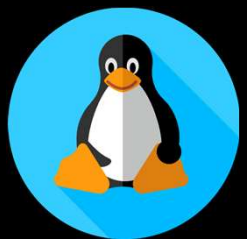
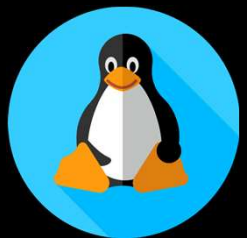
Linux partions

Distribution

S.NO	Linux	Windows
1.	Linux is a open source operating system.	While windows are the not the open source operating system.
2.	Linux is free of cost.	While it is costly.
3.	It's file name case-sensitive.	While it's file name is case-insensitive.
4.	In linux, monolithic kernel is used.	While in this, hybrid kernel is used.
5.	Linux is more efficient in comparison of windows.	While windows are less efficient.

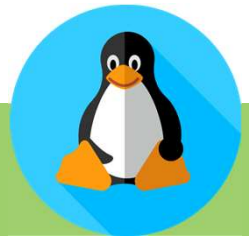


6.	There is forward slash is used for Separating the directories.	While there is back slash is used for Separating the directories.
7.	Linux provides more security than windows.	While it provides less security than linux.
8.	Linux is widely used in hacking purpose based systems.	While windows does not provide much efficiency in hacking.
9.	There are 3 types of user account – (1) Regular , (2) Root , (3) Service account	There are 4 types of user account – (1) Administrator , (2) Standard , (3) Child , (4) Guest
10.	Root user is the super user and has all administrative privileges.	Administrator user has all administrative privileges of computers.
11.	Linux file naming convention in case sensitive. Thus, sample and SAMPLE are 2 different files in Linux/Unix operating syst	In Windows, you cannot have 2 files with the same name in the same folder.



MBR & GPT

	MBR	GPT
Maximum Partition Capacity	2TB	9.4ZB (1 ZB is 1 billion terabytes)
Maximum Partition Number	4 primary partitions(or 3 primary + an infinite number of logical partitions)	128 primary partitions
Firmware Interface Support	BIOS	UEFI
Operating System Support	Windows 7 and older systems like Windows 95/98, Windows XP 32-bit, Windows 2000, Windows 2003 32-bit	Later systems like Windows 11, Windows 10 64-bit, Windows 8/8.1 64-bit



tools

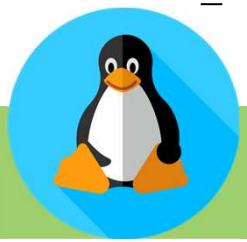
- **parted** A text-based tool that supports both MBR and GPT.
- **gparted** A graphical version of parted.
- **ofdisk** The traditional text-based Linux disk partitioning tool. **fdisk** does not support GPT.
- **gdisk** A version of fdisk that supports GPT but not MBR.

