

# Re: [opensuse] RE: Damaged Master Boot Record – Solved

---

*Source:* <http://linux.derkeiler.com/Mailing-Lists/SuSE/2007-08/msg00251.html>

---

- *From:* Registration Account <[alpha096@xxxxxxxxxx](mailto:alpha096@xxxxxxxxxx)>
  - *Date:* Tue, 07 Aug 2007 16:05:11 +1000
- 

I have successfully installed 10.2. I thought I would explain what the problem was and how it was fixed.

Firstly I need to go over the IDE hardware setup.

There are 2 IDE BUS connectors.

The first has 2 LBA IDE HDD, however the disk at the end of the ribbon is hardware configured as the slave and the master is hardware configured between the two ends of the ribbon.

The second IDE connector had the CD hardware configured at the end of the ribbon and another LBA HDD hardware configured as a slave between the two ends of the ribbon.

The other complexity, whilst not causing a problem, is interesting as the system BIOS has a specification for which HDD are the first, second, third and fourth devices (NOTHING TO DO WITH BOOT ORDER) As All HDD are the same model and capacity the 1st Master HDD was positioned as the second device which is correct in so far as its physical location on the cable.

The settings for the Boot preference priority was set to CD/HDD/FDD which is true and correct as despite a bootable image being loaded in the CD and the CD nominated at the 1st priority; if the BIOS recognises that the current CD media is bootable it ALWAYS asked "hit any key to boot from CD". If media is present in the CD and there is no bootable image and despite the priority being set as above; no question is asked of the user.

Therefore I partitioned the second HDD, which was in fact the 1st HDD with a root mount point and gave it 20GB formatted with ext3. I created a second partition with a home mount point formatted with ext3 and a swap

Re: [opensuse] RE: Damaged Master Boot Record – Solved

partition formatted as such. I created and formatted a swap partition of 1SHDD and 2MHDD.

System installed and up and running.  
(This is an overhang that came from the first PC which had only 1 FDD – one was A and the other B. The A drive ALWAYS had the O/S the B the DATA. The convention that no matter logically where drives are the only drive which will boot is the First device and it matter not what size (in the case of floppies) or placement on the ribbon.

How I discovered the wrong physical location of the 1MHDD was to install Windoze XP – Its install program formatted and copied files to the 1MHDD despite me setting fdisk to format 1SHDD as drive C. That lead me to think the same "1st Drive" concept in DOS and Windows applied to Linux and there is logic behind this.

One day I will physically move the 1MHDD to the end of the ribbon and the 1SHDD to the middle.

Lesson for me – even the teko shop sometimes gets things wrong when putting in new HDD.

Thanks to all who have offered their suggestions to help

Scott

Jerry Feldman wrote:

On Sat, 04 Aug 2007 11:52:34 +1000  
Registration Account <alpha096@xxxxxxxxxxx> wrote:

What I need are 2 things.

1. How do I dismount all the drives to run fsck at Xterm?
2. How do I use fdisk to re-write MBR from xterm?

The second one might be difficult as there is plenty of info on re-creating a LiLO MBR but not GRUB on the internet

The best way is to boot a rescue or disk or live CD, but...  
Another way is to shutdown to single user mode. This should unmount all

Re: [opensuse] RE: Damaged Master Boot Record – Solved

but the root file system. You can always do a umount -a.

Make sure root is mounted read-only. (If I recall, in SuSE when shutting down to single-user, it mounts read-only, but Fedora did not. So, what I do is try to write to root, and if it fails I'm read-only.

The command to mount root readonly is:

```
mount -o remount,ro /
```

At this point you can run fsck.

I generally run fsck on a single partition at a time in this mode, but you can also run multiples.

Probably the simplest way to fix the MBR is to go to YaST/System/Boot Loader. Stepping through this, should cause the MBR to be rebuilt.

Another way is to use the grub(8) command. Check the grub info page:

`info grub`

There is a section "3.2 Installing GRUB natively"

This will also rewrite the MBR.

***Attachment: smime.p7s***

*Description: S/MIME Cryptographic Signature*