuring the firewall* section.

Caution: If this computer is a laptop, and it is used out of the office, it may connect to an unknown local network. If this happens, firewall rules in the secondary configuration that use the local

network as an address may inadvertently allow unknown traffic. For that reason, we strongly advise caution when using local network rules as part of secondary configurations.

9.6.5 Choose a configuration to apply

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. On the **General** tab, under **Applied location**, click one of the following options:

Option	Description
Apply the configuration for the detected location	The firewall applies either the primary or secondary configuration to each network connection according to the detection settings for location awareness (as described in *Set up location awareness* (page 75)).
Apply the configuration for the primary location	The firewall applies the primary configuration to all network connections.
Apply the configuration for the secondary location	The firewall applies the secondary configuration to all network connections.

9.7 Firewall reporting

9.7.1 About firewall reporting

By default, the firewall reports state changes, events, and errors to the management console.

Firewall state changes

The firewall regards the following as state changes:

- Changes to the working mode
- Changes to the software version
- Changes to whether the firewall is configured to allow all traffic
- Changes to whether the firewall complies with policy

When you are working in interactive mode, your firewall configuration may deliberately differ from the policy applied by the management console. In that case, you can choose **not** to send "differs from policy" alerts to the management console when you make changes to certain parts of your firewall configuration.

For more information, see *Turn reporting of local changes on or off* (page 78).

Firewall events

An *event* is when an unknown application on your computer, or your computer's operating system, tries to communicate with another computer over a network connection.

You can prevent the firewall from reporting events to the management console.

For more information, see *Turn off reporting of unknown network traffic* (page 78)

9.7.2 Turn reporting of local changes on or off

If your firewall configuration differs from policy, you can **turn reporting of local changes off**.

Turning reporting of local changes off stops the firewall sending "differs from policy" alerts to the management console about changes made to the global rules, applications, processes, or checksums. You may want to do this, for example, when you are working in interactive mode, since these are settings that can be changed by using the learning dialogs.

If the firewall configuration on this computer is intended to conform to policy, you should **turn reporting of local changes on**.

To turn reporting of local changes off:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **General** tab, under **Reporting**, clear the **Display an alert in the management console if local changes are made to the global rules, applications, processes or checksums** check box to turn reporting of local changes off.

   To turn reporting of local changes on, select the check box.

9.7.3 Turn off reporting of unknown network traffic

You can prevent the firewall from reporting unknown network traffic to the management console. The firewall regards traffic as unknown if there is no rule for it.

To prevent the firewall from reporting unknown network traffic to the management console:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **General** tab, under **Blocking**, select the **Use checksums to authenticate applications** check box.
4. Under **Reporting**, clear the **Report unknown applications and traffic to the management console** check box.

9.7.4 Turn off reporting of firewall errors

Important: We do not recommend that you turn off reporting of firewall errors permanently. You should turn off reporting only when you need to.

To prevent the firewall from reporting errors to the management console:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **General** tab, under **Reporting**, clear the **Report errors to the management console** check box.

9.7.5 Configure desktop messaging

You can control what messages the firewall displays on the desktop using balloon tips.

Unknown applications and traffic balloon tips are not shown in interactive mode since the same information is displayed in the learning dialogs.

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Under **Configurations**, click **Configure** next to the location that you want to configure.
3. On the **General** tab, under **Desktop messaging**, do one of the following:
   - To display balloon tips for firewall warnings and errors, select the **Show warnings and errors** check box.
   - To display balloon tips for unknown applications and traffic, select the **Show unknown applications and traffic** check box.

9.8 Firewall logging

9.8.1 About the firewall log viewer

The Sophos Client Firewall log viewer enables you to view, filter, and save details of the following:

- All connections
- Connections that have been allowed or blocked
- Firewall events
- The system log

9.8.2 Open the firewall log viewer

- On the **Home** page, under **Firewall**, click **View Firewall log**.
  For information about the **Home** page, see *About the Home page* (page 4).

9.8.3 Configure firewall logging

To manage the size and contents of the firewall's event log database:

1. On the **Home** page, under **Firewall**, click **Configure firewall**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Click the **Log** tab.
3. To manage the size of the firewall's event log database, select one of the following options:
   - To allow the database to grow without limit, click **Keep all records**.
   - To clear out old records, click **Delete old records**, and then configure the **Log cleanup settings**.
4. Under **Log cleanup settings**, select one or more of the following options:
   - Click the **Delete records after** check box, and then enter or select a figure in the **Days** box.
   - Click the **Keep no more than** check box, and then enter or select a figure in the **Records** box.
   - Click the **Keep size under** check box, and then enter or select a figure in the **MB** box.

9.8.4 Change how the firewall log viewer looks

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. On the **View** menu, click **Layout**.
3. In the **Customize View** dialog box, select items to hide or display:
   - The **Console tree** is displayed in the left pane.
   - The **Toolbar** is displayed at the top of the firewall log viewer.
   - The **Description bar** is displayed above the data in the right pane.
   - The **Status bar** is displayed at the bottom of the firewall log viewer.

