

ESXi 4.0 - Storage: Am I missing ...



TechnoStruct 3 posts since

Jan 31, 2007

I've installed ESXi 4.0 onto one of the "known good" whiteboxes, an Asus M3N78-VM (bought *because* it was on said HCL whitelist). At first, it wouldn't load ESXi whatsoever. Surprisingly, upgrading the BIOS (it came with 1009, upgraded to current 1013) and suddenly ESXi worked fine. Next, it took some rather noob troubleshooting but I got the custom "oem.tgz" (found [here](#)) into the USB-installed thumb drive of the ESXi install, and then past the PSOD issues due to the file being in the wrong location. I've now gotten ESXi to boot up and function normally (and even see [both](#) the built-in Realtek PHY gigabit adapter, and the add-on Intel GT gigabit adapter).

(Just in case anyone wants to say this, I do know about the VMware HCL, and I have checked other entries here & elsewhere for the M3N78 and its variants in regards to ESXi. I wasn't sure how to search for this type of incident, outside of the actual model info.)

The problem, now, is with the storage controller. It ... *appears* that it's being loaded as follows:

```
00:09.00 10de:0ad4 1043:82f2 5/ 5/0x69 A V vmhba1
```

But any time I go into "Add a device\LUN", absolutely NOTHING shows up. I've tried a previously-Linux-formatted drive (former Untangle box's 40GB WDC WD400 drive), and a brand-new unformatted drive (1TB WDC WD1001FALS drive). Nothing shows-up in the vSphere Client whatsoever. So, what am I doing?

Contents of "lspci -p":

```
~ # lspci -p
```

```
Bus:SI.F Vend:Dvid Subv:Subd ISA/irq/Vec P M Module Name
```

```
Spawned bus
```

```
00:00.00 10de:0754 1043:82f2 V
```

```
00:01.00 10de:075c 1043:82f2 V
```

```
00:01.01 10de:0752 1043:82f2 10/ / A V
```

```
00:01.02 10de:0751 1043:82f2 V
```

```
00:01.03 10de:0753 1043:82f2 7/ 7/0x69 B V
```

```
00:01.04 10de:0568 1043:82f2 V
```

```
00:02.00 10de:077b 1043:82f2 15/ 15/0x69 A V usb-ohci
```

```
00:02.01 10de:077c 1043:82f2 11/ 11/0x69 B V ehci-hcd
```

```
00:04.00 10de:077d 1043:82f2 10/ 10/0x69 A V usb-ohci
```

```
00:04.01 10de:077e 1043:82f2 10/ 10/0x69 B V ehci-hcd
```

```
00:06.00 10de:0759 1043:82f2 255/ / @ V
```

```
00:08.00 10de:075a 0000:0000 V
```

```
001
```

```
00:09.00 10de:0ad4 1043:82f2 5/ 5/0x69 A V vmhba1
```

```
00:10.00 10de:0760 1043:82f2 11/ 11/0x69 A V forcedeth vmnic0
```

```
00:11.00 10de:0569 0000:0000 V
```

```
002
```

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```
00:16.00 10de:0778 0000:0000 10/ 10/0x71 A V
003
00:18.00 10de:075b 0000:0000 11/ 11/0x71 A V
004
00:24.00 1022:1100 0000:0000 V
00:24.01 1022:1101 0000:0000 V
00:24.02 1022:1102 0000:0000 V
00:24.03 1022:1103 0000:0000 V
01:06.00 8086:100e 8086:002e 15/ 15/0x71 A V e1000 vmnic1
02:00.00 10de:0849 1043:82f2 15/ 15/0x69 A V
```

Contents of "fdisk -l":

~ # fdisk -l

Disk /dev/disks/mpx.vmhba32:C0:T0:L0: 1008 MB, 1008991744 bytes
64 heads, 32 sectors/track, 962 cylinders
Units = cylinders of 2048 * 512 = 1048576 bytes

