Linux assignment: 5

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1]

 shell in linux is a command line interface that's connects user and operating system kernel it also allows user to enter commands which shell interprets and executes to perform tasks for example file management and process control

Categories of shell in linux :

1. Bourne shell
2. C shell
3. Korn shell(ksh)
4. Bourne Again Shell (bash)
5. Z Shell (zsh)
6. Fish Shell (fish)

 Bash is popular because its has features like command history, tab completion and scripting capabilities it is also user friendly easy to learn and document. Bash is highly customizable and open source which makes it easy for people to port their work.

2]

 Is -z command is used to display the security context of each file that system has, it shows details like user, role type level Output might look like -rw-r--r--. root root system_u:object_r:etc_t:s0 config.txt

3]

 To list all hidden files in directory we can use ls -a command which displays all the hidden files the 'a' stands for all In Linux hidden files are those which start which a dot operator

4]

 Hard links: Its the direct reference to same data on disk as original files In hard link both original file and hard link share the same inode number If original filr is deleted then the data exists as long as the one hard link remains Comand:ln original.txt hardlink.txt

Soft link: Soft link is like a shortcut to another file Its has different inode number than original file but does point to the original files path If original file is deleted then the soft link becomes broken Command:ln -s original.txt softlink.txt

5] The rwx part in the command lets the owner or user to read write and execute the file and r-x part lets a group read and execute only, the -- x part lets other to execute only

6] Command to use: chgrp staff data.txt

7] 777 permission means that everyone(user,group,and others)has read write and execute access to it its is dangerous because It can be a security risk as anyone can modify delete or execute the file Datas can be lost as a user can easily get acces and accidentally or intentionally delete or overwrite the file If the file is an executable or script,other could insert harmful code and run hence it is dangerous to give a file 777 permission

8] Apropos: This command searches the man page database for keyword in command description This command is used when user dont know the exact command name but know what they are looking for Whatis: This command displays a small summary or one line deatils about the specific command This command is used when you already know the command name

9]

Command: command 2> error.log 2> → redirects standard error (stderr). error.log → the file where the error messages will be saved. command → any Linux command you run.

10]

To append the output, we can use the command:

command | tee -a filename

Here:

'|' sends the output of command to another command

'tee' writes output both to file terminal and to a file

'-a' appends the output