Add & Auto-Mount a Virtual Disk in Kali Linux (VirtualBox)

This guide walks through adding a second virtual hard disk to a Kali Linux VM in VirtualBox, partitioning it, formatting it, mounting it, and enabling auto-mount on boot.

Step 1: Add a New Virtual Disk in VirtualBox

1. Power off your Kali Linux VM.
2. Open VirtualBox Manager.
3. Go to Settings > Storage.
4. Under Controller: SATA, click the Add Hard Disk icon.
5. Choose Create New Disk:
   - Type: VDI
   - Storage: Dynamically allocated
   - Size: e.g., 2 GiB
6. Click Create.
7. Start your Kali Linux VM.

Step 2: Verify the New Disk

List block devices:

```
lsblk
```

Also verify with:

```
sudo fdisk -l
```

Look for Disk /dev/sdb.

Step 3: Partition the Disk

Run fdisk:

```
sudo fdisk /dev/sdb
```

In the prompt:

```
n  # New partition
p  # Primary partition
1  # Partition number
<Enter>  # Accept default first sector
<Enter>  # Accept default last sector
w  # Write changes
```

Step 4: Format the Partition

Format to ext4:

```
sudo mkfs.ext4 /dev/sdb1
```

Step 5: Mount the Partition

Create mount point:

```
sudo mkdir -p /mnt/mydisk
```

Mount it:

```
  sudo mount /dev/sdb1 /mnt/mydisk

Check it's mounted:
  df -h | grep /mnt/mydisk

Expected output:
  /dev/sdb1 1.5G 420K 1.4G 1% /mnt/mydisk

Step 6: Auto-Mount on Boot
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Get UUID:
  sudo blkid /dev/sdb1

Edit /etc/fstab:
  sudo nano /etc/fstab

Add:
  UUID=your-uuid-here /mnt/mydisk ext4 defaults 0 2

Test it:
  sudo mount -a

Step 7: Give User Write Access (Optional)
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To allow user joseph to write:
  sudo chown joseph:joseph /mnt/mydisk

Final Check
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Verify with:
  lsblk

Summary
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| Step | Description                         |
|------|-------------------------------------|
| 1    | Add a new virtual disk in VirtualBox |
| 2    | Verify disk presence                |
| 3    | Partition it with fdisk             |
| 4    | Format to ext4                      |
| 5    | Mount manually                      |
| 6    | Configure fstab for auto-mount      |
| 7    | (Optional) Set ownership for user   |
```