## Linux ()

## 200+ Linux Technical Interview Questions:

- 1. Give any 3 examples of operating systems.
  - Windows, Linux, and macOS.
- 2. How to check kernel version?
  - Use the command uname -a.
- 3. Which directory has all the configuration files?
  - The /etc directory.
- 4. How to become a root user from a regular user?
  - Use su or sudo su to switch to the root user.
- 5. How to check the computer name or hostname in Linux?
  - Use the hostname command.
- 6. List 3 basic commands to navigate the filesystem.
  - cd, pwd, and ls.
- 7. How to check network interfaces in Linux?
  - Use if config or ip addr or ip a
- 8. List 3 different methods of adding a user.
  - Methods include using useradd, adduser, or manually editing /etc/passwd and /etc/shadow files.
- 9. How to change a user password?
  - Use the command passwd username.
- 10. List any 4 Linux distributions.
  - Kali, Red Hat, CentOS, Ubuntu, and SUSE.
- 11. How to log off from the system?
  - Use the exit command.

- 12. How to create a directory?
  - Use the mkdir command.
- 13. List a few commands that are used in troubleshooting network-related issues?
  - netstat: Displays network connections.
  - tcpdump: Captures and analyzes network traffic.
  - ping: Tests connectivity to another host.
  - traceroute: Traces the route packets take to a network host.
- 14. How to combine 2 files into 1? E.g., you have 3 lines in file "A" and 5 lines in file "B", which command syntax to use that will combine into one file of 3+5 = 8 lines?\*\*
  - cat fileA fileB > combinedfile
- 15. What is the echo command used for?\*\*
  - The `echo` command is used to display a line of text or output a string to the screen.
- 16. What does the following command do?\*\*
  - echo "This year the summer will be great" > file1
  - It creates a new file named "file1" and writes the text "This year the summer will be great" into it. If the file already exists, it will be overwritten.
- 17. When you login you get "\$" prompt, what is the prompt for root?
  - The prompt for the root user is typically #.
- 18. Explain the difference between grep and egrep.
  - grep is used for basic regular expression pattern matching, while egrep
     (or grep -E) supports extended regular expressions, which allow more
     complex pattern matching.
- 19. What is the port number for DNS, NTP, and NFS?
  - DNS: 53, NTP: 123, NFS: 111 (portmapper) and 2049 (NFS).
- 20. What is the configuration file name of DNS and where is it located?
  - The DNS configuration file is named named.conf and is typically located in /etc.
- 21. How many new directories will be created after running the following command mkdir {a..c}{1..3}?
  - 9 directories will be created: a1, a2, a3, b1, b2, b3, c1, c2, c3.

- 22. Your PC is configured with a DNS server address but not the default gateway.

  Can the PC access the internet?
  - No, without a default gateway, the PC cannot access the internet.
- 23. What is the difference between IP and Gateway?
  - An IP address is a unique identifier for a device on a network, while a
    gateway is a network point that acts as an entrance to another network,
    often used to connect local networks to external networks like the
    internet.
- 24. Can you assign one static IP to 2 computers, if not then why?
  - No, assigning the same static IP to two computers will create an IP conflict, causing network communication issues.
- 25. How to change IP address to static?
  - You can change the IP address to static by editing the network
     configuration files, such as /etc/network/interfaces on Debian-based
     systems or /etc/sysconfig/network-scripts/ifcfg-eth0 on Red
     Hat-based systems, and setting the IP address manually.
- 26. You are trying to ping a server by hostname and you get an error message, "ping: unknown host ...". What could be the reason and how to solve the problem so you can ping it by hostname?
  - The issue could be due to a missing hostname-to-IP mapping in the /etc/hosts file or an incorrect DNS configuration. Check and update these files to resolve the issue.
- 27. Explain the difference between relative and absolute path.
  - An absolute path starts from the root directory / and specifies the complete path to a file or directory. A relative path is based on the current directory and does not start with /.
- 28. What is the command to change file/directory ownership and group?
  - Use chown to change ownership and charp to change the group.
- 29. List any 3 types of filesystem.
  - ext4, NTFS, and FAT.
- 30. When you login you get a message on the screen. What is the name of that file and where is it located? The file is /etc/motd (Message of the Day).

