

## Re: Big-disk woes

**Source:** <http://linux.derkeiler.com/Newsgroups/comp.os.linux.setup/2005-01/1169.html>

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**From:** prg (rdgentry1\_at\_cablelynx.com)

**Date:** 01/27/05

Date: 27 Jan 2005 13:26:34 -0800

Tom F. wrote:

> >On Thu, 27 Jan 2005 02:23 -0800, Jules wrote:  
> >Is there a reason for having such a huge boot partition?  
> That is big, isn't it? No reason really. Maybe that's part of the  
> problem? Doubt it but I'll try a more resonable size.

And shrink that / partition as well -- it should be as small as possible. Use more patition(s) for /temp /usr /var and /opt. Extra space with a scratch partition and/or just leave some of the disk unpartitioned for future use. Or read up on LVM.

> >Did you do a full disk check at filesystem creation time?  
> No, I guess that's a good idea. I only just started thinking in terms  
> of a bad disk. I was thinking bios all this time.  
>  
> I just found this online my motherboard is bit LBA. This is the  
> problem I think.  
>  
> Tom F.

"my motherboard is bit LBA" -- hmmm .....

Actually, grub only needs BIOS to find the boot dir to load the stage1\_5 and stage2 files, the menu and the kernel/vmlinuz, etc. Any BIOS from the past 10 years can help grub with that task when grub files (/boot) reside in the first 1 GB. It is possible that the earliest LBA capable BIOSes translate the disk geometry reported by the hard disk in a strange way -- not yours.

Some BIOSes do have different translation "modes" that may throw things off at boot, but once booted, Linux does not use BIOS to access the hard disk. If you can boot and your files reside in the first 32GB then you should run just fine. Double check your BIOS settings.

Don't worry about any complaints about partitions not ending on cylinder boundaries. CHS has been outdated/useless for 15 years -- celebrate the day everyone forgets it ever existed. Different utils

report it differently and there is not now and never has there been a "standard" for CHS geometry translation.

28 bit LBA just means the BIOS can't see beyond 128GB. Your BIOS may not have this limitation as it was mostly a Windows (combined with some BIOSes) limitation, but it really cropped up just about the time of your BIOS date. Most mobos able to correct this via a flash. But yours may be one that pre-dated the 48 bit LBA standard that was adopted and has no flash fix :(

>>From the ASUS site:

<http://www.asus.com.tw/support/download/item.aspx?ModelName=A7A266&Type=AllAA261011.ZIP>

Support AMD XP2100+ CPU.

Add LBA 48-bit addressing mode support. << need this?

Fix Samsung DDR problem.

Your BIOS flash fix should show that it supports 48 bit LBA mode.

Besides the BIOS you need to be sure to use an 80 line IDE cable -- not an old 40 line cable. Make sure the BIOS and hard disk agree on DMA mode.

\$ man hdparm

<http://www.die.net/doc/linux/man/man8/hdparm.8.html>

Make sure the jumpers on disk and BIOS are properly set. Some disks have a jumper that makes them "friendlier" to use with older BIOSes. Some BIOS/disk combos don't work well with CS (cable select), especially with a 40 line cable.

Even with a new disk, I always run badblocks when doing a fresh install. It's lengthy, but assures that mkfs does not use what the OS will see as bad sectors.

Also get/run hard disk maker's disk utility to make sure it's not toast -- rare but does happen. If it is bad some makers will have you run the tests and email results before they will issue an RMA anyway. See: <http://www.duxcw.com/faq/hd/diag.htm>

I notice that this is hdc -- are you sure you have a clean/sufficient power supply? Switch disk power plugs?

All that comes to mind "off" the top of my head (except hair 0:(  
hth,  
prg  
email above disabled