

Module 15 :- linux server and essential Tool

1. Full form of bash.

- Bash stands for "Bourne-Again Shell."

2. What is bash shell.

- Bash shell, commonly referred to as "Bash", is a command line (CLI) and scripting language used in Unix-like operating systems. It is the default shell of many Linux distributions and macOS. The main purpose of the bash shell is to provide a way for users to interact with work through commands and scripts.

3. What is the meaning of \$ in terminal.

- In the terminal or command line interface, the number sign (\$) is often used to indicate that the system is ready to receive commands from the user. When you see the \$ sign in the terminal, it is waiting for you to enter a command.

4. What is the meaning of # in terminal.

- In the terminal or command line interface, the hash sign (#) is often used to indicate that the user is running with special privileges, usually "root" or superuser. When you see the # symbol in the terminal, it means you have permission and full control to run the command.

5. How many virtual console available in Linux 7.0 ?

- Linux provides six virtual consoles for interactive use; a seventh virtual console is associated with the graphical user interface.

6. What is file system hierarchy in linux?

- The File System Hierarchy Standard (FHS) is a standard specification for Unix-like operating systems, including Linux. It defines the organization and arrangement of files and directories in the system to ensure compatibility and interoperability between different distribution systems and Unix-like systems. The FHS provides guidance on where different types of information should be stored in the information system.

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7. What is “ / ” in linux?

- In Linux and other Unix-like operating systems, the slash ("/") is the root of the filesystem hierarchy. It follows the above list on which all other lists and historical records are based. The root directory is the beginning of the entire structure of the directory denoted by a slash.

8. What is the purpose of “ /etc ” ?

- The /etc directory on Linux and Unix-like operating systems is used as the location for system-wide configuration files and directories. It plays an important role in managing the behaviour and configuration of various software, services and general processes. The name "etc" is short for "etcetera", indicating that it is used as a place to store various configuration files.

9. What is the purpose of “ /home ” ?

- The /home directory on Linux and Unix-like operating systems is the default place where users' home files are stored. All users of the system usually have their own subdirectory in the /home directory, where they can store their own files, documents, settings and other user-specific information. The main purpose of the /home directory is to provide users with an enhanced place to organize and manage their personal files and settings.

10.What is the Purpose of “ /boot ” ?

- The /home directory in Linux and Unix-like operating systems is the default location where user home directories are stored. Each user on the system typically has their own subdirectory within the /home directory, where they can store their personal files, documents, settings, and other user-specific data. The primary purpose of the /home directory is to provide a dedicated space for users to organize and manage their individual data and configurations.

11.What is the use of man command?

- The man command in Linux is used to display manual pages for various commands, utilities, and functions available on the system. Manual pages provide detailed documentation and information about how to use and understand different commands and programs. The man command is an essential tool for accessing help and reference information directly from the command line.

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12.What is the use of passwd command?

- The passwd command in Linux and Unix-like operating systems is used to manage user account passwords. It allows users to change their own passwords as well as provides system administrators with the ability to manage the passwords of other users.

13. I want to search specific string in man, what should I do?

- search for a specific string within a man page (manual page) on a Unix-like system, you can use the man command along with the grep command. Here's how you can do it:
- `man [section_number] [command] | grep [search_string]`

14.How to exit from man?

- To exit from the `man` pager and return to the command line, you can simply press the "q" key on your keyboard. This will immediately quit the `man` pager and bring you back to your terminal prompt.

15.What is the use of “ pinfo “ command ?

- The pinfo command is used to display data in information format. The file format is an alternative to Unix man pages (man pages) and is mainly used for detailed information and software procedures and scripts.

16.What is the use of “sosreport “ command ?

- The sosreport command is used on Linux systems to collect diagnostic information about system hardware, software, and configuration. It is often used for troubleshooting and debugging purposes, especially when dealing with problems with system performance, crashes, or unexpected behavior. The information generated can be very useful for administrators or support teams when trying to diagnose and resolve complex issues.

17.By default location to store “ sosreprt “ is....

- The location where the sosreport archive is stored depends on the Linux distribution you are using. However, in many places the default location is /var/tmp. The created sosreport archives are usually stored in a subdirectory called sosreport.

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18.What is the use of ">file "command?

- The > symbol is used for output redirection. Specifically, the >file command is used to redirect the standard output (stdout) of a command to a file instead of displaying it on the terminal. This allows you to capture the output of a command and save it into a file for later use or analysis.

19.What is the use of ">>file "command?

