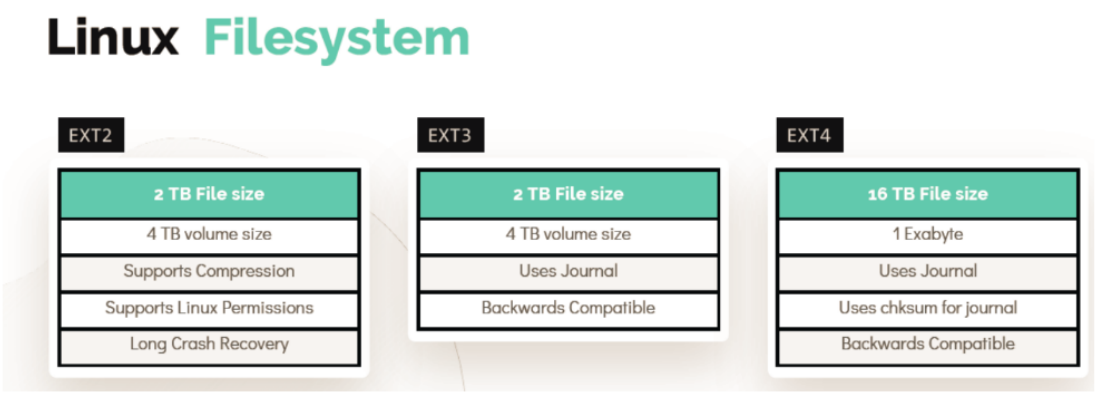
File System in Linux

In this lecture we will cover the most commonly used file systems from EXT2 to EXT4.



Working with Ext4

- To create a file system we will make use of `/dev/sdb` disk, run below command

```
[~]$ mkfs.ext4 /dev/sdb1
```

- Now create a directory to mount the filesystem use below commands

```
[~]$ mkdir /mnt/ext4;

[~]$ mount /dev/sdb1 /mnt/ext4
```

- To verify if the filesystem is mounted use

```
[~]$ mount | grep /dev/sdb1

[~]$ df -hP | grep /dev/sdb1
```

- Add an entry into `/etc/fstab` for the filesystem to be available after reboot.

```
# /etc/fstab: static file system information.
#
# Use 'blkid' to print the universally unique identifier for a
# device; this may be used with UUID= as a more robust way to name devices
# that works even if disks are added and removed. See fstab(5).
#
# <file system> <mount point> <type> <options> <dump> <pass>
/dev/sda1 / ext4 defaults,relatime,errors=panic 0 1 ~
```

```
echo "/dev/sdb1 /mnt/ext4 ext4 rw 0 0" >> /etc/fstab
```

- `fstab` file attributes

FIELD	Purpose
Filesystem	Such as /dev/vdb1 to be mounted
Mountpoint	Directory to be mounted on
Type	Example ext2, ext3, ext4
Options	Such as RW = Read-write, RO = Read Only
Dump	0 = Ignore, 1 = take backup
Pass	0 = ignore, 1 or 2 = FSCK filesystem check enforced.