Disk Cleaning & Performance

Enhancing Computer Performance
MLCUG 2008-05

Disk performance overview

- Disk performance (the speed with which a file is either read/loaded from disk or written to disk) is dependent on the number of files on the disk and what sectors of the disk they occupy relative to the disk head and other files on the disk. Computer performance is dependent in part on disk performance.

- To achieve reasonable computer performance may require hardware upgrades including more RAM or HD capacity and ultimately a new computer with a faster bus and CPU.

- What is presented here is essentially a TUNE-UP, things that can be done in software to enhance & maintain computer performance, specifically on Windows XP.

Precautions to protect your disk data

- Backup!
- Check for disk file system errors
- Backup again if errors found & corrected
- STOP! if errors found, but not corrected

Use an efficient file system

- Use NTFS instead of FAT 32
  - On a large disk, FAT 32 can waste more disk space than NTFS due to the scaling of cluster size

Recovering disk space from services

- Turn off Hibernation on desktops that don't need it
  - Laptops should leave hibernation on
  - Desktops w/UPS should leave hibernation on
- Manage Restore Point space allocation
  - Consider disabling restore point service if you have frequent automated backup
  - Reduce restore point space allocation
- Disable unneeded indexing services
  - MS search index
  - Google desktop, Nero 7+, Real's Rhapsody

Use file cleanup utilities

- CCleaner
  - http://www.mlcug.org/CCleaner_Disk_File_Cleanup.pdf
  - Set it for auto cleanup at login for each user

- MS Disk Cleanup - 2 tabs
  - Tab 2 - "More Options" has 3 categories for helping reduce files on disk; routinely use System Restore option to clean out old restore points when computer working OK
  - Tab 1 - "Disk Cleanup" will delete and compress; do not enable last option to Catalog files for Content Indexer

Cleanup other "junk" files

- Remove .TMP files using file search
- Manage browser cache files
  - Set IE properties - Tools | Internet Options menu
    - General (tab) | Browsing history SETTINGS (button) | Disk space to use
    - Advanced (tab) | Empty Temporary Internet Files Folder when browser is closed
  - Set Firefox properties - Tools | Options menu
    - Advanced | Network (tab) | Cache (size)
    - Privacy | Private Data SETTINGS (button) | Cache

Defrag

- Disk defragger does 2 jobs
  - file fragmentation - defrags files so they are in sequential sectors on disk to load faster
  - disk fragmentation - defrags disk so there are large open areas of free space - important if you work w/large files

- MS defragger cannot defrag paging file or hibernation file, but there is a work-around
  - Turn off hibernation & virtual memory
  - Boot into Safe mode & defrag
  - Reboot normally & enable hibernation & virtual memory

Paging file (virtual memory)

- Set static size to avoid fragmentation & poor performance
  - http://www.petri.co.il/pagefile_optimization.htm
  - http://homepage.ntlworld.com/alistair.nichol/articles/xpvm.htm
- Consider putting on another drive / partition if C partition full
- Use Windows Task Manager Performance tab to determine if additional RAM would enhance performance & to monitor Paging file usage

WinDirStat / KDirStat

- When all else fails to recover disk space...
  - http://windirstat.info/
- Demo: using WinDirStat for analysis
  - Directory drill down to files
  - TreeMap visualization