Module : 17 Linux Server - Configure local Storage

1) Different file system types

- EXT4 (Fourth Extended Filesystem)
- NTFS (New Technology File System)
- FAT32 (File Allocation Table 32)
- exFAT (Extended File Allocation Table)

2) Manage disk partitions and filesystems using tools like fdisk, mkfs, and mount

- Using fdisk to Manage Partitions
- sudo fdisk -l
- Using mkfs to Create Filesystems
- sudo mkfs.ext4 /dev/sda1
- sudo mkfs.ntfs /dev/sda1
- Using mount to Mount Filesystems
- sudo mount /dev/sda1 /mnt
- sudo umount /mnt

3) Open fdisk and Create a New Partition

- sudo fdisk /dev/sda
- Type n to create a new partition.
- Select p for a primary partition.
- Choose the partition number (e.g., 1)
- Press Enter to accept the default start sector.

- Type + 2048M to set the size to 2048MB.
- Type w to write the changes and exit fdisk.

4) Logical Volume Manager (LVM) provides several benefits that make it a valuable tool for managing disk storage in Linux.

- Flexible Disk Management
- Simplified Storage Configuration
- Snapshots
- Improved Performance
- Dynamic Disk Allocation
- Logical Volume Mirroring
- Easy Migration
- Enhanced Scalability

5) Top command to find out how much memory Linux is using.

6) For Systems with Low RAM (<= 4GB):

- Swap Size: 2x the amount of RAM
- Example: For 2GB of RAM, use a 4GB swap partition.
- For Systems with Moderate RAM (4GB to 8GB):
- Swap Size: 1.5x the amount of RAM
- Example: For 4GB of RAM, use a 6GB swap partition.
- For Systems with High RAM (> 8GB):

- Swap Size: Equal to the amount of RAM
- Example: For 16GB of RAM, use a 16GB swap partition.
- Note: If you plan to use hibernation, the swap size should be at least equal to the RAM size plus some extra (e.g., RAM size + 2GB)

7) The maximum file size on an ext4 file system is 16 terabytes (TB).

8) The maximum file size on the XFS file system is 8 exabytes (EB).