Lecture 24 — Reliability: RAID

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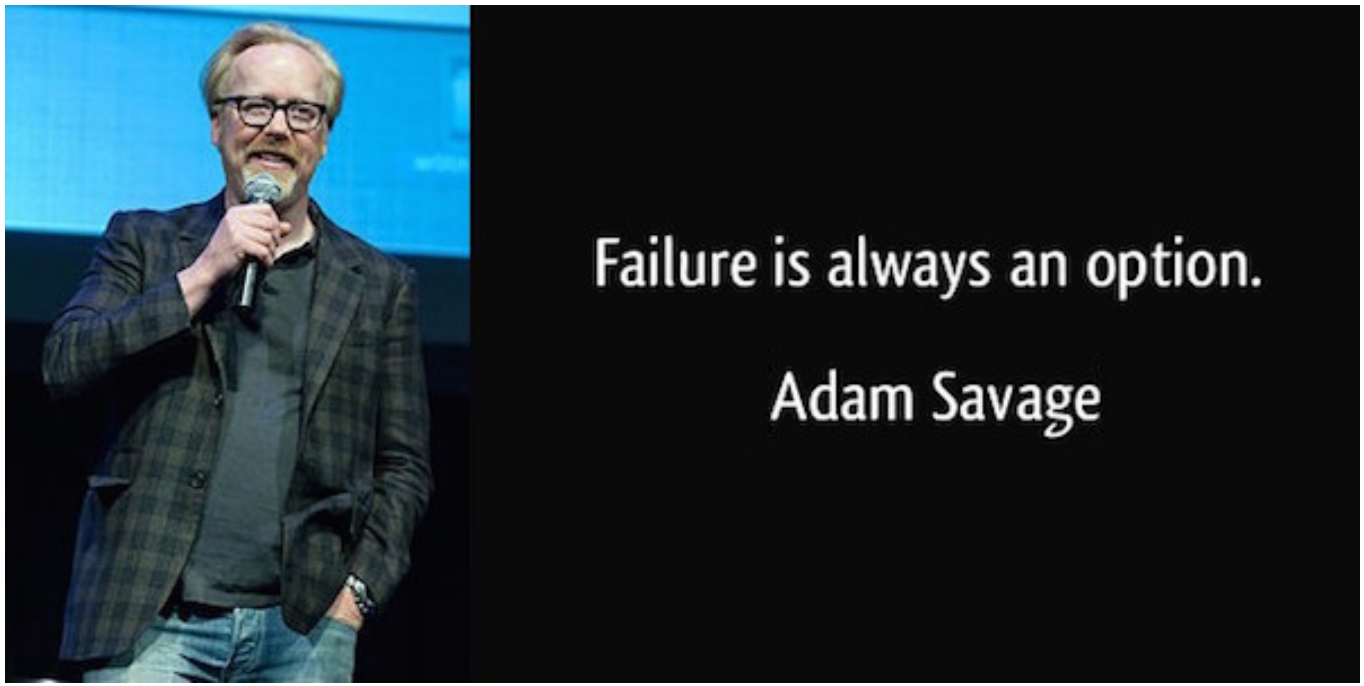
Failure is Always an Option



Sometimes hard drives die – so now what?

Backups

Backups help but they are not the only way.

A backup may be a bit out of date?

Are you sure they work?

Now What?

Maybe loss of data, maybe system is down, maybe reduced performance?

Too Good To Be True?

What if I told you there exists a solution to this where you not only get higher reliability and availability, but also maybe better performance?

It does cost money… But it’s not magic.

The Solution is Called...

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RAID

RAID: Redundant Array of Independent Disks.

Multiple different independent disks that work together but appear to the user as if they are one drive/volume.

Can be managed in software or hardware.

How Much Redundancy?

Choose level of redundancy based on the data in question.

Is losing data inconvenient? A tragedy? Does it affect uptime?

MttF