

The Purpose of this document is to explain how to perform Error Checking (Disk Check) and Defragmentation (defrag). These instructions apply to Microsoft Windows XP, Home and Professional.

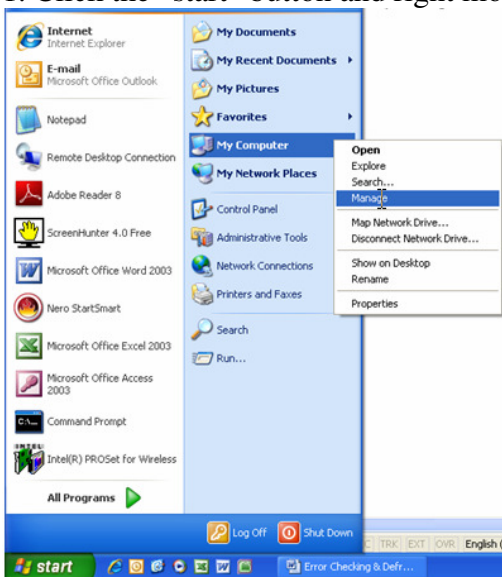
Error-checking and Defragmentation are essential maintenance routines which will help your hard disk drive to run with fewer errors and with better performance. If you use your computer intensely, then perform these routines weekly, otherwise, once a month is sufficient. They take a long time to run but the more often you run them the less time they take. Error-checking used to be called “Scandisk”.

The log generated by Error-checking may give a warning of an imminent crash. This will hopefully give you enough time to perform a backup and seek assistance.

Error-Checking attempts to fix errors found on the hard disk drive which are caused by the normal and abnormal operation of the computer. As a general rule you should run error-checking before defrag. Once error checking is started it cannot be stopped.

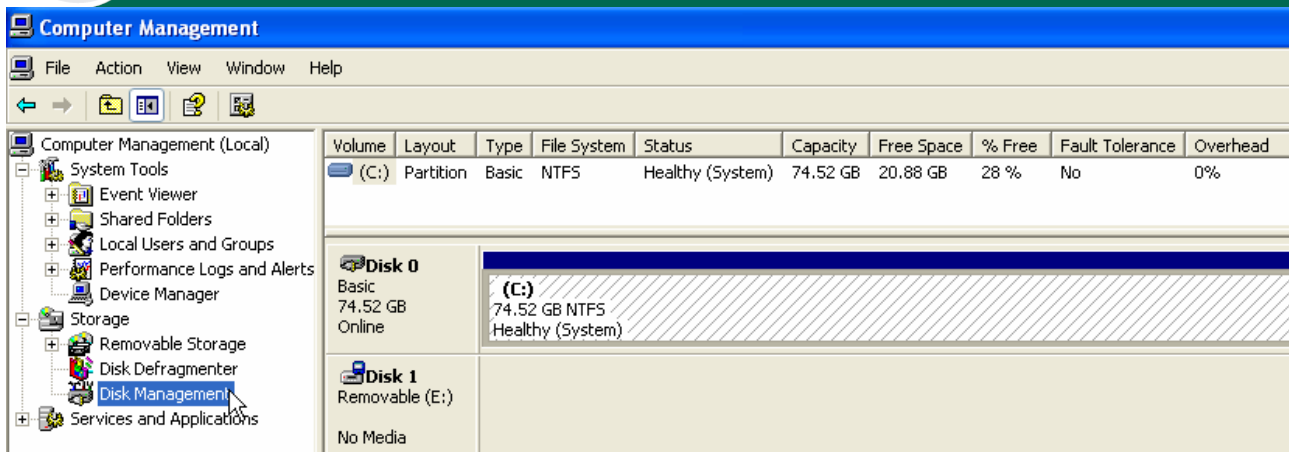
Defragmentation is the process of rearranging the files on the hard disk drive so that each file larger than a sector uses the next sector. It makes the files contiguous. This allows the hard disk drive to work more efficiently and effectively with fewer errors being generated.

