

Re: Installation instructions for Firefox somewhere?

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To: freebsd-questions@freebsd.org

Ted Mittelstaedt writes:

- > *HP didn't manufacture either of the drives nor the SCSI controller so*
- > *why would you think that they know what they are talking about?*

They rebranded the drives and took the top 10% or so of production batches (according to someone I knew on the inside). They also charged more for them.

- > *This happens when the SCSI target disk0 stop answering*
- > *commands from the SCSI adapter.*
- >
- >> *Feb 26 20:09:26 contactdish kernel: (da1:ahc0:0:2:0): Retrying Command*
- >> *Feb 26 20:09:26 contactdish kernel: (da1:ahc0:0:2:0): Queue Full*
- >> *Feb 26 20:09:26 contactdish kernel: (da1:ahc0:0:2:0): Retrying Command*
- >
- > *Same thing as above just with the second disk.*

So perhaps FreeBSD is issuing commands that the disk drives don't like.

Incidentally, I've discovered that I can instantly generate similar messages by issuing "smartctl -a /dev/da0" (or da1).

- > *The usual problem is bad termination that causes this, because what*
- > *happens with bad termination is that electrical noise causes one or*
- > *more targets on the bus to receive a command that is garbage, that*
- > *target shuts down and goes out of sync with the other initiators and*
- > *targets on the bus, as soon as that happens all targets shut down.*

I would have seen the same problem with Windows if that were the case. The hardware was the same, and the long delay (20-30 seconds) produced each time this happens would have been impossible to ignore.

- > *But it can also be caused by a device that isn't totally compliant*
- > *with the standard interfering with another device on the bus (although*

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- > *this is rare) And it can also be caused by the adapter card driver*
- > *sending a command to a target that the target doesn't understand or*
- > *does not process properly, this can happen when during the probe on*
- > *boot, a target responds saying it supports something, then really*
- > *doesn't. IDE devices are infamous for this, claiming to support UDMA,*
- > *PIO mode 4, and such when they really don't support them properly.*

Or perhaps FreeBSD doesn't understand that this particular (old) SCSI hardware can't understand every command it issues.

- > *The driver for the SCSI adapter has finally given up trying to send*
- > *commands to the adapter card your disks are tied to and has decided to*
- > *just reset the card entirely, which resets the bus and all devices on*
- > *it, which reestablishes sync.*

That explains the long delay.

- > *This is a bit significant, after the bus reset, the second disk (the*
- > *Quantum) isn't answering. But it looks like it later on started*
- > *responding since otherwise your system would probably have panicked.*

I've experienced one or two panics, but most of the time it's just a long delay. I've seen no evidence of data corruption, although it's hard to be sure, of course.

- > *The idea that a SCSI command sent to a disk by the adapter card*
- > *causing this is unlikely, unless either the Seagate or Quantum models*
- > *that you have are known rogues (and I didn't find that they are) it is*
- > *much more likely a conflict on the SCSI bus.*

Why now, after eight years?

- > *Well first of all I already told you to run your BIOS config and set*
- > *the adapter to limit sync negotiation on the Quantum to 10Mb and*
- > *see if that fixed it.*

I'll check that the next time I boot. But it seems to happen on both drives, not just the Quantum.

- > *Secondly, you don't know how NT setup the disks and such on your*
- > *system. It is quite possible that the NT driver saw the mismatch*
- > *and simply reprogrammed the SCSI adapter card to limit both disks*
- > *to 10Mbt transfers. Or possibly the NT driver decided not to send*
- > *writes to both disks at the same time. So, comparisons like "it*
- > *worked with NT so the hardware must be good" are almost useless.*

So how do I configure FreeBSD to do the same thing? If NT can do it in software, so can FreeBSD.

- > *But the most important thing, and I think why your having so much*
- > *trouble here, is that you are trying to approach this problem*

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> *as though you paid \$9,000 for this server, yesterday.*

I don't believe in throwing computers away just because they are a few years old.

> *If your Vectra was a brand new prototype in an HP test lab, or
> even if it was 10 days old from HP and you ran into this problem,
> you might have engineers with SCSI analyzers from HP's server
> build department all over you.*

If it were a problem with hardware, I would have had exactly that eight years ago. But I didn't, so it's not.

> *But it's not – this is a server that has a production life that
> is OVER. I know you don't like Ebay and you probably think that
> everything on it is junk, but people are selling HP servers on
> it right now that are more powerful than yours and younger than
> it for under a hundred bucks – see:*

Why should I pay anything for another machine, when I have a perfectly good one here on my desk?

All I need is software that can drive it.

> *The fact of the matter is that ANY life you can get out of this
> server today is found money – it's a freebie. HP, 8 or 10 years
> ago when they designed this server would have told you THEN that
> they wern't expecting it to be in service today.*

If so, they would have been deliberately lying, as even then everyone knew that HP machines can run for a decade or more with ease.

> *Now to be honest I have a soft spot for older hardware, the
> gateway router system that this very message is passing though just
> happens to be a dual Pentium Pro with 128MB of ram and a 4GB
> SCSI disk on an Adaptec controller, here's it's dmesg:*

Looks familiar.

> *ahc0: <Adaptec 2940 Ultra SCSI adapter> port 0x9300–0x93ff mem
> aic7880: Ultra Wide Channel A, SCSI Id=7, 16/253 SCBs*

These look familiar, too. I still have an Adaptec SCSI controller in a box somewhere (it wouldn't run on the cheap hardware I used for my old server, so I removed it and replaced it with a more modest controller—in that case, it was hardware).

> *da0 at ahc0 bus 0 target 0 lun 0
> da0: <MICROP 4343WS X502> Fixed Direct Access SCSI-2 device
> da0: 20.000MB/s transfers (10.000MHz, offset 8, 16bit), Tagged Queueing*

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Hmm.

> *This is a real live system I just built last week. It runs a champ.*

So what is the difference between yours and mine?

> *Said pile included cases even, it also includes a second dual Ppro
> motherboard (sans CPU's).*

In some circles it is said that PPros still have considerable value. They're not fast but they are reliable and classic, with hardware features that Intel inexplicably abandoned thereafter.

> *But, I have learned something in dealing with the older gear, and that
> is that you must be extremely flexible with it. If I get 2 systems
> that are flakey, I will swap parts between them in an effort to get
> 1 stable system. More commonly though I have a half dozen or more
> older systems in the pool at a time, that parts move around between,
> and that new systems in a state of disrepair come into, and old systems
> that are in a state of stability go out of to friends and others who
> need systems.*

But this is a stable system. The hardware does work. I didn't put this together out of scrap parts. It has run perfectly for eight years; I think I can safely say that it's pretty well broken in by now. So when I switch from Windows to FreeBSD and it stops working, I know it's not hardware.

> *If you insist on going that route, your only hope is interesting the
> developer of the ahc driver in your problem. Start by filing a PR in
> the correct manner (ie: by following the instructions in the Handbook)
> and if that does not get a response from the developer (the PR's are
> mailed to the developers of the drivers) then read the source code
> of the driver to find out who it is, look up his e-mail address on the
> website, send him an e-mail begging to take a look at your PR, and
> stop wasting our time here.*

I'll consider it. The waste of time has been mutual.

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Anthony

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