

Interview Questions on Linux

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1. What is Linux?

Ans-

Linux is an open-source operating system kernel used for a variety of computing devices, such as servers, desktops, mobile phones, and embedded systems.

2. Explain the difference between UNIX and Linux.

Ans-

Linux is a Unix-like operating system, but there are differences. UNIX is a proprietary operating system, while Linux is open source. Linux is a clone of the UNIX operating system.

3. Advantage of linux OS?

Ans-

Fast Free open source

community support

network friendly stability in

performance high security

customizable work low

hardware resource

4. What is the root account in Linux?

Ans-

The root account, also known as the superuser or administrator, has elevated privileges and can execute commands with unrestricted access to the system.

5. How do you change permissions in Linux?

Ans-

chmod command is used to change file permissions in Linux.

6. Explain the use of the grep command.

Ans-

The grep command is used to search for a specific pattern or text in a file. It can be used with regular expressions for more complex searches.

7. What is the purpose of the ls command?

Ans-

The ls command is used to list files and directories in a directory

8. How do you find information about a command in Linux?

Ans-

The man command is used to display the manual pages for a given command. For example, man ls displays the manual page for the ls command.

9. Explain the purpose of the /etc/passwd file.

Ans-

The /etc/passwd file contains user account information, including usernames, user IDs, home directories, and default shells.

10. Which programming language was used to develop the Linux kernel?

Ans-

The Linux kernel is primarily written in the C programming language.

11. Who created Linux, and when was it first released?

Ans-

Linux was created by Linus Torvalds, and the first version (0.01) was released in September 1991.

12. What is the ls command used for?

Ans-

The ls command is used to list files and directories in a directory. -----

13. Explain the purpose of the cp command.

Ans-

The cp command is used to copy files or directories. For example, cp file1.txt /destination copies "file1.txt" to the specified destination.

How do you move a file in Linux?

14. The mv command is used to move files or directories. For example, mv file1.txt /destination moves "file1.txt" to the specified destination.

15. What is the function of the rm command?

Ans-

The rm command is used to remove or delete files and directories. For example, rm file1.txt deletes "file1.txt."

16. How do you create a new directory in Linux?

Ans-

The mkdir command is used to create a new directory. For example, mkdir new_directory creates a directory named "new_directory."

17. What is the purpose of the pwd command?

Ans-

The **pwd** command stands for "print working directory" and is used to display the current working directory.

18. How do you navigate to the home directory quickly?

Ans-

The **cd** command with no arguments or with the tilde (**cd ~**) is used to navigate to the home directory.

19. Explain the use of the man command.

Ans-

The **man** command is used to display the manual pages for other commands. For example, **man ls** shows the manual page for the **ls** command.

20. How can you find out who is currently logged into the system?

Ans-

The **who** command is used to display information about users who are currently logged in.

21. What is the purpose of the cat command?

Ans-

The **cat** command is used to concatenate and display the content of files. For example, **cat file.txt** displays the content of "file.txt."

22. How do you add a new user in Linux?

Ans-

The **useradd** command is used to add a new user. For example, **useradd newuser** creates a new user named "newuser."

23. Explain the purpose of the /etc/passwd file.

Ans-

The /etc/passwd file contains user account information, including usernames, user IDs (UIDs), home directories, and default shells.

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

Ans-

The passwd command is used to change the password for a user. For example, passwd username allows the user "username" to change their password.

25. What is the function of the /etc/shadow file?

Ans-

The /etc/shadow file stores encrypted password information for user accounts, providing an additional layer of security over the /etc/passwd file.

26. How can you view the groups to which a user belongs?

Ans-

#grep <name of group> /etc/group or
#cat /etc/group

27. How do you add a user to a group in Linux?

Ans-

#gpasswd -a <user> <group>

28. What is the purpose of the /etc/group file?

Ans-

The /etc/group file contains group information, including group names, group IDs (GIDs), and the list of users who belong to each group.

29. How do you create a new group in Linux?

Ans-

The groupadd command is used to create a new group. For example, groupadd newgroup creates a new group named "newgroup."

30. Explain the difference between the id and whoami commands.

Ans-

The id command provides more detailed information about the user, including user and group IDs and group memberships.

The whoami command simply prints the username of the current user.

31. How can you delete a user in Linux?

Ans-

The userdel command is used to delete a user.

32. What is the purpose of the chown command?

Ans-

chown command is used to change the ownership of files or directories. For example, chown username:groupname file changes the owner to "username" and the group to "groupname."

