pvcreate /dev/vdb2

success

pvdisplay /dev/vdb2

PV name /dev/vdb2

vgcreate -s 8 datastore /dev/vdb2

success

vgdisplay datastore /dev/vdb2

VG name datastore

lvcreate -l 50 -n database /dev/datastore

lvdisplay database /dev/datastore

LV path /dev/datastore/database

mkfs -t ext3 /dev/datastore/database

partpoobe

lsblk

vdb

└vdb2

└ds-database 400M 0 lvm

mkdir /mnt/database

vim /etc/fstab

/dev/ds/db /mnt/db default 0 0

mount -a

partprobe

lsblk

vdb

└vdb2

└ds-db 400M 0 lvm /mnt/db

vim /etc/fstab

/dev/vdb1 (swap) swap swap default 0

partprobe

lsblk

vdb

└vdb1 [swap]

mount -a

swapon

NAME TYPE SIZE USED PRIO

/dev/vdb1 partition 2G 0B -2

partprobe

lsblk

vdb

└vdb1 [swap]

4) create a one logical volume named database and it should be on datastore volume group with size 50 extent & assign the filesystem as ext3

1) the datastore volume group extend should be 8 MiB (50*8=400)

2) mount the logical volume under mountpoint /mnt/database.

lsblk

fdisk /dev/vdb

n

1

+2G

t

L

8E

w

partprobe

lsblk

vdb

└vdb2 2G 0 part

15.2 Set the password expire date

a) The password for all new users in server.b.lab.example.com should expire after 20 days.

```
# vim /etc/login.defs
    PASS_MAX_DAYS   20
    :wq!
# reboot
```

15.3 Assign Sudo privilege

Assign the sudo privilege for group admin and group members can administrate without any password

```
# vim /etc/sudoers
% admin    ALL=(ALL)    NOPASSWD: ALL
```

15.4 configure the application RHCSA as an alies user, when login it will show the message "welcome to Adv pro"

```
# su - alies
# ls -a
# vim .bash_profile
    RHCSA="welcome to Adv pro"
    export RHCSA
    echo - $RHCSA
    :wq!
# source .bash_profile
# logout
# su - alies
```

⑤ create a collaborative directory /common/admin with following characteristics:

a) Group ownership of /common/admin is admin

b) The directory should be readable, writable and accessible to members of admin, but not to any other user.

c) Files created in /common/admin is automatically have group ownership set to the admin group

sol: # mkdir -p /common/admin

cd /common/admin

ls -ld /common/admin

chgrp admin /common/admin

ls -ld /common/admin

chmod 770 /common/admin

ls -ld /common/admin

chmod g+s /common/admin

ls -ld /common/admin

su - harry

[harry@server ~] #

cd /common/admin

[harry@server admin] #

touch file

ls -ld

cd ~

su root

15.5 create the script file

a) create a mysearch script to locate fi
under /usr/share having size less than

b) After executing the mysearch script
file and listed (searched) files has to
be copied under /root/myfiles

```
# mkdir /root/myfiles

# vim mysearch
  #!/bin/bash
  find /usr/share | -type f -size -1M
  -exec cp {} /root/myfiles \;

  find /usr/share | -type f -size 1M
  -perm /4000 -exec cp {} /root/mfi

  find /usr/share |-type f -size +800M
  -size -900M -perm /2000 -exec cp
  {} /root/myfiles \;
# chmod +x mysearch
# ./mysearch
# ls -a /root/myfiles
```

1) Assign root user password as northale

DD
- Alt + ctrl + Del
- ↓ e
- rd. break
- ctrl + x
- enter

```
# mount -o remount, rw /sysroot/
# chroot /sysroot
# passwd --stdin root
      northale
      northale
# touch /.autorelabel
# exit
# exit
```

11) create a user account

a) create a new user with UID 1326 and user name as alies.

```
# Useradd -u 1326 alies
# passwd --stdin alies [redhat]
```

12) create an archive file

a) Backup the /var/tmp as /root/test.tar.gz

```
# tar -zcvf /root/test.tar.gz /var/tmp
# ls
# tar -jcvf /root/test.tar.bz /var/tmp
# ls
# tar -Jcvf /root/test.tar.xz /var/tmp
# ls
```

15.1 set the permission

a) All new creating files for user natasha as '-r--------' as default permission.

b) All new creating directories for user natasha as dr-x------ as default permission.

