Instructions for using System Configuration Utility (msconfig)

Windows provides a tool called the "System Configuration Utility" (just called "System Configuration" in Windows Vista and 7). This tool can be used to prevent unnecessary or unwanted programs from starting (or used to find the cause for unwanted windows opening) at Windows startup.

Many programs, during their installation, install background tools (programs) which open during each Windows startup.   These tools are sometimes needed to allow the installed program to function properly (such as antivirus, antispyware, or firewall software). But often they put a tool within the startup items purely to make manual access to the full program quicker or easier. These tools are typically not really necessary for the program to function in a completely normal fashion. Another situation which occurs: you have an error message, an annoying window appearing, or a repeated warning occurring at startup, which you cannot explain, but which you would like to prevent.

Each one of these tools (or windows appearing) represents an item "loading at startup". And each one of these items loading adds further delay to (an increase in the time it takes for) Windows completing the startup process (being fully ready to begin using the computer). Furthermore, some of these unnecessary items can retard system performance even after startup, during use.

Sometimes these unnecessary startup items can be prevented merely by configuring Options (or Preferences) from within the respective program (often found under the Tools, or Edit menus of the individual programs), thus speeding Windows startup or stopping an unwanted message. But often, a precise location to prevent the startup item is not easily found within the program. In Windows versions prior to Windows 8, it was for this purpose Windows has included the **System Configuration** Utility. The System Configuration Utility provides a single location to selectively control the appearance of (or troubleshoot) startup items and/or services. This can be used to streamline and quicken Windows startup and improve performance. Controlling the Startup items was moved to the Task Manager in Windows 8 and now Windows 10. All the other Configuration Manager functions remain.

Even if you have no problems, or were just curious, you would be amazed at the quickened startup, and improved performance when all the startup items and non-Microsoft services are temporarily prevented from loading. I often use this tool when I need to restart a system repeatedly for some reason (such as installing multiple programs).

Of course many of the listed items and services are needed for full functionality, and security; and others are wanted by desire. So you do not want to prevent all items from loading ("disabled") beyond the troubleshooting phase, just the undesirable or personally considered unneeded items. If you have any question as to whether a startup item or service is safe to continually "disable", simply put the item's name into a search engine such as Google. You will get much information and/or recommendations regarding its need or function.

It is most important to know that making any changes from within the System Configuration Utility or Task Manager (Win 8 & 10) are fully reversible, and consequently do no lasting harm. Below I describe step-by-step how to use the System Configuration Utility.

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1. To access the System Configuration Utility (SCU), first go to Start, then Run (on the lower right side of the first window of the Start Menu). If you are using Windows Vista, 7, 8, or 10 and do not have "Run, type into the Start menu's Search box (far lower left). Type in "msconfig" (no quotation marks), and hit the ENTER key. Or first hold the Windows (logo) key (the one with the four squares) and hit R bringing up the Run box.
2. A window labeled System Configuration Utility opens. At the top there are multiple tabs. You will be on the General tab when it opens. This is fine.
3. See if the dot (round radio button near the top) is in "Normal Startup". If it is not in Normal startup, but instead in Selective startup, see the paragraph below the numbered instructions before beginning this step. Look below to an area labeled "Selective startup". If you are trying to prevent (troubleshoot an annoying occurrence at startup (such as warning, folder, or pop-up), remove the check from "Load Startup items". It looks grayed out, but by clicking in the box currently containing a check mark, you will remove the check. If it doesn't seem to work, first click in the Selective startup radio (round) button to select it. This "disables" all startup items.
    a. If you are simply trying to improve performance, or reduce the number of programs running in the Notification Area (system tray), go to the Startup tab and begin removing checks from unwanted items. Modify the remaining steps as needed.
4. Once the "Load Startup items" check is removed (or the checks have been removed from unwanted items in the Startup list), click on Apply, then OK. It will inform you it will need to restart for system changes to take effect. Click "Restart".
5. When it restarts, if you disabled all Startup items, very few of the usual icons in the taskbar area (Notification area on the right) will show up. A window will open informing you that you have used System Configuration Utility. If you just click OK, the System Configuration window will open back up immediately. If you wish to prevent System Configuration from opening (such as you are satisfied and finished-see below), place a check in the little box on the lower left before clicking OK. For troubleshooting, you are going to need to return to the SCU repeatedly, so don't bother checking it yet.
6. Now watch and wait until the computer has finished restarting. See if the undesirable item or error still occurs. Remember, you may get some errors about this or that not starting. Just ignore them for now. We are specifically looking whether the window, occurrence, or task bar item has been eliminated.
7. Assuming the window or annoying occurrence do not appear, you know it is an item listed in the startup group. (If the annoyance still persists, you know it is not a startup item (which will be unusual). Be aware viruses and computer infections can stubbornly replace the check in their startup item even when you have removed it. So when you return to the System Configuration Utility, be sure all items on the Startup tab are still unchecked (or disabled in Task Manager Startup tab).
8. Again, assuming it is gone, you need to return to the utility (if you closed it, again Start/Run/msconfig).
9. Once back to the System Configuration Utility, go to the Startup tab (usually the last or second to last tab). Start replacing checks ("re-enable"), one at a time (see below for another option), applying, and restarting until the undesirable window or program reappears. When it reappears, you know the last item you re-enabled was the cause. Keep that item disabled indefinitely.

