Module 15

Linux server - Understand and use essential tools

• Assignment Level Basic

1. Full form of bash.

ANS: Bash stands for "Bourne Again Shell."

2. What is bash shell.

ANS: Bash shell is a command language interpreter for Unix-like operating systems, providing a command-line interface for users to interact with the system.

3. What is the meaning of $ in terminal.

ANS: In the terminal, the "$" symbol typically represents the command prompt, indicating that the terminal is ready to accept commands from the user.

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4. What is the meaning of # in terminal.

ANS: In the terminal, the "#" symbol typically indicates that the user has superuser or root privileges, commonly used for administrative tasks in Unix-like operating systems.

5. How many virtual console available in Linux 7.0 ?

ANS: In Linux 7.0, there are typically six virtual consoles available.

6. What is file system hierarchy in linux?

ANS: The file system hierarchy in Linux organizes files into a structured tree, starting from the root directory ("/"), with directories like "/bin" for essential binaries, "/home" for user home directories, "/etc" for system configuration files, and more, defining the system's structure and organization.

7. What is " / " in linux?

ANS: In Linux, "/" refers to the root directory, serving as the top-level directory in the file system hierarchy from which all other directories and files stem.

8. What is the purpose of " /etc " ?

ANS: In one line, "/etc" in Linux is used to store system-wide configuration files and settings for various applications and services.

9. What is the purpose of " /home " ?

ANS: In one line, "/home" in Linux is the directory where user-specific files, data, and settings are typically stored, including user home directories.

10. What is the Purpose of " /boot " ?

ANS: In one line, "/boot" in Linux is the directory containing essential files for booting the operating system, including the kernel and bootloader configurations.

11. What is the use of man command?

ANS: The "man" command in Linux is used to display the manual pages (documentation) for commands and other system functions, providing detailed information and usage instructions.

12. What is the use of passwd command?

ANS: The "passwd" command in Linux is used to change a user's password

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

ANS: man <command> | grep <search_string>

14. How to exit from man?

ANS: press"q" in our keyboard

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

ANS: The "pinfo" command is used to view and navigate GNU Info documents, which provide structured documentation for various commands, programs, and concepts in the GNU/Linux environment.

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

ANS: he "sosreport" command is used to generate a comprehensive report containing system information, logs, and configuration details for troubleshooting purposes in Linux environments.

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

ANS: the "sosreport" command stores its generated reports in the "/var/tmp" directory.

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

ANS: he ">" command in Unix/Linux is used for output redirection, allowing the output of a command to be redirected and saved into a specified file.

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

ANS: The ">>" command in Unix/Linux is used for output redirection, appending the output of a command to the end of a specified file without overwriting its contents.

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

ANS: the "2>" command in Unix/Linux is used for error output redirection, directing error messages (stderr) from a command to be saved into a specified file.

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

ANS: he "2>>" command in Unix/Linux is used for error output redirection, appending error messages (stderr) from a command to the end of a specified file without overwriting its contents.

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

ANS: The "whereis" command in Linux is used to locate the binary, source, and manual page files for a specified command or program.

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

ANS: The "echo" command in Linux is used to display text or variables as output in the terminal or to redirect its output to a file.

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

ANS: The "tty" command in Linux is used to print the file name of the terminal connected to the standard input. It essentially displays the name of the terminal device that the user is currently using.

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

ANS: The "|" (pipe) command in Linux is used to redirect the output of one command as input to another command.

The "tee" command is used to read from standard input and write to standard output and files simultaneously, allowing users to see the output on the screen while simultaneously saving it to a file.

26. What is the use of "vim "?

ANS: Vim is a powerful text editor used for editing files in Unix-like operating systems, offering features such as syntax highlighting, search and replace, and extensive customization options.

27.Give a list of " vim modes "

- ➢ ANS: **Normal mode:** Used for navigating the file and executing commands.
- ➢ **Insert mode:** Used for inserting and editing text.
- ➢ **Visual mode:** Used for selecting and manipulating text.
- ➢ **Command-line mode:** Used for entering commands such as saving files, quitting Vim, etc.
- ➢ **Ex mode:** Similar to command-line mode but used for more advanced editing operations.

28. What is "gedit "?

ANS: Gedit is a simple and lightweight text editor for Unix-like operating systems, offering basic editing features and a user-friendly interface.

29.What is " tar " ?

ANS: "tar" is a command-line utility in Unix-like operating systems used for creating, viewing, extracting, and manipulating archive files, often used for backups or distributing collections of files.