33. How do you change the group ownership of file/dir?

Ans-

#chgrp <name of group> <name of file/dir>

34. Explain the purpose of the su command.

Ans-

The su command is used to switch to another user account. It can be used with the - option to simulate a full login, updating the user's environment variables.

35. How do Change the Permissions of a File or Directory?

Ans-

The chmod command is the command that modifies the permissions of a file or directory.

36. Explain 750 permission

Ans: rwx r-

x ---

37. what is use of uptime command

Ans-

Uptime command show computer uptime

38. How to check kernel version in linux

Ans:

#uname -r

39. What is a regular expression (regex)?

Ans-

A regular expression is a sequence of characters that defines a search pattern. It is a powerful tool for pattern matching and text manipulation.

40. How do you use the grep command with regular expressions in Linux?

Ans-

The grep command is used to search for patterns in text files. For example, `grep 'pattern' file.txt` searches for the specified pattern in "file.txt."

41. What is the purpose of the find command in Linux?

Ans-

The find command is used to search for files and directories in a directory hierarchy based on various criteria.

42. How do you use the find command to search for a file by name?

Ans-

The basic syntax is `find <directory> -name <filename>`. For example, `find /home/user -name example.txt` searches for a file named "example.txt" in the "/home/user" directory.

43. what is use of tar command Ans-

tar stands for Tap Archive, tar command use for create and extract Archive file using algorithm such as gzip,bzip2,xzip etc.

44. What is Vim?

Ans-

Vim (Vi Improved) is a highly configurable and efficient text editor that is an improved version of the traditional Vi editor.

45. How do you enter and exit Vim?

Ans-

To enter Vim, you can open a terminal and type `vim` followed by the name of the file you want to edit. To exit Vim, press Esc to enter command mode and then type `:wq` to save and quit, or `:q!` to quit without saving changes.

46. Explain the difference between command mode and insert mode in Vim

Ans-

In command mode, you can navigate, delete, copy, and perform other actions using keyboard commands. In insert mode, you can actually insert and edit text.

46. How do you switch from command mode to insert mode in Vim?

Ans-

Press i in command mode to enter insert mode

47. What is the purpose of the :w command in Vim?

Ans-

The :w command is used to save changes to the file without exiting Vim.

48. Explain the purpose of the :q command in Vim.

Ans-

The :q command is used to quit Vim. If changes were made to the file, Vim will not allow you to quit unless the changes are saved.

49. How can you save changes and quit Vim in a single command?

Ans-

You can use the :wq command to save changes and quit Vim simultaneously.

50. How can you quit Vim without saving changes?

Ans-

In command mode, you can use the :q! command to force quit without saving changes.

51. What is the purpose of the dd command in Vim?

Ans-

The dd command is used to delete the entire line on which the cursor is positioned.

52. Explain the purpose of the p command in Vim.

Ans-

The p command is used to paste the content that was yanked or deleted. It pastes after the cursor position in command mode.

53. Explain the linux directory hierarchy(structure) in Linux.

Ans-

Linux follows a hierarchical file system structure. The root directory is denoted by "/", and subdirectories branch out from it, forming the file system hierarchy.

54. how to check basic file permission of file or directory

Ans-

#ls -l note.txt

#ls -ld /india

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55. What is GRUB?

Ans-

GRUB (Grand Unified Bootloader) is a bootloader from the GNU project. It's a program that is responsible for managing the boot process.

56. What is GUI?

Ans-

GUI is an acronym for Graphical User Interface. These are the graphical elements of a Linux operating system which include windows, icons, menus, buttons, taskbars, and much more.

57. What is CLI?

Ans-

CLI is an acronym for Command Line Interface. This is an interface that allows users to type commands on a shell provided by the terminal.

59. how to show hidden files in linux Ans- with help of following command

#ls -a

60. What is the purpose of the at command in Linux?

Ans-

The at command is used to schedule one-time tasks to be executed at a specific time in the future.

62. How do you use the at command to schedule a task?

Ans-

You can use the at command followed by the time and date when you want the task to run, and then enter the command or script you want to execute. For example, at 3pm tomorrow and then provide the command.

63. Explain how to view the list of scheduled at jobs.

Ans-

The atq command is used to display the list of at jobs in the queue.

64. How do you remove a scheduled at job?

Ans-

The atrm command, followed by the job number (obtained from atq), is used to remove a scheduled at job.

65. What is the difference between at and cron?

Ans-

The at command is used for one-time scheduling, while cron is a more flexible and recurring task scheduler.

66. What is cron in Linux? Ans-

cron is a time-based job scheduler in Unix-like operating systems. It allows users to schedule tasks (cron jobs) to run periodically at fixed times, dates, or intervals.

