S_LINUX_09 Practicing

LINUX - LAB_4

_____

_____

Khaled Dawoud

APRIL 2023

LINUX – DEVOPS

Linux – LAB_4:

1. Compress a file by compress, gzip, zip commands and decompress it again. State the differences between compress and gzip commands.

```
-rw--wx--x. 1 kdawoud kdawoud 2880 Apr  7 20:55 oldpasswd
[kdawoud@localhost ~]$ compress oldpasswd
[kdawoud@localhost ~]$ ls -l oldpasswd.Z
-rw--wx--x. 1 kdawoud kdawoud 1585 Apr  7 20:55 oldpasswd.Z
[kdawoud@localhost ~]$ uncompress oldpasswd.Z
[kdawoud@localhost ~]$ ls -l oldpasswd
-rw--wx--x. 1 kdawoud kdawoud 2880 Apr  7 20:55 oldpasswd
[kdawoud@localhost ~]$ gzip oldpasswd
[kdawoud@localhost ~]$ ls -l oldpasswd.gz
-rw--wx--x. 1 kdawoud kdawoud 1110 Apr  7 20:55 oldpasswd.gz
[kdawoud@localhost ~]$ gunzip oldpasswd.gz
[kdawoud@localhost ~]$ ls -l oldpasswd
-rw--wx--x. 1 kdawoud kdawoud 2880 Apr  7 20:55 oldpasswd
[kdawoud@localhost ~]$ zip oldpasswd

zip error: Nothing to do! (oldpasswd.zip)
[kdawoud@localhost ~]$ zip oldpasswd.zip oldpasswd
  adding: oldpasswd (deflated 62%)
[kdawoud@localhost ~]$ ls -l oldpasswd
-rw--wx--x. 1 kdawoud kdawoud 2880 Apr  7 20:55 oldpasswd
[kdawoud@localhost ~]$ ls -l
total 5864
drwxr-xr-x. 5 kdawoud kdawoud     155 Apr 18 22:12 Desktop
d---------. 3 kdawoud kdawoud      19 Apr  7 20:39 dir1
drwxrwxrwx. 3 kdawoud kdawoud      18 Apr 13 03:27 dir2
d---------. 2 kdawoud kdawoud       6 Apr 13 22:15 dirNoPerm
drwxrwxr-x. 2 kdawoud kdawoud      18 Apr  7 20:28 docs
drwxr-xr-x. 3 kdawoud kdawoud     118 Nov  5 14:07 Documents
drwxr-xr-x. 2 kdawoud kdawoud      33 Oct 27 17:58 Downloads
-rw-rw-r--. 1 kdawoud kdawoud  122473 Apr 16 22:18 error.txt
----------. 1 kdawoud kdawoud       0 Apr 13 22:15 fileNoPerm
drwxrwxr-x. 3 kdawoud kdawoud      20 Nov  2 20:46 lodaa
-rw-rw-r--. 1 kdawoud kdawoud      89 Apr 16 22:11 log_names.txt
-rw-rw-r--. 1 kdawoud kdawoud   99606 Apr 10 19:02 ls_output.txt
drwxr-xr-x. 2 kdawoud kdawoud       6 Oct 26 06:38 Music
-rwxrwxrwx. 1 kdawoud kdawoud     182 Apr 14 19:26 mycv
dr--rwxr-x. 2 kdawoud kdawoud       6 Apr 13 01:28 myteam
-rw-r--r--. 1 kdawoud kdawoud    2880 Apr  8 22:23 newPasswd
-rw--wx--x. 1 kdawoud kdawoud    2880 Apr  7 20:55 oldpasswd
-rw-rw-r--. 1 kdawoud kdawoud    1250 Apr 18 22:16 oldpasswd.zip
-rw-rw-r--. 1 kdawoud kdawoud 5752515 Apr 16 22:18 output.txt
drwxr-xr-x. 2 kdawoud kdawoud      53 Oct 27 18:20 Pictures
drwxr-xr-x. 2 kdawoud kdawoud       6 Oct 26 06:38 Public
drwxrwxr-x. 3 kdawoud kdawoud      16 Oct 27 18:07 Study
drwxr-xr-x. 2 kdawoud kdawoud       6 Oct 26 06:38 Templates
drwxrwxr-x. 4 kdawoud kdawoud      52 Apr  7 17:42 test1
drw--wx--x. 2 kdawoud kdawoud       6 Apr 13 02:26 test13
-rw-rw-rw-. 1 kdawoud kdawoud    3062 Apr 13 02:39 test13.txt
drwxrwxrwx. 2 kdawoud kdawoud       6 Apr 13 02:31 test14
drwxrwxr-x. 5 kdawoud kdawoud      64 Apr  8 22:43 test2
drwxr-xr-x. 2 kdawoud kdawoud       6 Oct 26 06:38 Videos
```

