fsck Cheatsheet

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Quick reference for fsck: check Linux filesystems, run safe repairs, force checks, review exit codes, and handle boot-time recovery

fsck checks Linux filesystems for errors and can repair problems when a partition is unmounted. This cheatsheet covers safe check patterns, repair modes, boot-time checks, exit codes, and related recovery commands.

Basic Usage

Common `fsck` command forms.

`fsck /dev/sdb1`	Check a filesystem
`fsck -n /dev/sdb1`	Check only, do not write changes
`fsck -f /dev/sdb1`	Force a check even if the filesystem looks clean
`fsck -t ext4 /dev/sdb1`	Check only filesystems of the given type
`fsck -A`	Check filesystems listed in `/etc/fstab`

Safe Repair Workflow

Use this sequence before making repairs.

`lsblk -f`	Identify the device, mount point, and filesystem type
`mount | grep /dev/sdb1`	Confirm whether the device is mounted
`sudo umount /dev/sdb1`	Unmount the filesystem before repair
`sudo fsck -n /dev/sdb1`	Run a read-only check first
`sudo fsck -p /dev/sdb1`	Auto-fix safe problems without prompts

Repair Modes

Choose how interactive the repair should be.

`-n`	Do not make changes, useful for a safe first pass
`-p`	Automatically repair safe problems
`-y`	Answer yes to all prompts
`-r`	Prompt before each repair
`-f`	Force checking even if the filesystem appears clean

Filesystem Selection

Target one filesystem, one type, or all entries in `fstab`.

`sudo fsck /dev/nvme0n1p2`	Check one device directly
`sudo fsck -t ext4 /dev/nvme0n1p2`	Check one device as `ext4`
`sudo fsck -A`	Check all eligible filesystems in `/etc/fstab`
`sudo fsck -AR`	Check all except the root filesystem
`sudo fsck.ext4 /dev/nvme0n1p2`	Run the filesystem-specific checker directly

Root Filesystem Recovery

`fsck` cannot repair the mounted root filesystem on a running system.

`Recovery mode`	Boot into recovery and choose the filesystem check option
`Live USB`	Boot a live system, identify the root partition, then run `fsck` there
`fsck.mode=force`	Kernel parameter to force a check during boot on systemd systems
`fsck.repair=yes`	Kernel parameter to approve repairs during boot
`sudo touch /forcefsck`	Older non-systemd pattern to force a boot-time check

tune2fs Scheduling

Control when ext filesystems are checked automatically.

`sudo tune2fs -l /dev/sdb1 | grep -i 'last checked|mount count'`	Show last check time and mount counters
`sudo tune2fs -c 25 /dev/sdb1`	Run a check after every 25 mounts
`sudo tune2fs -c -1 /dev/sdb1`	Disable mount-count-based checks
`sudo tune2fs -i 1m /dev/sdb1`	Run a check at most once per month
`sudo tune2fs -i 0 /dev/sdb1`	Disable time-based checks

fstab Pass Values

The sixth `/etc/fstab` column controls boot-time check order.

`0`	Do not check this filesystem at boot
`1`	Check first, usually the root filesystem
`2`	Check after root, for other local filesystems

Example: `/dev/sda2 /home ext4 defaults 0 2`

Exit Codes

Use exit codes to understand what `fsck` found.

`0`	No errors
`1`	Filesystem errors corrected
`2`	System should be rebooted
`4`	Filesystem errors left uncorrected
`8`	Operational error
`16`	Usage or syntax error
`32`	Checking canceled by user
`128`	Shared-library error

Other Filesystems

Some filesystems use tools other than `fsck`.

XFS	`xfs_repair`
Btrfs	`btrfs check` or `btrfs scrub`
NTFS	`ntfsfix`
FAT/VFAT	`fsck.vfat`
Ext2/3/4	`fsck.ext2`, `fsck.ext3`, `fsck.ext4`

Related Guides

Use these articles for the full workflow around filesystem repair.

Fsck Command in Linux (Repair Filesystem)	Full `fsck` guide with examples
How to Check Disk Space in Linux Using the df Command	Check mounted filesystems and free space
How to Mount and Unmount File Systems in Linux	Unmount a filesystem before repair
Sudo Command in Linux: Run Commands as Root	Run `fsck` with the required privileges