



SCREEN 3

Disk setup

The partitioning section is the part that tends to confuse and scare away most people. If you want to dual-boot with Windows you can configure it here. Dual-booting involves having a full Windows and a full Linux installation present separately on your hard drive with the option to boot either at start-up. If you've got a blank hard drive and don't wish to use Windows at all you can go ahead with the installation without any worries – this is the usual case for people installing Windows onto a PC and it's just as easy with Linux.

To dual-boot you will need some free unpartitioned space on the hard drive. Ubuntu can resize your Windows partition to make room for itself, or you can use a commercial program such as Partition Magic. Always back up your data before resizing a partition: while it should certainly be safe there are always risks (a power failure during the process could be disastrous). The minimum amount of space you need is around 2GB, but that won't leave much room for extra files and new applications, so go for as much as you can.

The partition utility allows you to create and delete partitions and set up more complex features such as logical volumes and software Raid. Unless you're an expert it's best to stick with a basic setup. You should have one partition for the root filesystem (listed as '/') and one partition for swap, or virtual memory. Traditionally this would be at least equal to the amount of memory the PC has, but with memory sizes going into the gigabytes that's no longer necessary. Anything up to 1GB should be more than adequate.

The utility will detect all partitions it recognises on the hard drive and assign

Ubuntu's standard desktop: here we see Firefox and Evolution

PC partitions explained

A PC hard drive is split into partitions. Under Windows these appear as drive letters, in Linux they are mounted onto the filesystem under directories. A disk can have four primary partitions; in Linux these are referenced with the numbers 1 to 4. One of the primary partitions can be treated as an extended partition, which itself can be broken into many logical partitions. In Linux, logical partitions have the numbers 5 and upwards. Each partition is entirely separate from the rest and acts effectively like a separate hard drive. Linux needs at least one partition for itself, and ideally another for a swap (virtual memory) area.

Linux names IDE drives with the 'hd' prefix, and SCSI and most Serial ATA drives with 'sd'. A letter

then identifies the physical hard drive, followed by a number to reference the partition. So 'hda1' refers to the first IDE hard drive and its first primary partition; hdb5 refers to the second hard drive's first logical partition.

The standard MBR bootloader installed by Windows boots any primary partition that is marked as active, but will not boot a logical partition. Grub (the Linux bootloader) does not have this limitation. Be warned that installing Windows onto a hard drive will overwrite the MBR bootloader without warning, so install Windows before Linux on dual-boot systems. Alternatively install the Linux bootloader onto a primary partition and set that partition to be active, leaving the Windows MBR in place.

mount points to them so you can access the partitions from Linux. Select a partition and choose the mount point option to disable it if you don't want to access the filesystem. Other advanced options such as the label and reserved blocks can be ignored. When everything is done you'll receive a warning that the disk is about to change and partitions are to be formatted. Make sure the configuration is correct before proceeding.

Now that the disk is ready, the installation program copies across the remaining software packages and asks

for some final configuration details. Enter the time zone (a sensible suggestion is offered) and create a new user: this is an administrator user who has access to the 'root' account. Finally the bootloader, Grub, must be installed. You can choose to place it on the Master Boot Record (MBR) of the hard drive or on another partition or boot device (such as a floppy). Most people will choose the MBR. See the 'PC partitions explained' box above for more information. Once Grub is installed, the system reboots for the final stage.

Installing updates requires no effort at all



SCREEN 4

Finishing up

The first boot-up involves installing all the packages that were copied across. Depending on your monitor you may be asked to provide some screen resolutions. If you're using an LCD screen make its native resolution the highest available, and this will then be the default. After about 10 minutes or so the login manager should appear and the installation is complete. Log in with your new username and start getting to know Ubuntu (see screen 3). A window will pop up to tell you updates are available – these are automatically downloaded and installed (see screen 4).

Next month I'll show you how to add extra software to enable mp3/aac and DVD playback and look a bit deeper into Apt, the rather wonderful software management system. **PCW**