

Storage Management in Ubuntu

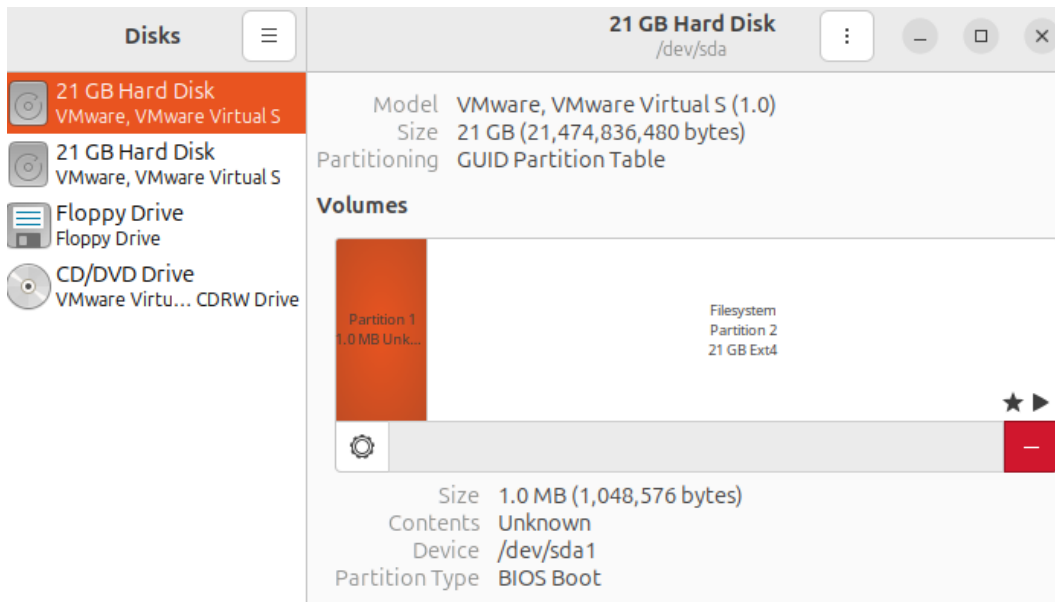
Managing disks in Ubuntu is essential for optimizing storage, organizing data, and ensuring efficient system performance. Ubuntu provides both a graphical user interface (GUI) and command-line tools for disk management. In this article, we will cover how to manage disks using the Disks GUI application and commands for mounting and unmounting disks in the terminal.

Managing Disks Using the GUI (Disks Application)

Ubuntu comes with a built-in **Disks** utility that provides a user-friendly interface for managing storage devices. You can use it to view partitions, format drives, mount and unmount disks, and create disk images.

Opening the Disks Application

1. Open the **Activities** menu and search for **Disks**.
2. Click on **Disks** to launch the application.
3. The left panel lists all available storage devices, including internal hard drives, SSDs, USB drives, and external storage devices.

