Test Paper 2

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TR3

1. Write the command to count the number of lines in a file /var/log/messages containing the string "error".

Ans.

grep -c -e "error" /var/log/messages

```
[root@devops ~]# grep -c -e "error" /var/log/messages
28
[root@devops ~]#
```

2. How can you use grep to display all lines in a file /var/log/dnf.log that do not contain the word DEBUG?

Ans.

grep -v "DEBUG" /var/log/dnf.log

```
[root@devops ~]# grep -v "DEBUG" /var/log/dnf.log
2025-01-20T15:13:23+0530 INFO --- logging initialized ---
2025-01-20T15:13:23+0530 INFO Updating Subscription Management repositories.
2025-01-20T15:13:23+0530 INFO Unable to read consumer identity
2025-01-20T15:13:23+0530 INFO
This system is not registered with an entitlement server. You can use subscription-manager to regist
er.

2025-01-20T15:13:23+0530 WARNING Failed determining last makecache time.
2025-01-20T15:13:23+0530 INFO There are no enabled repositories in "/etc/yum.repos.d", "/etc/yum/rep
```

3. Explain the purpose of the following command and describe what it does: command > /dev/null 2>&1

Ans.

" > /dev/nul 2>&1 "

Is same as the " &>"

This redirection write both the output and error of a command to a single file

4. How can you redirect both the standard output and standard error of a command to the diffrent file? Write the appropriate command for redirecting the output of ls /usr to a file named errors.log.

Ans.

You can redirect the output of a command and error by using the redirections

" > " can be used to redirect the output of the command to a file

" 2> " can be used to redirect the error of the command to a file

```
[root@devops ~]# ls /usr > output.txt 2> error.log
[root@devops ~]# cat output.txt
bin
games
include
lib
lib64
libexec
local
sbin
share
src
tmp
[root@devops ~]# cat error.log
[root@devops ~]#
```

5. Create a file named sed.txt enter the content linux (twice), redhat, ubuntu, windows, Mac. Write the command to find the word redhat and replace that word to centos. And write command to delete the word linux . (Hint – Use sed command)

Ans.

sed -i ‘s/redhat/centos/’ sed.txt

sed -i ‘/linux/d’ sed.txt

```
[root@devops ~]# vim sed.txt
[root@devops ~]# cat sed.txt
linux
linux
redhat
ubuntu
windows
Mac
[root@devops ~]# sed -i 's/redhat/centos/' sed.txt
[root@devops ~]# cat sed.txt
linux
linux
centos
ubuntu
windows
Mac
[root@devops ~]# sed -i '/linux/d' sed.txt
[root@devops ~]# cat sed.txt
centos
ubuntu
windows
Mac
[root@devops ~]#
```

6. You have a file users.txt containing 1,000 usernames, one on each line. Write a pipeline command to display lines 101 to 110 from the file.

Ans.

head -110 users.txt | tail -10

7. How can you copy three files: file1.txt, file2.txt, and file3.txt into a directory named backup?

Ans.

cp file1.txt ./backup/

cp file2.txt ./backup/

cp file3.txt ./backup/

```
[root@devops ~]# cp file1.txt ./backup/
[root@devops ~]# cp file2.txt ./backup/
[root@devops ~]# cp file3.txt ./backup/
[root@devops ~]# ls ./backup/
file1.txt  file2.txt  file3.txt
[root@devops ~]#
```

8. Create a collaborative directory /udaipur/techno/njr and now create 20 files as file1.txt to file20.txt in a single command, location must be /udaipur/techno/njr. (hint use command separator)

Ans.

mkdir -p /udaipur/techno/njr && cd /udaipur/techno/njr && touch file{1..20}.txt

```
[root@devops ~]# mkdir -p /udaipur/techno/njr && cd /udaipur/techno/njr && touch file{1..20}.txt
[root@devops njr]# ls
file10.txt  file13.txt  file16.txt  file19.txt  file2.txt  file5.txt  file8.txt
file11.txt  file14.txt  file17.txt  file1.txt   file3.txt  file6.txt  file9.txt
file12.txt  file15.txt  file18.txt  file20.txt  file4.txt  file7.txt
[root@devops njr]#
```

9. Difference between || su || & || su - || command.

Ans.

The difference between " su " and " su – " is that

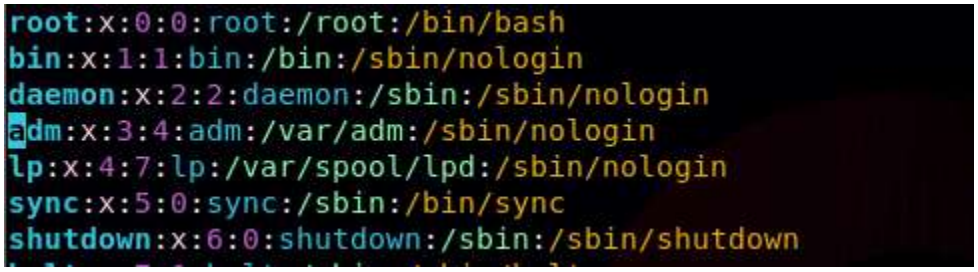
" su " -> switches the user without changing the environment and using the same environment

" su – " -> switches the user to the new environment

10. Explain each field of /etc/passwd and /etc/shadow file.

Ans.

/etc/passwd file



root:x:0:0:root:/root:/bin/bash

username : x : UID : GID : Group : Home Directory : Shell Permission

in the previous versions, the x had password but in new versions it has been moved to a seprate file so this field remains x

/etc/shadow: Stores password information and security-related details like password expiration and account expiry.

11. When a new user is created on the system, the default password aging policy should ensure that the user's password expires after 90 days.

Ans.

Go to the file named /etc/login.defs

`vim/etc/login.defs`

And change the value of the PASS_MAX_DAYS to 90 to set it default to make user change password every 90 days

12. Difference between superuser, systemuser & regular user.

Ans.

Superuser – root

Has the power to do every thing and run every command in the system. They are like the owner of the system and has full control

Systemuser –

Are user whose UID is between range 1 to 999 and cannot log in to the shell

They are used by programs to execute and do certain tasks

Regular User –

They are normal users and their UID ranges from 1000 to 60000. They can login into the shell and will login to there home directory

13. Create a group named sysadmin and add harry and raj in the group. They should not be removed from existing groups. Change the Primary group of user prem as sysadmin.

Ans.

```
[root@devops ~]# useradd harry
[root@devops ~]# useradd raj
[root@devops ~]# groupadd sysadmin
```

```
[root@devops ~]# usermod -aG sysadmin harry
[root@devops ~]# usermod -aG sysadmin raj
[root@devops ~]#
[root@devops ~]# useradd prem
[root@devops ~]#
[root@devops ~]# usermod -g sysadmin prem
[root@devops ~]#
```

Added user harry, prem, raj

Added sysadmin as group

Added sysadmin as secondary group to harry and raj

Added sysadmin as primary group to prem

14. Configure password policies of harry user such that its Account get expired on 23 05-2026.

Ans.

chage -E 23-05-2026 harry

```
[root@devops ~]# chage -E 23-05-2026 harry
```

15. If I delete a user, Does it's home directory and mail file gets deleted? If not then what is the command to delete the home directory and mail file of user along with the user.

Ans.

userdel -r consultants1

```
[root@devops ~]# userdel -r consultants1
[root@devops ~]#
```