Most computers come in for servicing have various problems. Pop-ups and slow response are the most common of those problems. A computer that has these problems can be fixed very easily. Windows itself has various programs that you can use to scan and optimize a computer. In this guide we will be taking a look at those utilities as well as utilizing some free ones available on the Internet.

Please note that this is meant to be a guide and not a solution to all your computer maintenance and troubleshooting needs.

**NOTE:** This overview is for PCs with the Windows XP operating system on them, the steps may be different of other Window's operating systems.

**NOTE:** The following steps have been explained along with graphics to help you out in learning these procedures.

**IMPORTANT:** Before running any spy-ware or virus programs it is advised that you turn off system restore.

**NOTE:** You will see important notes like these spread throughout this guide. Pay close attention to them.

It is also very important to note that you should **backup** crucial data (like documents and pictures, etc.) before attempting to clean out viruses or spyware from your computer in the event that any scans or virus removals render the system inoperable. This downtime may be temporary until you can get the system operational again and it may provide useful to have a backup copy of important documents in case you need to setup the user on a temporary workstation.
Step One: Disable System Restore

The reason we disable system restore is because some virus and ad-ware like to hide in old restore points. If you had a virus and scanned to remove it, then had to use system restore then you could be infecting your computer with the same virus that you got rid of before.

1. Bring up the START MENU by clicking on the start button in the bottom left hand side of your computers desktop, shown in the following picture. From here, click on CONTROL PANEL. If you are using the classic Start menu you may need to click on Settings after “Start” and then Control Panel.

2. This will bring up the control panel, a window with icons to various programs useful to the Microsoft® Windows XP user. As shown in the following screen we want to double-click on the SYSTEM icon. If you do not see the Control Panel exactly as pictured here, you can switch to Classic View by click “Switch to Classic View” on the left task pane.
Step One: Disable System Restore

3. In this next screen that pops up, you will need to select the SYSTEM RESTORE tab.

4. When you get to the next screen, click in the check box beside TURN OFF SYSTEM RESTORE ON ALL DRIVES. If there is already a check mark in the box, please skip to next step.
Step One: Disable System Restore

5. The word APPLY should go from faded to black lettering as shown in the next screen, click on APPLY.

6. The next screen that comes up after you click on apply will be a system restore warning, this warning tells you that the computer will be deleting all previous restore points that it has created. Click on YES in this box.
Step One: Disable System Restore

7. Then it should take you back to system restore screen, note that the status off all your drives will be set to TURNED OFF, if you have more than one drive in your computer like I do then you will see multiple drives with this status. CLICK on OK to finish this step.

NOTE: After the virus threat or spyware has been removed from the system, it is important to turn the System Restore feature of Windows XP back on. Having restore points may provide useful in the future if you find yourself troubleshooting the system.

On to the next step...
Step Two: Ad-Aware SE Personal Scan

Ad-Aware is a program that you use to scan for ad-ware or spy-ware programs that are in your computer. Some of these programs block access to the internet, create advertising pop-ups on your computer and generally slow your computer down.

耒 NOTE: If you have access to internet from the infected computer, you should download the Winsock XP Fix tool in the event that removing the spyware from your system accidentally corrupts the Winsock on the computer. Read Appendix A for instructions on using the Winsock XP Fix tool. If the computer does not have access to the internet because of spyware or viruses, download the following tools using another working computer that has internet access.

1. Ad-Aware SE Personal is a free program downloadable from the internet.

Their website address/URL is http://www.lavasoftusa.com or you can Google ADAWARE and click here.

耒 Ad-Aware @ Lavasoft - The Original Anti-Spyware Company
Ad-Aware secures your business against dangerous infiltrators and threats. ... Product of the Year: Antispyware Category Ad-Aware SE Enterprise voted ...
www.lavasoftusa.com/ - 14k - Cached - Similar pages

2. Go to their homepage and you should see this image on the right hand side of the page. Click on this image and you will be redirected to another webpage.

