



OPERATION CLEANUP: COMPLETE MALWARE RECOVERY GUIDE

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Introduction

This guide will help you clean your computer of malware. If you think your computer is infected with a virus or some other malicious software, you may want to use this guide. It contains instructions that, if done correctly and in order, will remove most malware infections on a Windows operating system. It highlights the tools and resources that are necessary to clean your system. Malware is a general term for any malicious software, including viruses, trojans, rootkits, spyware and adware.

Many different **symptoms** indicate a malware infection. Sometimes, the symptoms can be difficult to detect. Below is a list of symptoms you may experience when you are infected with malware:

- Your computer shows strange error messages or popups.
- Your computer takes longer to start and runs more slowly than usual.
- Your computer freezes or crashes randomly.
- The homepage of your web browser has changed.
- Strange or unexpected toolbars appear in your web browser.
- Your search results are being redirected.
- You start ending up at websites you didn't intend to go to.
- You cannot access security related websites.
- New icons and programs appear on the desktop that you did not put there.
- Your desktop background has changed without your knowledge.
- Your programs won't start.
- Your security protection have been disabled for no apparent reason.
- You cannot connect to the internet or it runs very slowly.
- Your programs and files are suddenly missing.
- Your computer is performing actions on its own.

Disclaimer: *This guide is for informational purposes only and is not a substitute for professional malware removal. Your use of this information is at your own risk.*

 I recommend that you back up all your important data before attempting to perform the malware removal process. In the unlikely event that something goes wrong, you can restore your data. Do not back up any system files, installers (.exe), or screensavers (.scr) because they may be infected by malware.

[How do I back up my data?](#)

Note:

1. Several steps may need repeated a number of times in order to remove all threats.



2. In some cases, the only way to remove a malware infection is to do a complete reformat and reinstall of the operating system.
3. You may want to print out or make a copy of these instructions so that you may easily refer to them if needed.

Preparation for Removal

1. Reset Proxy Settings (Internet Connection Problems)

Some malware infections will turn on a proxy setting, which can prevent you from accessing the Internet or downloading tools required for disinfection. It can also cause redirects. Follow these instructions to reset the proxy settings:

Go to the **Start** menu , click **Control Panel**, and then double-click **Internet Options**. Go to the **Connections** tab, and click **LAN settings**. Uncheck the first box under **Proxy Server**, and then click the OK button to close the screen.

Alternatively, you can go to the **Start** menu , click **Run**, type **inetcpl.cpl**, and then click OK. Then continue with the instructions given above where you click the **Connections** tab.

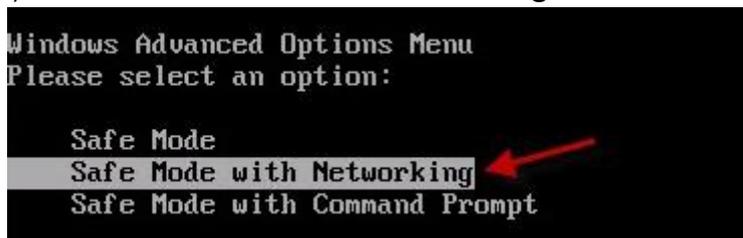


The Removal Process

If you have a malware infection that is blocking Internet access, disabling the desktop, or preventing programs from running, you will need to boot into safe mode. Some malware infections will not run in safe mode, thus allowing easier detection and removal.

To access safe mode, restart your computer and start tapping the **F8** key before Windows begins to load. You will see a black screen with a number of options. Use

the arrow keys to select the **Safe Mode with Networking** option, and then press the **Enter** key. Once you are in **Safe Mode with Networking**, move on to Step 1.



For a detailed tutorial on how to start the computer in safe mode, visit [How to Start in Windows Safe Mode](#)

⚠ If safe mode is disabled or if for some reason you cannot get into safe mode, skip down to **Can't Boot Into Windows or Safe Mode?**

Step 1 - Automatic Preliminary Rootkit Scan

You need to scan your computer for possible rootkits before running other anti-malware software.

TDSSKiller is an anti-rootkit tool from Kaspersky. It is specially designed to remove malware belonging to the rootkit family **Rootkit.Win32.TDSS**. This rootkit family downloads and execute other malware, delivers advertisements to your computer, and blocks programs from running. It also redirects Google searches as well as blocks access to security sites. TDSSKiller is simple to use and requires no installation.