9.8.5 Customize the data format

You can change the format used to display the following items of data in the firewall logs:

- Display ports as a number or a name, for example **HTTP** or **80**.
- Display applications as icons, file paths, or both.
- Specify the size of unit that is used to display the data transfer speed, for example **KBytes** or **MBytes**.
- Hide or display the gridlines.

To customize the data format:

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. On the **View** menu, click **Customize**.
3. Select the options you want.

9.8.6 Hide or display columns in the firewall log viewer

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Click an item in the console tree that displays columns in the details pane.
3. On the **View** menu, select **Add/Remove Columns**.
   You can also right-click any of the column headings.
4. In the **Columns** dialog box, do one of the following:
   - To hide a column, clear its check box.
   - To display a column, select its check box.

9.8.7 Reorder columns in the firewall log viewer

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. Click an item in the console tree that displays columns in the details pane.
3. On the **View** menu, select **Add/Remove Columns**.
   You can also right-click any of the column headings.
4. In the **Columns** dialog box, click a column name, and then click **Move Up** or **Move Down** to change the position of the column.

Notes

- You can also reorder columns in the details pane by using a mouse to drag a column heading to the left or right of its original position. As you drag a column, highlighting between the column headings indicates the new position of the column.
- You can resize columns by using the mouse to drag column headings.

9.8.8 Filter records in a firewall log

You can sort the firewall log records by creating a filter.

To filter the firewall log records:

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the console tree, select a log.
3. On the **Action** menu, click **Add filter**.
4. Follow the instructions in the **Filter** wizard.

The filter appears in the console tree immediately below the node for the log you want to filter.

9.8.9 Export all records from a firewall log

To export all the records from the firewall log to a text or CSV file:

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the console tree, select a log.
3. Right-click the record list, and then click **Export All Records**.
4. In the **File name** box, type a name for the file.
5. In the **Save as type** list, click the file type that you want.

9.8.10 Export selected records from a firewall log

To export selected records from a firewall log to a text or CSV file:

1. On the **Home** page, under **Firewall**, click **View firewall log**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the console tree, select a log.
3. Select the records you want to export.
   If the records update rapidly, on the **View** menu, clear the **Auto refresh** check box.
4. On the **Action** menu, click **Export Selected Records**.

5. In the **File name** box, type a name for the file.
6. In the **Save as type** list, click the file type that you want.

10 Sophos AutoUpdate

10.1 Update immediately

By default, Sophos AutoUpdate is scheduled to update every 10 minutes if you are permanently connected to your company network, or every 60 minutes if you are permanently connected to the internet.

If you are on a dial-up connection, Sophos AutoUpdate is scheduled to update when you connect to the internet or your network, and every 60 minutes after that.

To update immediately:

- Right-click the Sophos Endpoint Security and Control system tray icon, and then click **Update now**.

10.2 Schedule updates

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

You can specify when or how often Sophos AutoUpdate updates.

1. On the **Configure** menu, click **Updating**.
2. Click the **Schedule** tab.
3. Select **Enable automatic updates**, and then enter the frequency (in minutes) with which Sophos AutoUpdate will update.

   If the updated files are downloaded from your company network, updates are every 10 minutes by default.

   If the updated files are downloaded over the internet from the Sophos server, Sophos AutoUpdate cannot update more frequently than every 60 minutes.

10.3 Set a source for updates

If you want Sophos AutoUpdate to update automatically, you must specify where it downloads updates from.

1. On the **Configure** menu, click **Updating**.
2. Click the **Primary location** tab.
3. In the **Address** list, enter the UNC path or web address of the update server.

   To download updates directly from Sophos via the internet, select **Sophos** in the **Address** list.

4. In the **User name** box, type the user name for the account that will be used to access the update server.

   If the user name needs to be qualified to indicate the domain, use the form *domain\username*.

5. In the **Password** box, type the password for the account that will be used to access the update server.

10.4 Set an alternative source for updates

You can set an alternative source for updates. If Sophos AutoUpdate cannot update from its usual source, it will attempt to update from the alternative source.

1. On the **Configure** menu, click **Updating**.
2. Click the **Secondary location** tab.
3. In the **Address** list, enter the UNC path or web address of the update server.

   To download updates directly from Sophos via the internet, select **Sophos** in the **Address** list.

4. In the **User name** box, type the user name for the account that will be used to access the update server.

   If the user name needs to be qualified to indicate the domain, use the form *domain\username*.

5. In the **Password** box, type the password for the account that will be used to access the update server.

10.5 Update via a proxy server

If Sophos AutoUpdate updates via the internet, you must enter details of any proxy server that it must use to connect to the internet.

1. On the **Configure** menu, click **Updating**.
2. Click the **Primary location** or **Secondary location** tab.
3. Click **Proxy Details**.
4. Select the **Access the location via a proxy** check box.
5. Enter the proxy server **Address** and **Port** number.
6. Enter a **User name** and **Password** that grant access to the proxy server.