耒 Download Now

3. On this next page you should see this image. Click on this image to start downloading the install file for Ad-Aware.
Step Two: Ad-Aware SE Personal Scan

4. Click on SAVE to download the install file to your computer.

5. The next page that pops up is asking you where you want to save the installation file. Click on the arrow pointing down (1) to bring up a drop down list. From this list click on “Desktop (2) to choose that as the save to area, then click on SAVE (3) then move on to the next step.
6. After the file is downloaded you’ll see the following image, then you can RUN the program now or you can CLOSE if you plan to run the program later or on another computer. If you choose to open it later, start at #7. If you choose to run now, skip to #8.

7. The downloaded file is called aawsepersonal.exe; this will be located wherever you decided to save the file to, usually the desktop and can look like either of the two following pictures. Double click the file to start the install process.

8. A security warning should pop up telling you that you are about to run a program, click on RUN to continue.
9. This next screen is the program’s installation wizard, click on NEXT to continue.

10. In this next window click in the CHECKBOX beside I ACCEPT THE LICENSE AGREEMENT and then the words NEXT should change from light lettering to dark lettering. Click NEXT to continue.
11. Keep clicking NEXT, using default values until you reach this screen. If you click **FINISH** the computer will update the adware definitions file, provided that you have access to the internet, then it will do a full system scan.

12. The computer will scan for a bit and then it should end up looking like the following image when it is completed. Click on **NEXT** to continue.
Step Two: Ad-Aware SE Personal Scan

13. This next screen shows a list of what the program found hiding in the computer, put a CHECK in all of the BOXES and then click NEXT to continue.

14. This screen is just telling us that Ad-Aware is going to remove all of the files that you have selected, click OK to continue.

NOTE: In most cases this scan will remove all of the spyware/ad-ware infections on your computer, if you computer was having problems connecting to the internet this should fix those problems, allowing you to update Ad-Aware if you couldn’t before, if you couldn’t update before, update now and do another full system scan and you should be finished with this step.

On to the next step...
Step Three: X-Cleaner / X-Scan

xScan is an online ActiveX Spyware & Adware Scanning tool, meaning that there is no program that you can just download and run locally on your PC, you have to be connected to the internet to use this scanning tool, there might be a standalone version that you can download but the online tool is much easier to use.

1. To get to xScan open up Internet Explorer and navigate to http://www.spywareinfo.com/xscan and wait until the information bar pops up (as seen in the following image). Click anywhere on the bar that appears to open up a small menu, from that menu click on INSTALL ACTIVEX CONTROL. Continue to the next screen.

2. After you click on the prompt a new window will pop up asking you if you want to install the ActiveX control again. Click on INSTALL to continue.
Step Three: X-Cleaner / X-Scan

3. xScan will now scan your computer for adware and malware as seen in this image. Continue to the next screen.

4. If xScan finds any spyware on your computer you will get a warning window like in the image below, click on REMOVE IT to continue.
Step Three: X-Cleaner / X-Scan

5. The next screen that pops up is a prompt to create a restore point, but since at the beginning of this tutorial we disabled system restore you can just click NO to continue.

6. Keep removing any other spyware/malware that the program finds until it brings up a window asking you to reboot, as seen in the following image. Click on YES to REBOOT and then you are finished with this step.

On to the next step...
Step Four: Spybot S&D (Search & Destroy)

Some people like to be absolutely certain that the spyware that has infected their system is completely gone. So to make sure that the previous spyware and malware scanners haven’t missed anything, we will utilize Spybot: Search and Destroy to do another scan and ensure that the threat of spyware has been ‘destroyed.’

1. Spybot Search & Destroy is another free program downloadable from the internet. The easiest way to download this program is to navigate to http://www.download.com and type in Spybot in the search field near the top, as shown in the next image. Click on GO to continue to the next webpage.

2. Navigate down the next webpage till you see this listing. Click on DOWNLOAD NOW to start downloading the install file.

