

Practical 11 Exercise

Name: Zara Teo Xiao Xuan	Admin No: 194123U	Group: 2
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Instructions:

- 1) Do the tasks and paste the screen shots using Windows snipping tool in the boxes provided Copy the commands and output. Enlarge the box or resize the image if necessary.

Task 1

Create a shared directory (/home/contracts) with the following conditions:

- (a) A Service department has 3 users - svc1, svc2, svc3. Create them and show proof.

```
[root@server ~]# useradd svc1
[root@server ~]# passwd svc1
Changing password for user svc1.
New password:
BAD PASSWORD: it is based on a dictionary word
BAD PASSWORD: is too simple
Retype new password:
passwd: all authentication tokens updated successfully.
[root@server ~]# useradd svc2
[root@server ~]# passwd svc2
Changing password for user svc2.
New password:
BAD PASSWORD: it is based on a dictionary word
BAD PASSWORD: is too simple
Retype new password:
passwd: all authentication tokens updated successfully.
[root@server ~]# useradd svc3
[root@server ~]# passwd svc3
Changing password for user svc3.
New password:
BAD PASSWORD: it is based on a dictionary word
BAD PASSWORD: is too simple
Retype new password:
passwd: all authentication tokens updated successfully.
```

```
[root@server ~]# grep svc /etc/passwd
svc1:x:515:515::/home/svc1:/bin/bash
svc2:x:516:516::/home/svc2:/bin/bash
svc3:x:517:517::/home/svc3:/bin/bash
[root@server ~]# grep svc /etc/shadow
svc1:$1$sECg/rBf$sABLTP.HA3V1jmfma50BE/:18456:0:99999:7:::
svc2:$1$Lc/N30w9$qXEiU6dHnP/UGA3XHeBaG.:18456:0:99999:7:::
svc3:$1$lvRHlvBe$eh.W9/ORC090.mGD1SL2e.:18456:0:99999:7:::
[root@server ~]#
```

(b) They are in a group called **servicedept**. Create the group and add the users as its members. Display the group and the members.

```
[root@server ~]# grep svc /etc/passwd
svc1:x:515:515::/home/svc1:/bin/bash
svc2:x:516:516::/home/svc2:/bin/bash
svc3:x:517:517::/home/svc3:/bin/bash
[root@server ~]# grep svc /etc/shadow
svc1:$1$sECg/rBf$sABLTP.HA3V1jmfma50BE/:18456:0:99999:7:::
svc2:$1$Lc/N30w9$qXEiU6dHnP/UGA3XHeBaG.:18456:0:99999:7:::
svc3:$1$lvRHlvBe$eh.W9/ORC090.mGD1SL2e.:18456:0:99999:7:::
[root@server ~]# groupadd servicedept
[root@server ~]# usermod -G servicedept svc1
[root@server ~]# usermod -G servicedept svc2
[root@server ~]# usermod -G servicedept svc3
[root@server ~]# grep servicedept /etc/group
servicedept:x:607:svc1,svc2,svc3
[root@server ~]#
```

Or use `cat /etc/group | grep /etc/passwd`

(c) Create the directory **/home/contracts**. Display the command and a listing of the directory.

```
[root@server ~]# mkdir /home/contracts
[root@server ~]# ls -ld /home/contracts
drwxr-xr-x. 2 root root 4096 Jul 12 19:01 /home/contracts
[root@server ~]#
```

(d) Configure /home/contracts to be shared by servicedept group such that members can Read and Write to the shared directory. Display the commands and directory permission after configuration.

```
[root@server ~]# groupadd servicedept
[root@server ~]# usermod -a -G servicedept svc1
[root@server ~]# usermod -a -G servicedept svc2
[root@server ~]# usermod -a -G servicedept svc3
[root@server ~]# mkdir /home/contracts
[root@server ~]# chgrp servicedept /home/contracts
[root@server ~]# ls -ld /home/contracts
drwxr-xr-x. 2 root servicedept 4096 Jul 12 19:18 /home/contracts
[root@server ~]#
[root@server ~]# chmod g+rws /home/contracts
[root@server ~]# ls -ld /home/contracts
drwxrwsr-x. 2 root servicedept 4096 Jul 12 19:18 /home/contracts
[root@server ~]#
[root@server ~]# echo change group owner to servicedept
change group owner to servicedept
[root@server ~]#
```

(e) Switch to svc1 user and show they he can create a file in the shared directory.

```
[root@server ~]# su - svc1
[svc1@server ~]$ cd /home/contracts
[svc1@server contracts]$ echo svc1 was here > svc1.out
[svc1@server contracts]$ ls -la
total 12
drwxrwsr-x. 2 root servicedept 4096 Jul 12 19:40 .
drwxr-xr-x. 24 root root 4096 Jul 12 19:18 ..
-rw-rw-r--. 1 svc1 servicedept 13 Jul 12 19:40 svc1.out
[svc1@server contracts]$
```