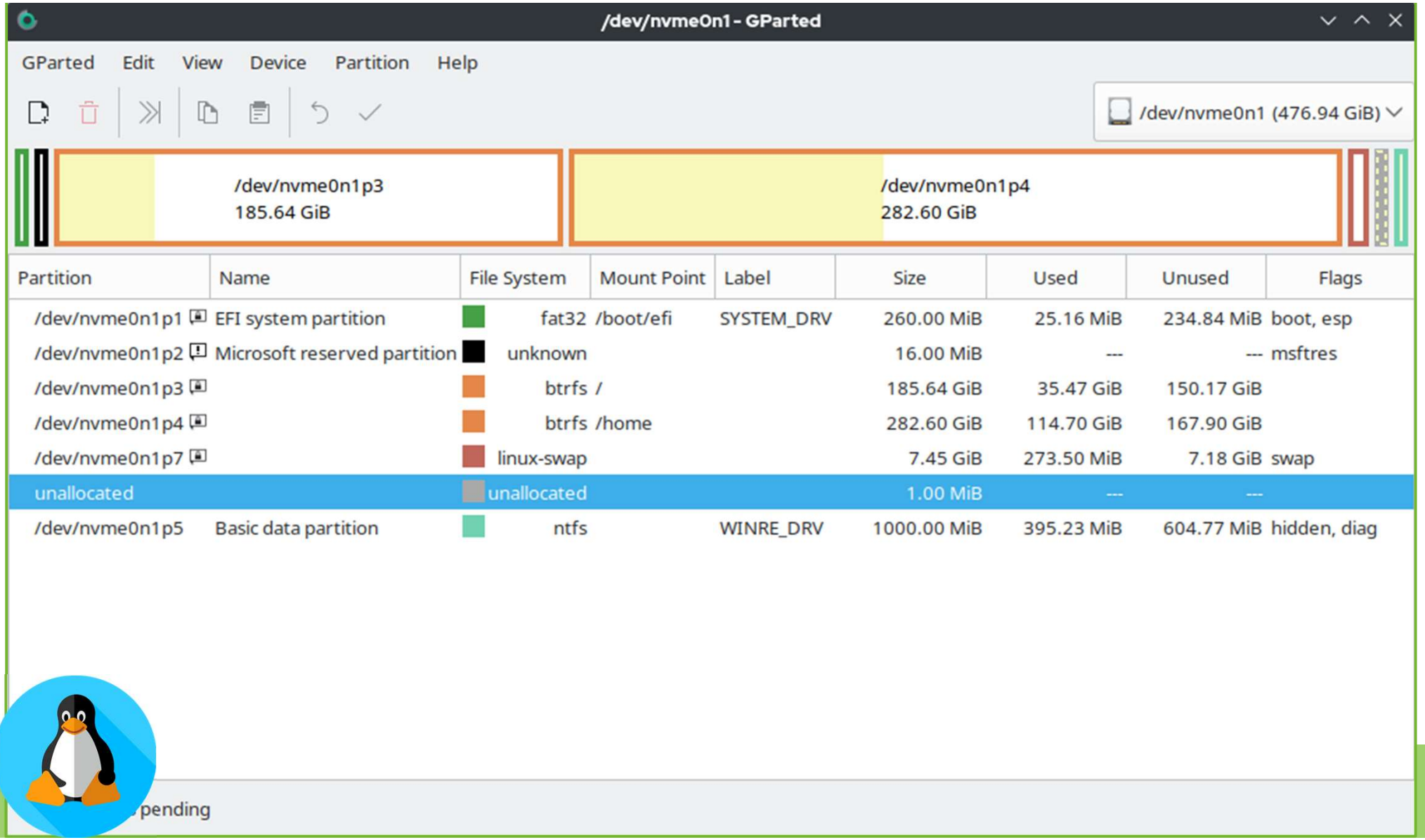
tools

Name	Package	MBR	GPT	CLI	TUI	Scripting utility
fdisk	util-linux	Yes	Yes	fdisk(8)	cfdisk(8)	sfdisk(8)
GPT fdisk	gptfdisk	No	Yes	gdisk(8)	cgdisk(8)	sgdisk(8)
Parted	parted	Yes	Yes	parted(8)	No	parted(8)

fdisk

- fdisk -l
- fdisk /dev/sdb
  - m -> help
  - p -> print partition table
  - n -> create new partition
  - d -> delete partition
  - q -> quit without writing
  - w -> write to disk




/dev/nvme0n1 - GParted
GParted
Edit
View
Device
Partition
Help
/dev/nvme0n1 (476.94 GiB)
/dev/nvme0n1p3
185.64 GiB
/dev/nvme0n1p4
282.60 GiB
Partition
Name
File System
Mount Point
Label
Size
Used
Unused
Flags
/dev/nvme0n1p1
EFI system partition
fat32
/boot/efi
SYSTEM_DRV
260.00 MiB
25.16 MiB
234.84 MiB
boot, esp
/dev/nvme0n1p2
Microsoft reserved partition
unknown
16.00 MiB

---
msftres
/dev/nvme0n1p3
btrfs
/
185.64 GiB
35.47 GiB
150.17 GiB
/dev/nvme0n1p4
btrfs
/home
282.60 GiB
114.70 GiB
167.90 GiB
/dev/nvme0n1p7
linux-swap
7.45 GiB
273.50 MiB
7.18 GiB
swap
unallocated
unallocated
1.00 MiB

/dev/nvme0n1p5
Basic data partition
ntfs
WINRE_DRV
1000.00 MiB
395.23 MiB
604.77 MiB
hidden, diag
pending

vm

More resource

- https://wiki.archlinux.org/title/partitioning
- https://docs.redhat.com/en/documentation/red_hat_enterprise_linux/8/html/managing_storage_devices/disk-partitions_managing-storage-devices