1. **What is Linux?**
   * Linux is an open-source Unix-like operating system kernel. It is widely used for servers, desktops, and embedded systems.
2. **What is a Linux distribution?**
   * A Linux distribution (or distro) is an operating system made from a software collection that includes the Linux kernel and often a package management system. Examples include Ubuntu, CentOS, and Debian.
3. **How do you check the current kernel version?**
   * uname -r
4. **How do you display the current working directory?**
   * pwd
5. **How do you list files in a directory?**
   * ls

**Intermediate Linux Questions**

1. **How do you copy files in Linux?**
   * cp <source> <destination>
2. **How do you move or rename files?**
   * mv <source> <destination>
3. **How do you delete files and directories?**
   * rm <file\_name> for files, rm -r <directory\_name> for directories
4. **How do you view the contents of a file?**
   * cat <file\_name>, less <file\_name>, more <file\_name>
5. **What are the different types of permissions in Linux?**
   * Read (r), Write (w), Execute (x)

**Advanced Linux Questions**

1. **How do you change file permissions?**
   * chmod <permissions> <file\_name>
2. **How do you change file ownership?**
   * chown <owner>:<group> <file\_name>
3. **How do you create a symbolic link?**
   * ln -s <target> <link\_name>
4. **What is a process in Linux?**
   * A process is an instance of a running program. Each process has a unique PID (Process ID).
5. **How do you view running processes?**
   * ps, top, htop

**Practical Linux Scenarios**

1. **How do you kill a process?**
   * kill <PID>, killall <process\_name>
2. **How do you schedule tasks in Linux?**
   * Using cron jobs (crontab -e to edit crontab)
3. **How do you check disk usage?**
   * df -h (disk free), du -sh <directory\_name> (disk usage)
4. **How do you monitor system performance?**
   * Tools like top, htop, vmstat, iostat, sar
5. **What is the difference between a hard link and a soft link?**
   * A hard link points directly to the inode of a file, while a soft link (symbolic link) is a pointer to the pathname of the file.

**DevOps-Specific Linux Questions**

1. **How do you set up SSH key-based authentication?**
   * Generate a key pair using ssh-keygen, then copy the public key to the remote server's ~/.ssh/authorized\_keys file using ssh-copy-id user@hostname.
2. **How do you use scp to transfer files?**
   * scp <source\_file> user@remote\_host:<destination\_path>
3. **What is Docker, and how do you use it with Linux?**
   * Docker is a platform for developing, shipping, and running applications inside containers. Basic commands include docker run, docker build, docker images, and docker ps.
4. **How do you manage services in Linux?**
   * Using systemctl for systems using systemd, e.g., systemctl start <service>, systemctl stop <service>, systemctl status <service>
5. **How do you configure and use firewalls in Linux?**
   * Using iptables or firewalld for more modern systems. Basic commands include iptables -L (list rules), iptables -A (append rule), and firewall-cmd for firewalld.

**Scripting and Automation**

1. **How do you write a basic shell script?**

sh

Copy code

#!/bin/bash

echo "Hello, World!"

1. **What is grep and how do you use it?**
   * grep searches for patterns in files. Example: grep "pattern" file\_name
2. **How do you find and replace text in a file?**
   * Using sed: sed -i 's/old\_text/new\_text/g' file\_name
3. **How do you automate tasks with Ansible?**
   * Write Ansible playbooks in YAML and run them using ansible-playbook <playbook.yml>
4. **How do you manage packages in Linux?**
   * Using package managers like apt (Debian/Ubuntu), yum or dnf (RHEL/CentOS), and zypper (SUSE)