3. Click SAVE in the next window to save to install file to your computer and proceed to next window.
Step Four: Spybot S&D

4. Same procedure as when we downloaded Ad-Aware, click the down arrow (1) to bring up the drop down list, click on desktop (2) to choose the desktop as your save location and then click on SAVE (3) to start downloading the file.

5. When the file is done downloading you can choose to RUN the program now or CLOSE and run this program later. The programs name is spybotsd14.exe if you decide to run it later.
Step Four: Spybot S&D

6. Click RUN to start the installation process or double click on the file, you’ll most likely end up with a security window. Click ‘Run’ to continue with the install.

7. Choose English as your language, this is usually already selected as the default then click OK.

8. Click NEXT on this next window that pops up and you should come up the license agreement.
9. You have to select I ACCEPT THE AGREEMENT before the faded letters will let you continue on with the installment.

10. After you select accept, you will be able to continue with the installation. Click NEXT to continue on.
Step Four: Spybot S&D

11. Continue clicking on NEXT using all the default values until you come to the next screen. Click on finish to end the installation and to start up Spybot for the first time.

12. Click OK on the next warning.

13. Setup starts and you'll have to go through a couple steps before the scan starts. The first step is to create a registry backup as shown here. Click on CREATE REGISTRY BACKUP, wait until it finishes what it's doing then click on NEXT.
Step Four: Spybot S&D

14. The next step updates the definitions file; if you have access to the internet then you can click SEARCH FOR UPDATES, if you don’t have access to the internet at the moment then just click NEXT, go on to the next step if you have internet access.

15. If you search for updates then the bottom button will become clickable, click on DOWNLOAD ALL AVAILABLE UPDATES to continue.
16. Another warning may pop up after the updates are auto installed, click OK to continue.

17. The main windows for Spybot should come up now, click on CHECK FOR PROBLEMS to start the scanning process.

18. Spybot will scan and end up at this screen listing all of the things that it found on your computer, this list could be long or small, depending on how infected the computer is. All of the items in the list will be automatically selected so you can just click on FIX SELECTED PROBLEMS to continue.
Step Four: Spybot S&D

19. This warning is just telling you that it is going to delete these files, click on YES to continue on.

20. Next is a confirmation window telling you that it has finished its job, click on OK to continue on.

21. Click on the X in the top right hand corner of the program window to finish with this step.

On to the next step...
Step Five: Antivirus Scan using AVG

AVG Anti-Virus Free Edition is a free anti-virus protection tool developed by GRISOFT for home use. NOTE: Although AVG free has all the tools that will protect your computer from virus infections, it is still only recommended as a temporary alternative to a licensed program such as McAfee or Symantec Anti virus. The program will issue virus definition updates as quickly as it can, but the licensed versions will update these virus definitions quicker making your computer and networks safer than if you just used a free anti virus program.

1. Open up a new web browser and navigate to http://free.grisoft.com or you can “Google” AVG FREE and it will be the first website that pops up. Once you get to there, the page should look like the following image, click on AVG ANTI-VIRUS FREE to continue.

2. Navigate down on the next page and click on the following image to continue.

3. Navigate down the next page and you should see something like the following image. There are other versions for different operating systems but the one we want is under the Windows operating system. Here you will see the file name of the download files and the current version of the program. CLICK on the file name to start the download process.
Step Five: Antivirus Scan using AVG

4. Here you can choose to open the file and install right away or save the file for installing later on. Click on SAVE to continue.

5. Choose a good place to save this file so that you can locate it later on, most people usually save these files to the desktop. CLICK on SAVE to continue.

6. After the program is finished downloading CLICK on CLOSE and find the file that you downloaded. If you downloaded to the desktop then that's where the file should be located.
7. The downloaded file will look like the following image. Once you know where this file is then it is easier to copy the file and move it to another computer for scanning. DOUBLE CLICK on the file to start the installation.

8. Click on RUN to continue when the security warning pops up.

9. The first window in the installation process should look like the following image. Click on NEXT to continue.
10. This next screen is the license agreement, you have to accept this license in order to continue installing AVG. Click on ACCEPT to continue.