Download and run **TDSSKiller** - [Download here](#) or [here](#) - [Homepage](#)

To run TDSSKiller, follow these instructions:

When the program opens, click the **Start scan** button. The scan time is very short (less than a minute). If the scan completes with nothing found, click **Close** to exit. If **malicious objects** are found, the default action will be **Cure**. Click on **Continue**. If **suspicious objects** are found, the default action will be **Skip**. Click on **Continue**. It may ask you to reboot the computer to complete the disinfection.



⚠ If TDSSKiller does not run, try renaming it. To do this, right-click on the **TDSSKiller** icon and select **Rename**. Give it a random name with the .com file extension (e.g. 123abc.com). If you still cannot run TDSSKiller after renaming it, try running [FixTDSS](#) from Symantec. If FixTDSS does not work, you will need to use [RKill](#) to terminate malicious processes.

Step 2 - Scan and Clean (On-demand Scans)

Many tools will scan for and remove various malware infections. Unfortunately, none of them will detect and remove 100% of all malware; therefore, it is important to use more than one, in the hope that their combined detection is enough to find the problem.

Below are three highly recommended on-demand scanners. They do an excellent job at detecting threats and completely removing them.

Important notes:

- Make sure the scanners are updated before you scan with them.
- After you have downloaded and updated the on-demand scanners, disconnect your Internet connection. This will eliminate the possibility of any further malware installing on your computer.
- Do not use your computer for anything else until the scanning process has finished.
- Some of these scans may take over an hour to run.
- Do NOT run more than one scan at a time.
- You may need to restart your computer to complete the removal process.
- If you cannot run any of the scanners below, you will need to use [RKill](#) to terminate malicious processes.



Download and install **Malwarebytes** - [Download here](#) or (malwarebytes.org)

Open Malwarebytes and perform a **quick scan**. You can also perform a full system scan, but that is optional.



Once the scan is complete, remove all found infections.



⚠ Malwarebytes is designed to run best in Windows normal mode. If you can run it in normal mode, then you should. If you cannot run it in normal mode, run it in safe mode. However, once you have the system running better, you should scan again in normal mode.

⚠ If Malwarebytes will not install, simply rename the downloaded file (mbam-setup.exe) to **explorer.exe** or **winlogon.exe**. Once you rename it, try running it

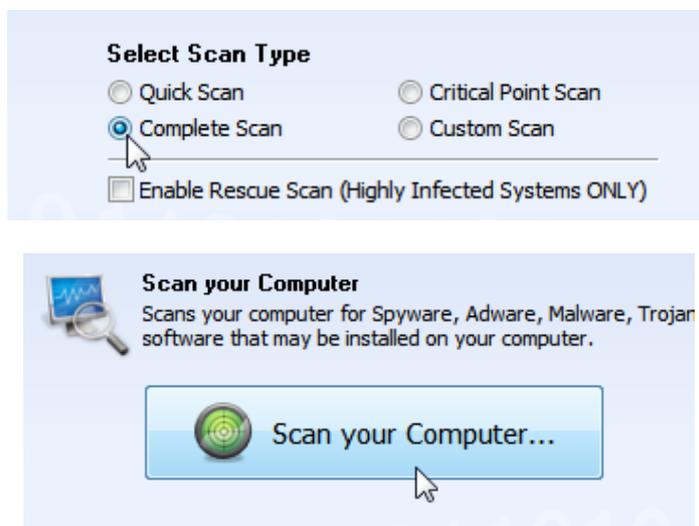
again. If that does not work, skip down to **SuperAntiSpyware**. After you scan with SuperAntiSpyware, try installing Malwarebytes again.



Download and run **SuperAntiSpyware Portable** - [Download here](#) - [Homepage](#)

Why, you might ask, am I using the portable version? Because it requires no installation, contains the latest definitions, and automatically gives you a random filename, so malware can't block it from running.

Select the **Complete Scan** option, and then click the **Scan your Computer** button to start scanning your computer.