67.

How do you edit the crontab file for a specific user?

Ans-

The crontab -e command opens the crontab file for editing. It allows users to schedule or modify their own cron jobs.

68. Explain the format of a cron job entry.

Ans-

A cron job entry consists of five fields representing the minute, hour, day of the month, month, and day of the week when the job should run. An example entry might look like 0 2 * * * (runs daily at 2:00 AM).

69. Explain how to schedule a cron job to run every weekday at 4:30 PM.

Ans-

The cron entry 30 16 * * 1-5 schedules a job to run at 4:30 PM every weekday (Monday to Friday).

70. How can you view the system's cron logs?

Ans-

The cron logs are typically stored in /var/log/cron or /var/log/syslog, and you can use commands like cat or tail to view the contents.

71. what is use of head command? Ans- to show top 10 line of the file

72. what is use of tail command? Ans- to show bottom 10 line of the file

73. what is use of wc command? Ans- wc show word count,line count and character counting.

74. What is a disk partition in Linux?

Ans-

A disk partition is a logical division of a physical disk drive. It allows the disk to be treated as separate units, each with its own file system.

75. Explain the difference between primary and extended partitions.

Ans-

Primary partitions are the main partitions on a disk, and there can be up to four of them. Extended partitions are used to create additional logical partitions beyond the limit of four primary partitions.

76. How can you view the existing partitions on a Linux system?

Ans-

The fdisk -l command displays information about all disks and partitions on the system.

77. How do you format a partition in Linux?

Ans-

The **mkfs** command is used to format a partition with a specific file system. For example, **mkfs.ext4 /dev/sdX1** formats the partition at **/dev/sdX1** with the **ext4** file system.

78. Explain the use of the mount command in Linux.

Ans-

The **mount** command is used to attach a file system to a specific directory, making the files within that file system accessible.

79. How can you make a partition automatically mount at boot?

Ans-

You can add an entry to the **/etc/fstab** file to specify the details of the partition, including the mount point and file system type.

80. What is the purpose of the swap partition in Linux?

Ans-

The swap partition is used as virtual memory in Linux. It helps the system handle situations where physical memory (RAM) is insufficient by temporarily moving data from RAM to the swap space on the disk.

81. How do you resize a partition in Linux?

Ans-

The **resize2fs** command is used to resize the file system, and tools like **parted** or **gparted** can be used to resize the actual partition.

82. Explain the significance of the root (/) partition in Linux.

Ans-

The root partition contains the root file system and is essential for the proper functioning of the operating system. It includes the system files and directories required for booting.

83. What is LVM (Logical Volume Management) in Linux?

Ans-

LVM is a system of managing logical volumes, allowing for dynamic resizing and easy management of file systems across physical disks.

84. How can you check disk space usage in Linux?

Ans-

The df, lsblk and du command is used to display information usage

85. What is LVM (Logical Volume Management) in Linux?

Ans-

LVM is a logical volume manager for the Linux kernel that provides a flexible and dynamic way to manage storage by creating logical volumes from physical storage devices.

86. Explain the components of LVM.

Ans-

LVM consists of Physical Volumes (PVs), Volume Groups (VGs), and Logical Volumes (LVs). Physical Volumes are individual storage devices, Volume Groups group together one or more Physical Volumes, and Logical Volumes are created within Volume Groups.

87. How do you initialize a disk as a Physical Volume (PV) in LVM?

Ans-

The pvcreate command is used to initialize a disk as a Physical Volume. For example, pvcreate /dev/sdb initializes the disk at /dev/sdb as a Physical Volume.

88. Explain the purpose of a Volume Group (VG) in LVM.

Ans-

A Volume Group is a collection of one or more Physical Volumes. It serves as a pool of storage from which Logical Volumes can be created.

89. How can you create a Volume Group in LVM?

Ans-

The **vgcreate** command is used to create a Volume Group. For example, **vgcreate myvg /dev/sdb** creates a Volume Group named "myvg" using the Physical Volume /dev/sdb.

90. How do you extend a Volume Group in LVM?

Ans-

The **vgextend** command is used to add additional Physical Volumes to an existing Volume Group. For example, **vgextend myvg /dev/sdc** adds /dev/sdc to the "myvg" Volume Group.

91. What is a Logical Volume (LV) in LVM?

Ans-

A Logical Volume is a virtual partition created within a Volume Group. It is used to allocate space from the Volume Group to store data.