Both compress and gzip are used for file compression but use different algorithms. Gzip provides better compression ratios compared to compress. Also, gzip can compress directories and files, while compress can only compress individual files.

2. What is the command used to view the content of a compressed file.

```
[kdawoud@localhost ~]$ zcat oldpasswd.Z
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
```

3. Backup /etc directory using tar utility.

```
[kdawoud@localhost ~]$ zcat oldpasswd.Z
root:x:0:0:root:/root:/bin/bash
bin:x:1:1:bin:/bin:/sbin/nologin
daemon:x:2:2:daemon:/sbin:/sbin/nologin
adm:x:3:4:adm:/var/adm:/sbin/nologin
lp:x:4:7:lp:/var/spool/lpd:/sbin/nologin
sync:x:5:0:sync:/sbin:/bin/sync
shutdown:x:6:0:shutdown:/sbin:/sbin/shutdown
```

4. Starting from your home directory, find all files that were modified in the last two day.

```
[kdawoud@localhost ~]$ find /home -mtime -2
/home/kdawoud
/home/kdawoud/.config/dconf
/home/kdawoud/.config/dconf/user
/home/kdawoud/.local/share
/home/kdawoud/.local/share/gnome-shell
```

5. Starting from /etc, find files owned by root user.

```
[kdawoud@localhost ~]$ find /etc/ -user root
/etc/
/etc/mtab
/etc/fstab
/etc/crypttab
/etc/dnf
/etc/dnf/modules.d
/etc/dnf/modules.d/javapackages-runtime.module
/etc/dnf/modules.d/llvm-toolset.module
/etc/dnf/modules.d/perl.module
/etc/dnf/modules.d/perl-IO-Socket-SSL.module
/etc/dnf/modules.d/perl-libwww-perl.module
```

6. Find all directories in your home directory.

```
[kdawoud@localhost ~]$ find /home/ -type d
/home/
/home/kdawoud
/home/kdawoud/.mozilla
/home/kdawoud/.mozilla/extensions
/home/kdawoud/.mozilla/plugins
/home/kdawoud/.config
/home/kdawoud/.config/pulse
/home/kdawoud/.config/gnome-session
/home/kdawoud/.config/gnome-session/saved-session
/home/kdawoud/.config/ibus
```

7. Identify the file types of the following: /etc/passwd, /dev/pts/0, /etc, /dev/sda

```
[kdawoud@localhost ~]$ file /etc/passwd /dev/pts/0 /etc/ /dev/sda
/etc/passwd: ASCII text
/dev/pts/0:  character special (136/0)
/etc/:       directory
/dev/sda:    cannot open `/dev/sda' (No such file or directory)
[kdawoud@localhost ~]$
```

8. Copy /etc/passwd to your home directory, use the commands diff and cmp, and Edit in the file you copied, and then use these commands again, and check the output

```
[kdawoud@localhost ~]$ cp /etc/passwd Q_10
[kdawoud@localhost ~]$ diff /etc/passwd Q_10
[kdawoud@localhost ~]$ cmp /etc/passwd Q_10
[kdawoud@localhost ~]$ vim Q_10
[kdawoud@localhost ~]$ diff /etc/passwd Q_10
56a57,58
>
> Test
[kdawoud@localhost ~]$ cmp /etc/passwd Q_10
cmp: EOF on /etc/passwd after byte 3062, line 56
[kdawoud@localhost ~]$
```