

# ZFS Mirror

A zfs vdev where one or more drives of identical (or close to identical) size are used to cross-replicate data. Drives in a mirror are (for the most part) identical copies between them.

The purpose of a mirror is very-high data protection. In an array of size X, X-1 drives can fail before you lose any data. For example, in a 3-way mirror (raid1), 2 drives can fail before you lose data.

Pros:

- Protection - As long as 1 drive of the mirror still functions, the data is still safe. (this does not protect against user error/deletion of files)
- Increased read speed - As there are 2 (or more) copies of the data, ZFS can simultaneously read from multiple drives, creating faster throughput.

Cons:

- Necessary space - If you're storing 2Tb of data, a 2-way mirror would require 2x2Tb drives. A 3-way mirror would require 3x2Tb drives.

Some data, arguably is worth this level of protection, but most probably isn't.

If you've got multiple drives of the same size (or pretty close) available, with no other task you need the drives for, mirroring can be a worthwhile option.

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