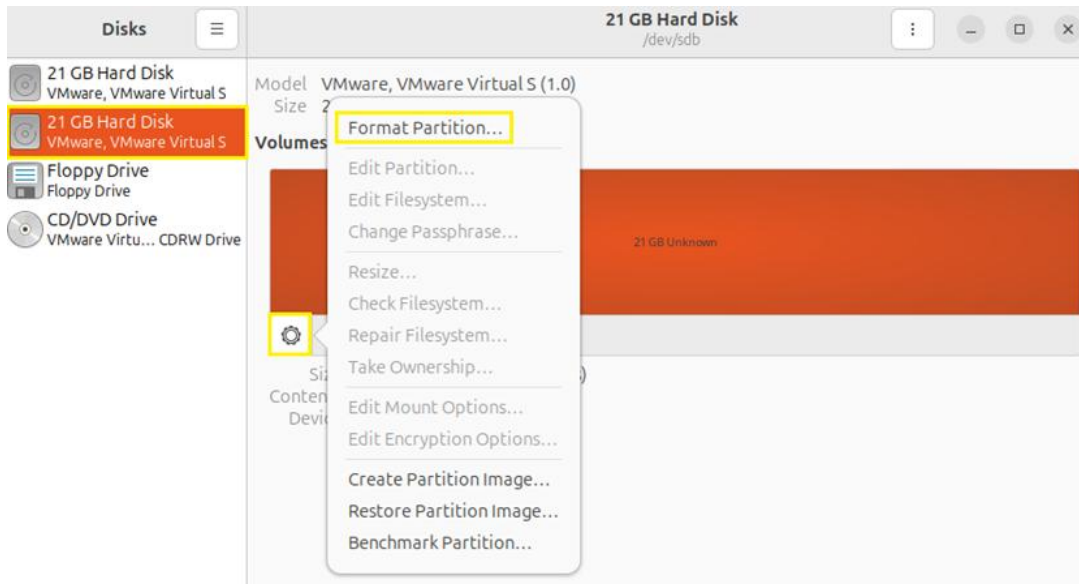


Disks

In this case scenario, a new hard disk was added. Here are the steps for **Formatting a Drive Using Disks**.

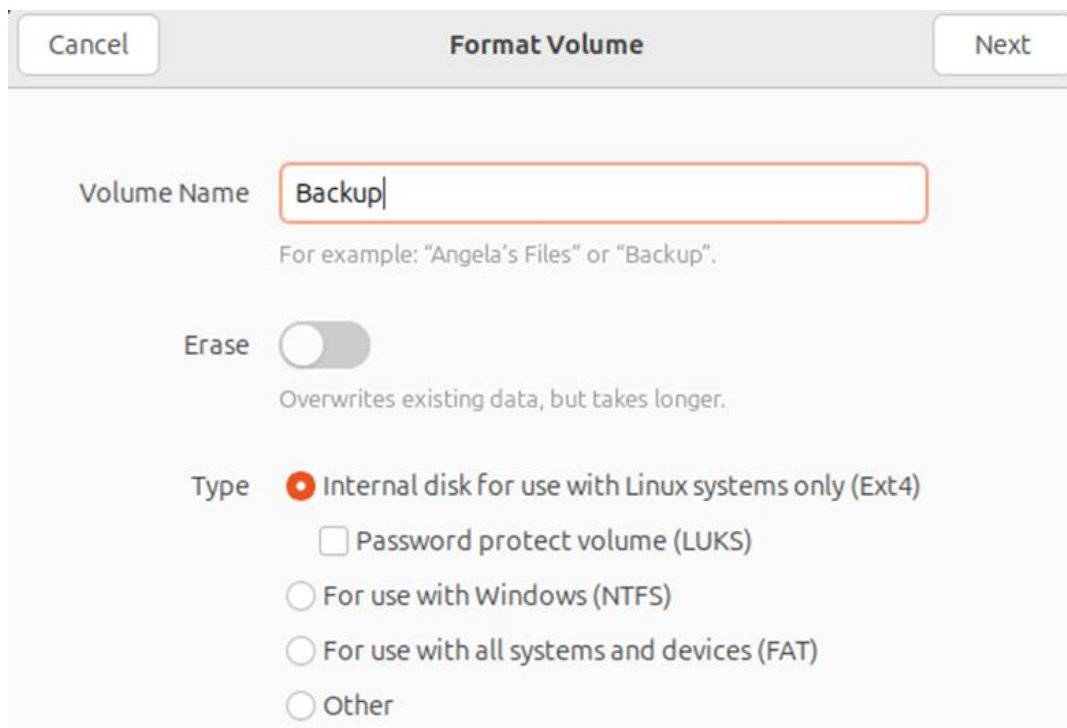
1. Select the disk and click the **gear icon** (⚙️).
2. Choose **Format Partition**.
3. Select a filesystem (e.g., **ext4**, **NTFS**, **FAT32**) and confirm the format operation.

