LINUX Questions

What is Linux?

Linux is an open-source operating system kernel that serves as the foundation for many different distributions, known as Linux distributions or simply Linux distros.

Q. What are the flavors of Linux?

It is a type of Linux. You can either create your own version of Linux and call it by your name. You can't get paid for Linux but you can get paid for the services you provide.

Ubuntu,

CentOS,

Suse,

RedHat,

Debian.

Q. What is the difference between UNIX and Linux?

UNIX is an older operating system that served as the inspiration for Linux. Linux is a Unix-like operating system that was developed independently but shares many similarities with UNIX.

Q. What is the difference between a process and a thread in Linux?

A process is an instance of a program that is running on a system, while a thread is a lightweight process that shares the resources of a process.

Q. What is the difference between a hard link and a soft link in Linux?

A hard link is a link to a file that points to the same inode as

the original file, while a soft link (also known as a symbolic link) is a link

to a file that points to the file's path.

Q. What is a shell in Linux?

The shell is a command-line interpreter that allows users to interact with the operating system. It provides a way to execute commands and run programs.

Q. What is a process in Linux?

A process is an instance of a running program. It represents the execution of a program in memory and includes information such as the program's code, data, and resources.

Q. How can you check the memory usage of a Linux system?

The "free" command displays information about the system's memory usage, including total memory, used memory, free memory, and swap usage.

Q. How do you find the IP address of a Linux system?

The "ifconfig" command displays network interface information, including IP addresses assigned to the system.

Q. How do you find the list of running processes in Linux?

The "ps" command can be used to display a list of running processes. Adding options like "-ef" or "-aux" provides more detailed information.

Q. How do you kill a process in Linux?

The "kill" command is used to terminate a process. It requires the process ID (PID) of the process to be killed. The PID can be obtained using the "ps" command.

Q. What is the purpose of the "chmod" command in Linux?

The "chmod" command is used to change the permissions of files and directories in Linux. It can be used to grant or revoke read, write, and execute permissions.

Q. How do you search for a file in Linux?

The "find" command allows you to search for files based on various criteria, such as name, size, or modification time. For example, "find / -name myfile.txt" searches for a file named "myfile.txt" starting from the root directory.

Q. What is SSH?

SSH (Secure Shell) is a network protocol that provides a secure way to access and manage remote systems. It allows encrypted communication between a client and a server.

Q. How do you connect to a remote Linux server using SSH?

You can connect to a remote Linux server using SSH by running the command "ssh username@hostname" in a terminal. Replace "username" with your username and "hostname" with the server's IP address or domain name.

Q. What is the purpose of the "grep" command?

The "grep" command is used to search for specific patterns within files. It is commonly used for text searching and pattern matching.

Q. How do you check the disk usage in Linux?

The "df" command displays information about disk space usage on file systems. Adding the "-h" option provides human-readable output.

Q. How can you compress and decompress files in Linux?

The "gzip" command is used to compress files, creating a ".gz" file. To decompress a compressed file, you can use the "gunzip" command.

Q. How do you check the disk space usage of a specific directory in Linux?

The "du" command is used to estimate the disk space usage of a directory and its subdirectories. Adding the "-h" option provides a more readable output.

Q. How do you monitor system performance in Linux?

The "top" command is commonly used to monitor system performance in real-time. It displays information about CPU usage, memory usage, running processes, and more.

Q. What is a package manager in Linux?

A package manager is a tool used to manage software packages in a Linux distribution. It handles package installation, updates, and removal. Examples of package managers are "apt" for Debian-based distributions and "yum" for Red Hat-based distributions.

Q. How do you install software in Linux?

The method of installing software in Linux depends on the distribution. For Debian-based distributions like Ubuntu, you can use the "apt" or "apt-get" command. For Red Hat-based distributions like CentOS, you can use the "yum" or "dnf" command.

