**Linux Questions**

1. In linux which flavour you are used ?
2. Suppose iam having 10 lines how can you display 5—7 lines?
3. Explain the directory structure of linux?
4. What is the advantage why you use linux in devops?
5. Explain top and htop?
6. Why are u using Chown, Chmod, ownership commands in linux?
7. What is SCP command?
8. What are storage, and network commands?

**Here are detailed answers to your Linux questions:**

**1. Which Linux flavour are you using?**

Linux has multiple distributions (distros), each designed for different use cases. Common flavours include:

* Ubuntu (user-friendly, great for beginners)
* Debian (stable, widely used in servers)
* CentOS/RHEL (enterprise-focused, secure)
* Arch Linux (highly customizable, rolling release)
* Fedora (cutting-edge technology, Red Hat backed)
* Kali Linux (penetration testing, cybersecurity)
* SUSE Linux Enterprise Server (SLES) (enterprise-grade, used in industries)

**You can check your Linux flavour using:**

**cat /etc/os-release**

**2. How to display lines 5 to 7 from a 10-line file?**

You can use multiple commands:

* sed command:
* sed -n '5,7p' filename.txt…
* awk command:
* awk 'NR>=5 && NR<=7' filename.txt
* head and tail combination:
* head -n 7 filename.txt | tail -n 3

**3. Explain the Linux directory structure**

Linux follows a hierarchical file system:

* / (Root) – Base of the filesystem
* /bin – Essential binaries (e.g., ls, cp, mv)
* /boot – Boot files, including kernel (vmlinuz)
* /dev – Device files (e.g., /dev/sda1)
* /etc – Configuration files
* /home – User directories (/home/user)
* /lib – Shared libraries required by binaries
* /media & /mnt – Mounted devices
* /opt – Optional software packages
* /proc – Kernel and process info (virtual filesystem)
* /root – Home directory of root user
* /sbin – System binaries (for root/admin users)
* /tmp – Temporary files
* /usr – User applications (/usr/bin, /usr/lib)
* /var – Variable files (/var/log, /var/tmp)

**4. Why use Linux in DevOps?**

* Stability & Security – Fewer vulnerabilities compared to Windows
* Automation – Scripting with Bash, Python, and tools like Ansible
* Containerization – Runs Docker & Kubernetes smoothly
* Performance – Better resource management, lightweight
* Open-source – No licensing costs, customizable
* Package Management – apt, yum, dnf for easy software installation
* Remote Management – SSH access for remote servers

**5. Explain top and htop commands**

* top: A command-line utility showing real-time system performance:
  + Displays CPU, memory, swap usage
  + Shows running processes and system load
  + Commands: Press q to quit, k to kill a process, M to sort by memory usage
* htop: A more advanced version of top:
  + Colorful, graphical interface
  + Mouse support for process management
  + Horizontal and vertical scrolling
  + Run using:
  + htop
  + If not installed, install it using:
  + sudo apt install htop # Debian/Ubuntu
  + sudo yum install htop # RHEL/CentOS

**6. Why use chown, chmod, and ownership commands in Linux?**

* chown (Change owner of a file/directory):
* chown user:group file.txt
* chmod (Change file permissions):
* chmod 755 script.sh
* Ownership Commands:
  + ls -l → Show file ownership & permissions
  + chgrp → Change group ownership
  + umask → Set default file permissions

**7. What is the scp command?**

scp (Secure Copy) is used to transfer files securely over SSH:

scp file.txt user@remote\_host:/destination/path/

To copy a file from a remote server:

scp user@remote host:/path/to/file.txt

Use -r for recursive directory copy.

**8. Storage and Network Commands in Linux**

* **Storage Commands:**
  + df -h → Show disk usage
  + du -sh \* → Show directory size
  + lsblk → List block devices
  + fdisk -l → Show partition table
  + mount & umount → Mount/unmount filesystems
* Network Commands:
  + ifconfig / ip a → Show IP addresses
  + ping google.com → Check network connectivity
  + netstat -tulnp → Show open ports
  + ss -tulnp → Alternative to netstat
  + traceroute → Trace packet route
  + wget & curl → Fetch URLs from the web