

RAIDs

RAIDs

RAIDs are a collection of drives, that when put together, are faster and/or bigger and/or safer. A RAID without any special configuration other than a collective volume is called JBOD ("Just a Bunch of Drives").

RAIDs might have a cache drive that is faster than the rest. Think 4x spinning drives, plus a fifth NVMe.

RAID Configurations

1. RAID 0 - also called "striped", this speeds your drives up considerably, but has zero redundancy. A regular 7200 drives has read/write ("R/W") speeds of around 120 MB/s. A RAID 0 configuration of 4x 7200 drives has a 700 MB/s R/W. 4x2TB drives = 8TBs.
2. RAID 1 - also called "mirrored," this keeps the drives mirrored for redundancy/back-up. The speed is just as fast as a single drive (so 120 MB/s @ 7200). Slower but safer. 4x2TB drives = 4TBs.
3. RAID 2, 3, 4 - I never use any of these so I couldn't tell you what they are.
4. RAID 5 - this is a RAID configuration that gives you speed and parity. Best of both worlds. 4x 7200 drives has a R/W of ~450 MB/s. 4x2TB drives = 6TBs.

Thunderbays and SoftRaid

I use and generally recommend Thunderbays and SoftRaid.

OWC Thunderbays work without software on Mac computers, but for improved speeds, and reconfiguring your RAID, you need Softraid XT. It is \$100 per seat and \$20 for additional seats on the same license. Be warned that you should install Softraid XT before you plug in a Softraid drive like a Thunderbay. Otherwise! You can temporarily bork your drive: it will read as a failed drive on any system and you need to clear the i/o and then re-validate. Proper installation means you need to change security config via recovery mode on Mac systems. Confused? Call OWC, their support can be really great. Have yet to test SOFT RAID on Windows, but it is supposed to work. Soft Raid works on Windows, but the performance isn't super great as of Dec 2023. R/W is ~150MB/s compared to mac where it's ~700ish (4-Bay Softraid 0 in a Thunderbay).

If SoftRaid is acting buggy on Mac, don't despair, run `sudo softraidtool uninstall` in terminal and that'll clean it out. Then just re-download the dmg and reinstall.

If SoftRaid is acting buggy on Windows, don't despair, run the uninstaller via the Windows Control Panel. There's even an option to attempt repair!

Also, if a SoftRaid is taking forever to mount - just be patient. Some legacy ExFat formatted SoftRaids need to manually index before they can mount. Worth mentioning: you need a licensed version of SoftRaid in order to mount this legacy type of RAID. This is a bummer. Hopefully this changes but this is still true as of January 2024.

Revision #2

Created 2025-04-13 18:59:18 UTC by Cam Vokey

Updated 2025-04-13 19:06:26 UTC by Cam Vokey