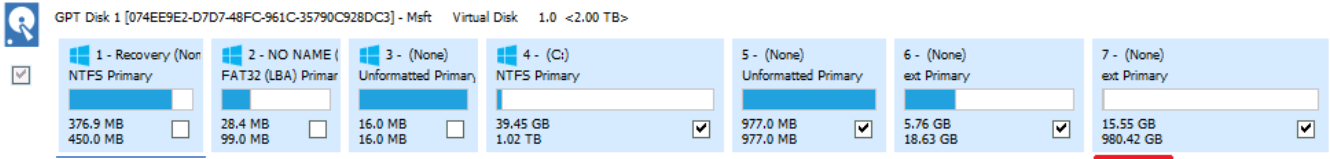


# Linux ext file systems used and total space in Reflect

You may notice that the used space shown for a Linux ext partition in Macrium Reflect is larger than shown in Linux.



The above is after a fresh install of Linux Mint on a dual booting Windows 10 and Linux Mint system.

Notice that the reported file system size for the '/home' partition is **980.43 GB** and the used space is **15.55 GB**

Viewing the same file system in Linux can yield different and incorrect results. The following is the output from running 'sudo df -h'

```
linux-vm ~ $ sudo df -h
Filesystem      Size  Used Avail Use% Mounted on
udev            1.9G   0  1.9G   0% /dev
tmpfs           392M   5.9M 386M   2% /run
/dev/sda6       19G   5.4G 12G   32% /
tmpfs           2.0G  988K 2.0G   1% /dev/shm
tmpfs           5.0M   0  5.0M   0% /run/lock
tmpfs           2.0G   0  2.0G   0% /sys/fs/cgroup
/dev/sda7       965G  110M 916G   1% /home
/dev/sda2        95M   29M   67M  30% /boot/efi
cgmanagerfs    100K   0  100K   0% /run/cgmanager/fs
tmpfs           392M   48K 392M   1% /run/user/1000
```

Notice that the same partition is shown as having a total size of **965 GB** with a used space of only **110 MB**.

Reflect is showing the used space is approx **15 GB larger** and the file system size is approx **15 G larger**, on a fresh install of Linux!

## Why the difference?

Macrium Reflect uses the ext **super\_block structure** to report the total and used space of the file system. This should always be correct and **includes 'reserved' blocks for root** which is usually up to 5% of the file system.

The following is the output from running 'sudo cfdisk'.

```

Disk: /dev/sda
Size: 2 TiB, 2199023255552 bytes, 4294967296 sectors
Label: gpt, identifier: 074EE9E2-D7D7-48FC-961C-35790C928DC3

# Device      Start          End          Sectors      Size Type
#-----
1 /dev/sda4    1159168        2197813247  2196654080  1T  Microsoft basic data
2 /dev/sda5    2197813248        2199814143  2000896     977M Linux swap
3 /dev/sda6    2199814144        2238875647  39061504    18.6G Linux filesystem
4 > /dev/sda7    2238875648        4294965247  2056089600  980.4G Linux filesystem

[ Delete ] [ Quit ] [ Type ] [ Help ] [ Write ] [ Dump ]

```

The output from running 'cfdisk' matches the Reflect total file system size exactly and includes reserved data blocks.

The difference between 980.4 GB and 965 GB is the same as the difference in the reported used space by Macrium Reflect.

Running 'sudo gparted' should agree with the numbers reported by Reflect:

Partition	Name	File System	Mount Point	Label	Size	Used	Unused	Flags
/dev/sda1	Basic data partition	ntfs		Recovery	450.00 MiB	372.87 MiB	77.13 MiB	hidden, c
/dev/sda2	EFI system partition	fat32	/boot/efi		99.00 MiB	32.45 MiB	66.55 MiB	boot, esp
/dev/sda3	Microsoft reserved partition	unknown			16.00 MiB	---	---	msftres
/dev/sda4	Basic data partition	ntfs			1.02 TiB	39.42 GiB	1008.03 GiB	msftdata
/dev/sda5		linux-swap			977.00 MiB	0.00 B	977.00 MiB	
/dev/sda6		ext4	/		18.63 GiB	5.78 GiB	12.85 GiB	
/dev/sda7		ext4	/home		980.42 GiB	15.62 GiB	964.80 GiB	
unallocated		unallocated			1.00 MiB	---	---	

0 operations pending

These numbers agree with those shown by Macrium Reflect,

See also: [Browsing Linux Ext File System Images](#)