Lesson 02 Demo 01

Executing Basic Linux Commands

Objective: To execute multiple Linux commands for file and directory management, permissions, package installation, and system administration tasks

Tools required: Linux

Prerequisites: None

Steps to be followed:

1. Execute simple Linux commands

Step 1: Execute simple Linux commands

1.1 List the files or folders present in the current directory in the master node by using the below command:

ls

```
labsuser@ip-172-31-47-25:~$ ls
DCV-Storage  Documents  Music      Public     Videos                                         containerd-1.6.8-linux-amd64.tar.gz  snap
Desktop      Downloads  Pictures   Templates  cni-plugins-linux-amd64-v1.1.1.tgz  runc.amd64
labsuser@ip-172-31-47-25:~$
```

1.2 Create a new directory in the current folder and check if the folder is created or not by using the below commands:

mkdir New_Folder

ls

```
labsuser@ip-172-31-47-25:~$ ls
DCV-Storage  Documents  Music      Public     Videos                                         containerd-1.6.8-linux-amd64.tar.gz  snap
Desktop      Downloads  Pictures   Templates  cni-plugins-linux-amd64-v1.1.1.tgz  runc.amd64
labsuser@ip-172-31-47-25:~$ mkdir New_Folder
labsuser@ip-172-31-47-25:~$ ls
DCV-Storage  Documents  Music        Pictures   Templates  cni-plugins-linux-amd64-v1.1.1.tgz  runc.amd64
Desktop      Downloads  New_Folder   Public     Videos     containerd-1.6.8-linux-amd64.tar.gz  snap
labsuser@ip-172-31-47-25:~$
```

1.3 Navigate to the New_Folder directory by changing the current directory:

cd New_Folder

```
labsuser@ip-172-31-47-25:~$ mkdir New_Folder
labsuser@ip-172-31-47-25:~$ ls
DCV-Storage  Documents  Music        Pictures  Templates  cni-plugins-linux-amd64-v1.1.1.tgz   runc.amd64
Desktop      Downloads  New_Folder   Public    Videos     containerd-1.6.8-linux-amd64.tar.gz  snap
labsuser@ip-172-31-47-25:~$ cd New_Folder
labsuser@ip-172-31-47-25:~/New_Folder$
```

1.4 Write some text in a demo file and display the content of the file by using the below command:

echo "This is a demo file" > demo.txt
cat demo.txt

```
DCV-Storage  Documents  Music        Pictures  Templates  cni-plugins-linux-amd64-v1.1.1.tgz   runc.amd64
Desktop      Downloads  New_Folder   Public    Videos     containerd-1.6.8-linux-amd64.tar.gz  snap
labsuser@ip-172-31-47-25:~$ cd New_Folder
labsuser@ip-172-31-47-25:~/New_Folder$ echo "This is a demo file" > demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ cat demo.txt
This is a demo file
labsuser@ip-172-31-47-25:~/New_Folder$
```

1.5 Change the mode of the demo.txt file to read-only by using the below command:

chmod -r demo.txt

```
labsuser@ip-172-31-47-25:~$ cd New_Folder
labsuser@ip-172-31-47-25:~/New_Folder$ echo "This is a demo file" > demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ cat demo.txt
This is a demo file
labsuser@ip-172-31-47-25:~/New_Folder$ chmod -r demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$
```

1.6 Remove the demo.txt file from the folder and list the files in the folder by using the below command:

rm demo.txt

ls

```
labsuser@ip-172-31-47-25:~$ mkdir New_Folder
labsuser@ip-172-31-47-25:~$ ls
DCV-Storage  Documents  Music        Pictures  Templates  cni-plugins-linux-amd64-v1.1.1.tgz   runc.amd64
Desktop      Downloads  New_Folder  Public    Videos     containerd-1.6.8-linux-amd64.tar.gz  snap
labsuser@ip-172-31-47-25:~$ cd New_Folder
labsuser@ip-172-31-47-25:~/New_Folder$ echo "This is a demo file" > demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ cat demo.txt
This is a demo file
labsuser@ip-172-31-47-25:~/New_Folder$ chmod -r demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ rm demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ ls
labsuser@ip-172-31-47-25:~/New_Folder$
```

1.7 Change the current user as a super/root user:

sudo su

```
labsuser@ip-172-31-47-25:~/New_Folder$ chmod -r demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ rm demo.txt
labsuser@ip-172-31-47-25:~/New_Folder$ ls
labsuser@ip-172-31-47-25:~/New_Folder$ sudo su
root@ip-172-31-47-25:/home/labsuser/New_Folder#
```

