

# Reinstall Grub after installing windows

1. Boot from a Live Linux USB drive. You can use any Live Linux distribution for this, such as Ubuntu, Fedora, or Debian.

2. Once you have booted into the Live Linux environment, open a terminal. For example;

```
Ctrl+Alt+T
```

3. Type the following command to list all the partitions on your system:

```
sudo fdisk -l
```

4. Identify the partition where your Linux operating system is installed. Note the partition name, for example, `/dev/sda1`.

5. Mount the partition with the Linux operating system:

```
sudo mount /dev/sdx1 /mnt
```

Replace `/dev/sdx1` with the actual partition name.

6. Mount other necessary partitions:

```
sudo mount --bind /dev /mnt/dev
```

```
sudo mount --bind /proc /mnt/proc
```

```
sudo mount --bind /sys /mnt/sys
```

7. Chroot into the mounted Linux partition:

```
sudo chroot /mnt
```

8. Install the Grub bootloader:

```
sudo grub-install /dev/sdx
```

Again, replacing `/dev/sdx` with the actual device name of your hard drive. If you have more than one hard drive, make sure to select the one where the Linux operating system is installed.

9. Update the Grub configuration:

```
sudo update-grub
```

10. Exit the chroot environment:

```
exit
```

## 11. Unmount the partitions:

```
sudo umount /mnt/dev
```

```
sudo umount /mnt/proc
```

```
sudo umount /mnt/sys
```

```
sudo umount /mnt
```

## 12. Reboot your computer from the terminal.

```
sudo reboot
```

### My System

```
sudo fdisk -l
```

```
[sudo] password for csr:
```

```
Disk /dev/sda: 465.76 GiB, 500107862016 bytes, 976773168 sectors
```

```
Disk model: Samsung SSD 850
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
Disklabel type: gpt
```

```
Disk identifier: 18F7B150-AD7B-4AC1-9864-0391968D7FE3
```

Device	Start	End	Sectors	Size	Type
/dev/sda1	4096	1232895	1228800	600M	EFI System
/dev/sda2	1232896	3330047	2097152	1G	Linux filesystem
/dev/sda3	3330048	904714755	901384708	429.8G	Linux filesystem
/dev/sda4	904714756	976768064	72053309	34.4G	Linux swap

```
Disk /dev/nvme0n1: 953.87 GiB, 1024209543168 bytes, 2000409264 sectors
```

```
Disk model: addlink M.2 PCIE G3x4 NVMe
```

```
Units: sectors of 1 * 512 = 512 bytes
```

```
Sector size (logical/physical): 512 bytes / 512 bytes
```

```
I/O size (minimum/optimal): 512 bytes / 512 bytes
```

```
Disklabel type: gpt
```

```
Disk identifier: 753AD7B1-9E5B-4DC8-A1BF-4966F9CA2801
```

Device	Start	End	Sectors	Size	Type
/dev/nvme0n1p1	2048	206847	204800	100M	EFI System
/dev/nvme0n1p2	206848	239615	32768	16M	Microsoft reserved
/dev/nvme0n1p3	239616	1999320142	1999080527	953.2G	Microsoft basic data
/dev/nvme0n1p4	1999321088	2000406527	1085440	530M	Windows recovery environment

```
Disk /dev/zram0: 8 GiB, 8589934592 bytes, 2097152 sectors
```

```
Units: sectors of 1 * 4096 = 4096 bytes
```

```
Sector size (logical/physical): 4096 bytes / 4096 bytes
```

```
I/O size (minimum/optimal): 4096 bytes / 4096 bytes
```

```
Disk /dev/sdb: 115.69 GiB, 124218507264 bytes, 242614272 sectors
```

```
Disk model: Ultra Fit
```

```
Units: sectors of 1 * 512 = 512 bytes
```

Sector size (logical/physical): 512 bytes / 512 bytes  
I/O size (minimum/optimal): 512 bytes / 512 bytes  
Disklabel type: dos  
Disk identifier: 0x0d320863

Device	Boot	Start	End	Sectors	Size	Id	Type
/dev/sdb1	*	2048	242548735	242546688	115.7G	7	HPFS/NTFS/exFAT
/dev/sdb2		242548736	242614271	65536	32M	ef	EFI (FAT-12/16/32)

```
mount | grep /dev/sda
/dev/sda3 on / type btrfs
(rw,relatime,compress=zstd:1,ssd,discard=async,space_cache=v2,subvolid=400,subvol=@)
/dev/sda3 on /home type btrfs
(rw,relatime,compress=zstd:1,ssd,discard=async,space_cache=v2,subvolid=399,subvol=@home)
/dev/sda2 on /boot type ext4 (rw,noatime)
/dev/sda1 on /boot/efi type vfat
(rw,noatime,fmask=0022,dmask=0022,codepage=437,ioccharset=ascii,shortname=mixed,errors=remount-ro)
```

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