   If the user name needs to be qualified to indicate the domain, use the form *domain\username*.

10.6 Update via a dial-up connection

To update via a dial-up connection to the internet:

1. On the **Configure** menu, click **Updating**.
2. Click the **Schedule** tab.

3. Select **Check for updates on dial-up**.

Sophos AutoUpdate will update whenever you connect to the internet.

10.7 Limit the bandwidth used for updating

To prevent Sophos AutoUpdate from using all your bandwidth when you need it for other purposes (such as downloading your email), you can limit the amount of bandwidth it uses.

1. On the **Configure** menu, click **Updating**.
2. Click the **Primary location** or **Secondary location** tab.
3. Click **Advanced**.
4. Select the **Limit amount of bandwidth used** check, and move the slider to specify the amount of bandwidth Sophos AutoUpdate uses.

   Note: If you specify more bandwidth than is available, Sophos AutoUpdate uses all the bandwidth.

10.8 Log updating activity

You can configure Sophos AutoUpdate to record updating activity in a log file.

1. On the **Configure** menu, click **Updating**.
2. Click the **Logging** tab.
3. Select the **Log Sophos AutoUpdate activity** check box.
4. In the **Maximum log size** box, type or select the maximum size in MB for the log.
5. In the **Log level** list, select **Normal** or **Verbose** logging.

   Verbose logging provides information on many more activities than usual, so the log will grow faster. Use this option only when you need a detailed log for troubleshooting.

10.9 View the updating log file

1. On the **Configure** menu, click **Updating**.
2. Click the **Logging** tab.
3. Click **View Log File**.

11 Sophos Tamper Protection

11.1 About tamper protection on this computer

Tamper protection enables you to prevent unauthorized users (users with limited technical knowledge) and known malware from uninstalling Sophos security software or disabling it through the Sophos Endpoint Security and Control interface.

Note: Tamper protection is not designed to protect against users with extensive technical knowledge. It will not protect against malware which has been specifically designed to subvert the operation of the operating system to avoid detection. This type of malware will only be detected by scanning for threats and suspicious behavior. (For more information, see the section "Using Sophos Anti-Virus.")

What does tamper protection mean for users of this computer?

SophosUsers and SophosPowerUsers

Tamper protection does not affect members of the SophosUser and SophosPowerUser groups. When tamper protection is enabled, they will be able to perform all tasks that they are usually authorized to perform, without the need to enter the tamper protection password.

SophosUsers or SophosPowerUsers cannot enable or disable tamper protection.

For more information about the tasks that each Sophos group is authorized to perform, see *About Sophos groups* (page 5).

SophosAdministrators

Members of the SophosAdministrator group can enable or disable tamper protection.

If a management console is used to administer Sophos Endpoint Security and Control on this computer, the tamper protection policy set up in the console determines the tamper protection configuration and password. If tamper protection is enabled from the console, ask your console administrator for a password if you need to perform any of the tasks mentioned below.

If you are a member of the SophosAdministrator group and if tamper protection is enabled, you must know the tamper protection password to perform the following tasks:

- Re-configure on-access scanning or suspicious behavior detection settings. For more information, see *Enter the tamper protection password to configure the software* (page 89).
- Disable tamper protection. For more information, see *Disable tamper protection* (page 88).
- Uninstall Sophos Endpoint Security and Control components (Sophos Anti-Virus, Sophos Client Firewall, Sophos AutoUpdate, Sophos Remote Management System) using Control Panel.
- Uninstall Sophos SafeGuard Disk Encryption using Control Panel.

A SophosAdministrator who does not know the password will be able to perform all other tasks except for the ones mentioned above.

If tamper protection is disabled, but the tamper protection password has been set previously, you must use the **Authenticate user** option to authenticate yourself before you can re-enable tamper protection. All other configuration options available to the SophosAdministrators group are enabled when tamper protection is disabled. For more information about re-enabling tamper protection, see *Re-enable tamper protection* (page 89).

11.2 Enable tamper protection

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

When Sophos Endpoint Security and Control is first installed, tamper protection is disabled. If you are a SophosAdministrator, you can enable tamper protection.

To enable tamper protection:

1. On the **Home** page, under **Tamper protection**, click **Configure tamper protection**.

   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Tamper Protection Configuration** dialog box, select the **Enable tamper protection** check box.
3. Click **Set** under the **Password** box. In the **Tamper Protection Password** dialog box, enter and confirm the password.

   Tip: The password must be at least eight characters long, and must contain numbers and upper and lower-case letters.

11.3 Disable tamper protection

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group, you can disable tamper protection.

To disable tamper protection:

1. If you haven't already authenticated yourself, and the **Configure tamper protection** option on the **Home** page is unavailable, follow the instructions in *Enter the tamper protection password to configure the software* (page 89) before proceeding to step 2.
2. On the **Home** page, under **Tamper protection**, click **Configure tamper protection**.