11. Next the program will check your system to see if it is ready to install AVG.

12. We want to install using the standard installation, in the next windows that pop up, click on NEXT on the windows that pop up and then click FINISH.
Step Five: Antivirus Scan using AVG

13. You have successfully installed AVG anti-virus free edition, the next steps will explain how anti virus programs work and how to keep them updated.

14. After you click OK then the main program will start up and an automatic configuration utility will appear. Click on NEXT to continue.

15. Just keep clicking on NEXT, this way you will be installing using the recommended default configurations. You should end up at the following screen. Click on CONTINUE and you will be at the main AVG screen. Proceed to the next step.
Step Five: Antivirus Scan using AVG

16. This next image is the main console of AVG Anti-virus; the red mark is telling you that something is wrong; the problem here is that the virus database is out of date. CLICK on CHECK FOR UPDATES to continue.

17. This next window sets up where the program looks for updates. We want the program to look for updates on the internet, but we also want to make this the default place that AVG looks for updates. Put a CHECK in the BOX as seen in the following image and click on INTERNET. Now the internet is where AVG will always look for updates.

18. The program will now connect to the internet and search for any updates; in this example we have a priority update, CLICK on UPDATE to continue.
Step Five: Antivirus Scan using AVG

19. The next part is automatic; the program will download and install the updates that were listed in the previous window. Move on to the next screen.

20. After the download completes and patches the program you will see the following image, click on OK to continue.

21. Now we are back at the main screen, the GREEN CHECKMARK means that AVG is ‘UP TO DATE.’ CLICK on SCAN COMPUTER to scan the computer for virus infections.
22. This next part is automatic, AVG will scan the computer and then generate a report at the end of the process.

23. The report that AVG generates will look like the following image, my computer has no virus infections. If a computer did have a virus infection then AVG would automatically quarantine the object in the virus vault. Now the infected file can’t harm your computer. CLICK on CLOSE and then on the X; now you are done with the virus scan.

**NOTE:** If a virus is found during the scan, it will automatically be ‘healed’ or moved to the virus vault. The virus vault will quarantine the file from the system so it cannot do any further damage. You can wipe the file completely by wiping the virus vault clean.
Step Six: Startup & System Processes

A computer can run slow for various reasons. If you look on the bottom right hand corner of your monitor you should see something similar to the first image in this section. Any extra icons or programs that are running will show up here. Aside from the sound icon and network icons, any other icons here are always running in the background taking up system resources and possibly slowing down a computer’s overall performance. The following steps will help you get rid of these programs and anything else that is hidden and running in the background.

1. Take a look at your system tray and see if there’s a lot of icons in there.

2. The Startup folder is one that all users should be able to access. To get to the System Startup Folder click on:

**START > ALL PROGRAMS > STARTUP**

This list should be (EMPTY) as seen in the next image, the programs that put themselves in here aren’t needed by Windows so you can just delete them. Examples of these programs are ADOBE READER SPEED LAUNCHER and LIMEWIRE ON STARTUP. These just slowdown the startup process and bog down your computer. Delete them and continue on to the next screen.
3. System Configuration Utility (also known as **MSCONFIG** – This is a hidden utility that you can use to disable any hidden programs that are running in the background.

To get to the System Configuration Utility, first open up the START menu and then click on **RUN**

4. Type **msconfig** in the next window that pops up and then click on **OK**

5. The System Configuration Utility window should pop up now. Click on the **STARTUP** tab to continue.
6. In this next window will be a list of programs that start up when your computer starts up, some of these programs start up and then stop right away. Others will start up and run in the background while your computer is on. These programs also slow your computer down quite a bit. Continue to the next screen.

**NOTE:** The proper startup of your computer does not rely on any of the items in this Startup section. You can have everything deselected and your computer should startup fine. It is also a good test to disable everything in this menu and see what programs re-add themselves automatically. It may be a virus or spyware.