Sol:

```
# su - natasha
# ls -a
# vim .bash_profile
      umask 277
# source .bash_profile
# mkdir test
# ls -ld test
# touch testfile
# ls -l testfile
```

7) Set a cron job for harry on 12:30 at noon print /bin/echo on "hello"

```
# crontab -eu harry
  30  12  *  *  *  /bin/echo "hello"
  */3  *  *  *  *  /bin/echo "hello"
# systemctl restart crond.service
#  crontab -lu harry
```

8) configure the NTP

a) configure ur system so that it is an NTP client of classroom.example.com

```
# vim /etc/chrony.conf
  put # for exsiting server(or) pool line
  server  classroom.example.com  iburst
# systemctl restart chronyd.service
# chronyc  sources  -v
```

9) Locate the files

a) find the owner of file sarah and copy the file to given path of /root/find.user

sol:

```
# mkdir  /root/find.user
# find  /  -user  sarah  -type f
# find  /  -user  sarah  -type f
    -exec  cp  {}  /root/find.user \;
# ls  -a  /root/find.user
```

10) find the string

a) find a string "home" in /etc/passwd and searching string as been stored in /root/search.txt.

sol:

```
# grep  home  /etc/passwd
# grep  home  /etc/passwd  >>
    /root/search.txt
# cat  /root/search.txt
```

6) Set the recommended

yum install tuned -y

systemctl start tuned.service

systemctl enable tuned.service

systemctl status tuned.service

tuned-adm active
current active profile: virtual-guest

tuned-adm recommend
virtual guest

tuned-adm profile virtual-guest

tuned-adm active
current active profile: virtual guest

3) create a swap partition

lsblk
-vdb
-vdc
-vdd

fdisk /dev/vdb
n
p
1
+512M
t
L
82
w

partprobe

lsblk
vdb
└ vdb1 512M 0 part

mkswap /dev/vdb1

blkid

swapon /dev/vdb1

partprobe

lsblk
vdb
└ vdb1 512M 0 part [swap]

Node1 [serverb]

1) Configure the network

a) Assign Hostname and IP address for your Virtual machine.

Hostname serverb.lab.example.com

IP Address 172.25.250.11

NetMask 255.255.255.0

Gateway 172.25.250.254

Name server 172.25.250.254

sol:

hostnamectl set-hostname serverb.lab.example.com

hostname

nmcli connection show [out wired connection]

nmcli connection modify "Wired connection 1" ipv4.addresses 172.25.250.11/24 ipv4.gateway 172.25.250.254 ipv4.dns 172.250.254 ipv4.method static

nmcli connection up "Wired connect1" [success]

ping 172.25.250.11 [64 bytes]

ping 172.25.250.254 [64 bytes]

ctrl + z

③ configure the selinux

a) Your webcontent has been confirmed on port 82 at /var/www/html directory.

sol: [root@server6 ~]

semanage port -l |grep http

semanage port -a -t http_port_t -p tcp 8

semanage port -l |grep http

firewall-cmd --permanent --add-port=8

firewall-cmd --reload

firewall-cmd --list-port

yum install httpd -y

systemctl start httpd.service

systemctl enable httpd.service

systemctl status httpd.service

vim /etc/httpd/conf/httpd.conf

<VirtualHost 172.25.250.11 : 82>

ServerName server6.lab.example.com

DocumentRoot /var/www/html

</VirtualHost>

:wq!

httpd -t

systemctl restart httpd.service

④ create the following users, groups and group memberships:

a) A group named admin

b) A user harry who belong to admin as 2nd group

c) A user natasha who belong to admin as 2nd group

d) A user sarah who doesn't have access to an interactive shell on the system and who is not member of admin.