- The >> symbol is used for output redirection as well, specifically for appending the standard output (stdout) of a command to a file without overwriting its contents. This is useful when you want to continuously add new data to an existing file without losing the previously stored information.

20.What is the use of "2>file "command?

- The 2> symbol in a Unix-like command line is used for redirecting the standard error (stderr) output of a command to a file.

21.What is the use of "2>>file "command?

- The 2>> symbol in a Unix-like command line is used for appending the standard error (stderr) output of a command to a file, without overwriting its contents.

22.What is the use of "whereis "command?

- The whereis command is used to locate the binary, source code, and manual page files for a given command or program. It's primarily used to find out where a specific command's executable, source code, and documentation files are located on the system.

23.What is the use of "echo "command?

- The echo command is used in systems to display text or output to the terminal. It's a simple and fundamental command that's often used in shell scripts, command-line operations, and various scripting tasks.

24.What is the use of "tty "command?

- The tty command is used to display the file name of the terminal connected to the standard input. In other words, it shows the name of the terminal device that your shell session is using.

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25.What is the use of “| “and “tee “command in terminal?

- The | symbol (pipe) and the tee command are used for redirecting and manipulating the output of commands in the terminal.
- | (Pipe): The pipe symbol | is used to connect the standard output (stdout) of one command to the standard input (stdin) of another command. This allows you to create a pipeline of commands, where the output of one command serves as the input for another. It's a powerful way to chain together multiple commands to perform more complex operations.
- The tee command is used to read from the standard input and write to both the standard output and one or more files simultaneously. It's particularly useful when you want to display output on the terminal while saving it to a file at the same time.

26.What is the use of “vim “?

- vim is a highly configurable and powerful text editor commonly used in Unix-like operating systems. It stands for "Vi IMproved" and is an enhanced version of the traditional vi text editor that was originally developed for the Unix operating system.

27.Give a list of “ vim modes “

- Normal Mode
- Insert Mode
- Visual Mode
- Command-Line Mode
- Replace Mode
- Visual Block Mode
- Ex Mode

28.What is “gedit “?

- gedit is a graphical text editor for the GNOME desktop environment, which is commonly used in Linux-based operating systems. It provides a user-friendly and feature-rich interface for creating, editing, and managing text files. gedit is often preferred by users who prefer working in a graphical environment rather than the command line.

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29.What is “ tar “ ?

- tar is a command-line utility in Unix-like operating systems that is used to create and manipulate compressed archive files. The name "tar" stands for "tape archive," as it was originally designed for archiving files onto magnetic tape storage. However, over time, its usage has extended to creating archive files on various storage media, including disks and network shares.

30.I want to get backup of /etc directory, how do i wright down the command?

- To create a backup of the /etc directory using the tar command and store it in a compressed archive file, you can use the following command:
- `sudo tar -czvf file_name.tar.gz /etc`
- The resulting etc_backup.tar.gz file will be located in the current working directory when you run the command. If you want to specify a different location for the backup file, you can provide the full path in the -f option, like this:
- `sudo tar -czvf /path/to/backup/filee_name.tar.gz /etc`

31.From which command, I extract .tar file ?

- `tar -xvf file_name.tar`

32..I want to see the content of .tar file, without extracting this, which command will help me

- To view the contents of a .tar archive file without extracting it, you can use the tar command with the -tf (list files) option. Here's the syntax:
- `tar -tf file_name.tar`

33. I want to copy “ file1 “ on remote desktop computer, which command will help ?

- To copy a file from your local computer to a remote desktop computer, you can use the scp (Secure Copy Protocol) command. scp allows you to securely copy files between your local system and a remote system over a network. Here's the basic syntax:
- `scp source_file username@remote_host:destination_path`

34.Which command is used for remote synchronize?

- The rsync command is commonly used for remote synchronization of files and directories. rsync is a versatile and powerful utility that efficiently copies and synchronizes files between local and remote systems over a network.

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35. What is ACL?

- ACL stands for Access Control List. An ACL is a list of permissions attached to an object, such as a file or directory, that specifies which users or groups are granted or denied access to the object and what actions they are allowed to perform on it. ACLs provide a more fine-grained and flexible approach to access control compared to traditional Unix file permissions.

36.Which command is used to view the ACL?

- The getfacl command is used to view the Access Control List (ACL) of a file or directory in Unix-like operating systems. It provides information about the permissions granted to users and groups beyond the standard linux file permissions.

