

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.