Linux Questions and Answers

A Linux White Paper

Preface

For someone new (and even not so new) to Linux®, there are hundreds of questions, problems and concerns that arise during the learning process, especially for someone coming from the world of Microsoft® Windows®. Other Linux white papers deal with individual topics, often in lengthy fashion. This paper addresses a number of miscellaneous questions, both frequently- and rarely-asked, grouped by topic. The focus will be on helping Windows users make the transition to Linux, but those converting from other operating systems should find useful information here as well.

Note: Because of the differences between Linux "distributions" from various vendors, some of the information below may apply to one distribution but not another. This will be pointed out where known; however, with all the available distributions it is impossible to identify all such situations here. If the problem is that a command or program described doesn't exist in a given distribution, it is generally possible to download a copy of that program from a Web site, if needed. On the other hand, there may be a functionally similar utility already provided with that distribution. To find out, consult the user's manual or contact the distribution vendor. If all else fails, there is a list of Web sites in the *Miscellaneous* section, below, that may be of assistance.

For general terminology questions, please refer to the white paper entitled *A Brief Linux Glossary for Windows Users*, available from the same sources as this paper.

Special Note: If you are reading this document online with Adobe Acrobat Reader, simply click on the Web addresses highlighted in blue to go to those Web sites via your Web browser.

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Installation

These questions all deal with some aspect of installing the operating system.

Q. During installation Linux creates a swap space partition. Why do I need this and how is it different from a Windows swap file?

Like Windows, Linux uses a certain amount of space for holding programs temporarily, when there is not enough available RAM (random access memory) to hold all the programs that are running concurrently. Generally, the least recently used program (or part of a program) is copied from memory to a file on your hard drive until it is needed again, at which time the current least recently used program is swapped out in its place and the first program is loaded back into memory. (This is an over-simplified explanation; there is much more to it, but this will do for this question.) This file is called a swap file in Windows or OS/2 and "swap space" in Linux, but in either case it is a form of data file that is read from and written to off and on as long as your system is running.

Windows puts the swap file (a hidden system file with different names for different versions of Windows) in the bootable data partition by default. OS/2 does the same, but by changing the CONFIG.SYS file a user can put the swap file in any directory in any partition on any drive they like. Linux, by default, requires a special swap partition in which to store the swap file. (Actually, Linux does allow swap files to be put in data partitions, with caveats—see below for more on this.)

Q. During installation, I have a choice of creating swap space in a Primary or an Extended partition. Which should I choose?

Either will work. There is no technical advantage to doing it one way or the other, but there are only a limited number of primary partitions that can be created, so if you plan on installing more than one operating system you might want to put the swap space in an Extended partition and save a Primary partition for other uses.

Note: If you have Microsoft Windows installed, it may not boot if you have more than one primary partition installed on the bootable disk drive (what Windows sees as C:). In this case, Linux would have to be installed in an Extended partition, or in a Primary partition on a second hard disk drive. For more information, refer to the lilo (LInux LOader) documentation on a Linux system, using the command: `man lilo` (no, ***man*** is *not* a politically incorrect command—it is merely short for manual). If you do not yet have a Linux system set up where you can read the lilo documentation there are a couple of other options available: 1) If you are installing from a CD set, look for a directory or separate CD (as in Red Hat 6.2) containing documentation, possibly in HTML format. 2) Visit Linux Web sites, such as *http://linux.ctyme.com* and *http://www.linuxdoc.org*, for online documentation.

Q. How large a swap partition should I create?

Although it can be smaller, for best results the partition size should be *at least* equal to the amount of memory installed in the system—preferably *twice* the amount of physical memory. In other words, if you have 64MB of RAM installed use double that amount for your swap space partition (64MB * 2 = 128MB).

If you need more than 128MB of swap space, but you are using an older distribution that does *not* support a swap file larger than 128MB, there are ways around the 128MB swap file limitation: 1) Linux allows more than one swap partition on a hard drive, and 2) Linux also allows swap files to be put in *data* partitions (i.e., in the same partitions as your programs and data files).

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