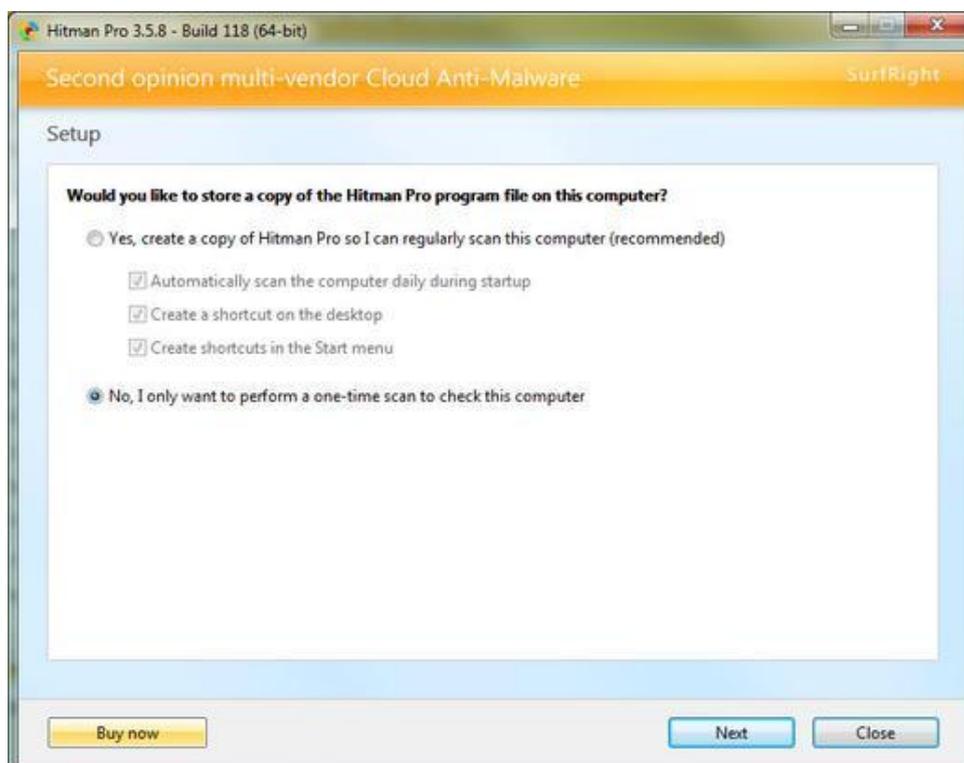
Download and run **Hitman Pro** - [Download here \(32-bit\)](#), [\(64-bit\)](#) - [Homepage](#)

It requires no installation.  Hitman Pro requires a working Internet connection to detect malware.

When the program opens, simply click the **Next** button.



Click the **Next** button again.



The scan should complete within a few minutes and display a list of threats. Click the **Next** button to delete the threats.



Note: TDSSKiller, SuperAntiSpyware, and Hitman Pro are portable programs, which means they can run directly from a USB flash drive. You can take them anywhere and use them on any computer.

Step 3 - Run a Full Antivirus Scan

If the on-demand scan fails to find anything or if it finds malware that it can't delete, it is time to launch a full antivirus scan.

If you currently have antivirus software installed on your computer, make sure it is up to date with the latest virus definitions, and perform a full system scan with it. Remove or quarantine everything that it finds.

⚠ Before removing anything, make sure it's not a false positive. "A false positive is when antivirus software identifies a non-malicious file as a virus." In other words, false positives are mistakes made by an antivirus. If you suspect a file to be a false positive, go to [VirusTotal](#) or [Jotti's malware scan](#) and upload the file. They will scan the file with several antivirus engines

If you do not have antivirus software installed, get it immediately.  [Avast!](#) and  [Microsoft Security Essentials](#) are two highly recommended antivirus programs. You should only have one antivirus program running on your computer.

- [Best Free Antivirus Software](#)

After the Removal Process

1. Clean up System Restore

Your "restore points" may contain malware. The only way to remove the malware is to delete the restore points. This will remove any old points that contain malware. You can use **Disk Cleanup** to remove all but the most recent restore point. Follow these instructions to run **Disk Cleanup**:

Go to **Start** menu  > **All Programs** > **Accessories** > **System Tools** and then click **Disk Cleanup**. Click on the **More Options** tab and locate the section near the bottom labeled **System Restore**. Click on the **Cleanup** button.

Here's another way to open **Disk Cleanup**: Click the **Start** button . In the search box, type **disk cleanup**, and then, in the list of results, click **Disk Cleanup**.



2. Change All Passwords

Some malware infections will steal your personal data such as passwords, emails, and banking information. Change all your passwords immediately, especially if you do any banking or other financial transactions on the computer.

- [Password Strength Checker](#)

3. Clean up Temporary Files

After the removal process, you need to remove your temporary files. Removing your temporary files will delete the remaining malware files from the temp folders. It will also free up hard disk space, which will help to speed up your computer.

 If you are experiencing problems like missing files or folders, skip this step and go on to **Fix Post-Disinfection Problems**.



Download **TFC (Temp File Cleaner)** - [Download here](#) If you have **CCleaner** installed, you can use that instead, but do not use the registry cleaner.