92. How can you create a Logical Volume in LVM?

Ans-

The **lvcreate** command is used to create a Logical Volume. For example, **lvcreate -L 10G -n mylv myvg** creates a Logical Volume named "mylv" with a size of 10GB in the "myvg" Volume Group.

93. Explain the process of resizing a Logical Volume in LVM.

Ans-

To resize a Logical Volume, you can use the **lvresize** command. For example, **lvresize -L +5G myvg/mylv** increases the size of "mylv" by 5GB.

94. How can you resize a file system on a Logical Volume after resizing the LV?

Ans-

The `resize2fs` command is used to resize `ext2`, `ext3`, or `ext4` file systems. For example, `resize2fs /dev/myvg/mylv` resizes the file system on the "mylv" Logical Volume.

95. What are the different types of file systems supported in Linux?

Ans-

The Linux supported file systems are `ext2`, `ext3`, `ext4`, `xfs`, `vfat` etc.

96. Explain the difference between swap space and RAM.

Ans-

RAM (Random Access Memory) is volatile memory that stores data and programs currently in use by the operating system and applications. Swap space, on the other hand, is non-volatile storage used as an extension of RAM when the physical memory is full.

97. What is the purpose of the `mkswap` command?

Ans-

The `mkswap` command is used to initialize a device or file as swap space. For example, `mkswap /dev/sdX1` initializes the swap partition at `/dev/sdX1`.

98. What is the purpose of the `swapon` command?

Ans-

The `swapon` command is used to activate swap devices or files. For example, `swapon /dev/sdX1` activates the swap partition at `/dev/sdX1`.

99. How can you temporarily disable swap space in Linux?

Ans-

The `swapoff` command is used to disable swap space. For example, `swapoff /dev/sdX1` disables the swap partition at `/dev/sdX1`.

100. What is swap space in Linux?

Ans-

Swap space is a dedicated area on a storage device (usually a hard disk) that is used as virtual memory by the operating system when physical RAM is fully utilized.

101. When and why is swap space used?

Ans-

Swap space is used when the system's physical RAM is exhausted. It acts as an extension of RAM, allowing the system to temporarily move inactive or less frequently used data from RAM to the swap space.

102. How can you check the amount of swap space in Linux?

Ans-

The free -m & free -h command displays information about both physical RAM and swap space. Specifically, the swap section shows the total, used, and free swap space.

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103. Explain the role of the bootloader in the Linux boot process.

Ans-

This question assesses the candidate's knowledge of how the bootloader (e.g., GRUB) facilitates the loading of the kernel.

104. What is the kernel, and what is its role in the boot sequence?

Ans-

This question helps gauge the candidate's understanding of the kernel's function during the boot process, including hardware initialization

105. Total runlevel in rhel9 linux?

Ans-

7 Runlevel

106. Explain boot process in linux

Ans-

Power ON - POST - MBR - Grub - Kernel - Systemd - Login

107. Tell me 7 runlevel Sequentially

Ans:

RunLevel 0 - Poweroff.target

RunLevel 1 - rescue.target

RunLevel 2 - multi-user.target

RunLevel 3 - multi-user.target

RunLevel 4 - Not in use

RunLevel 5 - graphical.target

RunLevel 6 - reboot.target

----- 108.

How to check default run level in linux

Ans-

#systemctl get-default

109. How to set default run level in linux

Ans-

#systemctl set-default <name of run level>

110. which command use for check ip address in linux

Ans-

#ifconfig or

#ip addr

111. which command use for set ip address in linux

Ans:

#nmtui

&

#nmcli

112. How to check available network connection list in linux Ans-

#nmcli con show

113. How to down and up network connection?

Ans-

#nmcli con up enp0s3

&

#nmcli con down enp0s3

114. What is use of ssh?

Ans- ssh use for access remote computer by using command line interface.

115. what is default port number of ssh?

Ans-

22

116. Difference between telnet and ssh

Ans-

Telnet transfer information in plain text between local to remote system, ssh transfer information in encrypted format between local to remote system. telnet use port number 23, ssh use port number 22

117. what is use of ssh-keygen

Ans:

ssh-keygen use for generated private and public key for keybase remote authentication.

118. How to protect authorized access of single user mode? Ans- by using grub password.

119. what is path of grub configuration file in linux

Ans-

#vim /etc/grub2.cfg

120. Tell me ssh command for access remote computer

Ans-

#ssh <user name>@<computer ip/name>

eg.