   For information about the **Home** page, see *About the Home page* (page 4).
3. In the **Tamper Protection Configuration** dialog box, clear the **Enable tamper protection** check box and click **OK**.

11.4 Re-enable tamper protection

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

If you are a member of the SophosAdministrator group, you can re-enable tamper protection.

To re-enable tamper protection:

1. On the **Home** page, under **Tamper protection**, click **Authenticate user**.
   For information about the **Home** page, see *About the Home page* (page 4).
2. In the **Tamper Protection Authentication** dialog box, enter the tamper protection password and click **OK**.
3. On the **Home** page, under **Tamper protection**, click **Configure tamper protection**.
4. In the **Tamper Protection Configuration** dialog box, select the **Enable tamper protection** check box.

11.5 About the tamper protection password

When tamper protection is enabled, you must enter the tamper protection password if you want to configure on-access scanning, configure suspicious behavior detection, or disable tamper protection. You must be a member of the SophosAdministrator group to do this.

You need to enter the tamper protection password only once after you open Sophos Endpoint Security and Control. If you close Sophos Endpoint Security and Control and then open it again, you will need to enter the password again.

If you want to uninstall any of the Sophos Endpoint Security and Control components, you must enter the tamper protection password before you can disable tamper protection and then uninstall the software.

If tamper protection is disabled but the tamper protection password has been set previously, you must enter the password before you can re-enable tamper protection.

You will need to enter the tamper protection password to enable tamper protection if:

- You have previously enabled tamper protection, created a tamper protection password, and then disabled tamper protection.
- A tamper protection password has been created in the management console, but tamper protection is not enabled.

11.6 Enter the tamper protection password to configure the software

If you are a member of the SophosAdministrator group, you can authenticate yourself by entering the tamper protection password.

To authenticate yourself:

1. On the **Home** page, under **Tamper protection**, click **Authenticate user**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. In the **Tamper Protection Authentication** dialog box, enter the tamper protection password and click **OK**.

11.7 Change the tamper protection password

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

You must be a member of the SophosAdministrator group to change the tamper protection password.

To change the tamper protection password:

1. If you haven't already authenticated yourself, and the **Configure tamper protection** option on the **Home** page is unavailable, follow the instructions in *Enter the tamper protection password to configure the software* (page 89) before proceeding to step 2.
2. On the **Home** page, under **Tamper protection**, click **Configure tamper protection**.

   For information about the **Home** page, see *About the Home page* (page 4).

3. In the **Tamper Protection Configuration** dialog box, click **Change** under the **Password** box.
4. In the **Tamper Protection Password** dialog box, enter and confirm a new password.

   Tip: The password should be at least eight characters long and contain numbers and mixed-case letters.

11.8 Uninstall Sophos security software

If you are a member of the SophosAdministrator group, you can uninstall the Sophos security software using Control Panel:

- Sophos Endpoint Security and Control components (Sophos Anti-Virus, Sophos Client Firewall, Sophos AutoUpdate, Sophos Remote Management System)
- Sophos SafeGuard Disk Encryption

To uninstall Sophos security software when tamper protection is enabled:

1. On the **Home** page, under **Tamper protection**, click **Authenticate user**.

   For information about the **Home** page, see *About the Home page* (page 4).

2. In the **Tamper Protection Authentication** dialog box, enter the tamper protection password and click **OK**.
3. On the **Home** page, under **Tamper protection**, click **Configure tamper protection**.

4. In the **Tamper Protection Configuration** dialog box, clear the **Enable tamper protection** check box and click **OK**.

   Tamper protection is disabled.

5. In **Control Panel**, open **Add or Remove Programs**, locate the software you want to remove and click **Change/Remove** or **Remove**. Follow the instructions on screen for uninstalling the software.

11.9 View the tamper protection log

The tamper protection log shows two types of event:

- Successful tamper protection authentication events, showing the name of the authenticated user and the time of authentication.
- Failed attempts to tamper, showing the name of the targeted Sophos product or component, the time of the attempt, and the details of the user responsible for the attempt.

You must be a member of the SophosAdministrator group to view the tamper protection log.

To view the tamper protection log:

- On the **Home** page, under **Tamper protection**, click **View tamper protection log**.

  For information about the **Home** page, see *About the Home page* (page 4).

From the log page, you can copy the log to the clipboard, or email, or print the log.

To find specific text in the log, click **Find** and enter the text you want to find.

12 Troubleshooting

12.1 Updating has failed

12.1.1 About update failures

To find out more about an update failure, look at the update log: for information on how to do this, see *View the updating log file* (page 86).

The sections below explain why updating may fail, and how you can change the settings to correct the problem.