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- 31. What is the /bin directory used for?
  - The /bin directory contains essential binary executables needed for booting and system repair.
- 32. What are the different types of DNS Server?
  - Master (Primary) and Secondary (Slave) DNS servers.
- 33. Where are the zone files located for DNS service?
  - Typically located in /var/named/zonefiles.
- 34. How many megabytes in 1 gigabyte?
  - There are 1024 megabytes in 1 gigabyte.
- 35. What is the purpose of having different network ports?
  - So the communication of each application goes through a dedicated port
  - Different network ports allow multiple applications to communicate over the network simultaneously without interference.
- 36. How to display the first column of a file?
  - Use cat filename | awk '{print \$1}'
  - awk '{print \$1}' filename.
- 37. What is the name of the DNS rpm package?
  - The package is called bind.
- 38. What is the difference between nslookup and dig commands?
  - nslookup is a simple tool for querying DNS servers, while dig provides
     more detailed information and is more flexible for DNS troubleshooting.
- 39. How to check your user id and group id?
  - Use the id command.
- 40. What is the difference between "kill" and "kill -9" command?
  - kill sends a signal to terminate a process gracefully, allowing it to clean up resources. kill -9 sends a SIGKILL signal, forcing the process to terminate immediately without cleanup.
- 41. What is a subnet?
  - A subnet is a segmented piece of a larger network, designed to improve performance and security by grouping devices with similar network requirements.

- 42. You are troubleshooting an issue with Redhat support and they have asked you to send the contents of /etc directory. How and which method will you use to transfer the contents?
  - Compress the /etc directory using tar and transfer it using ftp or scp.
- 43. What is the root home directory?
  - The root home directory is /root.
- 44. What is rsyslogd daemon and its purpose?
  - rsyslogd is a system utility providing support for message logging. It is an enhanced version of syslogd.
- 45. Your company has terminated a server administrator. What is the first thing as an administrator you should do to enhance the security?
  - Change the root password.
- 46. What is the command to untar a tarred file?
  - Use tar -xvf filename.tar.
- 47. What is the /proc directory used for?
  - The /proc directory contains virtual files that provide a view into the kernel's view of the system.
- 48. What is the purpose of the nsswitch.conf file?
  - It specifies the sources from which to obtain name-service information in a range of categories and in what order.
- 49. Which service/daemon should be running on the server that allows you to connect remotely?
  - sshd (SSH Daemon).
- 50. What is the purpose of a firewall?
  - A firewall controls incoming and outgoing network traffic based on predetermined security rules.
- 51. List any 3 IT components.
  - Hardware, Operating System, and Applications.
- 52. Which directory has all the commands we use, e.g., Is, cd, etc.?
  - /usr/bin **or** /bin.
- 53. What is the difference between memory, virtual memory, and cache?

- Memory (RAM) is the physical hardware inside a computer that temporarily stores data.
- Virtual memory is a memory management capability that uses disk space as an extension of RAM.
- Cache is a smaller, faster memory component that stores copies of frequently accessed data for quick access.
- 54. Correct order of interaction:
  - a. User>> Operating System >> Hardware
- 55. Which of the following is a communication command?
  - mail
- 56. How to rename a file or directory?
  - Use the my command.
- 57. How to change a hostname in Linux?
  - Edit /etc/hostname and /etc/hosts, then restart the system or use hostnamectl set-hostname newname.
- 58. Why is the "tail -f logfilename" command used most often and what does it do?
  - It outputs all incoming logs in real-time, useful for monitoring log files as they are updated.
- 59. How to sort a file in reverse order?
  - **Use** sort -r filename.
- 60. List all byte sizes from smallest to largest.
  - Bit, Byte, Kilobyte (KB), Megabyte (MB), Gigabyte (GB), Terabyte (TB),
     Petabyte (PB), Exabyte (EB).
- 61. How to check the total number of partitions in Linux?
  - Use fdisk -1.
- 62. How to access a Linux system from a Linux system?
  - Use ssh.
- 63. Explain the procedure of bonding 2 NICs or interfaces together.
  - Use network bonding to combine two or more NICs into a single bonded interface for redundancy or increased throughput. This typically involves configuring /etc/network/interfaces or