#ssh root@192.168.1.3

121 How to check status of httpd service

Ans-

#systemctl status sshd

122. How to start,stop,enable,disable sshd service?

Ans-

#systemctl start sshd

#systemctl stop sshd

#systemctl enable sshd

#systemctl disable sshd

123. which command use for remote file transfer in linux

Ans- #scp (secure

copy)

#rsync (Remote Synchronization)

124. How to check firewall default zone?

Ans-

#firewall-cmd --get-default

125. How to set firewall default zone?

Ans-

#firewall-cmd --set-default-zone=<zone name>

126. How to add port in firewall

Ans-

#firewall-cmd --permanent --add-port=<port number/(tcp/udp)>

127. How to remove service from firewall

#firewall-cmd --permanent --remove-service=<name of service>

128. What is a Yum Server?

Ans-

Yum (Yellowdog Update Modifier) is an open source management tool for Red Hat Packet Manager based Linux systems. It allows users and administrators of a system to install, update, remove or search packages easily.

129. How to install package in linux with help of yum command?

Ans:

#yum install <name of package>

130. How to check package is installed or not?

Ans-

#yum info <name of package>

131. What are NFS usages?

Ans-

NFS allows a system to share directories and files with others over a network. By using NFS, users and programs can access files on remote systems almost as if they were local files

132. NFS default port number?

Ans- 2049

NFS configuration file?

Ans-

/etc/nfs-exports

133. What is the full form of DHCP?

Ans-

The full form of DHCP is Dynamic Host Configuration Protocol.

134. What does DHCP do?

Ans-

Dynamic Host Configuration Protocol: Assigns IP addresses to clients on a dynamic or automatic basis.

135. What is the scope of DHCP?

Ans-

Scope is basically the range of IP addresses that is assigned to DHCP clients.

136. What do you mean by an IP Lease?

Ans-

The DHCP server assigns the client an IP address for a time period of 8 days. We call this offer an IP Lease.

137. What exactly is IP Reservation?

Ans-

IP Reservation means reserving a specific dynamic IP address for a certain system. When you use the DHCP IP reservation, you basically instruct your Wi-Fi network to assign the same IP address to a specific device each time it connects to your network.

138. Which ports do DHCP, and the DHCP clients use?

Ans-

For requests, UDP Port 68 is used, and for server responses, UDP Port 67 is used.

139. Why is Dora process used in DHCP?

Ans-

DORA stands for Discover, Offer, Request, Acknowledge. DHCP uses Dora Process to provide an IP Address to hosts or client machines.

140. Configuration file of samba?

Ans-

`/etc/samba/smb.conf`

141. What is MariaDB?

Ans-

MariaDB is a community-based, open source project developed by MySQL developers, providing similar features to MySQL.

It is a relational database management system used for a wide range of applications, from banking to websites.

MariaDB offers fast, scalable, and robust performance, making it a versatile solution for various use cases.

142. What is the difference between MariaDB and MySQL?

Ans-

MariaDB is a fork of MySQL, meaning that it is based on the same codebase as MySQL. However, MariaDB has additional features and improvements that are not found in MySQL.

143. What are the advantages of using MariaDB?

Ans-

Some of the advantages of using MariaDB include improved performance, increased scalability, and enhanced security features.

144. How do you create a user account in MariaDB?

Ans-

To create a user account in MariaDB, you can use the following syntax:

```
CREATE USER 'username'@'localhost' IDENTIFIED BY 'password';
```

145. How do you create a database in MariaDB?

Ans-

To create a database in MariaDB, you can use the CREATE DATABASE statement.

146. How do you create a table in MariaDB?

Ans-

To create a table in MariaDB, you can use the CREATE TABLE statement.

147. Which script use for secure mariadb in rhel9? Ans- mysql_secure_installation

148. What is the purpose of the GRANT statement in MariaDB?

Ans-

The GRANT statement in MariaDB is used to grant privileges to users or roles

149. What do you mean by Apache Web Server?

Ans-

Apache web server is the HTTP web server that is open source, and it is used for hosting the website.

150. How to check the Apache version?

Ans-

You can use the command `httpd -v`

151. What is the port of HTTP and https of Apache?

Ans-

The port of HTTP is 80, and https is 443 in Apache.

152. How will you install the Apache server on Linux Machine?

Ans-

We can give the following command for Centos and Debian, respectively:

Centos/RHEL: yum install httpd

Debian: apt-get install apache2.

153. How you will check the httpd.conf file syntax error?

Ans:

#httpd -t

154. What is Virtual Hosting?

Ans-

Virtual Hosting in Apache allows you to host multiple websites on a single instance

155. What is DocumentRoot?

Ans-

DocumentRoot directive is the configuration where you can specify the folder location from where the static files will be served. It's also called as WebRoot.

Default DocumentRoot location is /var/www/html