7. Open up a webpage, assuming that you now have an internet connection, and go to [http://www.processlibrary.com](http://www.processlibrary.com) CHECK ALL of the items that show up in this list by typing them into the box and then click on FIND.
8. The next page that pops up should have a safety level for each of the items that you check out, if all the items are safe then you have nothing to worry about, but if any of the items come up with anything more serious then you should disable the item, but first you should read why it has a higher rating.

**NOTE:** Make sure you type in exactly what is in the list or you might come up with wrong descriptions or no description at all, if you typed the process in right and there is still no description then you most likely have an infection. Some Virus and Trojans don’t name themselves the same thing every time; they might use random file names to hide themselves in the computer.

9. A little further down the webpage will be a description of the process that you searched for and a recommendation of what to do with the file. This file for example tells you that you should not disable this program from running because it is required for essential applications to work properly. Leave the checkbox on and move on to the next item in the list.
Step Six: Startup & System Processes

10. You may not have to disable any programs or you might have to disable a lot of them. Click on APPLY then OK to continue.

11. Click on RESTART in the next window to restart your computer with the new startup options, when the computer restarts check re-check MSCONFIG to see if the items that you disabled did not come back, if they did come back then disable them again and RE-START.

12. Verify that these programs have stopped loading at Windows startup by going into the msconfig utility again. The majority of speed will return after you have done the ad-ware scans. This step just ensures that your computer will be as fast as we can get it. You are now done with this step.

NOTE: Get to know these processes and which ones are usually loaded onto computers, that way the cleanup process will go a lot faster.

On to the next step...
Step Seven: Disk Cleanup Tool

The Disk Cleanup tool helps you free up space on your hard disk by searching your disk for files that you can safely delete. You can choose to delete some or all of the files.

1. To access the Disk Clean-Up, click on
START > ALL PROGRAMS > ACCESSORIES > SYSTEM TOOLS > DISK CLEANUP
Proceed to the next screen.

2. You may get an option to choose which drive to perform the cleanup on. If you have more than one HDD (Hard Disk Drive) in the computer you are working on, choose the drive that your Windows system is loaded on. Usually the C: drive.
Proceed to the next screen.
Step Seven: Disk Cleanup Tool

3. The next screen that pops up is just the system scanning for all the files that I can remove safely, no intervention is needed here. Proceed to the next screen.

4. The next screen that pops up give you a list of choices as to what you want to cleanup or delete from your computer, don’t worry, none of these files are essential to your computer’s ability to run, these are just so you can. Put a check in all of the boxes to clean up all unnecessary files from your computer then click on OK to continue.

**NOTE:** Depending on the size of your hard drive and how many files are on your hard-drive, the Disk Cleanup tool may take some time to complete.
Step Seven: Disk Cleanup Tool

5. Click on YES in the next screen to continue.

6. The computer will perform all the actions that you have selected and clean up all the junk files that it found, you don’t have to do anything while this process is on. No other window will open up; you are now done with this step.

On to the next step...
Step Eight: Disk Defragmentation

Disk Defragmenter consolidates fragmented files and folders on your computer’s hard disk, so that each occupies a single, contiguous space on the volume. As a result, your system can gain access to your files and folders and save new ones more efficiently. By consolidating your files and folders, Disk Defragmenter also consolidates the volume’s free space, making it less likely that new files will be fragmented.

NOTE: Before starting a defragmentation on your computer, ensure that all background programs are disabled or closed. This includes anti-virus/anti-spyware software. Also ensure that your power saver settings are set to never put your system into a standby or hibernation mode after a certain period of idle time. Also make sure your screen saver is turned off. You do not want to be running any programs that make changes to your hard drive while the defragment process is on. You also do not want to actively be using your computer while this is happening. Doing so may result in a slow scan, or continuous restarts in the scan process.

1. To get to Disk Defragmenter click on START > ALL PROGRAMS > ACCESSORIES > SYSTEM TOOLS > DISK DEFRAAGMENTER.
Continue on to the next screen.
2. The next window that pops up is the disk defragmenter main window, highlight the drive that has Windows loaded on it, usually C, and then click on analyze to scan the file system. Continue on to the next screen.

