Module 3(linux): Linux server- Deploy & Amp; Control Access

1. Learn about different filesystem types (e.g., ext4, NTFS).

Ans-> Filesystems are a critical component of operating systems, enabling the organization, storage, and retrieval of data on storage devices.

There are some different types of filesystem are as follow:-

1. ext4 (Fourth Extended Filesystem).
2. NTFS (New Technology File System).
3. FAT32 (File Allocation Table 32-bit).
4. exFAT (Extended File Allocation Table).
5. HFS+ (Hierarchical File System Plus).
6. APFS (Apple File System).
7. XFS
8. Btrfs (B-Tree File System).
9. Manage disk partitions and filesystems using tools like fdisk, mkfs, and mount.

Ans-> Managing disk partitions and filesystems involves several steps, including partitioning, formatting, and mounting. There are some steps of filesystems using tools like fdisk, mkfs, and mount are as follow:-

1. Partitioning a Disk with fdisk.
2. Formatting Partitions with mkfs.
3. Mounting a Filesystem.
4. Persistent Mounting with /etc/fstab.
5. Additional Utilities.
6. Create a 2048MB partition and verify if the partition has been created.

Ans-> There are some steps for creating a 2048MB partition are as follow:-

1. Identify the Target Disk.
2. Create a 2048 MB Partition Using fdisk.
3. Verify the Partition.
4. Optional: Format the Partition.
5. Test Mount the Partition.
6. Why LVM is required?

Ans-> Logical Volume Manager (LVM) is a powerful disk management system used in Linux to provide greater flexibility and control over disk storage compared to traditional partitioning methods. There are some required of LVM are as follow:-

1. Dynamic Disk Management.
2. Easy Storage Expansion.
3. Snapshots for Backup.
4. Thin Provisioning.
5. Simplified Storage Management.
6. RAID Integration.
7. Disk Relocation.
8. Flexibility for Virtualization.
9. How can you find you how much memory linux is using?

Ans-> There are some step for finding out how much memory linux is using are as follow:-

1. Using free Command.
2. Using top Command.
3. Using htop Command (Enhanced top).
4. Using /proc/meminfo.
5. Using vmstat Command.
6. Using ps Command.
7. Using smem Command.
8. Using dstat Command.
9. What is a typical size for a swap partition under a linux system?

Ans-> The size of a swap partition in a Linux system depends on several factors, such as the system's total RAM, the workloads it handles, and whether hibernation is used.

There are some points to swap partition under a linux system are as follow:-

1. General Recommendations.

* Swap size should be **2 × RAM**.
* Swap size should be **equal to RAM**.
* Swap size should be **1/2 × RAM**, with a minimum of 4 GB.

1. If Hibernation Is Used.
2. Workload-Based Guidelines.
3. Modern Guidelines (Swap File Alternative).