- *Sophos Endpoint Security and Control contacts the wrong source for updates* (page 92)
- *Sophos Endpoint Security and Control cannot use your proxy server* (page 92)
- *Automatic updating is not correctly scheduled* (page 92)
- *The source for updates is not being maintained* (page 93)

12.1.2 Sophos Endpoint Security and Control contacts the wrong source for updates

1. On the **Configure** menu, click **Updating**.
2. On the **Primary location** tab, check that the address and account details are those supplied by your administrator.

   For information on configuring the **Primary location** tab, see *Set a source for updates* (page 84).

12.1.3 Sophos Endpoint Security and Control cannot use your proxy server

If Sophos Endpoint Security and Control updates itself via the internet, you must make sure that it can use your proxy server (if there is one).

1. On the **Configure** menu, click **Updating**.
2. On the **Primary location** tab, click **Proxy Details**.
3. Ensure that the proxy server address, the port number, and the account details are correct.

   For information on entering proxy details, see *Update via a proxy server* (page 85).

12.1.4 Automatic updating is not correctly scheduled

1. On the **Configure** menu, click **Updating**.

2. Click the **Schedule** tab. (For information on the **Schedule** tab, see *Schedule updates* (page 84).)
3. If your computer is networked, or if you update via a broadband internet connection, select **Enable automatic updates** and enter the updating frequency. If you update via a dial-up connection, select **Check for updates on dial-up**.

12.1.5 The source for updates is not being maintained

Your company may have moved the directory (on the network or on a web server) from which you should update. Alternatively, they may not be maintaining the directory.

If you think this may be the case, contact your network administrator.

12.2 Threat not cleaned

If Sophos Anti-Virus has not cleaned a threat from your computer, it may be because of the following.

Automatic cleanup is disabled

If Sophos Anti-Virus has not attempted cleanup, check that automatic cleanup has been enabled. For information on enabling automatic cleanup, see the following topics:

- *Configure on-access cleanup* (page 11)
- *Configure right-click cleanup* (page 19)
- *Configure cleanup for a custom scan* (page 23)

Automatic cleanup of adware and PUAs is not available for on-access scanning.

Cleanup failed

If Sophos Anti-Virus could not clean a threat ("Cleanup failed"), it may be that it cannot clean that type of threat, or you have insufficient access rights.

Full computer scan is required

You may need to run a full computer scan to determine all components of a multi-component threat, or to detect a threat in files that were previously hidden, before Sophos Anti-Virus can clean it from your computer.

1. To scan all disk drives, including boot sectors, on the computer, run the **Scan my computer** scan. For information, see *Run a full computer scan* (page 26).
2. If the threat has still not been fully detected, it may be because you have insufficient access rights, or some drives or folders on the computer, containing the threat's components, are excluded from scanning. For information, see *Add, edit, or delete on-access scanning exclusions* (page 13). Check the list of the items excluded from scanning. If there are some items on the list, remove them from the list and scan your computer again.

Removable medium is write-protected

If dealing with a removable medium (e.g. floppy disk, CD), make sure that it is not write-protected.

NTFS volume is write-protected

If dealing with files on an NTFS volume (Windows 2000 or later), make sure that it is not write-protected.

Virus/spyware fragment has been reported

Sophos Anti-Virus does not clean a virus/spyware fragment because it has not found an exact virus/spyware match. Refer to *Virus/spyware fragment reported* (page 94).

12.3 Virus/spyware fragment reported

If a virus/spyware fragment is reported, do the following:

1. Update your protection immediately, so that Sophos Anti-Virus has the latest virus identity files.
2. Run a full computer scan.

- *Update immediately* (page 84)
- *Run a full computer scan* (page 26)

If virus/spyware fragments are still reported, contact Sophos technical support for advice.

- *Technical support* (page 106)

The report of a virus/spyware fragment indicates that part of a file matches part of a virus or item of spyware. There are three possible causes:

Variant of a known virus or item of spyware

Many new viruses or items of spyware are based on existing ones, so that code fragments typical of a known virus or item of spyware may appear as part of a new one. If a virus/spyware fragment is reported, it is possible that Sophos Anti-Virus has detected a new virus or item of spyware, which could become active.

Corrupted virus

Many viruses contain bugs in their replication routines that cause them to infect target files incorrectly. An inactive portion of the virus (possibly a substantial part) may appear within the host file, and this is detected by Sophos Anti-Virus. A corrupted virus cannot spread.

Database containing a virus or item of spyware

When running a full computer scan, Sophos Anti-Virus may report that there is a virus/spyware fragment in a database file. If this is the case, do not delete the database. Contact Sophos technical support for advice.

For information about contacting technical support, see *Technical support* (page 106).

12.4 Threat partially detected

To scan all disk drives, including boot sectors, on the computer, run a full computer scan.

- *Run a full computer scan* (page 26)

If the threat has still not been fully detected, it may be because some drives or folders on the computer, containing the threat's components, are excluded from scanning. If there are some of these items on the exclusion list, remove them, and then scan your computer again.

- *Add, edit, or delete on-demand scanning exclusions* (page 16)

If the threat has still not been fully detected, it may be because you have insufficient access rights.