3. The program will scan the file system and report back to you if you need to defragment the drive or if you don’t have to. Click on DEFRAGMENT to continue.
Step Eight: Disk Defragmentation

4. The program will defrag until it gets all the files in as much of an order as it can, while it is defragging you will see the program in action in the form of two graphics with various lines of color. Continue on to the next image.

5. The next screen will pop up after the computer has finished defragging the hard drive. Click on CLOSE and continue to the next screen.

6. The next screen that pops up is the original screen. Click on DEFRAGMENT again and again until this process takes less then 1 minute to complete. That way you know it is really defragmented. The following two images show the result from beginning to end.

On to the next step...
Step Nine: Restart System Restore

Now that the computer is cleaned out, optimized and defragged, we can turn on the “System Restore” features again.

1. To get back to system restore click on START > CONTROL PANEL as shown in the following image.

2. In the next window that pops up double click on SYSTEM to open up the SYSTEM PROPERTIES. Continue on to the next image.
3. Click on the SYSTEM RESTORE tab to continue.

4. UNCHECK the box beside TURN OFF SYSTEM RESTORE ON ALL DRIVES, click on APPLY then click on OK. You are now finished all that should be needed for basic computer optimization. READ the following text about Advanced computer problems before exiting.
Step Nine: Restart System Restore

5. Every once and a while you will run into programs that you can’t get rid of using these methods. This is where Google comes in handy, type in any messages that you get using quotations. An example of this would be wininstall, this program uses fake taskbar alerts that pop up in the bottom right hand corner of your screen as seen in the following image.

6. You would go to Google and type in “your computer is infected” and “windows had detected spyware infection” read around some of the forums that come up and see if anyone has a fix for this. This program I know is called wininstall, it took me quite a bit of reading before I was able to remove it, but if you ever come across this infection Google wininstall or smitfraudfix and the first webpage should be what you are looking for. There will always be some things that will take you a while to remove, that is normal, just use Google to track down any fixes that might be out for that certain infection.

There are some sites that will tell you edit the registry to fix some problems. Editing the registry is a last resort. You can seriously mess up a computer if the registry is improperly edited. Only do these steps if you are an advanced computer technician who knows how to recover from registry errors.
Appendix A: Winsock XP Fix Tool

Sometimes if the spyware on a computer becomes so integrated into the system processes or has replaced critical system files with its own version of that same file, removing the "infected" files causes the system to become unstable. In most cases, it will only affect the 'Networking' portion of your computer system, hindering your ability to access network resources or to connect to the Internet. If this is the case, this is the tool for you.

**NOTE:** Like any other utility, this is a 'Use at your own Risk' tool. Be sure to do a registry backup and save it on disk/CD so you can copy it over in the event that your system becomes inoperable after using this tool.

1. Open a browser and go to:
   http://www.snapfiles.com/get/winsockxpfix.html
   If for any reason this site is not operational, go to Google.com and search for “Winsock XP Fix” and download the tool.
Appendix A: Winsock XP Fix Tool

2. Scroll down the page until you find the ‘Download’ button. Click it to begin the download process.

3. The site will try to contact a download location. If you are using Windows XP with Service Pack 2, you will need to click on the ‘Information Bar’ on the top of the page while it contacts the download site in order to allow it to download this file. Click on “Download File” from the Information Bar and the site will refresh itself.

4. The File Download dialog box will appear. Click on “Save” to save this file to your computer. This will allow you to transfer it to a CD or Flash Drive to take to the infected computer.
5. The file you downloaded will look similar to this icon here. All you need to do is double-click it to start the program.

6. Once the utility is started, all you need to do is click “Fix” and let the program do its magic. You can use the ReG-Backup built-in utility here, but it may or may not work. Your best chances at backing up your registry is to use the tools provided by Windows to do so. The computer will need to restart after this step and your networking should be restored.
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