Linux command line interview topics

Linux is a very important topic to learn if you want to make a career in the IT industry. You will find Linux questions being asked in many of the technical roles like SDE, SRE, DevOps, Cloud engineer, System admin, Support engineer etc. The level of questions being asked will vary depending on the requirements of the company. SDE interviews may focus on understanding the basics of linux operating system and commands whereas SRE/DevOps/Cloud/System engineering roles may test in depth understanding of linux internals as well as linux command line.

Below is a list of topics that are important in the Linux command line. At the end of this doc, you will also find a section on how to practice these commands.

Linux basics

- Boot process in linux
- Popular linux distributions
- Linux architecture
- System calls

System information

- uname
- lscpu

File system navigation

- File system tree architecture
- Understanding what each directory in root contains
- cd
- pwd
- ls

Viewing file content

- cat
- less
- more
- head
- tail
- echo

Manipulating files and directories

- cp
- mv
- rm
- mkdir
- touch
- ln

Information about commands

- type
- which
- help
- man
- alias

Text processing

- cat
- grep
- awk
- Sed
- sort
- uniq
- cut
- tr
- wc

I/O redirection

- Pipe operator
- How to redirect output and error to a file ?
- How to take input from a file ?

Command expansion

- Pathname expansion with *
- Tilde(~) expansion
- Command substitution and parameter expansion with $
- Escaping characters

Users and groups

- id
- adduser
- deluser
- passwd
- addgroup
- delgorup
- Moduser
- /etc/passwd
- /etc/group

File permissions

- umask
- chown
- chmod
- chgrp
- su
- sudo

Process management

- top
- ps
- jobs
- bg
- fg
- kill

Memory management

- /proc/meminfo
- free
- vmstat
- top

File system management

- locate
- find
- du
- df
- xargs
- touch
- stat
- file
- iostat

Network management and troubleshooting

- Application layer - telnet, curl, wget, ssh, sftp, scp, dig, nslookup, rsync
- Transport layer - nc, tcpdump, netstat(ss)
- Network layer - ping, traceroute, route, ip addr, iptables, nmap
- Data link layer - arp

Package management

- Types of package management systems in Linux(dpkg vs rpm)
- Display information about an installed package(apt-cache show/yum info)
- Searching a package(apt-cache search/yum search)
- Updating a package (apt-get update/yum update)
- Installing a package(apt-get install/yum install)
- Removing a package(apt-get remove/yum erase)

Environment variables

- Where are environment variables stored ?
- set
- export

Storage devices

- mount
- unmount
- fsck
- fdisk
- mkfs
- dd

Archiving and backup

- gzip
- tar
- zip

Miscellaneous

- Proc file system
- How to change kernel parameters ?
- Regular expressions - learn how to use regular expression with grep command
- Systemd

How to practice

- You first need a linux terminal to run the commands
    - Install linux on you system or dual boot your system with Linux operating system
    - If you have credits on AWS/Azure/GCP, create a linux instance
    - Use docker as mentioned here
    - Use an online terminal like jslinux
    - Prefer the first two options as you may not be able to run all the commands in docker or an online terminal.
- Most of the basic linux commands are covered at linuxcommand.org. Try to understand these commands and run them on your linux terminal.
- If you prefer learning through video, watch and practice first 17 videos of this playlist
- The Linux Command Line, 2nd Edition book covers almost all the topics mentioned above in detail. If you have got time, you should definitely read this book and practice the commands.
- If you are not able to cover any topic from the above sources, use google search and learn the topics.

- Once you are done with learning, go to devops-exercises and try to answer the questions without seeing the solution.