

Re: installation problems

Source: <http://linux.derkeiler.com/Newsgroups/comp.os.linux.misc/2005-08/0091.html>

From: Allan Adler (ara_at_nestle.csail.mit.edu)

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In an earlier message, I explained that attempting to upgrade from RH 7 to RH 9 had trashed my Linux partition and rendered my PC unbootable. At the moment, I'm trying to restore RH 7.

In a helpful message, Lenard <Lenard@127.0.0.1> suggested:

- >Red hat Linux 7 CD has a bootable floppy installation disk image that
- >you can create the floppy from and can be created on a differnet
- >system, the directions on how to do this are in the directory location
- >on the CD as the floppy boot image. You can also read the directions
- >and create the installation floppy disk by visiting and reading;
- ><http://www.redhat.com/docs/manuals/linux/archive.html>
- ><http://www.redhat.com/docs/manuals/linux/RHL-7-Manual/install-guide/>
- >Step 5 – Can You Install Using the Red Hat Linux CD-ROM?
- > Alternative Boot Methods
- > Making Installation Diskettes

I copied boot.img from the CDRROM to /tmp on another computer (also running RH 7) and then made a boot floppy with the command:

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dd if=boot.img of=/dev/fd0 bs=1440k
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I inserted the resulting floppy in the floppy drive of the disabled PC and started it. I selected rescue mode and eventually wound up in single user mode. I executed but could only run it on /dev/hda. That made it possible to mount the old partitions, but of these only the DOS partition survived with its files intact. It's not bootable, though. The boot floppy had no knowledge of the CD ROM drive.

The BIOS is a little strange. It isn't possible to have it boot in the sequence A,CDROM,C or A,C,CDROM. The only way to get it to boot A before C was to tell it to boot SCSI,A,CDROM, since there is no SCSI drive. I don't know if that has anything to do with it.

I also tried booting the floppy and selecting installation in text mode. It couldn't detect the CD ROM drive. The PC detects the CD ROM drive in the first stages of booting up, so I don't know what the problem is.

Anyway, with this experience behind me, it occurs to me that I can try replacing the vmlinuz of the boot floppy with the vlminuz of the other PC running RH 7 and modifying some of the scripts on the boot floppy. That might eliminate the distracting efforts it is making to install from the CD ROM. Once I can simply boot from the floppy, I might be able to put other stuff on the machine, either in what is left of the linux partition or in the DOS partition, and get it eventually to boot from the hard drive. I once succeeded in installing RH 5.2 on a tiny laptop with only a 250 MB HD and only about 16 MB RAM by just such a bootstrapping process via sneaker net. It took a lot of work, but for a long time that old \$100 used laptop was the only machine I had to travel with and the only one I could afford. It did the job I needed it to do, no matter what the current versions of hardware and operating systems were, and that is all that mattered. Moreover, it taught me that even though certain hardware is recommended for a given distribution, one can sometimes manage without it.

Question 1: What do I need to put on the floppy to get it to detect the CD ROM drive, just in case it is a software problem and not a flaky drive?

Question 2: Since the disabled PC will nominally boot from a SCSI drive, and since flash drives seem to be listed in /proc as scsi devices, is there some way to put what I need on a "boot" flash drive and boot from it? Having a few hundred MB to work with seems better than trying to operate from a boot floppy with 1.4 MB.

Question 3: During the aborted installation of RH 9 on the disabled PC, it asked me whether it should install LILO or GRUB and I said LILO, and it asked me whether it should write to the MBR or to the Linux partition, and I said the MBR, thinking it didn't matter one way or the other. Maybe it did? It was right after that that it said it couldn't install on my hardware and gave up.

Lenard also asked what seemed like a natural question:

*>Why are you upgrading from an old *unsupported* version to another that
>is in *legacy* support???* (Something to think about)

Answers: (1) I don't want to buy more hardware and anyway can't afford it, and therefore a current upgrade is out of the question; (2) I had the RH 9 CD's and Fedora 2 CD's in hand for free, and didn't want to buy a distribution; (3) Given that one doesn't want to upgrade the hardware, it still makes sense to use a more recent version of RH, if it is compatible with the hardware.

I like to think that the concept of free software also entails the concept that I don't have to keep buying more computers in order to keep using the free software. Maybe that means I'll have to learn to read the source code for the Linux kernels eventually. There are worse fates. I downloaded a free copy of the book Linux Device Drivers from O'Reilly and have been going through it infinitely slowly. And I have a Coriolis publication entitled Core Linux Kernel (1999), probably dating back to kernel 2.4 or earlier. Then there are the old books on operating systems and the old copy of

Harbison and Steele on the Draft Ansi C I've been hoping will serve as suitable reference materials, along with various online books I've also downloaded and whose titles I don't remember. I've already put a certain amount of effort into acquiring this background, along with other books on programming (e.g. Knuth's Art of Computer Programming), but I don't really want to spend all my time reading computer books. I'm a mathematician and I like to spend my time on pure mathematics and I would rather give up on computers completely than compromise that commitment. I'm not asking for Linux and my PC just to be appliances, the way Windows does. All I ask is that if I pop the CD ROM in the drive to see if it will install, it will simply tell me it doesn't support the hardware and eject the CD instead of destroying my files and making the PC unbootable.

One reason I had that expectation is that I have another PC, much older than the others, that is also running RH 7. I call it The Cadaver and I use it the way medical students practice on cadavers: I try things out on it that I'm not sure about and I don't have to worry about the consequences since there is nothing on the machine I care about. I popped the RH 9 CD into The Cadaver's CDRom drive and it started trying to install, then told me it couldn't, and when I rebooted the PC, everything was just the way I had left it. So, I had the expectation that RH 9 would behave the same way on the machine I really did want to upgrade, particularly since Fedora 2 had already done so on that same machine.

Anyway, now I know I can't rely on experiments carried out on The Cadaver. And, anyway, for as long as I have been using Linux, all the way back to kernel 0.97, I've known that stuff can go wrong and that one has to back everything up just in case. This is the first time that has happened, but everything is backed up, so it is just a matter of making the machine functional again.

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Ignorantly,

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* Disclaimer: I am a guest and *not* a member of the MIT CSAIL. My actions and
* comments do not reflect in any way on MIT. Also, I am nowhere near Boston.