Sophos Anti-Virus may not be able to fully detect or remove threats with components installed on network drives.

12.5 Adware or PUA disappeared from quarantine

If an item of adware or PUA detected by Sophos Anti-Virus has disappeared from Quarantine manager without you taking any action, the adware or PUA might have been authorized or cleaned up from the management console or by another user. Check the list of authorized adware and PUAs to see if it has been authorized. To find out how to do this, refer to *Authorize adware and PUAs for use* (page 32).

12.6 Computer becomes slow

If your computer has become very slow, it may be that you have a PUA running on and monitoring your computer. If you have on-access scanning enabled, you may also see many desktop alerts warning about a PUA. To solve the problem, do the following.

1. Run the **Scan my computer** scan to detect all components of the PUA. For information, see *Run a full computer scan* (page 26).

   Note: If after the scan the PUA is partially detected, refer to *Threat partially detected* (page 95), step 2.

2. Clean the adware or PUA from your computer. To find out how to do this, refer to *Deal with adware and PUAs in quarantine* (page 37).

12.7 Allow access to drives with infected boot sectors

Important: If a management console is used to administer Sophos Endpoint Security and Control on this computer, it may override any changes you make here.

By default, Sophos Anti-Virus prevents access to removable disks whose boot sectors are infected.

To allow access (for example, to copy files from a floppy disk infected with a boot sector virus):

1. Click **Home** > **Anti-virus and HIPS** > **Configure anti-virus and HIPS** > **Configure** > **On-access scanning** .
2. On the **Scanning** tab, select **Allow access to drives with infected boot sectors** check box.

Important: As soon as you have finished accessing the disk, clear the check box, and then remove the disk from the computer so that it cannot try to re-infect the computer on restart.

12.8 Unable to access areas of Sophos Endpoint Security and Control

If you are unable to use or configure particular areas of Sophos Endpoint Security and Control it might be because access to these areas is restricted to members of particular Sophos user groups.

For more information about Sophos user groups, see *About Sophos groups* (page 5).

12.9 Recovering from virus side-effects

Recovery from virus infection depends on how the virus infected the computer.

Virus side-effects

Some viruses leave you with no side-effects to deal with, others may have such extreme side-effects that you have to restore a hard disk in order to recover.

Some viruses gradually make minor changes to data. This type of corruption can be hard to detect.

What to do

It is very important that you read the threat analysis on the Sophos website, and check documents carefully after cleanup. Refer to *Get cleanup information* (page 42) to find out how to view details on the Sophos website of the virus's side-effects.

Sound backups are crucial. If you did not have them before you were infected, start keeping them in case of future infections.

Sometimes you can recover data from disks damaged by a virus. Sophos can supply utilities for repairing the damage caused by some viruses.

Contact Sophos technical support for advice.

For information about contacting technical support, see *Technical support* (page 106).

12.10 Recovering from adware and PUA side-effects

Removing adware and PUAs may have some side-effects that cannot be eliminated during cleanup.

Operating system has been modified

Some items of adware and PUAs modify the Windows operating system, for example, change your internet connection settings. Sophos Anti-Virus cannot always restore all settings to the values they had before installation of the adware or PUA. If, for example, an item of adware or PUA changed the browser home page, then Sophos Anti-Virus cannot know what the previous home page setting was.

Utilities not cleaned

Some items of adware and PUAs can install utilities, such as .dll or .ocx files, on your computer. If a utility is harmless (that is, it does not possess the qualities of adware and PUAs), for example, a language library, and is not integral to the adware or PUA, Sophos Anti-Virus may not detect it as part of the adware or PUA. In this case, the file is not removed from your computer even after the adware or PUA that installed the file has been cleaned from the computer.

Adware or PUA is part of a program you need

Sometimes an item of adware or PUA is part of a program that you intentionally installed, and needs to be there for the program to run. If you remove the adware or PUA, the program may stop running on your computer.

What to do

It is very important that you read the threat analysis on the Sophos website. Refer to *Get cleanup information* (page 42) to find out how to view details on the Sophos website of the adware or PUA's side-effects.

To be able to recover your system and its settings to their previous state, you should maintain regular backups of your system. You should also make backup copies of the original executable files of the programs you want to use.

For more information or advice on recovering from adware and PUA side-effects, contact Sophos technical support.

For information about contacting technical support, see *Technical support* (page 106).

12.11 Password error reported

If you are trying to schedule a custom scan, and an error message is displayed about the password, make sure of the following:

- The password is correct for the user account
- The password is not blank

To make sure that the password is correct, check the properties of the user account in **User Accounts** in **Control Panel**.

12.12 "Service failure" error message

Symptoms

You see one of the following error messages in the notification area:

- `Anti-virus and HIPS: service failure`
- `Firewall: service failure`

Causes

One of the Sophos Endpoint Security and Control services on your computer has failed, and needs to be restarted.