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10. Return to the utility and uncheck that last one (disable it again); recheck all the others and restart. Hopefully the undesirable window or item did not return. Once satisfied, it now remains in Selective Startup.
11. This last time, on restarting, remember to put the check in the box, so the Configuration Utility doesn't keep coming up.

Understand, if using Windows 8 or 10, these startup steps are essentially the same, but you "disable" and "enable" items in Task Manager's Startup tab in order to troubleshoot or improve startup time.

1. Initially to enter Task Manager in Window 8 and 10, right-click on an empty are of the Taskbar and choose Task Manager.
2. When Task Manager open, it is relatively empty. Click on the "More Details button at the bottom left.
3. Now choose the Startup tab and unfortunately you must disabled the items each individually. There is no option to Disable All. You may be able to disable all by removing the check from Load startup items in Configuration Utility, and then re-enable items in Task Manager.

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9. **Alternate step 9**: Once back to the System Configuration Utility, go to the Startup tab. Start replacing checks ("re-enable")as follows. Because the list is frequently quite long, and re-enabling one item at a time is most time-consuming, (this is the way I do it), recheck 3-5 items at a time and restart. Keep track of the last ones into which you replaced check. Once the undesirable occurrence reappears, you know it was one of the last group re-enabled.

10. Return to System Configuration Utility. First uncheck the last group you re-enabled. Now either replace one check at a time in the items from that group, or zero in by replacing two or three. Example, if I had checked 5 items, when I return I uncheck two or three of the five, and see if it is again gone or present. If the item is gone, you know the culprit is one of the ones you left unchecked. If the item still persists, you know it is one of the items you left checked (and not the ones you left unchecked).

11. Again, once you have isolated the single culprit, you can leave it disabled (unchecked), and recheck all the other items. Apply and restart the computer. Remember to put the check in the box after restarting, so the Configuration Utility doesn't keep coming up.

This is a tedious process, and a real frustration with an older slower computer (because of the time to restart repeatedly), but it is the only way, and can be quite rewarding.

Now if the Utility comes up already in "Selective Startup (not Normal startup), it means some startup items have already been turned off by someone...probably to improve startup times. This is not uncommon (and instead of a check in "Load startup items", it will be a color-filled box. If it is in Selective startup, you need first to go to the Startup folder and record which programs are already unchecked...because when finished, you want to leave it with those originally unchecked items still unchecked.

1. If there are a lot of items unchecked, use the Print Screen to make and save a snapshot of the window displaying the unchecked items.
2. If there are only one or two items, you can merely jot then down.
3. The rest of the process is the same as above (starting with step 3), except for wanting to leave it in Selective startup (step 10 above), with the originally unchecked items also unchecked.

If turning off all the startup items does not stop the undesired window or item, and it was in Normal Startup, simply put the dot back into Normal startup and it returns it to the way it was.

Optionally, if none of the startup items was found to cause the occurrence, you can Load startup items, but try going to the Services tab.

1. First put a check in "Hide all Microsoft Services", then click on disable all.
2. Again "Apply" and restart and see if THAT stopped the undesirable event. If so, use the same process as above to replace checks in services until the occurrence returns. But more likely the occurrence is the function of a startup item rather than a service.