

Re: GRUB problem: Booting Linux from USB Disk

Source: <http://linux.derkeiler.com/Newsgroups/comp.os.linux.misc/2006-08/msg00941.html>

- *From:* Bill Waddington <william.waddington@xxxxxxxxxx>
 - *Date:* Wed, 09 Aug 2006 18:29:12 -0700
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On Wed, 09 Aug 2006 18:07:20 -0700, Bill Waddington
<william.waddington@xxxxxxxxxx> wrote:

On 9 Aug 2006 17:35:56 -0700, "Noelle"
<nmvega@xxxxxxxxxxxxxxxxxxxxxxxxxxxx> wrote:

Hello:

My PC BIOS supports booting from USB devices, so I decided to load FC5
on one of my USB attached disks (300GB Seagate).

I successfully did so, but I can't get GRUB to work right (i.e. to
complete the boot).
I may be experiencing a syntax or GRUB usage problem

Problem description:

/dev/sda (internal SATA Drive - Windows XP)
/dev/sdb (internal SATA Drive - for Backups)

/dev/sdc (external USB Drive - Fedora Core 5)
/dev/sdc1 (hd2,0) = /boot
/dev/sdc2 (hd2,1) = /
/dev/sdc3 (hd2,2) = swap

During the install, I specified that "stage1" of GRUB
was to be put on the first sector of /dev/sdc1 (and it was).

But when I boot the PC using the USB device, all I get is:

GRUB

(Literally, that's all I see). This tells me that the PC finds "stage1"
on the
disk, but "stage1" cannot find "stage2" (I think that's what
happening). So
I booted to rescue mode off a CD-ROM and used grub(8) and

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grub-install(8)
in various ways to modify the "stage1" grub image.

For example:

```
root# mount -t ext3 -o rw /dev/sdc1 /boot
root# grub-install --root-directory=/boot /dev/sdc1
root# umount /boot

root# grub
install (hd2,0)/boot/grub/stage1 d (hd2) \
(hd2,0)/boot/grub/stage2 p (hd2,0)/boot/grub/menu.lst
```

I also tried the above 'install' grub sub-command by omitting the '/boot' part in various parts of it.

HELP --- I did my homework and tried what I found all over. But no success here. And its probably something simple.

Basically here is what I have and need (a review):

- I have FC5 installed on the device slices shown above (/dev/sdc).
- I can select to boot off that device when I turn on my PC (by pressing F8).
- I have a Knoppix and FC5 rescue CD's that I can boot off to work on my GRUB issues. Now...

Tell me what GRUB commands to run (or re-run correctly) the get the system to complete the boot to that USB disk.

(Note: I don't want nor need to mess with the MBR on /dev/sd*a*, which holds Windows XP, because my PC can boot USB devices; in this case it is /dev/sdc).

BTW... the 'menu.lst' has an entry for Windows XP and one for the FC5 (default is FC5).

Thanks in advance.

N Milton
nmvega@xxxxxxxxxxxxxxxxxxxxxxxxxxxx

Hmmm, I'm not smart enough to figure out what's wrong with the above, but I have done it this way from Knoppix (trying to translate to your drive/partition setup). Grub goes in the mbr, since you are trying to boot from BIOS, not chainload the boot sector of your /boot partition from another boot loader:

Or use a vanilla boot loader in the mbr, mark sdc1 as active, and

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install stage1 to sdc1's boot sector, I suppose. Haven't tried it that way...

```
#mkdir /mnt/sdc1/grub
#cd /mnt/sdc1/grub
#cp /lib/grub/i386-pc/* .
#grub
root (hd2,0) <where the files are>
setup (hd2) <to put grub stage 1 in the mbr of hdc>
quit
```

build menu.lst to suit...

Probably typo infested, but (hopefully) you get the idea. Works for me on a USB fob. YMMV. A little more detail here:

<http://www.beezmo.com/FloobyDustDir/FDKnoppixUsbDir/FDKnoppixUsb.htm>

Bill

—

William D Waddington

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"Even bugs...are unexpected signposts on the long road of creativity..." – Ken Burch

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