Resolve the problem

1. Using Windows, open Services.
2. Do one of the following:
   - If you see an `Anti-virus and HIPS: service failure` error message, right-click **Sophos Anti-Virus** , and then click **Restart**.
   - If you see a `Firewall: service failure` error message, right-click **Sophos Client Firewall** Manager, and then click **Restart**.

Notes

- To open Services, click **Start**, click **Control Panel**, double-click **Administrative Tools**, and then double-click **Services**.

12.13 Firewall log database is corrupted

Symptom

Whilst using the firewall log viewer, you see the error message "The current Sophos Client Firewall log database is corrupted."

Cause

The firewall's event log database has become corrupted and needs to be recreated.

Resolve the problem

You need to be a member of the Windows Administrators group on this computer to do this.

1. Using Windows, open Services.
2. Right-click **Sophos Client Firewall** Manager, and then click **Stop**.
3. Using Windows Explorer, navigate to C:\Documents and Settings\All Users\Application Data\Sophos\Sophos Client Firewall\logs.

To view this hidden folder, you may need to display hidden files and folders in Windows Explorer.

4. Delete op_data.mdb.
5. In Services, right-click **Sophos Client Firewall** Manager, and then click **Restart**.

Notes

- To open Services, click **Start**, click **Control Panel**, double-click **Administrative Tools**, and then double-click **Services**.

13 Glossary

adware and PUAs	Adware displays advertising, for example, pop-up messages, which affects user productivity and system efficiency. A potentially unwanted application (PUA) is an application that is not inherently malicious but is generally considered unsuitable for the majority of business networks.
application rule	A rule that applies only to packets of data transferred over the network to or from a particular application.
Authorization manager	The module that enables you to authorize adware and PUAs, suspicious files, and applications that exhibit suspicious behavior and buffer overflows.
automatic cleanup	Cleanup that is performed without any intervention or acceptance by you.
blocked	A status showing that applications (including hidden processes), connections, protocols, ICMP messages, and so on have been refused network access.
buffer overflow detection	Detects buffer overflow attacks.
checksum	Each version of an application has a unique checksum. The firewall can use this checksum to decide whether an application is allowed or not.
cleanup	Cleanup eliminates threats on your computer by removing a virus from a file or boot sector, moving or deleting a suspicious file, or deleting an item of adware or PUA. It is not available for threats that are detected by web page scanning because the threats are not downloaded to your computer. Therefore, there is no need to take any action.
Content Control List (CCL)	A set of conditions that specify file content, for example, credit or debit card numbers, or bank account details near to other forms of personally identifiable information. There are two types of Content Control List: SophosLabs Content Control List and custom Content Control List.
content rule	A rule that contains one or more Content Control Lists and specifies the action that is taken if the user attempts to transfer data that matches all the Content Control Lists in the rule to the specified destination.
controlled application	An application that is prevented from running on your computer by your organisation's security policy.

custom rule A rule created by the user to specify the circumstances under which an application is allowed to run.

data control A feature to reduce accidental data loss from workstations. It works by taking action when a workstation user tries to transfer a file that meets criteria defined in the data control policy and rules. For example, when a user attempts to copy a spreadsheet containing a list of customer data to a removable storage device or upload a document marked as confidential into a webmail account, data control will block the transfer, if configured to do so.

data view The view that displays different data depending on the item selected in the tree view.

description bar A bar in the log viewer which appears above the data view and contains the name of the currently selected item in the tree view.

device control A feature to reduce accidental data loss from workstations and restrict introduction of software from outside of the network. It works by taking action when a workstation user tries to use an unauthorized storage device or networking device on their workstation.

extensive scanning Scans every part of every file.

firewall event A situation that occurs when an unknown application, or the operating system, on one computer tries to communicate with another computer over a network connection in a way that was not specifically requested by the applications running on the other computer.

firewall policy The settings issued by the management console which the firewall uses to monitor the computer's connection to the internet and other networks.

global rules Rules that are applied to all network connections and applications which do not already have a rule. They take lower priority than the rules set on the LAN page. They also take lower priority than application rules (unless the user specifies otherwise).

hidden process An application sometimes launches a hidden process to perform some network access for it. Malicious applications may use this technique to evade firewalls: they launch a trusted application to access the network rather than doing so themselves.

high-priority global rule A rule that is applied before any other global or application rule.

