FSCK

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FSCK (File System Consistency Check)

What does FSCK do?

`fsck` (file system consistency check) is a system utility used to check and repair filesystems. FSCK is made up of various tools that are made to handle different filesystem types, these are stored within /usr/sbin:

```
lrwxrwxrwx 1 root root         8 Mar 23  2022 dosfsck -> fsck.fat
-rwxr-xr-x 1 root root    360280 Jun  1  2022 e2fsck
-rwxr-xr-x 1 root root     43440 Apr  9 15:32 fsck
-rwxr-xr-x 1 root root      1185 Feb 24  2022 fsck.btrfs
-rwxr-xr-x 1 root root     31168 Apr  9 15:32 fsck.cramfs
lrwxrwxrwx 1 root root         6 Jun  1  2022 fsck.ext2 -> e2fsck
lrwxrwxrwx 1 root root         6 Jun  1  2022 fsck.ext3 -> e2fsck
lrwxrwxrwx 1 root root         6 Jun  1  2022 fsck.ext4 -> e2fsck
-rwxr-xr-x 1 root root     84360 Mar 23  2022 fsck.fat
-rwxr-xr-x 1 root root     55712 Apr  9 15:32 fsck.minix
lrwxrwxrwx 1 root root         8 Mar 23  2022 fsck.msdos -> fsck.fat
lrwxrwxrwx 1 root root         8 Mar 23  2022 fsck.vfat -> fsck.fat
-rwxr-xr-x 1 root root      1968 Feb  9  2022 fsck.xfs
-rwxr-xr-x 1 root root     51592 Nov  1  2022 ntfsclone
-rwxr-xr-x 1 root root     35200 Nov  1  2022 ntfscp
```

Purpose of fsck

- Checking Filesystem Integrity: It scans the filesystem for inconsistencies and potential errors, such as corrupted metadata, lost clusters, and bad sectors.
- Repairing Errors: `fsck` can fix detected issues to prevent data loss and improve system stability.

> You can only run a filesystem check on an unmounted disk.

Scanning a specific disk (optional repair):

```
fsck -t ext4 /dev/sda2
```

Scanning all disks (optional repair)

```
fsck -A
```

FSCK Options:

-A	Check all filesystems.
-t [option]	Specify filesystem type
-y	Automatically attempt to fix any errors without user prompt
-n	Do not attempt to repair
-f	Forces a check, even if the filesystem appears to be fine
-T	Skip mounted filesystems
-R	Skip the root filesystem

FSCK on boot

FSCK can be configured to run for each filesystem when the server boots. For more info see here.

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