1.8 Install git using the apt-get package manager by using the following command:

apt-get install git

```
labsuser@ip-172-31-47-25:~/New_Folder$ sudo su
root@ip-172-31-47-25:/home/labsuser/New_Folder# apt-get install git
Reading package lists... Done
Building dependency tree... Done
Reading state information... Done
git is already the newest version (1:2.34.1-1ubuntu1.10).
git set to manually installed.
0 upgraded, 0 newly installed, 0 to remove and 10 not upgraded.
1 not fully installed or removed.
After this operation, 0 B of additional disk space will be used.
Do you want to continue? [Y/n] Y
Setting up grub-efi-amd64-signed (1.187.6+2.06-2ubuntu14.4) ...
Installing grub to /boot/efi.
Installing for x86_64-efi platform.
grub-install: warning: EFI variables cannot be set on this system.
grub-install: warning: You will have to complete the GRUB setup manually.
Installation finished. No error reported.
root@ip-172-31-47-25:/home/labsuser/New_Folder#
```

1.9 List all the previously used commands:

history

```
Installation finished. No error reported.
root@ip-172-31-47-25:/home/labsuser/New_Folder# history
    1  echo 'labsuser ALL=(ALL) NOPASSWD:ALL' > /etc/sudoers.d/labsuser
    2  ./install.sh
    3  vi /etc/dcv/dcv.conf
    4  cat << EoF > /etc/systemd/system/ttyd.service
    5  [Unit]
    6  Description=Terminal over HTTP
    7  [Service]
    8  User=labsuser
    9  WorkingDirectory=/home/labsuser
   10  ExecStart=/usr/local/bin/ttyd /bin/bash
   11  Restart=on-abort
   12  [Install]
   13  WantedBy=multi-user.target
   14  EoF
   15  apt-get install git
   16  history
root@ip-172-31-47-25:/home/labsuser/New_Folder#
```

1.10 Create a file using vi editor by using the following command:

vi <filename>.<extension>

For ex: vi test.txt

```
labsuser@ip-172-31-47-25:~$ vi test.txt
```

```
~
~
~
~
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~
~
~
~
~
~
~
~
~
~
~
~
~
~
~
"test.txt" 0L, 0B
```

1.11 Change the file permissions by using the following command:

chmod <permission code> <filename>.<extension>

For ex: chmod 777 test.txt

```
labsuser@ip-172-31-47-25:~$ vi test.txt
labsuser@ip-172-31-47-25:~$ chmod 777 test.txt
labsuser@ip-172-31-47-25:~$
```

1.12 Use the below command to get **tar.gz** file:

wget https://assets.nagios.com/downloads/nagiosxi/5/xi-5.8.4.tar.gz

```
labsuser@ip-172-31-47-25:~$ vi test.txt
labsuser@ip-172-31-47-25:~$ chmod 777 test.txt
labsuser@ip-172-31-47-25:~$ wget https://assets.nagios.com/downloads/nagiosxi/5/xi-5.8.4.tar.gz
--2024-01-29 07:48:06--  https://assets.nagios.com/downloads/nagiosxi/5/xi-5.8.4.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00::f03c:92ff:fef7:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 68610618 (65M) [application/x-gzip]
Saving to: 'xi-5.8.4.tar.gz'

xi-5.8.4.tar.gz              100%[===================================================================>]  65.43M  23.1MB/s    in 2.8s

2024-01-29 07:48:09 (23.1 MB/s) - 'xi-5.8.4.tar.gz' saved [68610618/68610618]

labsuser@ip-172-31-47-25:~$
```

1.13 Use the following command to unzip a file:

tar -xf <filename>.tar.gz

For ex: **tar -xf xi-5.8.4.tar.gz**

```
labsuser@ip-172-31-47-25:~$ vi test.txt
labsuser@ip-172-31-47-25:~$ chmod 777 test.txt
labsuser@ip-172-31-47-25:~$ wget https://assets.nagios.com/downloads/nagiosxi/5/xi-5.8.4.tar.gz
--2024-01-29 07:48:06--  https://assets.nagios.com/downloads/nagiosxi/5/xi-5.8.4.tar.gz
Resolving assets.nagios.com (assets.nagios.com)... 45.79.49.120, 2600:3c00::f03c:92ff:fef7:45ce
Connecting to assets.nagios.com (assets.nagios.com)|45.79.49.120|:443... connected.
HTTP request sent, awaiting response... 200 OK
Length: 68610618 (65M) [application/x-gzip]
Saving to: 'xi-5.8.4.tar.gz'

xi-5.8.4.tar.gz              100%[===================================================================>]  65.43M  23.1MB/s    in 2.8s

2024-01-29 07:48:09 (23.1 MB/s) - 'xi-5.8.4.tar.gz' saved [68610618/68610618]

labsuser@ip-172-31-47-25:~$ tar -xf xi-5.8.4.tar.gz
```

By following these steps, you have successfully executed multiple Linux commands for file and directory management, permissions, package installation, and system administration tasks.