LAB - 05

- ☐ **All screenshots, must have your username at command prompt and screenshot should be legible.** Snipping tool is advised for the screen shots, no full page screenshot.
- ☐ **For LAB REPORT, The screenshots should be pasted in Word Document in order of the lab questions and submitted in Blackboard as a single document only. Plagiarism is awarded zero.**
- ☐ Refer to course details posted in BB for more info on Lab report and screenshots.
- ☐ **Do NOT login as root or user with UID=0 to do the lab, use sudo ONLY when required.**
- ☐ **Do not use changeme username** to do the lab, the lab(s) MUST be done using your own username as specified in PART-B of LAB-01
- ☐ **Strictly NO screenshots with full screen of terminal or desktop or partly taken screenshots**
- ☐ **It is highly required to following naming conventions and instructions and it would affect evaluation.**

IN-CLASS Activity: Q 1-17

NOTE: In toronto VM and montreal VM the RPM packages are in **/AppStream** and **/BaseOS**

PART – A : PACKAGE MANAGEMENT with dnf

In **toronto VM,**

1. List the dnf configuration file in **/etc/dnf/dnf.conf** & view the configuration file.
2. Using **dnf** command
   a. Install dcraw *(since no accessible repository is defined, error will be given)*
3. Disable the existing local repostiory with repo file **local.repo**.
4. Create local yum (dnf) repository with the local directory **/AppStream** and **/BaseOS** and Confirm the repository has been created with command **sudo dnf -v repolist (SCREENSHOT).** The repofile name should be named as **ccgc5000.repo**
   SCREENSHOT: i) cat /etc/yum.repos.d/local.repo ii) cat /etc/yum.repos.d/ccgc5000.repo
5. Using **dnf**
   a. List specific package quota
   b. Check for packages for **/etc/passwd**
   c. Find the packages for the commands **passwd**
   d. Check for dcraw package
   e. Install dcraw package using dnf *(note that unlike rpm, dnf does not require full path of the package)*
   f. Check if dcraw is installed using both **rpm** and **dnf** command **(SCREENSHOT)**
   g. Remove the dcraw package using dnf **(SCREENSHOT)**
   h. Check for the package dcraw using **dnf** and **rpm**
6. Find the available package modules
7. Find the available group packages **(SCREENSHOT: history |grep -E 'yum|dnf|rpm')**
8. Login to **montreal VM** and disable the existing local repository with repo file **local.repo**.
9. Create local yum repository with the packages in **/AppStream** and **/BaseOS** and confirm the repository created: **sudo dnf -v repolist (SCREENSHOT)**. *(use **vi** to create file)*. The repofile name will be **yulccgc5000.repo**
   SCREENSHOT: i) cat /etc/yum.repos.d/local.repo ii) cat /etc/yum.repos.d/yulccgc5000.repo

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PART – B : PACKAGE MANAGEMENT with rpm

10. In **toronto VM,** using **rpm** command,
    a. Query all installed packages using **rpm and rpmquery** command
    b. Find whether httpd is installed **(SCREENSHOT)**
    c. Identify package associated with the command **passwd**, *(find the path of the command file using* **which** *commandname)*
    d. Find the package associated with the files **/etc/passwd**
11. Installation & removal of dcraw package with **rpm. (SCREENSHOT all activities in this section)**
    a. Check if package **dcraw** is installed
    b. Install **dcraw** (*Note that unlike dnf, rpm requires the full path of the package).*
    c. Check if the **dcraw** package has been installed
    d. Check the files of the **dcraw** package installed
    e. Remove the package **dcraw** and check if the package **dcraw** is removed.

    (SCREENSHOT : **history |grep rpm**)

PART – C : STRATIS *(all activity in montreal)*

12. In **montreal** use 1GB HDD to create Stratis logical volume. The stratis pool will be **reportspl**, file system as **reportsfs** and mount it as **/reports**. **SCREENSHOT: a)df -Th /reports b)stratis pool list c)lsblk**
13. Update **/etc/fstab** file for **/reports** to mounted everytime the systems starts. **(SCREENSHOT)**

PART-D VARIABLES & SCRIPTING (SCREENSHOT*all activities, **cat** the script and its bash script output)*

14. Print environmental variables *(first five lines)*
15. Write a bash shell script that displays the screenshot shown
16. Demonstrate with an example the purpose of **export command**
17. Write a script to display the output of command as given. Use all methods to display commands in script. *(note that the date, user will be different)*
18. Write bash script to display as shown in screenshot where the script name was script1 and the positional parameters given is 10 20 and 30. In your screenshot the script name, PID and the positional parameters can be different.

```
This is lab-02
==============================
Hello Welcome to the program
Learning Linux ...
==============================
End of script
```

```
Demonstrating command in scripts
The command pwd output is /home/user1
Current date and time is Wed May 13 03:38:46 EDT 2020
Currently logged in user is user1
End of script
```

```
Name of script is script1 and its PID is 124531
First positional parameter is 10
Second positional parameter is 20
Third positional parameter is 30
3 positional parameters were given with script1
Positional parameters given with script1 are 10 20 30
```

19. Write a script to demonstrate the usage of echo command with no quotes, single quotes, double quotes with the text "The cost of laptop ranges from $467 to $3590" and use of ESC character as shown below:

```
No Quotes: The cost of laptop ranges from 67 to 590
Double Quotes: The cost of laptop ranges from 67 to 590
Single Quote: The cost of laptop ranges from $467 to $3590
No Quotes with ESC character: The cost of laptop ranges from $467 to $3590
Double Quotes with ESC character: The cost of laptop ranges from $467 to $3590
```