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

ANS: sudo tar czvf etc_backup.tar.gz /etc

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

ANS: tar xvf your_file.tar

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

ANS: tar tvf your_file.tar

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

ANS: scp file1 username@remote_host:/path/to/destination

34.Which command is used for remote synchronize?

ANS: "rsync"

35.What is ACL

ANS: ACL stands for Access Control List. In computing, it's a list of permissions attached to a file or directory, specifying which users or system processes are granted access and the type of access allowed.

36.Which command is used to view the ACL?

ANS: The command used to view Access Control Lists (ACLs) in Linux is "getfacl".

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

ANS: True. Both the Ext3 and Ext4 file systems support Access Control Lists (ACLs) in Linux.

38.Which command is used to modify ACL

ANS: The command used to modify Access Control Lists (ACLs) in Linux is "setfacl".

39.What is the use of "grep" command?

ANS: The "grep" command is used to search for specific patterns or text within files or output streams. It allows users to filter and display lines containing the specified pattern or text, facilitating efficient text processing and analysis.

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

ANS: The command "< grep -i -v 'cat' >" is not complete; it lacks input. However, if it were part of a pipeline, it would attempt to filter out lines containing the word

"cat" (case-insensitive) from the input stream and redirect the filtered output to a file or another command.

• Assignment Level Intermediate

1. What happed if I press "ctrl + alt + f1"

ANS: Pressing "Ctrl + Alt + F1" on Linux typically switches the user to the first virtual terminal (tty1), allowing them to access a text-based login prompt separate from the graphical interface.

2. What happened if I press "ctrl + alt + f2" ?

ANS: Pressing "Ctrl + Alt + F2" on Linux typically switches the user to the second virtual terminal (tty2), providing another text-based login prompt separate from the graphical interface.

3. What happened if I press "ctrl+alt+f3" ?

ANS: Pressing "Ctrl + Alt + F3" on Linux typically switches the user to the third virtual terminal (tty3), offering another text-based login prompt separate from the graphical interface.

1. Short cut key to finish session in terminal

ANS: The shortcut key to terminate or exit a session in the terminal is "Ctrl + D".

4. What is gnome in linux 7.0?

ANS: In Linux 7.0, "GNOME" refers to the GNOME desktop environment, which is a popular and user-friendly graphical desktop environment used in many Linux distributions. It provides a graphical user interface (GUI) for users to interact with the system, including features such as window management, application launching, and system settings configuration.

5. How many workspace are available in linux 7.0?

ANS: In Linux 7.0, the number of workspaces available depends on the configuration, but typically, there are multiple workspaces available, often organized in a grid layout.

6. What is the purpose of " /dev " ?

ANS: The "/dev" directory in Linux is used to store device files that represent physical and virtual devices connected to the system, facilitating their interaction with the operating system and applications.

7. What is absolute path ?

ANS: An absolute path in Linux refers to the complete path starting from the root directory ("/"), specifying the exact location of a file or directory in the file system hierarchy.

8. What is relative paths ?

ANS: Relative paths are file or directory locations expressed in relation to the current working directory, rather than starting from the root directory.

10. What is the difference between "ls -l" and "ls -la" command ?

ANS: "ls -l" lists files in long format without including hidden files, while "ls -la" lists all files (including hidden ones) in long format.

11. What is the use of "pwd" command?

ANS: The "pwd" command prints the current working directory.

12. What is the use of man command?

ANS: The "man"

13.What is the use of passwd command?

ANS: The "passwd" command is used to change a user's password in Unix-like operating systems.

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

ANS: "search_string"

15.How to exit from man?

ANS: To exit from the man pages, you can press the "q" key.

16.What is the use of " pinfo " command ?

ANS: The "pinfo" command is used to view and navigate GNU Info documents, which provide structured documentation for various commands, programs, and concepts in the GNU/Linux environment.

17.What is the use of "sosreport " command ?

ANS: : he "sosreport" command is used to generate a comprehensive report containing system information, logs, and configuration details for troubleshooting purposes in Linux environments.

18.By default location to store " sosreprt " is….

ANS: the "sosreport" command stores its generated reports in the "/var/tmp" directory.

• Assignment Level Advance

1. how do we switch workspace?

ANS:"Win+ ctrl+left/right Arrow"

2. use of "passwd" is...

    ANS: passwd set

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

ANS:{head -n 1 file. Text && tail –n 1 file. Text :}

4. use of history command is....

ANS: history

5. which command is used to add new user

ANS: 'adduser'

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

ANS: display the last 20 line of a file

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

ANS: "cd" changes the directory to a specified location, while "cd .." moves up one directory level.

