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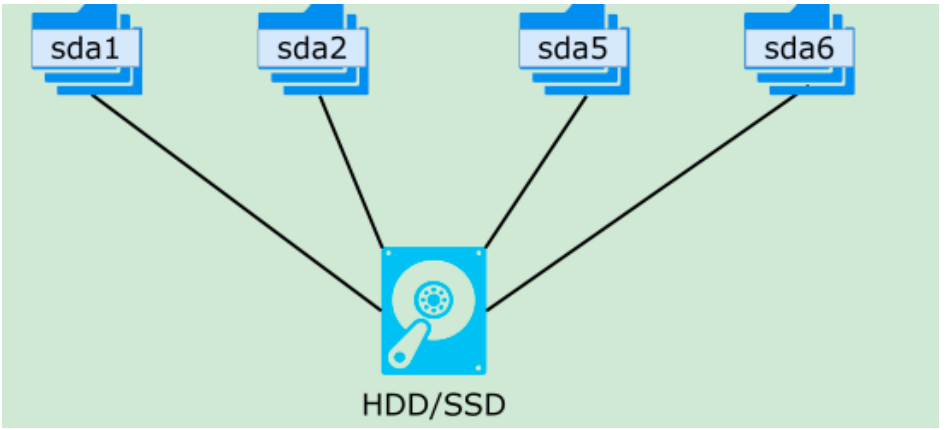
Linux Disk Management



- This session provides an in-depth overview of Linux disk management.
- It covers essential tools, systems, commands, and partition management practices.

Following are key topics to focus on:

- a) The fdisk Command
- b) Common fdisk Options
- c) Viewing All Disk Partitions
- d) Viewing a Partition on a Specific Disk
- e) Viewing All fdisk Commands
- f) Creating a Hard Disk Partition
- g) Deleting a Hard Disk Partitio

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a) The fdisk Command

- The fdisk command is essential when adding new storage or reorganizing existing space.
- It allows for clear partitioning, which helps to separate different file systems.

Syntax:

fdisk [options] device Or fdisk -l [device...]

b) Common fdisk Options

- Using fdisk options allows for more efficient disk management and each option is for a specific use case.

Uses:

- **-l:** Quickly see a summary of all disk partitions.
- **-s:** Check partition sizes to ensure allocation.
- **-d:** Back up partition tables for disaster recovery.
- **-u:** Gain precise information about sector allocations.
- **-b:** Modify the sector size for compatibility with hardware.

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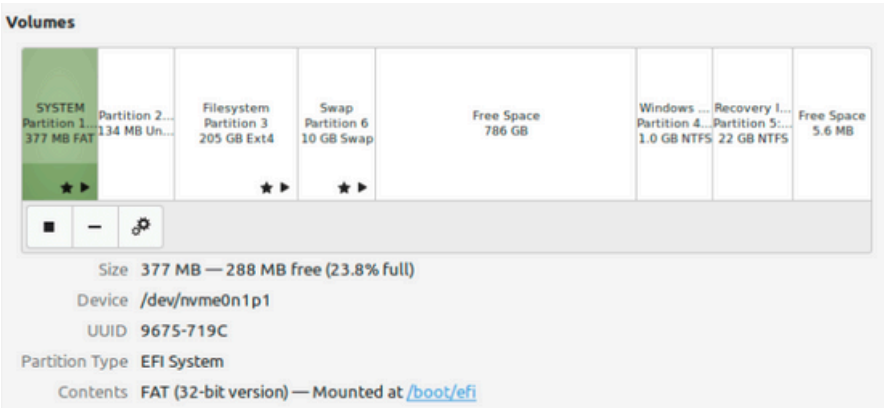
c) Viewing All Disk Partitions

- Listing all partitions helps you get a complete overview of the disk structure and space allocation.
- It's crucial before making any disk changes to avoid data loss or corruption.

Command:

$ sudo fdisk -l



d) Viewing a Partition on a Specific Disk

- Viewing partitions for a specific disk narrows down the focus to a single device.
- This makes it easier to manage large systems with multiple disks.

Command:

$ sudo fdisk -l /dev/sda

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e) Viewing All fdisk Commands

- Being able to see all available commands under fdisk enhances your control over disk management.
- It helps users quickly discover less-known commands and functionalities for better efficiency.

Command:

```
$ sudo fdisk /dev/sda
```

f) Creating a Hard Disk Partition

- Partitioning allows the flexibility to dedicate different partitions for system files, personal data, backups, etc.
- This improves both performance and organizational structure.

Steps:

i) Open the disk with fdisk:

```
$ sudo fdisk /dev/sda
```

ii) Type n to create a new partition.

iii) Type p to create a primary or e for an extended partition.

iv) Once done, use the w command to write changes and reboot.

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g) Deleting a Hard Disk Partition

- Deleting partitions frees up space that can be reallocated for other uses.
- It is crucial when reorganizing disk space or preparing a disk for new installations.

Steps:

i) Open the disk with fdisk:

```
$ sudo fdisk /dev/sda
```

ii) Type d to enter the delete partition menu.

iii) Specify the partition number to delete.