

Inadequate Power Causing ZFS Scrub Errors

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In a previous post, I replaced a VDEV device with two new VDEV mirrors expanding my ZFS pool. After the expansion read and write errors were accumulating for two or three drives within the pool.

In the hopes that the errors is a one time thing due to an unexpected shutdown of the server. The following actions were performed to clear the errors to see if ZFS can recover.

```
zpool clear vault  
zpool scrub
```

The scrub caused more errors. I scratched my head thought it to be really weird that two or more hard drives are failing at the same time. I immediately thought it may be a power issue.

To prove my suspicion that it may be inadequate power to the hard drives, instead of doing a clear on the entire pool, I just clear the errors on one of the VDEV. This way a resilvering can be performed on a single mirror instead of the entire pool. In theory this would reduce the power usage. The results were better but did not resolve the issues entirely. The read and write errors continue to happen.

I decided to get a cheap power supply from Canada Computers, The DeepCool PK500D 80 PLUS Bronze Power Supply, a brand that I never

heard of, but it was cheap only \$59.99. In order for me to use this, I had to short a couple of pins with a short wire to simulate the computer case's power button. See Figure 1 below.

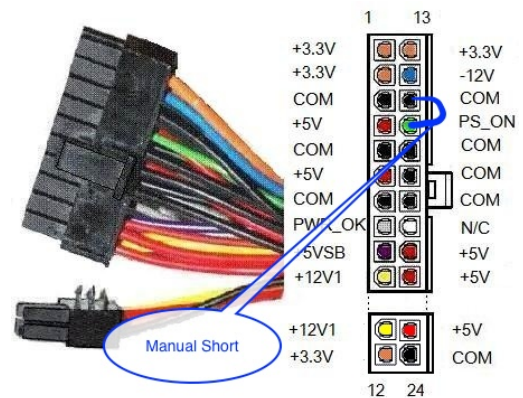


Figure 1: ATX 24Pin Connector

I had to ensure that this power supply is on before the main server is on. I then split off four drives from the ZFS zpool that was using the main server power supply to this new power supply.

To my relief, this resolved the sporadic read and write errors. I double checked this with a full `zpool scrub`.

I am so glad that is now resolved. I now also have extra power from this power supply should I choose to expand my pool further with additional drives.