Multiple Hard Disks

Hard Disk 1

Windows System Partition (C: drive)
1.5 Gb
Windows Directory, Common Files for other Applications
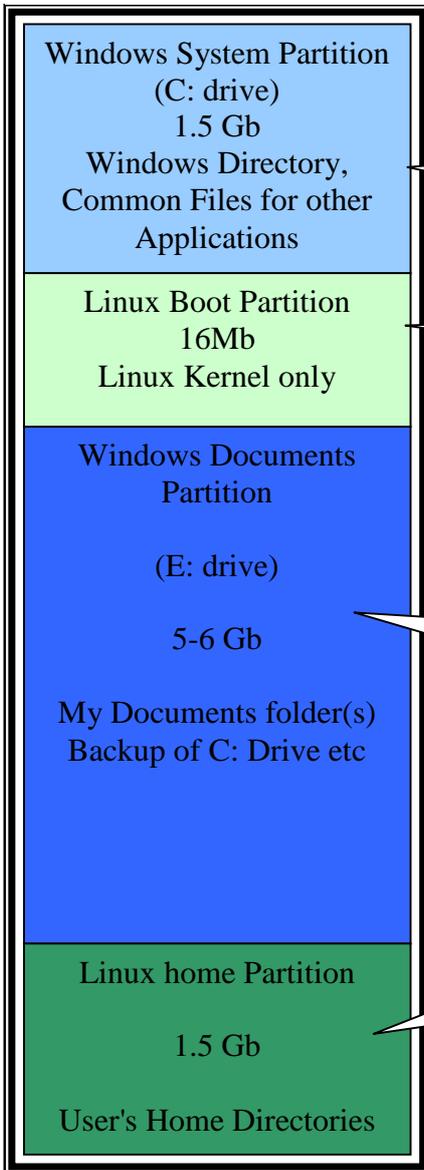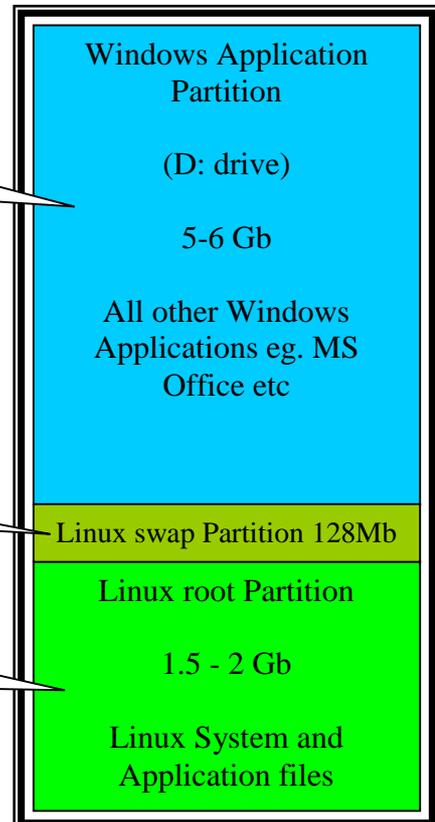
This contains the Windows System files and common files for other applications only. This should be backed up and when a reinstall is needed, this may be formatted and restored from the backup without the loss of user files or other applications

Linux Boot Partition
16Mb
Linux Kernel only

This contains the Linux kernel only. This partition **must** reside entirely below the 1024th cylinder on your HDD.

Windows Documents Partition

(E: drive)

5-6 Gb

My Documents folder(s)
Backup of C: Drive etc

This contains the 'My Documents' folder(s) for all Windows user(s). This should be backed on a regular basis. This could also contain a copy of the System Partition backup for ease of restoration

Linux home Partition

1.5 Gb

User's Home Directories

This contains the Linux user(s) Home directories. This should be backed on a regular basis. This could also contain a copy of the Linux System configuration backup for ease of restoration

Hard Disk 2

Windows Application Partition

(D: drive)