Once downloaded, double-click **TFC** to open it. TFC will close all open programs when run, so make sure you have saved all your work before you begin. Click the **Start** button to begin the process. Once it's finished, it should automatically reboot your computer. If it does not, manually reboot to ensure a complete clean.

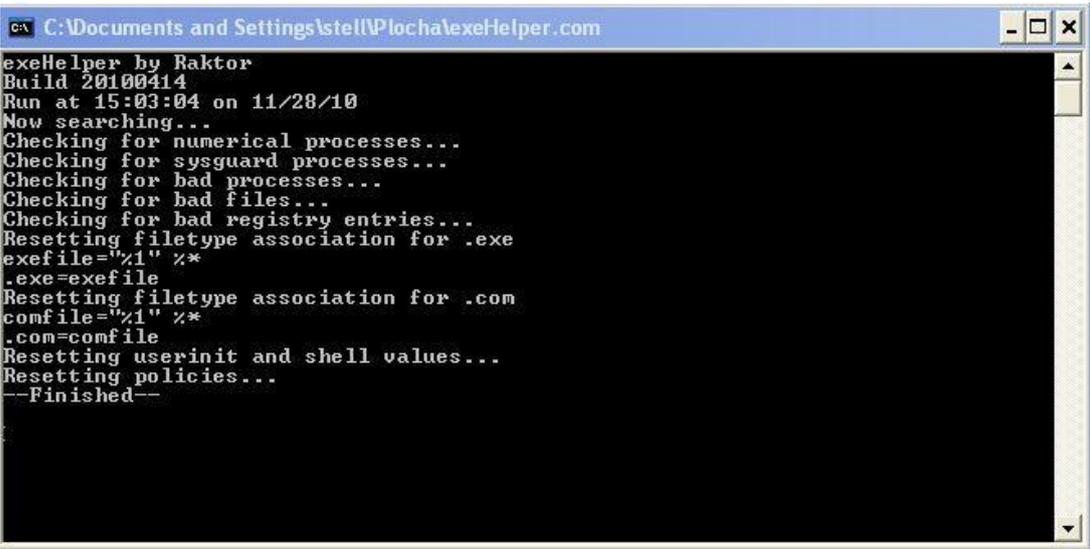
Fix Post-Disinfection Problems

Once you have removed the malware infection from your computer, you may experience some annoying problems. Fortunately, there are easy ways to fix these problems.

1. Cannot Open or Run Programs (.exe files)

This problem occurs when your .exe file associations are broken. This is usually caused by malware that changes the default file associations in Windows. Follow these instructions to fix this problem:

Download **exeHelper** from one of these two links: [Link 1](#), [Link 2](#) Double-click on **exeHelper** to run the fix. A black window should pop up.



```

C:\Documents and Settings\stella\plocha\exeHelper.com
exeHelper by Raktor
Build 20100414
Run at 15:03:04 on 11/28/10
Now searching...
Checking for numerical processes...
Checking for sysguard processes...
Checking for bad processes...
Checking for bad files...
Checking for bad registry entries...
Resetting filetype association for .exe
exe file=\"%1\" %*
.exe=exefile
Resetting filetype association for .com
com file=\"%1\" %*
.com=comfile
Resetting userinit and shell values...
Resetting policies...
--Finished--
  
```

Press any key to close, once the fix is completed.

If exeHelper does not work, follow the instructions provided in the following links:

- [Unable to Start a Program with an .exe File Extension \(Windows XP\)](#)
- [Repair Broken File Associations in Windows Vista](#) or [Windows 7](#)

2. I'm Being Redirected to Random Websites

If you're having a problem with redirects, your hosts file may be corrupted. In order to fix this problem, you have to reset the hosts file back to the default. To reset the hosts file automatically, simply go to [How do I reset the hosts file?](#) and click the Fix it button. Then follow the steps in the Fix it wizard.



If you still have redirect issues after resetting the hosts file, try running **GooredFix**. GooredFix fixes **Firefox** browser redirection problems. If you do not use Firefox, you can skip this. Download [GooredFix](#) and save it to your desktop. Close Firefox first, and then run the tool. When prompted to run the scan, click **Yes**. Once the scan is complete, a log will appear; you can close it.

If you still have redirect issues after trying all of the above, your router may be hijacked by malware. In order to fix this problem, you have to reset your router to its default settings. [How to Reset a Router Back to the Factory Default Settings](#)

3. Repair System Settings

[SuperAntiSpyware](#) includes a repair feature that allows you to repair or restore various settings, which are often changed by malware infections. It can repair broken Internet connections, Desktops, Registry editing, Task Manager and more. You can find the repair feature by clicking the **Repairs** button at the main menu.



