

Re: disk errors in 5.4

Source: <http://unix.derkeiler.com/Newsgroups/comp.unix.bsd.freebsd.misc/2005-07/0032.html>

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Skeleton Man wrote:

[snip]

>

> *Checked the power supply under load with a dmm.. all the rails are within*

> *spec*

> *(brand new 350W psu).. and it's not a power hungry setup (Celeron 700Mhz,*

> *1 hard disk, 1 cd-rom)..*

Just a little side note here: This probably doesn't apply so it's just an FYI kind of thing. But checking DC voltages with a meter does not tell the complete story; even though with a new power supply I highly doubt anything is wrong. But when you examine the DC voltages with an oscilloscope if the ripple just happened to be excessive it would cause all manner of problems which would seem to have no particular source (sans oscilloscope). The memory of this situation for me was a clients use of a model of HP Vectra which had a power supply only rated for 135 watts in a machine used as an archive repository. The archive was of images of cheques as they were processed and were written to a WORM drive. This drive pulled so much current every time it did anything the DC on the 'scope was anything but. All the "digiboys" had gone over this box repeatedly and could not figure anything out. They even replaced the box with completely new boxen of the same model and it made no difference. Analog electronics knowledge may be receding into the background in the computer era, but it still produced a result in this case: the HP Vectra model just simply could not be certified for use in this application.

> *I checked the cabling by swapping out ide connectors with several*

> *different cables, some brand new from the packet, no difference..*

> *I tried disconnecting cd-rom, no difference. I tried both the original and*

> *replacement hard drives on both primary and secondary channels, no*

> *difference..*

>

> *I tried swapping the ram with known good memory.. again no difference...*

Sounds quite frustrating! The next thing I would try hardware-wise myself would be to substitute a newer drive of a completely different make and model. If this produces a change rule out using the Seagate. You also may

try expirementing with disabling DMA in /boot/loader.conf. While running in PIO mode will definitely not be the way to go if the problem disappears it would point to a DMA/ATA driver issue. Here again, if such were the case, such a condition may be related to the Seagate/controller/driver combination itself; still a case for a different drive.

> *I am almost certain the issue is software, because a clean install of 5.4*
> *boots like a charm, but after adding the packages, everything*
> *segfaults/core dumps (I got core dumps from acpi.ko, ssh, inetd, grep, and*
> *a list of others)*
>

Some diagnostic split needs to be made between hardware or software troubles. It seems you have just about gone over the hardware fairly thoroughly. My experience with this is hardware problems may be very flaky and hard to pin down but software problems can usually be reproduced at will by doing the same sequence of things that produce the problem. But keep in mind that if the hard drive subsystem is causing file corruption then subsequent uses of a file (such as executing ssh for example) will likely segfault and dump core. Failing media on the drive might allow you to write out an area, then a bad spot corrupts some sector(s) within. This should be readily detectable using the drive mfrs diag software between "incidents".

Software wise after a fresh install and reboot I would load just one app at a time and run it for a while. For attempting to "tickle" an intermittent hardware glitch memtest or buildworld comes to mind. If you can do this for a while add on the next app and repeat. Also, one thing to consider would be to not use packages but, rather, cvsup your ports tree and compile the port(s) yourself. If all seemed well then there might be something wrong with the package(s)? The goal here would be study the "sequence of steps" ala divide and conquer. If it is truly a software problem you need to isolate it to the specific package/port.

I know -> This is no answer to your problem and I do *know* the frustration you are feeling (been there, done that). Don't know much about the problem but my gut instinct tells me to take a hard look at the "old Seagate".

-Jason