/etc/sysconfig/network-scripts/ifcfg-bond0 and using the bonding kernel module.

- 64. What is the exact command syntax to list the 5th column of a file and cut the first 3 letters?
  - awk '{print \$5}' filename | cut -c1-3
- 65. What is the /etc/hosts file used for?
  - It is used to resolve hostnames to IP addresses locally.
- 66. List any 3 options of 'df' command and what they are used for.
  - -h: human-readable format, -i: inodes information, -T: file system type.
- 67. What is the command to change file/directory permissions?
  - Use chmod.
- 68. What is the purpose of pipe (|)?
  - To pass the output of one command as input to another command.
- 69. What is /etc directory used for?
  - It contains configuration files for the system.
- 70. Which command is used to list files in a directory?
  - ls -l
- 71. There is a command which gives you information about other commands, please explain that command and what is it used for?
  - man is used to display the manual pages for other commands, providing detailed information on usage and options.
- 72. How to delete a file and a directory?
  - Use rm filename for files and rmdir dirname for directories.
- 73. What is the difference between "tail" and "tail -10"?
  - tail displays the last 10 lines of a file by default, while tail -10 explicitly specifies to display the last 10 lines.
- 74. List 4 commands to display or read a file's contents.
  - cat, more, less, vi.
- 75. Which command is used to read the top 5 lines of a file?
  - head -5 filename
- 76. What are the different commands or methods to write to a file?
  - echo > filename, vi filename, cat > filename.

- 77. What is swap space and how to check swap space?
  - Swap space is a portion of the hard drive used as an extension of RAM.
     Check swap space using swapon -s or free.
- 78. What is inode and how to find an inode of a file?
  - An inode is a data structure on a filesystem that stores information about a file or directory. Use ls -i filename to find the inode number.
- 79. Which file to edit for kernel tuning?
  - Edit /etc/sysctl.conf for kernel parameter tuning.
- 80. What is the latest version of Redhat?
  - Search online for the most recent version as it frequently updates.
- 81. Name the command to find a specific word from a file.
  - grep word filename
- 82. You have scheduled a job using crontab but it does not run at the time you specified, what could be the reason and how would you troubleshoot?
  - Check system time, crontab entry syntax, and /var/log/cron for errors.
- 83. How to check system hardware information?
  - Use dmidecode.
- 84. How to check network interface MAC address?
  - Use if config or ip link.
- 85. If I don't want others to read my file1, how do I do that?
  - Remove read permission for others using chmod o-r file1.
- 86. What is the purpose of "unig" and "sed" commands?
  - uniq removes duplicate lines from sorted input, sed is a stream editor for filtering and transforming text.
- 87. Which command is used to list the contents of a directory in the most recent time and in reverse order, meaning the most updated file should be listed on the bottom?
  - ls -ltr
- 88. What is the difference between tar, gzip, and gunzip?
  - tar is used for archiving files, gzip compresses files, and gunzip decompresses files.
- 89. What are the different ways to install an OS?