1. Click the “start” button and right mouse click on “My Computer” and select “Manage”

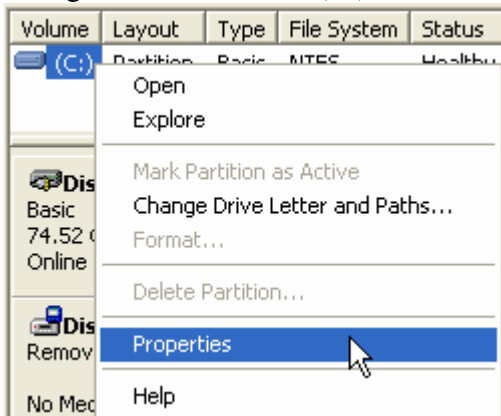


2. The “Computer Management” window will open. This is a serious part of the computer’s operating system, so be careful what you attempt in this area. Click on “Disk Management”. You may need to expand “Storage” first. You will see, in the right hand pane, a list of drives. Note that Disk 0 is the first drive and is Healthy. If the drive does not say “Healthy” seek assistance. Ignore the removable drives for the purposes of this exercise. You may have more than one fixed drive, in which case error-checking will need to be performed on each.

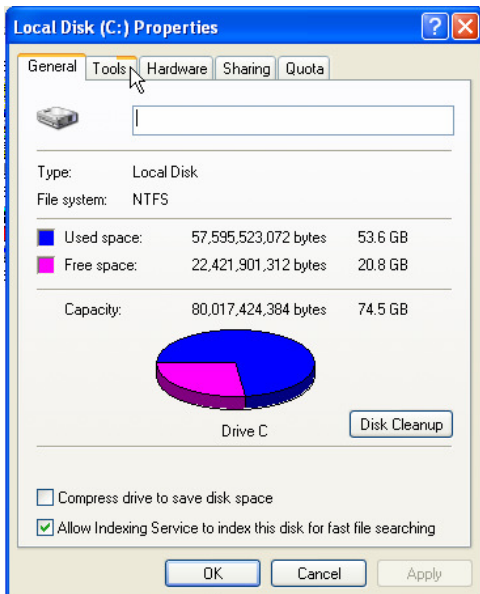




3. Right mouse click on (C:) and select “Properties”.

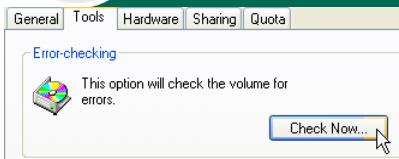


4. Select “Tools”

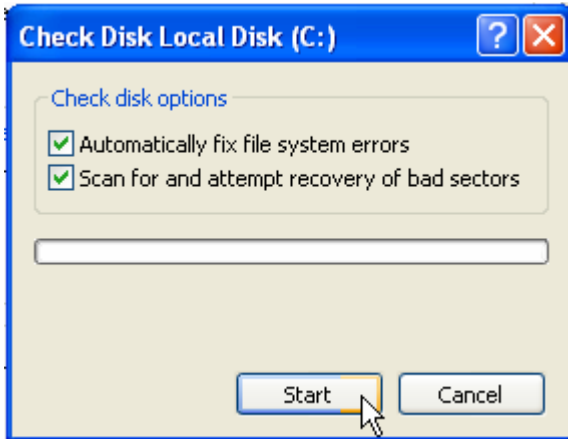


5. Click the “Check Now...” button

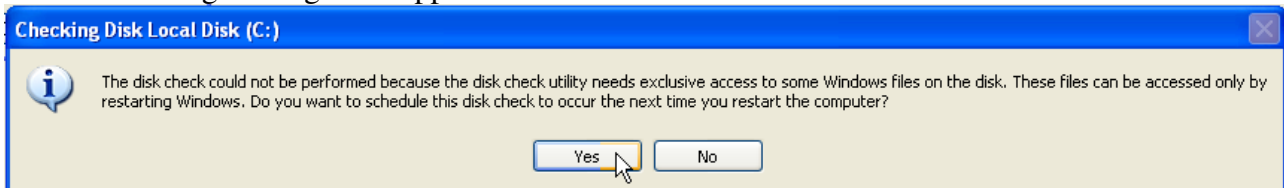




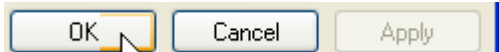
6. Tick both boxes and then click “Start”



