1. Creating Partitions With Fdisk

Partitions

There are two common partition.

- MBR -> Master Boot Record
- GPT -> GUID Partition Table

MBR

- One of the oldest partition layouts
- Most compatible
- Limited Primary Partitions

GPT

- Volumes instead of partitions
- More storage capacity
- Newer technology
- More partitions (128)

Virtual machines and some old server may use MBR partition

How to Create MBR partition with `fdisk`?

Each partition has its own utility (`fdisk` and `gdisk`).
First list all the disks and their location with `lsblk`

```
lsblk
```

For modifying MBR partitions we can use `fdisk`

```
sudo fdisk  /dev/sdX

sudo fdisk /dev/sda
```

Some of `fdisk` commands:

- `p` -> Print Current Partitions
- `n` -> Create New Partitions
- `w` -> Write The Partitions (Save Layout)
- `d` -> Deletes the partition

```
sudo fdisk /dev/sdc
        > n
        > Primary or Extended (p or e): p
        > Partition Number(1-4): 1
        > First Sector (Default:2048):
        > Last Sector: +100G
```

- `Primary or Extended` :
  - `Primary` : A primary partition is in which an Operating System can be installed.
  - `Extended` : In an Extended Partition you can create unlimited logical drives. You can store data in the logical partitions similar with primary partition
- `Partition Number(1-4)` : In MBR you can only create 4 primary partition and the number starts with 1 not 0.
- `First Sector (Default:2048)` : The first `2048` sector is reserved for [MBR partition table][https://en.wikipedia.org/wiki/Master_boot_record]. you should leave it as it is.
- `Last Sector ...` : The size of your partition based on the sectors or storage capacity.
  - `+/- (K,M,G,T,P)` : Size Based
    - `+20K` -> 20 Kilo Bytes
    - `+20M` -> 20 Mega Bytes
    - `+20G` -> 20 Giga Bytes
  - `+/- sectors` : Sectors Based

---

* `fdisk` **doesn't support GPT partitions**.

How to Create GPT partition with `gdisk` ?

`gdisk` is a tool for modifying GPT partitions. the syntax of `gdisk` and `fdisk` is not different.

```
sudo gdisk /dev/sdX
```

- `p` -> Print Current Partitions
- `n` -> Create New Partitions

- `w` -> Write The Partitions (Save Layout)
- `d` -> Deletes the partition