- Using a DVD, DVD ISO, or network boot.
- 90. How to view the difference between two files?
  - Use diff file1 file2.
- 91. You noticed that one of the Linux servers has no disk space left, how would you troubleshoot that issue?
  - If using LVM, add more disk space and extend the logical volume. If not, add a new disk, create a partition, and link it to an existing filesystem.
- 92. How to check Redhat version release?
  - Use cat /etc/redhat-release or uname -a.
- 93. What is the difference between TCP and UDP?
  - TCP is connection-oriented and reliable, while UDP is connectionless and faster but less reliable.
- 94. What is a zombie process?
  - A zombie process is a process that has completed execution but still has an entry in the process table, waiting for the parent process to read its exit status.
- 95. How do you search for a pattern/word in a file and then replace it in an entire file?
  - Use sed for search and replace operations.
- 96. Explain the purpose of the "touch" command.
  - touch is used to create an empty file or update the timestamp of an existing file.
- 97. If a command hangs, how to stop it and get the prompt back?
  - Press Ctrl + C.
- 98. Which command is used to count words or lines?
  - wc
- 99. How to check the number of users logged in?
  - Use who command.
- 100. What is the command to view the calendar of 2024?

```
cal 2024
```

101. Which command is used to view disk space?

df -h

102. How to create a new group in Linux?

-groupadd groupname.

- 103. What is the command to send a message to everyone who is logged into the system?
  - Use wall command.
- 104. Which command is used to check the total number of disks?

```
-fdisk -l.
```

- 105. What is a mail server record in DNS?
  - MX (Mail Exchange) rec
- 106. What does the following command line do? ps -ef | awk '{print \$1}' | sort | uniq
  - Lists the first column of all running processes, sorts them, and removes duplicates.
- 107. You get a call that when a user goes to www.yourwebsite.com it fails and gets an error, how do you troubleshoot?
  - Check user internet connectivity, DNS configuration, server status, and web service available
- 108. List 4 different directories in /?
  - /etc,/bin,/tmp,/home.
- 109. What is the output of the following command:
  - \$ tail -10 filename | head -1
  - It will show the first line from the last 10 lines of a file.
- 110. What are the different fields in /etc/passwd file?

The `/etc/passwd` file contains the following fields separated by colons (:):

- Username: The user's login name.
- Password: An 'x' character indicates that the password is stored in the `/etc/shadow` file.
- UID: User ID number.
- GID: Group ID number.
- GECOS: User's full name or other information.
- Home Directory: The path to the user's home directory.
- Shell: The user's default shell.

- 111. Which command is used to list the processes?
  - ps -ef

The 'ps -ef' command is used to list all the currently running processes.

- 112. What is the difference between "hostname" and "uname" commands?
  - hostname: Displays or sets the system's hostname.
  - uname: Prints system information, such as the kernel name, version, and other details. `uname -n` specifically prints the network node hostname, similar to the `hostname` command.
- 113. How to check system load?
  - You can check system load using the `top` and `uptime` commands.
- 114. How to schedule jobs?
  - You can schedule jobs using `crontab` for repetitive tasks and `at` for one-time tasks.
- 115. What is the 3rd field when setting up crontab?
  - The third field in a crontab entry is the "Day of the month".
- 116. What is the command to create a new user?
  - useradd username
- 117. What is the "init #" for system reboot?
  - The 'init' level for system reboot is '6'.
- 118. How to restart a service?
  - systemctl restart servicename
  - sudo service servicename restart
- 119. How to shutdown a system?\*\*
  - shutdown now
  - init 0
  - systemctl poweroff
- 120. What is the "ftp" command used for?
  - The `ftp` command is used to transfer files between a local system and a remote server using the FTP protocol.
- 121. Explain cron job syntax? First is minute, second is..?
  - The cron job syntax consists of five fields followed by the command to be executed:
    - 1. Minute (0-59)

