

Re: Can't boot off of new SATA drive

Source:

<http://www.tech-archive.net/Archive/WinXP/microsoft.public.windowsxp.hardware/2006-07/msg00014.html>

- *From:* "Vanguard" <vanguard.news@xxxxxxxxxxxxx>
 - *Date:* Sat, 1 Jul 2006 11:07:43 -0500
-

<mickeddie@xxxxxxxxxxxx> wrote in message
news:1151761871.203058.292310@xx

Vanguard wrote:

<mickeddie@xxxxxxxxxxxx> wrote in message
news:1151713587.591174.200960@xx
>
> So you think it would help if I told you which mobo I have? It is > a
> Dell in the Poweredge 400SC. When I asked Dell who makes the mobo
> they
> said they make their own.

Very often that information does help. After getting it, I was able to find:

<http://support.dell.com/support/edocs/systems/pe400sc/en/ug/j0323c30.htm#1039152>

It mentions the "Boot Sequence" option in the [BIOS] setup screens. However, true to Dell's inability to explain their hardware (because they don't know what components they will be slapping into the box that week that simply meets the specs for the box and why many customers won't bother with Dell if they want a fixed and known set of hardware in all their hosts), all it says is:

Unfortunately Dell doesn't bother to actually list what selections are available, so I can't tell if "hard drives" includes a SATA device. The show the screen for the option and that you hit the Enter key for the sub-screen but they don't bother showing that sub-screen. Generally I have found Dell's documentation to be verbose but vacuous.

Yea, I know. I would never buy a Dell...this was given to me. I'm going to build a Conroe system next month. From that link the "Boot Sequence" does NOT list the SATA controller...just IDE and USB. This

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is what I need to call back Dell tech support.

Since you had them on the phone, what did they say on how to boot from a SATA drive?

They said "I don't know why there is no SATA listed in the BIOS. I'll see if I can find anything and email you if I do."

- > The SATA ports are right on the mobo...I will poke around the bios
- > some
- > more.

Then use whatever keys your BIOS accepts to cycle through each of the preset settings for the boot drive ordering. One of them should include the SATA device. If the system BIOS does not include a SATA device in the boot drive order, maybe after the system BIOS has completed its POST you will then see a one-line blurb saying that the SATA BIOS is loading and it is at that time that you have to hit a key to enter that BIOS (that's how SCSI cards often work) where you can specify to boot from a SATA drive. However, since the SATA BIOS is ran after the system BIOS, the system BIOS would've already found the IDE hard drive to boot from (whether there is an OS there or not). That means you would have to disconnect all the IDE drives from the IDE ports so the system BIOS won't find them. Disabling the IDE ports would also prevent booting from them but then you can't use the IDE drives. Maybe the system BIOS has a boot drive order that doesn't include the IDE drives so you don't have to go with an IDE daughtercard to keep using the IDE drives.

In my OP I said I disconnected the IDE drive. I did NOT unplug the cable from the mobo...just from the drive unit. And like I said when I mirrored the SATA drive I selected the option to make it bootable, but when the system booted up with the IDE drive NOT connected I got a message "no OS installed" or "no OS found".

Ah, missed that (or focused on the other stuff). That is because the boot.ini file used by the Windows loader still lists the IDE drive as the boot device. The boot.ini file uses physical parameters to describe the boot drive (of where to find the rest of the OS that the loader needs to find). A SATA drive would have completely different physical parameters to describe in boot.ini how the loader (the boot sector in the OS' partition) would find that drive. You probably something like the following in boot.ini (which now a copy resides on the SATA drive, too):

```
default=multi(0)disk(0)rdisk(0)partition(1)\WINDOWS
[operating systems]
multi(0)disk(0)rdisk(0)partition(1)\WINDOWS="Microsoft Windows XP Professional"
```

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Disks are numbered starting from zero but partitions are numbered starting from one. You changed the physical location of the OS by going to the SATA drive but the boot.ini still has the physical descriptors that point to an IDE drive. I don't remember the syntax for the physical descriptors for a SATA drive (but could probably find them with a Google search). However, it may be easier to boot using the Windows install CD, use it to go into Recovery Console mode, and run "bootcfg" in the command shell that it gives you. Otherwise, you are stuck trying to use a utility that can read from your SATA drive to get a copy of the boot.ini file so you can edit it and put it back. You could use a DOS-bootable floppy that had NTFSini from Powerquest on it which will read NTFS-formatted partitions so you can get a copy of the boot.ini file onto the floppy, edit it there, and then use NTFSini to put it back. It used to be called NTFSini but, I think, it got renamed to BTini (get it from ftp://ftp.symantec.com/public/english_us_canada/tools/pq/utilities/).

I'm not sure, but I believe other users of SATA drives (from which they want to boot Windows) need the rdisk parameter changed from:

```
rdisk(0)
to
rdisk(1)
```

I found some reference to the ARC paths listed in the boot.ini file at:

http://msdn.microsoft.com/library/default.asp?url=/library/en-us/dnxpesp2/html/XPE_DUALBOOTDual-BoottingTip
<http://support.microsoft.com/kb/155222/en-us>
<http://support.microsoft.com/kb/102873/en-us>

If you can get into Recovery Console mode, you could use the diskpart command as follows:

```
diskpart
? (optional; list all commands)
list disk (how many disks are listed?)
select disk X (where X is the SATA drive)
detail disk (details of the selected disk)
list partition (partitions on the selected disk)
exit
```

That way you could find which disk number was for the SATA drive and which partition number had Windows in it.

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