Q. What is the purpose of the "cron" daemon in Linux?

The "cron" daemon is a time-based job scheduler in Linux. It allows users to schedule and automate the execution of commands or scripts at specified intervals or times.

Q. How do you schedule a cron job in Linux?

To schedule a cron job, you can use the "crontab" command. Running "crontab -e" opens the user's crontab file, where you can specify the command or script to be executed and the schedule.

Q. What is the difference between SSH and SSL?

SSH (Secure Shell) is a network protocol used for secure remote access and management of systems. SSL (Secure Sockets Layer) is a security protocol used to establish secure encrypted connections between clients and servers, commonly used for secure web communication (HTTPS).

Q. How do you change the password for a user in Linux?

The "**passwd**" command is used to change the password for a user in Linux. Running "passwd username" prompts you to enter a new password for the specified user.

Q. How do you check the network connectivity in Linux?

The "ping" command is used to check network connectivity between your machine and a remote host. Running "ping hostname" sends ICMP echo requests to the specified hostname or IP address and displays the response time.

Q. What is a firewall in Linux?

A firewall is a network security tool that filters incoming and outgoing network traffic based on predefined rules. It helps protect systems from unauthorized access and network-based attacks.

Q. What is a RAID in Linux?

RAID (Redundant Array of Independent Disks) is a technology used to combine multiple physical disk drives into a single logical unit. It provides improved performance, data redundancy, or a combination of both, depending on the RAID level used.

Q. How do you create a partition in Linux?

The "fdisk" command is commonly used to create partitions in Linux.

What if you run rm -rf /*?

Do not run this command ever! Because it is going to delete everything under root folder that means it will delete the whole system.

Q. How do you add a user in Linux?

The **"useradd"** command is used to add a user in Linux. For example, "useradd username" creates a new user with the username specified.

Q. What is full permission or what is 777/000 permission?

777- full permission

000- no permission

- 0 - no permission
- 1 (x)- execute,
- 2(w) - write,
- 3 (wx)- write and execute,
- 4(r) - read,
- 5 (r-x)- read and execute,
- 6 (rw)-read and write,
- 7 (rwx)- full read write execute

Q. What are commands used for Zip and Unzip files in Linux server?

A. 1. gzip = Compress File 2. gunzip = Uncompress File will use for Linux operating system

Q. What is file path of Alias name set byPermanent?

A. /etc/bashrc

Q. What is MBR in linux?

A. MBR is a Master Boot Recorder, it uses for booting operating system

Q. What are 2 Types of Mount in linux?

A. Temporary Mount and Permanent Mount

Temporary Mount for removable devices such as pendrive, cd/dvd or any other.

permanent Mounnting like harddrives, lun storage etc, it will remain connected on Linux system every boot or restart.

Q. What is SWAP in Linux?

A. Linux uses swap space to increase the amount of virtual memory available to a host. It can use one or more dedicated swap partitions or a swap file on a regular filesystem or logical volume.

Q. What command use for Error checking and Error Fixing in Linux?

A. $ fsck and e2fsck

Q. What is Kernel on Ubuntu / Unix Operating system like Linux?

A. Kernel is the heart of operating system. It interacts with shell and executes the machine level language.

Q. How can I save my input and output commands and see them when required in Linux?

A. At the beginning of the session if I will use SCRIPT command then the details of the input and output commands will be saved in a file called typescript and we can view it any time using "cat typescript" command.

This is very useful to track what user is doing what. HISTORY command will not work because it shows data only for the current session.

Q. How can I check which processes are running in my Linux machine?

A. To check process which are running in machine, use two commands.

(a) TOP and (b) PS

Q. You used TOP command and without aborting the TOP process I need to kill one process. Is it possible to kill ??

A. Yes TOP command it self has a command prompt. Type K then it will ask you for the PID of the process to kill. Hit the PID and enter, it will kill the process.