- o 2. Hour (0-23)
- o 3. Day of the month (1-31)
- 4. Month (1-12 or JAN-DEC)
- 5. Day of the week (0-6 or SUN-SAT).
- 122. How to delete a package in Linux?
  - rpm -e packagename
  - for RPM-based systems.
- 123. What is the file name where user password information is saved?
  - The user password information is saved in the `/etc/shadow` file.
- 124. Which command would you use to find the location of the chmod command?\*\*
  - which chmod
- 125. Which command is used to check if the other computer is online?
  - ping othercomputer
- 126. Please explain about LAN, MAN and WAN?
  - LAN (Local Area Network): Covers a small geographic area like a home, office, or building.
  - MAN (Metropolitan Area Network): Spans a city or a large campus.
  - WAN (Wide Area Network): Covers a large geographic area, such as a country or continent, connecting multiple LANs.
- 127. How to list hidden files in a directory?
  - ls -la
- 128. What is the difference between telnet and ssh?
  - SSH (Secure Shell)\*\*: Provides encrypted communication and is secure.
  - Telnet: Does not provide encryption and is not secure[1].
- 129. How to run a calculator on Linux and exit out of it?
  - Run 'bc' to start the calculator and type 'quit' to exit.
- 130. List any 4 commands to monitor the system?
  - - `top`
  - - `df -h`
  - `iostat`
  - `dmesg`

- 131. You are notified that your server is down, list the steps you will take to troubleshoot?
  - Check the system physically.
  - - Login through the system console.
  - - Ping the system.
  - - Reboot or boot if possible.
- 132. What is the difference between static and DHCP IP?
  - Static IP: Manually assigned and does not change.
  - DHCP IP: Automatically assigned by a DHCP server and can change over time.
- 133. How to write in vi editor mode?
  - - `i` = insert
  - - `a` = insert after the cursor
  - - `o` = insert a new line below the current line
- 134. What is the difference between "crontab" and "at" jobs?
  - crontab: Schedules repetitive jobs.
  - at: Schedules one-time jobs.
- 135. What is vCenter server in VMWare?
  - vCenter Server is a centralized management tool for managing VMware
     vSphere environments, providing control over virtual machines, ESXi hosts,
     and other components.
- 136. What is the "dmidecode" command used for?
  - The `dmidecode` command is used to retrieve system hardware information from the DMI (Desktop Management Interface) table.
- 137. What is the difference between SAN and NAS?
  - SAN (Storage Area Network): Provides block-level storage and is typically used in enterprise environments.
  - NAS (Network Attached Storage): Provides file-level storage and is often used for simpler file sharing.
- 138. What is the location of system logs? E.g. messages
  - System logs are typically located in the `/var/log` directory.
- 139. How to set up an alias and what is it used for?

- alias aliasname="command"
- It is used to create shortcuts for long commands.
- 140. What is the purpose of the "netstat" command?
  - The `netstat` command is used to display network connections, routing tables, interface statistics, masquerade connections, and multicast memberships[1].
- 141. What are terminal control keys, list any 3?
  - Ctrl+C`: Interrupt a process.
  - o `Ctrl+D`: End of input (EOF).
  - Ctrl+Z`: Suspend a process.
- 142. Which command(s) you would run if you need to find out how many processes are running on your system?
  - ps -ef | wc -l
- 143. 144. What are the different types of shells?
  - Sh, bash, ksh, csh, zsh
- 144. How to delete a line when in vi editor mode?
  - Press `dd` to delete a line.
- 145. Which is the core of the operating system?
  - Kernel
- 146. Which among the following interacts directly with system hardware?
  - Kernel
- 147. How to save and quit from vi editor?

Press `Shift ZZ` or type `:wq!` and press Enter.

- 148. What is the difference between a process and daemon?
  - Process: A running instance of a program.
  - Daemon: A background process that starts at boot time and runs continuously.
- 149. What is the process or daemon name for NTP?
  - The process or daemon name for NTP is 'ntpd'.
- 150. What are a few commands you would run if your system is running slow?\*\*
  - `top`: To view running processes and their resource usage.
  - `iostat`: To monitor system input/output device loading.