4. Web Browser Hijacked

Malware will usually try to hijack and redirect your web browser. Your homepage and default search may be changed. Open your web browser options, and correct the choices. [How to Change Browser Settings](#)

5. Unhide All Files / Restore Quick Launch and the Start Menu

Some malware infections will hide all the files on your computer from being seen. To make your files visible again, download  [Unhide](#) to your desktop.

Once downloaded, double-click on **Unhide** and allow it to run. It will remove the hidden attribute on all files and attempt to restore Quick Launch and Start Menu items to their proper location.

- [Restore Default Start Menu Shortcuts in Vista](#) or [Windows 7](#)



You may also want to use [Re-Enable](#), which can undo many changes made by a malware infection.

Get Expert Analysis

If you want to be certain that your computer is fully cleaned or just want a second opinion, you can create a topic at one of the forums listed below and ask for help. These forums have people who are well trained and experienced in malware removal. Be sure to mention in your topic that you followed this guide. Please note that it may take a couple of days to receive a reply, so be patient.

Malware removal forums:  [Bleeping Computer](#),  [Geeks to Go](#),  [What the Tech](#),  [Tech Support Forum](#),  [MalWare Removal](#)

Can't Boot Into Windows or Safe Mode?

If the malware infection is so severe that you cannot boot into Windows or safe mode, then I recommend using an antivirus rescue CD. An antivirus rescue CD is a bootable CD that can be used to scan your computer for malware without having to boot into the operating system. Many antivirus companies provide free rescue CDs. They are extremely effective at removing malware.



Below are three highly recommended **antivirus rescue CDs**.

 [Avira AntiVir Rescue System \(230 MB\) - How to create and use Avira Rescue CD](#)

 [Kaspersky Rescue Disk \(197 MB\) - How to create and use Kaspersky Rescue Disk](#)

 [Dr.Web LiveCD \(170 MB\) - How to create and use Dr.Web Live CD](#)

- Burn the antivirus ISO file to a CD using [CD burning software](#).
- Insert the CD into the infected computer's CD-ROM drive.
- [Enter the computer's BIOS](#), set it to boot from the CD, and reboot the computer.
- Scan the computer with the rescue CD.

Read [51 Uses For Live CDs](#) for more information about Live CDs.

If all else fails, you must reformat your hard drive and reinstall Windows. [When should I re-format? How should I reinstall?](#)

Conclusion

Your computer should be fully cleaned of all malware after following this guide. If you believe your computer is still infected, seek professional help to remove the malware. If you have any questions or comments regarding this guide, you can contact me by email: rs.realsecurity@gmail.com You can also find this guide on my website: [Your Real Security](#)

- [HackerProof: Your Guide To PC Security](#) by Matt Smith
- [9 Easy Ways To Never Get A Virus](#) by James Bruce
- [7 Common Sense Tips to Help You Avoid Catching Malware](#)

Further Help

Perform an Online Malware Scan

If you believe your computer is still infected, you can perform an online scan of your computer. Both ESET and F-Secure provide a good second opinion on whether you are infected.

 [ESET Online Scanner](#)

 [F-Secure Online Scanner](#)

Additional Malware Detection / Removal Tools

 Some of these tools are advanced, so use caution when using them.

 [Kaspersky Virus Removal Tool \(AVPTool\)](#): utility designed to remove all types of infections from your computer.

 [Microsoft Safety Scanner](#): a tool that provides on-demand scanning and helps remove viruses, spyware, and other malicious software.

 [Microsoft Standalone System Sweeper](#): a recovery tool that can help you start an infected PC and perform an offline scan to help identify and remove malware.

[aswMBR](#): a rootkit scanner that scans for TDL4/3, MBRoot (Sinowal) and Whistler rootkits (by Avast).

 [SARDU \(Shardana Antivirus Rescue Disk Utility\)](#): combines all of your bootable antivirus ISO images and turns them into a single ISO with a boot menu.

 [TaskManager.xls](#): a simple task manager implemented in Excel/VBA. It can list processes, terminate, suspend and resume selected processes. It can be useful when fighting malware that prevents you from using Task Manager or Process Explorer.

Notable Links

- [The 9 Types of Computer Viruses To Watch Out For & What They Do](#)
- [3 Best Resources To Find Sites That Are Known To Have Spyware & Viruses](#)



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