Q. What is the difference between creating a file in cat and in touch command on Linux?

A. $cat command creates a file and we can save some data inside the file but touch command by default will create a blank file.

Q. I want to create a directory a1 and inside that a2 and inside that a3. Is it possible? If yes how ?

A. Yes creating multiple directories is possible. In this scenario the below command works.

$mkdir –p a1/a2/a3

Q. How can I append some lines in an existing file in Linux?

A. $cat >> file name and hit enter.

You can append lines below the existing lines of the file. .

Q. What is FIFO and LIFO in Linux / Unix ?

A. FIFO is first in first out

and

LIFO is last in first out..

Q. How to check disk utilization of a linux server?

A. Use du command to check the disk utilization.

$du

in advance you want to see a specify partition with all the information use $df -hT to know clear details about connected harddisk information with available space as well used space..

Q. How to check the disk free of all the mount points in linux / Unix ?

A. use df –h command,

it will show the disk free of linux machine.

Q. What is command for to force close one particular process in Linux

A. $kill -9

Example : #kill -9 1045.

Linux conditionale questions

1. Sudden Spike in Server CPU Utilization: Troubleshooting the Root Cause

- **Question:** You notice a sudden spike in server CPU utilization. How would you troubleshoot and identify the root cause?
- **Answer:** I would employ tools like top and htop to analyze CPU usage, identify culprit processes using ps or pidstat, analyze logs for events, and optimize or scale resources accordingly.

2. Unresponsive Critical Application: Diagnosing and Resolving Issues

- **Question:** A critical application on your Linux server is unresponsive. Walk me through the steps you would take to diagnose and resolve the issue.
- **Answer:** Utilizing ps and top, I'd identify the hung process, check logs for errors, restart the application or services, and monitor for improvements.

3. Zero-Downtime Deployment of a New Web Application Version

- **Question:** You need to deploy a new version of a web application on a Linux server without causing downtime. Explain the steps you would take to achieve a zero-downtime deployment.
- **Answer:** Implement a load balancer, deploy the new version on one server at a time, validate each step, and update the load balancer to include new servers.

4. Recovering Lost Data: Dealing with Accidental Deletions

- **Question:** A team member accidentally deleted important files on a Linux server. How would you recover the lost data?
- **Answer:** Use file recovery tools like extundelete or photorec, avoid writing new data to prevent overwriting, and restore from backups if available.

5. Running Out of Disk Space: Identifying and Resolving the Issue

- **Question:** Your Linux server is running out of disk space. What steps would you take to identify and resolve the issue, considering both short-term and long-term solutions?
- **Answer:** Identify large files with du and df, remove unnecessary files, implement log rotation, and consider long-term solutions like additional storage.

6. Setting Up a Basic Firewall: Enhancing Server Security

- **Question:** Explain how you would set up and configure a basic firewall on a Linux server to enhance its security.
- **Answer:** Use iptables or firewalld to set up rules, allow only necessary ports and services, and regularly review and update firewall rules.

7. Git Repository Management: Collaborative Project with Version Control

- **Question:** Your team is working on a collaborative project, and you want to implement version control using Git on a Linux server. How would you set up and manage the Git repository?
- **Answer:** Initialize a Git repository with git init, add and commit files, push to a central repository, and collaborate using branches and pull requests.

8. Performance Monitoring Over Time: Tools and Techniques

- **Question:** You want to monitor the performance of your Linux server over time. What tools and techniques would you use for performance monitoring and analysis?
- Answer: Use tools like sar, vmstat, and iostat for monitoring, set up alerts for abnormal behavior, and consider long-term solutions like Prometheus.

9. Securing a Linux Server: Best Practices and Measures

- **Question:** You are responsible for securing a Linux server. Outline the security measures and best practices you would implement to protect against potential threats.
- **Answer:** Keep the system and software updated, configure a firewall, implement strong user authentication, regularly audit and review system logs, and apply the principle of least privilege.