- `df -h`: To check disk space usage.
- `netstat`: To display network connections and statistics.
- 151. How to install a package in Redhat Linux?
  - yum install packagename
- 152. What is the difference between "ifconfig" and "ipconfig" commands?
  - ifconfig: Used in Linux to configure and display network interface parameters.
  - ipconfig: Used in Windows to display all current TCP/IP network configuration values.
- 153. What is the first line written in a shell script?
  - The first line in a shell script is the shebang, which defines the shell to interpret the script, e.g., `#!/bin/bash`.
- 154. Where is the network (Ethernet) file located, please provide the exact directory location and file name?
  - The network configuration file is located at `/etc/sysconfig/network-scripts/ifcfg-nic`, where `nic` represents the network interface card name (e.g., `eth0`).
- 155. Why do we use the "last" command?
  - The `last` command is used to display a list of the last logged-in users, showing both active and logged-off sessions.
- 156. What does RHEL Linux stand for?
  - RHEL stands for Red Hat Enterprise Linux.
- 157. To view your command history, which command is used and how to run a specific command?
  - Use `history` to view the command history.
  - To run a specific command, use `!n`, where `n` is the command number from the history list.
- 158. What is NTP and briefly explain how it works and where are the config files and related commands of NTP?
  - NTP (Network Time Protocol): Used to synchronize the clocks of computers over a network.

- How it works: NTP servers provide time information to clients, which adjust their clocks accordingly.
- Config files: Located at `/etc/ntp.conf`.
- Related commands\*\*: `ntpd` for the daemon, `ntpq` for querying NTP servers.
- 159. How to disable the firewall in Linux?\*\*
  - To disable the firewall, you can use:
  - systemctl stop firewalld
  - systemctl disable firewalld
- 160. How to configure mail server relay for sendmail service?
  - Edit the `/etc/mail/sendmail.mc` file and add the `SMART\_HOST` entry to specify the relay host.
- 161. Where is the samba log file located?
  - The Samba log file is located at `/var/log/samba`.
- 162. What is the `mkfs` command used for?\*\*
  - The `mkfs` command is used to create a new filesystem on a device.
- 163. If you create a new group, which file does it get created in?
  - The new group information is stored in the `/etc/group` file.
- 164. Which file has DNS server information (e.g., DNS resolution)?
  - DNS server information is stored in the `/etc/resolv.conf` file.
- 165. What are the commands you would run if you need to find out the version and build date of a package (e.g., http)?
  - rpm -qi http
- 166. On the file permissions, what are the first 3 bits for and who is it for?
  - The first three bits represent the permissions for the file owner: read (r), write (w), and execute (x).
- 167. How to create a soft link?
  - ln -s target linkname
- 168. How to write a script to delete messages in a log file older than 30 days automatically?
  - You can use the `find` command in a script:
  - find /path/to/logs -type f -mtime +30 -exec rm {} \;

- 169. How to quit out of the "man" command?
  - Press `g` to guit the manual page viewer.
- 170. Which command is used to partition a disk in Linux?
  - The fdisk command is used to partition a disk.
- 171. What is the difference between the "shutdown" and "halt" command?
  - shutdown: Gracefully shutdown the system, allowing processes to terminate properly.
  - halt: Stops all processes and halts the system without powering it off.
- 172. What is the exact syntax of mounting an NFS share on a client and also how to un-mount?\*\*
  - Mount: `mount -t nfs server:/path/to/share /mount/point`
  - Unmount: `umount /mount/point`
- 173. What experience do you have with scripting, explain?
  - Experience with scripting includes using control structures like `if-then`,
     `do-while`, `case`, and `for` loops to automate tasks.
- 174. How to get information on all the packages installed on the system?
  - rpm -qa
- 175. Explain VMWare?\*\*
  - VMWare is a company that provides cloud computing and virtualization technology, including products like vSphere, ESXi, and vCenter.
- 176. You are tasked to examine a log file in order to find out why a particular application keeps crashing. The log file is very lengthy, which command can you use to simplify the log search using a search string?
  - Use the `grep` command to search for specific strings like "error",
     "warning", or "failure" in the log file:
  - grep "error" /var/log/messages
- 177. What is an /etc/fstab file and explain each column of this file?
  - The `/etc/fstab` file contains information about filesystems and their mount points. Each line has six fields:
  - 1. \*\*Device\*\*: The block device or remote filesystem.
  - 2. \*\*Mount Point\*\*: Directory where the filesystem is mounted.
  - 3. \*\*Filesystem Type\*\*: Type of filesystem (e.g., ext4, nfs).