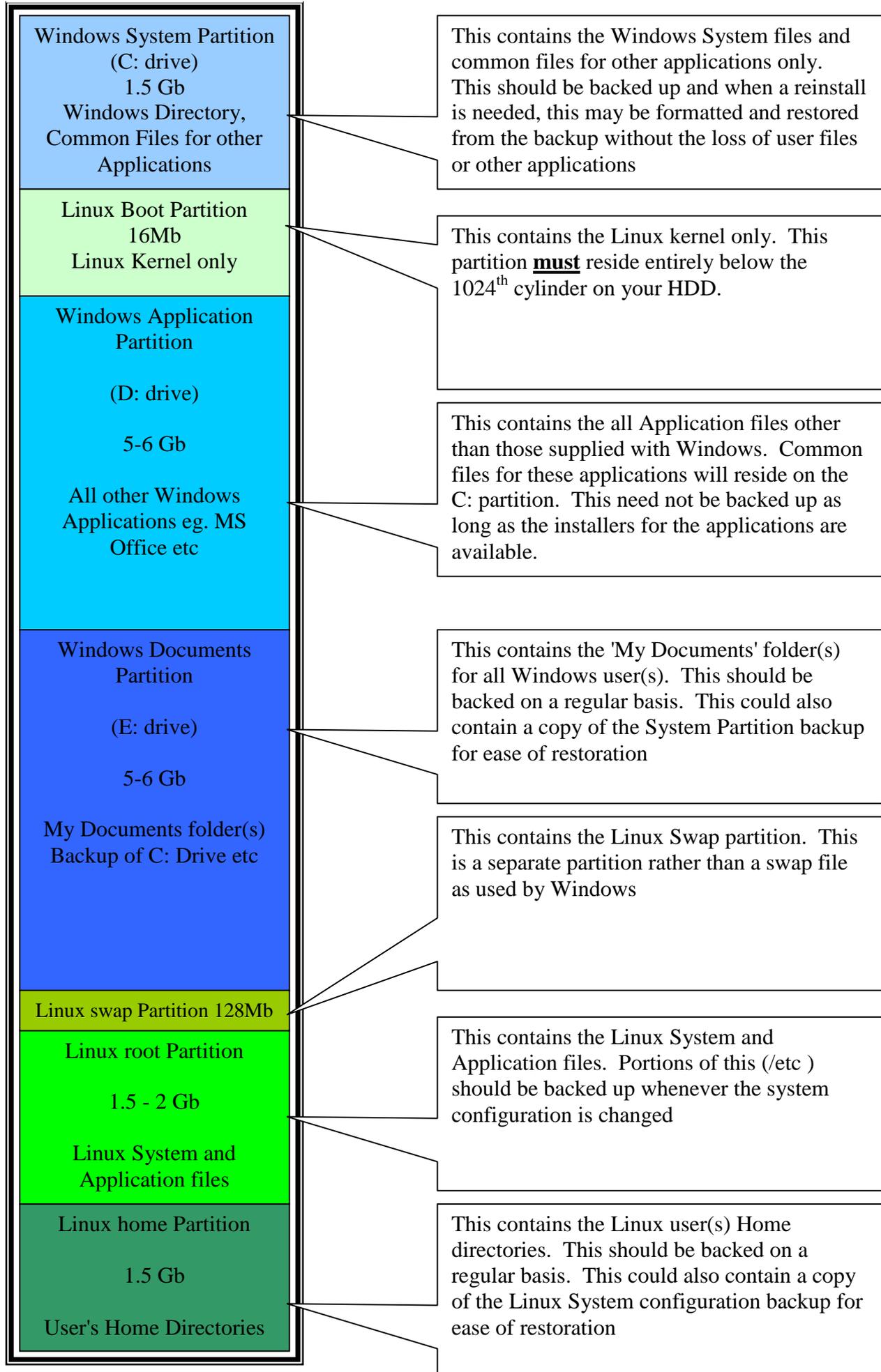5-6 Gb

All other Windows Applications eg. MS Office etc

This contains the all Application files other than those supplied with Windows. Common files for these applications will reside on the C: partition. This need not be backed up as long as the installers for the applications are available.