(f) Configure such that other users cannot see the directory or its contents (except root). After configuration, display the directory permission here.

```
[root@server ~]# cd /home/contracts
[root@server contracts]# ls -ld /home/contracts
drwxrwsr-x. 2 root servicedept 4096 Jul 12 19:40 /home/contracts
[root@server contracts]# chmod o= /home/contracts
[root@server contracts]# ls -ld /home/contracts
drwxrws---. 2 root servicedept 4096 Jul 12 19:40 /home/contracts
[root@server contracts]#
```

(g) Configure such that members cannot delete other members files. They can only delete their own files. Display your commands and list the shared directory permission after configuration.

```
[root@server contracts]# ls -ld /home/contracts
drwxrws---. 2 root servicedept 4096 Jul 12 19:40 /home/contracts
[root@server contracts]# chmod +t /home/contracts
You have new mail in /var/spool/mail/root
[root@server contracts]# ls -ld /home/contracts
drwxrws--T. 2 root servicedept 4096 Jul 12 19:40 /home/contracts
[root@server contracts]#
```

(h) Use ACL to enable a user alex (create the user if necessary) to have Read, Write and Execute permission to the shared directory. Display the command here.

```
[root@server contracts]# useradd alex
[root@server contracts]# passwd alex
Changing password for user alex.
New password:
BAD PASSWORD: it is based on a dictionary word
BAD PASSWORD: is too simple
Retype new password:
passwd: all authentication tokens updated successfully.
[root@server contracts]# setfacl -m u:alex:rwx /home/contracts
[root@server contracts]#
```

(i) Display the ACL permission of the shared directory here.

```
[root@server contracts]# getfacl /home/contracts
getfacl: Removing leading '/' from absolute path names
# file: home/contracts
# owner: root
# group: servicedept
# flags: -st
user::rwx
user:alex:rwx
group::rwx
mask::rwx
other::---
```

```
[root@server contracts]#
```


(j) Configure such that members can ONLY READ other members files. Members can edit or delete their own files but not other member files. Display your commands and some test results here. You may need to google this.

```
[root@server /]# ls -ld /home/contacts
drwxrws--T+ 2 root servicedept 4096 Jul 12 19:38 /home/contacts
[root@server /]# chmod 644 /home/contacts
[root@server /]# ls -ld /home/contacts
drw-r-Sr--+ 2 root servicedept 4096 Jul 12 19:38 /home/contacts
[root@server /]#
```

Task 2

Pre-requisite: In one of the practical, sales1 user was created. If you did not do it, create the user sales1 first before proceeding.

- (a) Backup /home/sales1 directory to **/tmp/sales1.tar**
Display the command and a listing to show the archive file.

```
[root@server ~]# tar -cvpzf /tmp/sales1.tar /home/sales1
tar: Removing leading '/' from member names
/home/sales1/
[root@server ~]# ls -l /tmp/sales1
ls: cannot access /tmp/sales1: No such file or directory
[root@server ~]# ls -l /tmp/sales1.tar
-rw-r--r--. 1 root root 117 Jul 12 19:52 /tmp/sales1.tar
[root@server ~]#
```

- (b) Delete /home/sales1 completely. Display the command and show that /home/sales1 does not exist anymore.

```
[root@server /]# rm -rf /home/sales1
[root@server /]# ls -ld /home/sales1
ls: cannot access /home/sales1: No such file or directory
[root@server /]#
```

- (c) Restore /home/sales1 from the archive /tmp/sales1.tar
Display the command and output.

```
[root@server ~]# cd /
[root@server /]# tar -xvf /tmp/sales1.tar
home/sales1/
[root@server /]#
```

- (d) Check that /home/sales1 has been restored. Show that sales1 has been restored.

```
[root@server /]# ls -ld /home/sales1
drwxr-xr-x. 2 root root 4096 Jul 12 19:52 /home/sales1
[root@server /]#
```

- (e) Use rsync to backup the /home directory to /tmp/homebackup. Display the command below.

```
[root@server /]# rsync -av /home /tmp/homebackup
```

```
home/svc1/.gnome2/
home/svc1/.mozilla/
home/svc1/.mozilla/extensions/
home/svc1/.mozilla/plugins/
home/svc2/
home/svc2/.bash_logout
home/svc2/.bash_profile
home/svc2/.bashrc
home/svc2/.gnome2/
home/svc2/.mozilla/
home/svc2/.mozilla/extensions/
home/svc2/.mozilla/plugins/
home/svc3/
home/svc3/.bash_logout
home/svc3/.bash_profile
home/svc3/.bashrc
home/svc3/.gnome2/
home/svc3/.mozilla/
home/svc3/.mozilla/extensions/
home/svc3/.mozilla/plugins/

sent 21935842 bytes  received 27236 bytes  43926156.00 bytes/sec
total size is 21829092  speedup is 0.99
```

Save the file in PDF format and submit in Blackboard.

[The End]