

Installing Fedora without a bootable CDROM drive

By Dirk Hart

The other day I got my hands on an old Pentium 90 server. It's an old machine but so well made I still really like it. Anyways It had an install of Caldera OpenLinux on it, which ran quite well, but that I wanted to try Fedora. I ordered up some CDROMs which arrived in due course so I slapped Disc 1/4 Install in the CDROM drive and looked around for a bootable image which wasn't too hard to find as it was in /images. Curious though that the size of the image was 6,291,456 bytes - far larger than any floppy I ever saw! How was I going to solve this little dilemma?

A little rummaging around on the 'net showed that I could hack at LILO (which is what was used by OpenLinux) and achieve a satisfactory result. So I did put in stuff that seemed sensible at the time and rendered the machine unbootable. I suppose I could have taken out the OpenLinux bootable install diskette and made the system bootable again, but I didn't want to muck around with OpenLinux, I wanted to muck around with Fedora.

A little more rummaging around on the net revealed that LoadLin is a commonly accepted way of running linux. It seems to be intended for folks who like to boot linux from DOS or Windows. But I had also noted while surfing the web that the initial program to run is vmlinuz and that it requires initrd.

vmlinuz is a virtual memory (hence vm) linux kernel that is compressed (hence z). This compressed kernel has a 'self-extractor' built in so the first thing it does is expand itself back into vmlinux. initrd is the bit that loads an initial ram disk (hence initrd). The ram disk contains drivers and such that may be needed to run your machine.

So I downloaded LoadLin and put it onto a DOS formatted floppy. And with a certain remorse I took out the Windows Emergency Boot diskette that has CDROM drivers on it and started it up. The floppy drive showed up as A:, the ramdisk as C: and the cdrom as D:. So I flipped out the boot diskette and whipped in the loadlin diskette and typed in:

```
loadlin d:isolinux\vmlinuz initrd=d:isolinux\initrd.img
```

backslashes and all.

And much to my delight, away it went.

---December 14, 2004

Very helpful. I got FC3 installed on a box without a CDROM. The trick was to put the HD in another machine, partition and format it, drop the ISOs on one partition (ext3), drop the boot stuff on another (fat), put the HD back, boot off of that swedish Win95 floppy, run loadlin, and install from the ISOs. Luckily everything worked the first time, since the boot partition got wiped out (repartitioned)...

---December 29, 2004

Thanks, man! That is a nice hack. Did it just as described on an old laptop that can't boot from CDROM. Put the new K12LTSP version 4.2 (a modified FC3) with xfce4 and icewm, works decently with only 80 megs of RAM. I had tried copying the vmlinuz and initrd from the CD to /boot partition on older distribution and putting them into grub.conf, but couldn't figure out how to get it to take my arguments to the kernel properly. Without "text" and "ide=nodma" I can't install any newer linux on that old thing. Loadlin figured everything out just fine.

Tom Trent

--Sun Sep 25 19:19:10 2005 James

Dude you rock! I seriously owe you one, this is the perfect solution for all of us using ancient machines that don't support booting from the CD drive :D Cheers buddy!