7. The following message will appear. Click “Yes” to schedule the disk check on the next restart.



8. Click the “OK” button to close the “Local Disk (C:) Properties” window.

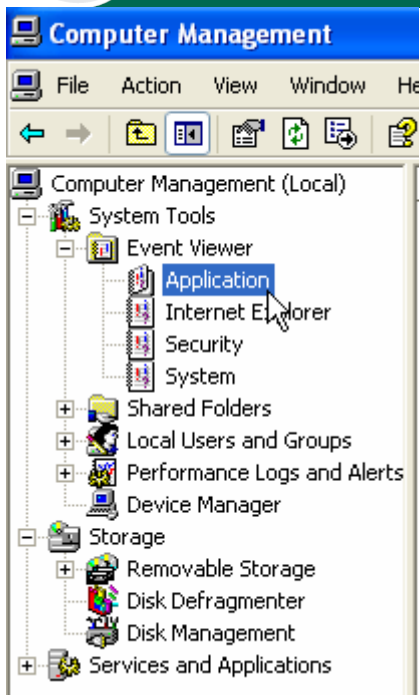


9. Close the “Computer Management” window and restart your computer.

As the computer restarts, do not touch the keyboard or mouse as you may cancel the disk check. You will see the Disk Check commenced and you will have a 10 second chance to cancel before it begins. Once it has started, do not attempt to cancel it. Leave the computer to do its work. If you need to leave it overnight or for long periods, then turn off the monitor and put up a sign saying the computer is in use and should not be touched.

When the Disk Check is complete, the computer will proceed to the Login Screen or the Desktop. You should now check the log by opening the Computer Management window as before but this time expand “System Tools”, expand “Event Viewer” and click on “Application”.

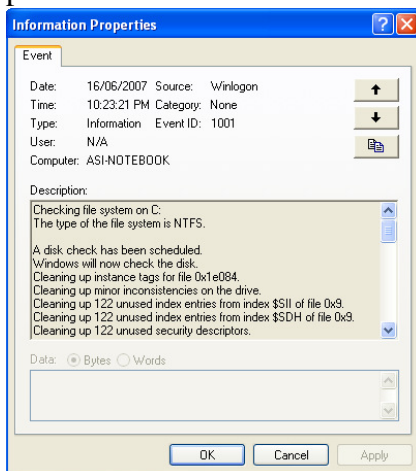




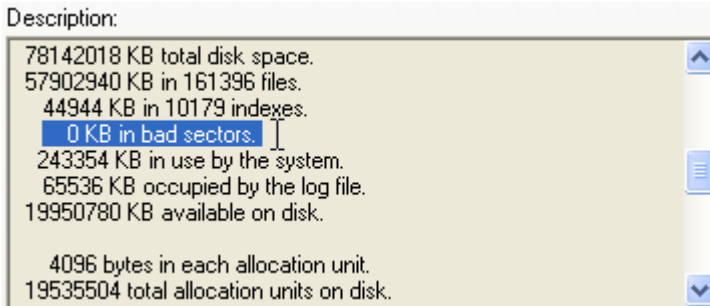
10. In the right hand pane, look under the column heading “Source” for “Winlogon” and right mouse click and select “Properties”.

Type	Date	Time	Source	Category	Event	User	Computer
Information	25/06/2007	9:52:06 PM	UmxAgent	None	88	N/A	ASI-NOTEB...
Information	25/06/2007	9:52:06 PM	UmxAgent	None	88	N/A	ASI-NOTEB...
Information	25/06/2007	9:52:06 PM	UmxAgent	None	88	N/A	ASI-NOTEB...
Information	25/06/2007	9:52:07 PM	Winlogon		1002	N/A	ASI-NOTEB...
Warning	25/06/2007	11:38:24 PM	Userenv		1517	SYSTEM	ASI-NOTEB...
Information	26/06/2007	10:11:43 ...	UmxCfg		25	N/A	ASI-NOTEB...
Information	26/06/2007	10:11:44 ...	UmxAgent		88	N/A	ASI-NOTEB...
Information	26/06/2007	10:11:44 ...	UmxAgent		88	N/A	ASI-NOTEB...

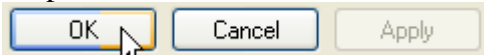
11. The “Information Properties” window will appear. Note the messages in the “Description:” pane. Scroll down to see more.