8. Explain the command " cp file1 file2"

ANS: The command "cp file1 file2" copies the contents of file1 to file2, effectively creating a duplicate of file1 named file2.

9. What the use of below command rm

ANS: The command "rm" is used to remove files or directories in Unix-like operating systems, while "comm" is used to compare two sorted files line by line.

10. rm -r mv mkdir

ANS: "rm -r" removes a directory and its contents recursively, "mv" moves or renames files or directories, and "mkdir" creates a new directory.

11. Explain the command " mkdir -p "

ANS: "mkdir -p" creates a directory and any necessary parent directories, ensuring the entire directory path exists.

12. What happened if i use this command " ls ab* " ?

ANS: "ls ab*" lists all files and directories in the current directory that start with "ab".

Task: 1

1. Use Ctrl+Alt+f1 to Ctrl+Alt+f6

ANS: DONE

2. Change the password for student user from "student" to 55TurnK3y

ANS: DONE

3. Check only time in terminal

ANS: DONE

4. Check only date in terminal

ANS: DONE

5. Check last three line of "passwd" file

ANS: DONE

6. Check word count, line count, character count in "passwd" file

ANS: DONE

7. Check hidden files in "/" directory

ANS: DONE

8. Use "history "commands

ANS: DONE

9. Use < !command > and < !number > from history

ANS: DONE

● Task: 2

1. Your present working directory is " /home/student/Desktop "

and with the help of relative path create "boss" directory in " /tmp/hello/dir1 "

ANS: DONE

2. Find your present working directory

ANS: DONE

3. Create three directory [dir1, dir2. Dir3]
   ANS: DONE

4. Remove this three directory [dir1, dir2, dir3
ANS: DONE

5. Create blank file in terminal
ANS: DONE

6. Use "cp" command
   ANS: DONE

7. Use "mv" command
ANS: DONE

8. Use "rm" command
ANS: DONE

9. Use "rm –r" command
ANS: DONE

● Task: 3
1. View the "gedit" man page
ANS: DONE

2. Use "pinfo" command
ANS: DONE

3. Reading documentation in /usr/share/doc
ANS: DONE

4. Access customer portal using https://access.redhat.com/help
ANS: DONE

5. Create "sosreport"
   ANS: DONE

● Task: 4
1. Redirect the output of "date" command to "/tmp/SavEd-timestamp
ANS: DONE

2. Delete Saved-timestamp file.
ANS: DONE

3. Send command output to file, and errors to different file.
ANS: DONE

4. Send output and errors to the same new, empty file
ANS: DONE

5. Run command, save output in a file, discard error messages.
ANS: DONE

6. Open and learn " vimtutor "
ANS: DONE

7. Edit any file with "gedit "
ANS: DONE

8. Redirect a long listing of all content in student's home directory, including hidden directories and files, into a file named "
ANS: DONE

8. editing_final_lab.txt "
ANS: DONE

10.Remove the time column, but leave the month and day on all line (block selection visual mode)
ANS: DONE

• Task: 5

1. Get backup of /etc
ANS: DONE

2. Create new directory "FoLDER"
ANS: DONE

3. Extract this new backup in FoLDER directory
ANS: DONE

4. Check the content of this new backup without extracting
ANS: DONE

5. Compress /etc
ANS: DONE

6. Check the size after compression
ANS: DONE

7. Graphically manage extract and compression
   ANS: DONE

8. Create new file with vim . name "f1"
ANS: DONE

9. Copy this "f1" on remote desktops's "/" directory
ANS: DONE

10. Create new file name 123 on "/"directory of desktop machine
    ANS: DONE

11. Start server machine
    ANS: DONE

12. Copy above /123 file on current system location
    ANS: DONE

13. Use sftp command
    ANS: DONE

• Task: 6

1. Assign Read, write, executable permission on directory "dir1" for user "u1"
ANS: DONE

2. Add user "u3" in group "red"
ANS: DONE

3. Assign Read, write, executable permission on directory "dir1" for group "red"
ANS: DONE

4. Create a new directory name "dir2"
ANS: DONE

5. Copy the permission of "dir1" to the new directory "dir2"
ANS: DONE

6. Remove only user's ACL on "dir"1
ANS: DONE

7. Remove all ACL on "dir2
ANS: DONE

● Task : 7

1. Create any file with the help of VIM 2. Replacing text in VIM
ANS: DONE

2. Copy and Paste any contents in VIM
ANS: DONE

3. Search any content in VIM

ANS: DONE