e) The users harry, natasha, sarah should all have password of password

sol: [root@server6 ~]

groupadd admin

cat /etc/group

useradd -G admin harry

useradd -G admin natasha

useradd -s /sbin/nologin sarah

cat /etc/group

passwd --stdin harry

passwd --stdin natasha

passwd -- stdin sarah

(26) create a repository

http://content/rhel9.0/x86-64/dvd/AppStream

http://content/rhel9.0/x86-64/dvd/BaseOS

[root@server6 ~] # vim /etc/yum.repos.d/app.repo

```
[Appstream]
name = appstream
baseurl = http://content/rhel9.0/x86-64/
          dvd/Appstream
gpgcheck = 0
enabled = 1

[space in 3 lines]

[456]
name = baseos
baseurl = http://content/rhel9.0/x86-64/
          dvd/BaseOS
gpgcheck = 0
enabled = 1
```

:wq!

dnf clean all

0 files removed

dnf repolist

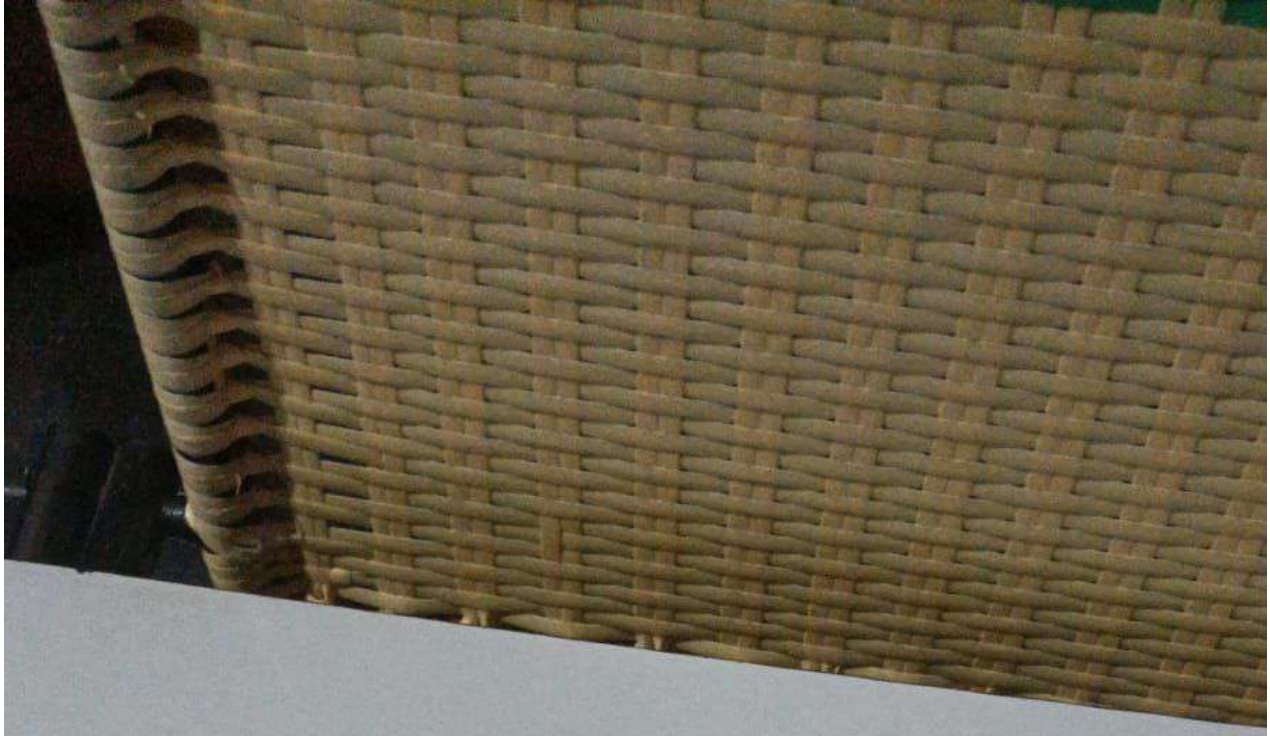
repo id	reponame
123	appstream
456	baseos

