MR.PLANB FIELD GUIDE · PROXMOX VE

Full LVM-Thin Pool: Prevention and Recovery Checklist

The fixes Proxmox users report for thin pools that fill up silently, and the alerts that catch it early.

Updated **2026-10-29** · Full guide: www.mrplanb.com/blog/proxmox-lvm-thin-storage-bloat-solutions

> LVM-Thin lets you promise more storage than you have, and a pool that hits 100% freezes VMs and kills backups without warning. The community fixes are to grow the volume group, move backups off the disk, prune junk, enable discard and TRIM, and set disk alerts early. A switch to BTRFS or ZFS is possible but major work.

100%
thin pool usage at which VMs freeze and backups stop

85%
disk usage threshold one user alerts on with a cronjob

350GB
stored in PBS for data that would otherwise use 5TB

6
fixes and safeguards covered

Why it fails silently

- LVM-Thin creates thin volumes that only use space when data is written, but it lets you promise more storage than you have.
- Regular file systems warn loudly when space gets low. A thin pool just keeps going until it cannot.
- One user's OPNsense VM booted, then froze. After two hours the cause was the pool at 100%, with no alert.
- A typical story: a 1TB NVMe set up as local-lvm, more VMs and containers over time, then 88% full and climbing, plus failed backups.

Grow the pool without rebuilding

Users add a new SSD and stretch the volume group, keeping VMs and containers running.

1. Install a new SSD.
2. Set it up as a physical volume with `pvcreate`.
3. Add it to your current volume group with `vgextend`.
4. The thin pool now uses multiple drives.
5. Accept the risk: if one disk dies, the whole volume group can break, so keep solid backups.

Quick fixes from real users

Solution	What it does
Add new SSD and expand volume group	More space without rebuilding
Move backups to separate drive or PBS	Stops backup bloat on the main disk
Prune Docker and clean cruft	Frees up forgotten storage
Enable TRIM and discard	Gets space back from deleted files
Set up disk alerts early	Warns you before disaster
Consider a file system switch	Fresh start with better tools

Prevention checklist

- [ ] Set a disk usage alert before the pool gets near full.
- [ ] Keep backups off the same disk as the VMs.
- [ ] Clear out old backups, old ISO files and logs.
- [ ] Prune old containers, unused volumes and dangling images if you run Docker.
- [ ] Turn on the Discard option on VM drives.
- [ ] Make sure `fstrim.timer` is running inside the guest OS.

Four reported fixes in detail

Move backups off

Use a NAS or another drive. Proxmox Backup Server deduplicates: one user stores 350GB that would normally eat 5TB.

Prune Docker

One homelabber got back over 100GB just by pruning Docker. Schedule regular cleaning.

TRIM and discard

Deleted guest files do not return space to the host unless discarded. This stops ghost usage.

Change file system

BTRFS or ZFS give snapshots, compression and better visibility. One user backed up to PBS, wiped the drive and restored.

Sources and notes: Proxmox community reports and user quotes · Proxmox Backup Server deduplication, as described by users