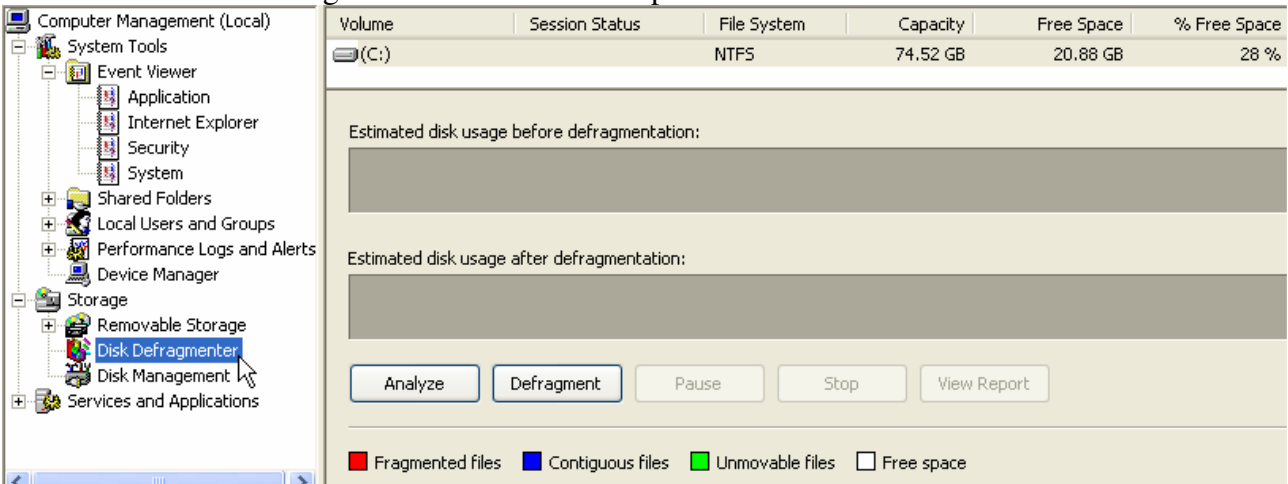
12. In particular, look for the number of bad sectors. If this is greater than zero, then seek assistance as you hard disk drive may be failing.



13. When you have finished reading, click the “OK” or “Cancel” buttons to close the “Information Properties” window.



14. Click on “Disk Defragmenter” in the left hand pane.



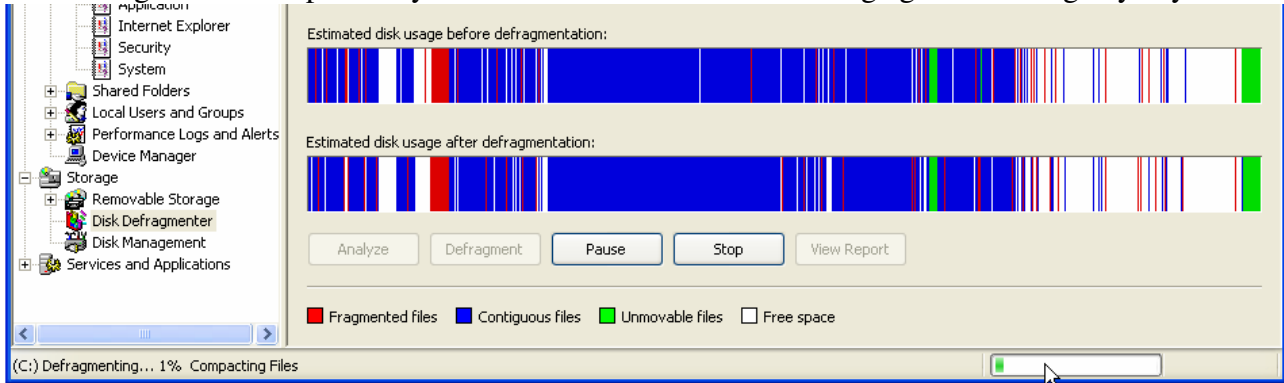
15. Click on the volume you want to defrag.

Volume	Session Status	File System	Capacity	Free Space	% Free Space
(C:)		NTFS	74.52 GB	20.88 GB	28 %

16. You now have a choice to have the volume analysed or to start the Defragmentation process. If you choose the “Analyze” button, then a report will be generated which you can view. It will make the suggestion to either defrag or not. Defrag anyway. So, select the “Defragment” button.



17. The defrag process will begin by first analysing your hard disk drive and displaying the “Estimated disk usage before defragmentation”. A message may appear warning that you do not have enough free disk space. Try to delete some files and run defrag again or defrag anyway.



18. Defragging may take a long time. If necessary, it may be paused or stopped. If you pause it can be resumed. Note the number of red bars in the graph. The red bars represent fragmented files. The more you have the worse it is. Blue bars are contiguous files. Green bars are files that cannot be moved and white represents free space.

When the defragging has finished, you may close the “Computer Management” window.

NB: In the screen shots above, you may have noticed the File System as NTFS. This is a superior file system and should be used. If you have any thing else here then seek assistance. To convert from FAT32 to NTFS, see our “How to” instructions which can be found at [www.cherrybrookcomputer.com.au](http://www.cherrybrookcomputer.com.au).