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Format New Hard Disk

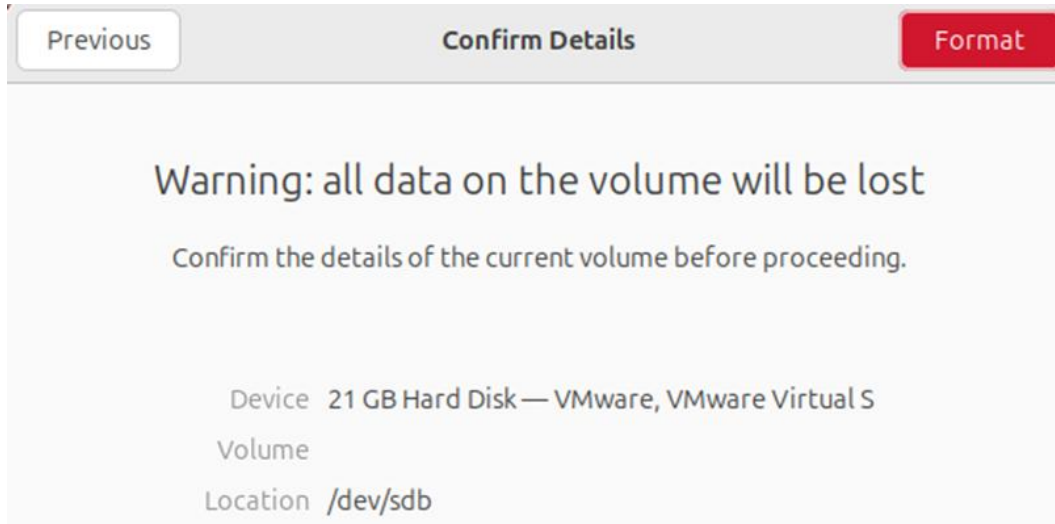
Proceed to assign a volume name. Here is **Backup** volume name is begin created. The default internal disk is **Ext4**.



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Format New Hard Disk

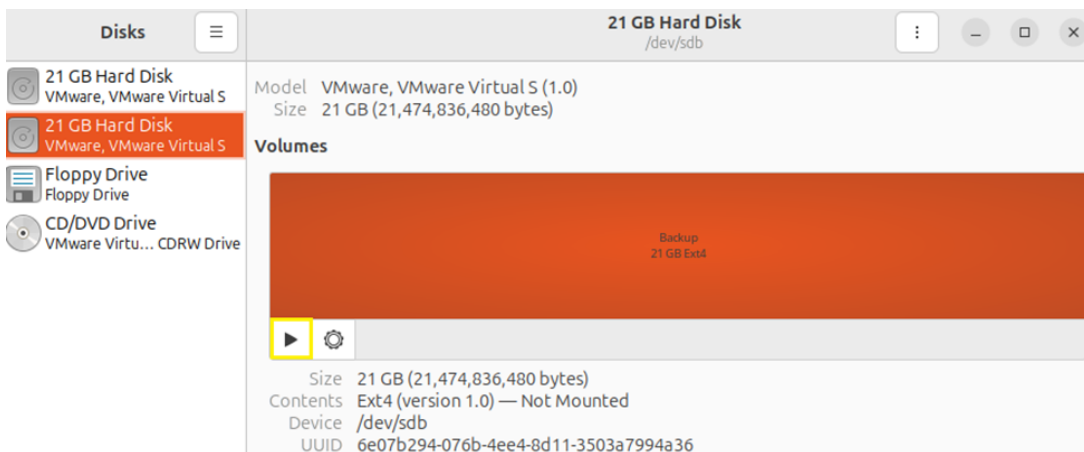
Click on Format. You will be prompted to enter admin password.



