

ZFS Backups

What this is about

When you open the **Backups** tab for your server, you'll see a banner telling you whether the node your server lives on uses **ZFS** for backups. This article explains what that means, why it matters, and what SuHosting is doing about it.

What is ZFS?

ZFS is a modern filesystem designed around **scalability and resiliency** — end-to-end checksumming to detect and repair silent data corruption, and a copy-on-write design that keeps data consistent even through crashes and power loss.

One of the features the copy-on-write design enables is **snapshots**, and that's the part most relevant to backups. A snapshot is a read-only, point-in-time image of the entire filesystem. Because ZFS never overwrites data in place, a snapshot is **atomic and instantaneous**: it records the exact state of every file at a single moment, no matter how many files there are or how large they are.

Taking a snapshot doesn't copy anything up front and doesn't pause your server. The snapshot simply "pins" the blocks that make up the current state, and only changes made *after* the snapshot consume additional space.

Why ZFS backups are better

- **Consistent backups, even while running.** A ZFS snapshot captures every file at the same instant. Your world save, configuration, mods and databases are all frozen together as one coherent set.
- **No downtime.** Snapshots are taken in milliseconds. Your server keeps running and players stay connected while a backup is created.
- **Fast and space-efficient.** Because only changed blocks are stored, backups are quick to create and don't duplicate data that hasn't changed.
- **Data integrity.** ZFS checksums every block and can detect (and on redundant pools, repair) silent corruption, so a backup is far less likely to quietly rot over time.

- **Quick restores.** Rolling back to a previous snapshot is a near-instant operation rather than a slow file-by-file copy.

Why it matters that ZFS is *not* enabled on this node

If your server is on a node **without** ZFS, backups are created by copying files off the disk while the server may still be running. Files can change *during* the copy, which means a backup can capture an **inconsistent or half-written state**.

For many game servers this is a minor risk, but for games that store the world in a live database (Vintage Story is one — [see the related article on backing up Vintage Story safely](#)) a backup that overlaps a save can **fail to load or lose recent progress**.

On a non-ZFS node the safe approach is to **stop the server before creating a backup**. On a ZFS node that step isn't necessary, because the snapshot is already a single consistent point in time.

What SuHosting is doing about it

We're actively and progressively **migrating all of our nodes to ZFS**. This is being rolled out node by node so that every server eventually benefits from fast, consistent, zero-downtime backups by default.

If your server is currently on a non-ZFS node:

- No action is required from you — your server will be moved as part of the ongoing migration.
- In the meantime, stop your server before taking a backup if the data matters (especially for Vintage Story).
- If you'd like your server prioritised for migration, reach out to SuHosting support and we'll help where we can.

Once your server is on a ZFS-enabled node, the Backups tab will show a green banner and you can back up safely at any time.

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