```
Device Boot Start End Blocks Id System
/dev/disks/mpx.vmhba32:C0:T0:L0p1 5 900 917504 5 Extended
/dev/disks/mpx.vmhba32:C0:T0:L0p4 * 1 4 4080 4 FAT16 <32M
/dev/disks/mpx.vmhba32:C0:T0:L0p5 5 254 255984 6 FAT16
/dev/disks/mpx.vmhba32:C0:T0:L0p6 255 504 255984 6 FAT16
/dev/disks/mpx.vmhba32:C0:T0:L0p7 505 614 112624 fc VMKcore
/dev/disks/mpx.vmhba32:C0:T0:L0p8 615 900 292848 6 FAT16
```

Partition table entries are not in disk order

Please, someone point out my (I'm guessing) totally NOOB moment here. I swear I've done this right, but I can see I haven't or else it'd work.



[RParker](#) 5,270 posts since

Dec 6, 2006 **1. Re: ESXi 4.0 - Storage: Am I missing something?** Jul 2, 2009 1:52 PM

But any time I go into "Add a device\LUN", absolutely NOTHING shows up.


Did you scan the HBA / Controller first? Scan might help you. And if there is a datastore already assigned (installed by default during install unless you unchecked it) the problem may be the size of your RAID/DISK.

A single storage (if not using virtual hard drives in the controller) can only be 2TB including the install. So if the install takes up the same drive as you intend to use datastore on, and let's say its 2.5TB, you will only have 500GB left. That's why you want to create RAID drives with your RAID configuration, at the hard drive level and break up those larger disks with 'virtual' hard disks.



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Jan 31, 2007 **2. Re: ESXi 4.0 - Storage: Am I missing something?** Jul 2, 2009 2:14 PM

 in response to: [RParker](#)

Thanks for the information, but my setup is a little simpler than that. Whitebox (OTS) componentry, for a home-based install (before exploring other options). This is an install using the onboard IDE/SATA controller, in this case the Asus/nVidia MCP78 chipset. There is not a separate controller card, and the BIOS on the MB does see the hard drive. The drives are in AHCI mode, and if I were to boot to the hard drive itself (in the case of the pre-formatted Linux-partitioned one pulled from an Untangle installation), the hard drive does boot up to the GRUB selection screen. So the drives are seen outside of ESXi itself, and are bootable.


ESXi is currently installed on a 1GB Memorex TravelDrive USB thumb drive. It runs fast enough for me and is, in my opinion, a great working setup. If I do select to use this (micro-OS) in the future, you'd better believe I'll be using equipment with embedded ESXi in them. I'd rather save storage for storage.

So, where I'm at, the drives are working and viewable outside of ESXi. And I *believe* that I can see the controller post-boot, as it's being given an assignment (in this case, "00:09.00 10de:0ad4 1043:82f2 5/ 5/0x69 A V vmhba1"). But when I go into "Add a datastore...", I don't see any devices at all. So I'm kerfuffled...



[RParker](#) 5,270 posts since

Dec 6, 2006 3. **Re: ESXi 4.0 - Storage: Am I missing something?** Jul 2, 2009 2:22 PM

 in response to: [TechnoStruct](#) "00:09.00 10de:0ad4 1043:82f2 5/ 5/0x69 A V vmhba1"). But when I go into "Add a datastore...", I don't see any devices at all. So I'm kerfuffled...

Yes BUT you still need to SCAN your HBA controller. Go into configuration on ESX host, click on storage adapters. Find that controller, right click on the controller and click 'rescan'. That drive may be there, but ESX needs to SCAN to use it for datastore.


You don't need to scan for VMFS, just new devices.

But on second thought ESXi won't let you use IDE/SATA for Datastore. It might be supported to install, but if it doesn't 'see' your controller, I don't know there is alternative... unless you buy a PCIe RAID controller.



[DSTAVERT](#) 2,418 posts since

Nov 30, 2003 4. **Re: ESXi 4.0 - Storage: Am I missing something?** Jul 2, 2009 4:03 PM

 in response to: [TechnoStruct](#) It looks like you may need to do some work. If you check at the <http://vm-help.com> forums it does appear that the issue you describe is an issue. Also on that HCL it lists the EM not VM motherboard although that may not matter. Have a look at <http://www.vm-help.com/forum/viewtopic.php?f=17&t=232&p=1196#p1196> towards the bottom of the page. I am referring to Dave Mishchenko's comment.