37.Ext3 and exe4 both file systems are supported the ACL, is true or false?

- True. Both the Ext3 and Ext4 file systems support Access Control Lists (ACLs). ACLs provide a more fine-grained approach to controlling access permissions for files and directories beyond the traditional Unix file permissions. With ACLs, you can define permissions for specific users and groups beyond the owner and group, allowing for more flexible and granular access control.
- While both Ext3 and Ext4 support ACLs, it's important to note that ACL support may need to be enabled or configured during filesystem creation or mounting. Additionally, ACL usage and management might vary slightly between different Unix-like operating systems and distributions.

38.Which command is used to modify ACL

- The setfacl command is used to modify the Access Control List (ACL) of a file or directory in linux operating systems.

39.What is the use of “grep” command?

- The grep command is a widely used text search utility in Unix-like operating systems. It allows you to search for specific patterns or text strings within files or the output of other commands. The name "grep" stands for "Global Regular Expression Print," as it was originally designed to search for regular expressions in files and print matching lines.

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40.What happened if i use < grep -i -v 'cat' > command?

- The command you've provided, < grep -i -v 'cat' >, appears to have some syntax issues and doesn't follow a valid structure.

41.What happed if I press “ctrl + alt + f1”?

- Pressing "Ctrl + Alt + F1" on a Linux-based system typically switches you to the first virtual terminal or TTY (short for "teletypewriter"). Virtual terminals are text-based interfaces that allow you to interact with your system without a graphical user interface (GUI).

42.What happened if I press “ctrl + alt + f2” ?

- Pressing "Ctrl + Alt + F2" on a Linux-based system typically switches you to the second virtual terminal or TTY (teletypewriter).

43.What happened if I press “ctrl+alt+f3” ?

- Pressing "Ctrl + Alt + F3" on a Linux-based system typically switches you to the third virtual terminal or TTY (teletypewriter).

44.Short cut key to finish session in terminal.

- Type "exit" and press Enter: This will typically close the terminal window or tab.
- Press "Ctrl + D" (EOF signal): This sends an "end-of-file" signal, which is equivalent to issuing the "exit" command and will close the terminal session.
- Use "Alt + F4" (for graphical terminal emulators): If you're using a graphical terminal emulator like GNOME Terminal, Konsole, or xterm, this keyboard shortcut often closes the terminal window.
- Press "Ctrl + C" (to interrupt a running process): While this doesn't exit the terminal session itself, it's useful for stopping a currently running process in the foreground.

45.What is gnome in linux 7.0?

- GNOME is a popular desktop environment for Linux and Unix-like operating systems. It provides a graphical user interface (GUI) and a set of applications for user interaction.

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46.How many workspace are available in linux 7.0?

- In GNOME Classic, the number of workspaces available to the user is by default set to 4.

47.What is the purpose of “ /dev ” ?

- The /dev directory in Linux and Unix-like operating systems serves as a special filesystem called the "device file system" or "devfs." Its primary purpose is to provide a way for the operating system to interact with hardware devices and certain software components as if they were files.

48.What is absolute path ?

- An absolute path is a complete and unambiguous reference to a file or directory location within a file system. It describes the full path starting from the root directory of the file system and provides the exact location of a file or directory regardless of the current working directory. Absolute paths are essential for specifying precise file locations in a file system hierarchy.

49.What is relative paths ?

- A relative path is a reference to a file or directory location within a file system that is specified relative to the current working directory. Unlike absolute paths, which provide an exact location starting from the root directory, relative paths describe the location of a file or directory in relation to where you currently are in the file system hierarchy.

50.What is the difference between “ls -l” and “ls -la” command ?

- LS -l
- The -l option stands for "long format."
- When you run ls -l, it lists the files and directories in the current directory in a detailed, long-format listing.
- The output includes additional information about each file or directory, such as file permissions, ownership, group, file size, modification date, and the file or directory name.
- Hidden files and directories (those whose names start with a dot) are not included in the list unless you explicitly specify them in the command.

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- `ls -la`:
- The `-a` option stands for "all," and it works in conjunction with `-l`.
- When you run `ls -la`, it lists all files and directories in the current directory, including hidden ones (those whose names start with a dot).
- The output includes the same detailed, long-format information as `ls -l` but includes hidden files and directories as well.

51.What is the use of “pwd” command?

- The "pwd" command stands for "Print Working Directory," and it is used in command-line interfaces, such as Unix, Linux, and macOS terminal, to display the current directory or folder you are in.