- 4. \*\*Options\*\*: Mount options (e.g., defaults, ro).
- 5. \*\*Dump\*\*: Backup utility flag (0 or 1).
- 6. \*\*Pass\*\*: Filesystem check order at boot (0, 1, or 2).
- 178. What is the latest version of Windows server?
  - The latest version as of 2023 is Windows Server 2022.
- 179. What is the exact command to list only the first 2 lines of history output?
  - history | head -2
- 180. How to upgrade Linux from 7.3 to 7.4?
  - yum update: This command updates all packages to their latest versions, including upgrading the distribution version.
- 181. How to tell which shell you are in or running?\*\*
  - echo \$0
- 182. You have tried to "cd" into a directory but you have been denied. You are not the owner of that directory, what permissions do you need and where?
  - You need execute (`x`) permission on the directory to change into it.
- 183. What is CNAME record in DNS?
  - A CNAME (Canonical Name) record is a type of DNS record that maps an alias name to a true or canonical domain name.
- 184. What is the name of the VMWare operating system?\*\*
  - The VMWare operating system is called ESXi.
- 185. What is the client name used to connect to ESXi or vCenter server?
  - The client used to connect to ESXi or vCenter is the vSphere Client.
- 186. You get a call from a user saying that I cannot write to a file because it says, permission denied. The file is owned by that user, how do you troubleshoot?
  - Check the file permissions and ensure the user has write ('w') permission.
- 187. What is the latest version of VMWare?
  - As of 2023, the latest version of VMware vSphere is 8.0.
- 188. What is the name of the firewall daemon in Linux?\*\*
  - The firewall daemon in Linux is called `firewalld`.
- 189. Which command syntax can you use to list only the 20th line of a file?
  - sed -n '20p' filename
- 190. What is the difference between run level 3 and 5?\*\*

- Run level 3: Multi-user mode with networking, but without a graphical interface.
- Run level 5: Multi-user mode with networking and a graphical interface (GUI).
- 191. What is the difference between domain and nameserver?
  - Domain: A domain is a human-readable address used to access resources on the internet.
  - Nameserver: A server that translates domain names into IP addresses.
- 192. You open up a file and it has 3000 lines and it scrolls up really fast, which command will you use to view it one page at a time?
  - Use `less` or `more` to view the file one page at a time.
- 193. How to start a new shell. E.g., start a new ksh shell?
  - Simply type `ksh` or `bash` to start a new shell session.
- 194. How to kill a process?
  - kill processID
- 195. How to check scheduled jobs?
  - crontab -1
- 196. How to check system memory and CPU usage?
  - Memory: Use `free`.
  - CPU Usage: Use `top` or `htop`.
- 197. Which utility could you use to repair the corrupted file system?\*\*
  - Use the `fsck` (File System Consistency Check) utility.
- 198. What is the command to make a service start at boot?\*\*
  - systemctl enable servicename
- 199. Which file to modify to allow users to run root commands?\*\*
  - Modify the `/etc/sudoers` file, typically using `visudo` for safe editing.
- 200. You need to modify the httpd.conf file but you cannot find it. Which command line tool can you use to find the file?\*\*
  - find / -name "httpd.conf"
- 201. Your system crashed and is being restarted, but a message appears indicating that the operating system cannot be found. What is the most likely cause of the problem?
  - The `/boot` partition or bootloader is most likely corrupted or missing.