Formatting a new Hard Disk

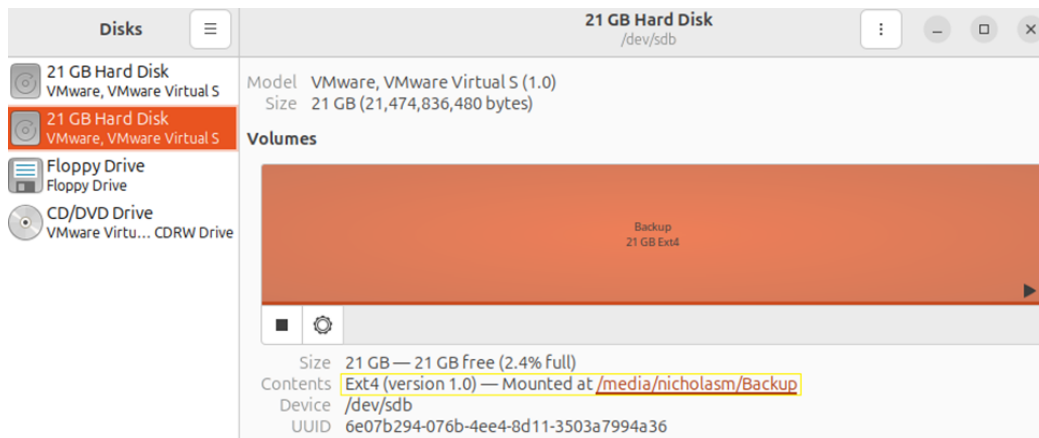
Mounting a Disk Using Disks

1. Select the disk or partition from the list.
2. Click the **Play** button (▶) to mount the partition.
3. The mounted drive will appear in the **File Manager** under **Other Locations**.



Mount Hard Disk

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Mount Hard Drive can be found at `/media/nicholasm/Backup`

Unmounting a Disk Using Disks

1. Select the mounted partition.
2. Click the **Stop** button (■) to unmount the partition.
3. The disk is now unmounted and cannot be accessed until remounted.

Managing Disk Using the Command Line

For users who prefer the command line, Ubuntu provides various commands to mount, unmount, and manage disks efficiently.

Listing Available Disks and Partitions

To view available disks and partitions, run in Terminal

lsblk

This command displays block devices in a tree structure, showing their mount points. To get detailed information, use:

sudo fdisk -l

Mounting a Disk Using the Terminal

Step 1: Identify the disk partition you want to mount:

sudo lsblk -f

Step 2: Create a mount point (if it doesn't exist):

sudo mkdir -p /mnt/mydisk

Step 3: Mount the disk:

sudo mount /dev/sdXn /mnt/mydisk

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Replace **sdXn** with your partition name (e.g., **sdb1**).

Step 4: Verify the mount:

```
df -h
```

The partition should appear in the list.

Unmounting a Disk Using the Terminal

To unmount a disk, use either one of the following commands.

```
sudo umount /mnt/mydisk  
sudo umount /dev/sdXn
```

Ensure the disk is not in use, or the unmount command will fail. If needed, you can force unmount with:

```
sudo umount -l /mnt/mydisk
```

Automatically Mount a Disk at Boot (Persistent Mounting)

1. Find the UUID of the disk:

```
sudo blkid
```

2. Open the **fstab** file for editing.

```
sudo nano /etc/fstab
```

3. Add an entry like this (modify according to your disk's UUID and desired mount point):

```
UUID=your-disk-uuid /mnt/mydisk ext4 defaults 0 2
```

4. Save the file (Ctrl + X, then Y, then Enter) and apply changes:

```
sudo mount -a
```

Final Thoughts

Disk management in Ubuntu can be done easily using both the **Disks** GUI application and the command line. While the **Disks** utility provides a simple way to manage storage visually, the terminal offers powerful options for advanced users. Whether you need to mount, unmount, format, or set up automatic mounting, Ubuntu provides the flexibility to handle your disks efficiently.