dnf install vim

success

nothing to do

complete



6) configure autofs to automount the home directories of production5 domain users. Note the following:

a) servera.lab.example.com (172.25.250.10) NFS-exports /user-homes to ur system

b) production5 home directory is servera.lab.example.com:/user-homes/production5

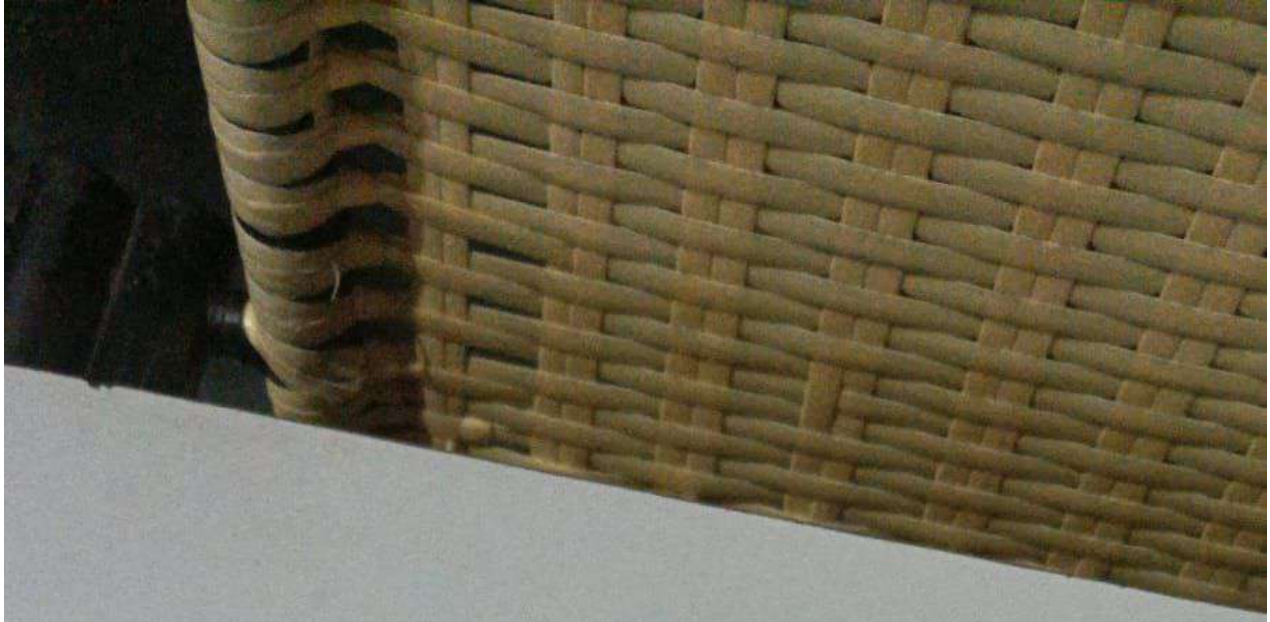
c) production5 home directory should be automounted locally mapped to /localhome in ur system

d) home directories must be writable by their users

e) while u r able to log in as any of the users production30, the only home directory that is accenible from your system is production5.

```
# exit

root@server ~]
# su - production1
  su - production12
  su - production30
  su - production5
```

```
[root@server ~]
# hostname

# yum install autofs -y

# systemctl start autofs service
# systemctl enable autofs service
# vim /etc/auto.master
    /localhome /etc/auto.misc
# vim /etc/auto.misc
  production5  -rw,soft,intr
  servera.lab.example.com:/user-homes/pro5

# systemctl restart autofs

# df -Th

# su - production5

# whoami

# exit

[root@server ~]
# getent passwd production5
# su - production5
# df -Th
```



5) Resize the logical volume size of 100 extent on /mnt/database dir

lvextend -l +50 /dev/datstore/data

50 (lv)
+50 (lvextend)
100 x 8 = 800

df -hT

resize2fs /dev/ds/db

df -hT
xfs_growfs /dev/ds/db