

Linux

DAY 2 - DISK MANAGEMENT, PARTITIONING, MOUNTING & TROUBLESHOOTING

1. Checking Disks and Partitions

- `lsblk` - Lists all disks and partitions in a clean tree format.
- `fdisk -l` - Shows detailed disk information including size, filesystem, and partitions.
- `ls /dev/sd*` - Lists all storage devices like `sda`, `sdb`, `sdc` and their partitions.

2. Understanding Disk Naming

- `sda` - First detected disk.
- `sdb` - Second disk.
- `sdc` - Third disk.
- Partition numbers (`sda1`, `sda2`) indicate sections inside the disk.

3. Creating a Partition on an Empty Disk

- `sudo fdisk /dev/sda` - Open `fdisk` tool for disk partitioning.

Inside `fdisk`:

- `n` - Create a new partition.
- `p` - Primary partition.
- `1` - Partition number.
- `Enter` - Accept default first sector.
- `Enter` - Accept default last sector (use full disk).
- `w` - Write changes and exit.

4. Reloading Partition Table

- `sudo partprobe` - Reloads kernel partition table.
- `sudo partx -a /dev/sda` - Ensures system reads new partitions.

5. Formatting the Partition

- `sudo mkfs.ext4 /dev/sda1` - Formats the partition with ext4 filesystem.

6. Mounting the Partition

- `sudo mkdir -p /mnt/mydisk` - Creates mount point.
- `sudo mount /dev/sda1 /mnt/mydisk` - Mounts the partition.
- `ls /mnt/mydisk` - Check if mount is successful.

7. Common Errors and Fixes

- Permission denied - Use `sudo` or fix directory permissions.
- Unable to mount - Ensure partition exists (check with `lsblk`).
- `mkfs.ext4: No such file or directory` - Partition not created or not saved.
- `sudo apt update` - Refresh package lists.

8. Installing htop

- `sudo apt install htop` - Installs system process visualizer.