This contains the Linux Swap partition. This is a separate partition rather than a swap file as used by Windows

Linux swap Partition 128Mb

Linux root Partition

1.5 - 2 Gb

Linux System and Application files

This contains the Linux System and Application files. Portions of this (/etc) should be backed up whenever the system configuration is changed

Single Hard Disk

Partition	Description
Windows System Partition (C: drive) 1.5 Gb Windows Directory, Common Files for other Applications	This contains the Windows System files and common files for other applications only. This should be backed up and when a reinstall is needed, this may be formatted and restored from the backup without the loss of user files or other applications
Linux Boot Partition 16Mb Linux Kernel only	This contains the Linux kernel only. This partition **must** reside entirely below the 1024th cylinder on your HDD.
Windows Application Partition (D: drive) 5-6 Gb All other Windows Applications eg. MS Office etc	This contains the all Application files other than those supplied with Windows. Common files for these applications will reside on the C: partition. This need not be backed up as long as the installers for the applications are available.
Windows Documents Partition (E: drive) 5-6 Gb My Documents folder(s) Backup of C: Drive etc	This contains the 'My Documents' folder(s) for all Windows user(s). This should be backed on a regular basis. This could also contain a copy of the System Partition backup for ease of restoration
Linux swap Partition 128Mb	This contains the Linux Swap partition. This is a separate partition rather than a swap file as used by Windows
Linux root Partition 1.5 - 2 Gb Linux System and Application files	This contains the Linux System and Application files. Portions of this (/etc) should be backed up whenever the system configuration is changed
Linux home Partition 1.5 Gb User's Home Directories	This contains the Linux user(s) Home directories. This should be backed on a regular basis. This could also contain a copy of the Linux System configuration backup for ease of restoration

How to set up your Disk Partitions for a Windows/Linux Dual-boot system with Large Hard Disk(s)

1. Create a 1.5Gb Primary DOS partition using MSDOS fdisk.
2. Create an extended partition to cover the rest of the drive.
3. Use the 'fips.exe' program in the 'dosutils' directory of the Linux CD to split the Primary DOS partition in two. The first part of the split should be most of the partition while the second part should be only 16Mb in size.
4. Use MSDOS fdisk to create the two other Windows partitions in the extended partition.
5. Install MS Windows to drive C
6. Using MSDOS fdisk, delete the 16Mb partition. This will leave 16Mb of free space on the drive. This will become your Linux boot partition.
7. Start the Linux install.
8. Select /dev/hda2 or /dev/hda3 (Check the size!) for your boot partition. This will be mounted as '/boot'
9. Select 128Mb of disk space for the Linux swap partition.
10. Select about 1.5 - 2Gb for the Linux root partition. This will be mounted as '/'
11. Select about 1-2Gb for the User's home directories. This will be mounted as '/home'
12. Make a boot floppy disk for the Linux system. This will allow you to boot Linux even after Windows manages to screw up your disk sometime.
13. Run LILO to set up your system to dual boot. If you ever have to reinstall Windows, you will need to boot from the boot floppy and the run LILO to restore the dual-boot setup. If multi-booting Linux and MS NT, you should use the NT boot manager (there have been reports of LILO not being able to load NT properly).
14. Reboot to Windows and continue installing your applications.
15. Use the batch98 program to create an automatic 'msbatch.inf' installer for your Windows system. This should be copied, along with the Win98 folder (without its subfolders) from your Windows CDROM to a CDR. The 'msbatch.inf' goes in the win98 folder replacing the existing one. This is now your Windows restoration disk.
16. Once you have your applications fully installed, use Windows Backup to make a backup of the C: drive. This should be written to the Windows Restoration CDR for restoration time. The use of this backup eliminates the need to reinstall all of your windows applications since they already reside on the D: partition and the backup contains all of the files on the C: partition along with a copy of the Windows Registry which contains all of the information windows needs to run your application.

NOTE: On a multi-disk system the partitions for any single OS should be spread over the two disks which allows the use of two disk controllers simultaneously.

FURTHER NOTE: It is important to use MSDOS fdisk to lay out the partitions first. MSDOS does not acknowledge the existence of other operating systems and its fdisk gets confused in the presence of foreign partitions and will not create MSDOS partitions properly if other partitions / logical drives exist already. You can create MSDOS partitions to fill the disk(s) and then use Linux fdisk to delete the MSDOS partition that occupies the space required for Linux or other OS.

ANOTHER FURTHER NOTE: I've been experimenting with BeOS also. BeOS can be booted by LILO so long as the BeOS partition lies below 1024 cylinders. If not, LILO should be installed to /dev/hda3 (the Linux /boot partition) rather than to /dev/hda Then the BeOS boot manager (bootman) can be used to boot Win, Linux and BeOS. Easy to setup and use.

Conor Daly <conor.daly@oceanfree.net>