Host Intrusion Prevention System (HIPS)	Overall term for pre-execution behavior analysis and runtime behavior analysis.
ICMP	Abbreviation for "Internet Control Message Protocol." A network-layer internet protocol that provides error correction and other information relevant to IP packet processing.
ICMP settings	The settings that specify which types of network management communication are allowed.
instant messaging	A category of controlled applications that includes instant messaging client applications (e.g. MSN).
interactive mode	The mode in which the firewall displays one or more learning dialogs when it detects network traffic for which it has no rule.
learning dialog	A dialog box that asks the user to choose whether to allow or block network activity when an unknown application requests network access.
log cleanup settings	The settings that control when records are deleted.
log viewer	A form where users can view details from the event database, such as connections that have been allowed or blocked, the system log and any alerts that have been raised.
manual cleanup	Cleanup that is performed by using special disinfectors or utilities, or by deleting files manually.
match	Equal the content that is defined in a Content Control List.
NetBIOS	Abbreviation for "Network Basic Input/Output System." Software that provides an interface between the operating system, the I/O bus, and the network. Nearly all Windows-based LANs are based on NetBIOS.
network protocol	A set of rules or standards designed to enable computers to connect with one another over a network and to exchange information with as little error as possible.
non-interactive mode	The mode in which the firewall either blocks or allows all network traffic for which it has no rule.
normal scanning	Scans only those parts of each file that are likely to be infected with a virus.
on-access scan	Your main method of protection against threats. Whenever you copy, move, or open a file, or start a program, Sophos Anti-Virus scans the

	file or program and grants access to it only if it does not pose a threat to your computer or has been authorized for use.
on-demand scan	A scan that you initiate. You can use an on-demand scan to scan anything from a single file to everything on your computer that you have permission to read.
primary configuration	The firewall configuration used for the corporate network that the user connects to for their day-to-day business.
process settings	The settings that specify whether modified or hidden processes should be allowed network access.
Quarantine manager	The module that enables you to view and deal with items that have been quarantined.
rawsocket	Rawsockets allow processes to control all aspects of the data they send over the network and can be used for malicious purposes.
right-click scan	A scan of file(s) in Windows Explorer or on the desktop that you run using the shortcut menu.
rootkit	A Trojan or technology that is used to hide the presence of a malicious object (process, file, registry key, or network port) from the computer user or administrator.
runtime behavior analysis	Dynamic analysis performed by suspicious behavior detection and buffer overflow detection.
scanning error	An error in scanning a file, e.g. access denied.
scheduled scan	A scan of your computer, or parts of your computer, that runs at set times.
secondary configuration	The firewall configuration used when users are not connected to the main corporate network, but to another network such as a hotel or airport wireless network or another corporate network.
spyware	A program that installs itself onto a user's computer by stealth, subterfuge, or social engineering, and sends information from that computer to a third party without the user's permission or knowledge.
Sophos Live Protection	A feature that uses in-the-cloud technology to instantly decide whether a suspicious file is a threat and take action specified in the Sophos anti-virus cleanup configuration.
stateful inspection	Firewall technology that keeps a table of active TCP and UDP network connections. Only packets matching a known connection state will be allowed by the firewall; others will be rejected.

storage device	Removable storage devices (for example, USB flash drives, PC Card readers, and external hard disk drives), CD/DVD drives, floppy disk drives, and secure removable storage devices (for example, SanDisk Cruzer Enterprise, Kingston Data Traveller, IronKey Enterprise, and IronKey Basic USB flash drives with hardware encryption).
suspicious behavior detection	Dynamic analysis of the behavior of all programs running on the system in order to detect and block activity which appears to be malicious.
suspicious file	A file that exhibits a combination of characteristics that are commonly, but not exclusively, found in viruses.
system memory	The memory that acts as a bridge between applications and the actual data processing done at the hardware level. It is used by the operating system.
system rule	A rule that will be applied to all applications and will allow or block low-level system network activity.
tamper protection	A feature that prevents unauthorized users (local administrators and users with limited technical knowledge) and known malware from uninstalling Sophos security software or disabling it through the Sophos Endpoint Security and Control interface.
threat event	Detection or disinfection of a threat.
tree view	The view that controls what data the log viewer displays in its data view.
true file type	The file type that is ascertained by analyzing the structure of a file as opposed to the filename extension. This is a more reliable method.
trusted application	An application that is allowed full and unconditional access to the network.
unidentified virus	A virus for which there is no specific identity.
unknown traffic	A form of network access by an application or service for which the firewall has no rule.
virus identity file (IDE)	A file that enables Sophos Anti-Virus to detect and disinfect a particular virus, Trojan, or worm.
Voice over IP	A category of controlled applications that includes Voice over IP client applications.
web control	A feature that allows you to set and enforce web access policies for your organization, and to view reports on web browsing usage. You can allow or block user access to certain categories of websites, and users can also be warned whether visiting a website will violate your policies.

web protection	A feature that detects threats in web pages. This feature blocks sites that have hosted malicious content in the past and also prevents malicious downloads. Web protection is part of the anti-virus and HIPS policy.
working mode	The setting that determines whether the firewall applies actions with input from the user (interactive mode) or automatically (the non-interactive modes).

14 Technical support

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

- Visit the SophosTalk community at *http://community.sophos.com/* and search for other users who are experiencing the same problem.
- Visit the Sophos support knowledgebase at *http://www.sophos.com/support/*.
- Download the product documentation at *http://www.sophos.com/support/docs/*.
- Send an email to *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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ConvertUTF

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