52.What is the use of man command?

- The "man" command is used in Unix, Linux, and similar operating systems to access the manual pages (often referred to as "man pages") for various commands, programs, and system functions. These manual pages provide detailed documentation and information about how to use specific commands and utilities within the operating system.

53.What is the use of passwd command?

- The "passwd" command is used in Unix, Linux, and similar operating systems to change a user's password.

54.I want to search specific string in man, what should I do?

55.How to exit from man?

- To exit from the "man" command and return to the command prompt, you can simply press the "q" key.

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56.What is the use of “ pinfo “ command ?

57.What is the use of “sosreport “ command ?

- The "sosreport" command is used in Linux systems, particularly in Red Hat-based distributions like Red Hat Enterprise Linux (RHEL) and CentOS, to collect system diagnostic information and create a detailed report. This report is often used by system administrators and support personnel to troubleshoot and diagnose issues on the system.

58.By default location to store “ sosreprt “ is....

- The default location to store the "sosreport" archive file is typically the /tmp directory. The archive file's name typically follows a pattern like sosreport-`<hostname>`-`<timestamp>`.tar.xz, where:

59.how do we switch workspace?

- Using Keyboard Shortcuts:
 - Ctrl + Alt + Left Arrow: Move to the left workspace.
 - Ctrl + Alt + Right Arrow: Move to the right workspace.
 - Ctrl + Alt + Down Arrow: Open the workspace overview and navigate with arrow keys.
- Using the Workspace Switcher:
 - Click on workspace squares/icons in the panel or taskbar to switch.
- Mouse Scroll Wheel:
 - Scroll the mouse wheel over the workspace switcher or an empty area of the desktop to switch.

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60.use of "head" and "tail" command is....

- The "head" and "tail" commands are used in Unix-like operating systems (including Linux and macOS) to display a specified number of lines from the beginning ("head") or end ("tail") of a text file or a stream of data. These commands are handy for quickly inspecting the contents of files or for viewing the beginning or end of log files, large data sets, or other text-based data sources.

61.use of history command is....

- The "history" command is used to display a list of previously executed commands in the current user's shell session. It provides a historical record of the commands you have entered during your session.

62.which command is used to add new user.

- The command used to add a new user is "useradd" command. The "useradd" command is used to create a new user account on the system.

63.meaning of "tail -n 20" command is....

- The command "tail -n 20" is used to display the last 20 lines of a text file or a stream of data.

64.What is difference between "cd" and "cd .." command?

- cd (Change Directory):
- The "cd" command is used to change your current working directory to a specified directory.
- When you use "cd" without any arguments, it typically takes you to your home directory.
- You can also use "cd" followed by the name of a directory to move into that directory.
- cd .. (Change to Parent Directory):
- The "cd .." command is used to change your current working directory to the parent directory (the directory one level up in the hierarchy) of your current location.
- It allows you to move up one level in the directory structure.
- For example, if you are in "/home/user/documents" and you run "cd ..," you will move to "/home/user."

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65.Explain the command “ cp file1 file2”.

- The command "cp file1 file2" is used to copy the contents of one file, "file1," into another file named "file2." It creates a duplicate of "file1" with the same content in "file2."

66.What the use of below command rm.

- The "rm" command is used to remove files and directories from the file system. The primary purpose of the "rm" command is to delete files and, when used with specific options, directories.

67.rm -r mv mkdir

- rm (Remove):
- The rm command is used to remove files and directories from the file system.
- Syntax for removing files: rm [options] file1 file2 ...
- Syntax for removing directories and their contents recursively: rm -r [options] directory1 directory2 ...
- mv (Move or Rename):
- The mv command is used to move files and directories from one location to another or to rename files and directories.
- Syntax for moving or renaming: mv [options] source destination
- mkdir (Make Directory):
- The mkdir command is used to create new directories (folders) in the file system.
- Syntax: mkdir [options] directory1 directory2 ...

68.Explain the command “ mkdir -p “

- The "mkdir -p" command is used to create one or more directories (folders) in a file system, including any necessary parent directories that do not exist. The "-p" option ensures that the command creates both the specified directory and any intermediate directories in the directory path if they don't already exist. This option is particularly useful when you need to create a directory hierarchy without worrying about whether the parent directories exist.

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69.What happened if i use this command “ ls ab* “ ?

- If you use the command "ls ab*", it will list the files and directories in the current directory whose names match the pattern "ab*" (where "*" is a wildcard character representing zero or more characters).