Vm-1-servera

1. set hostname and IP address

2. create a repository

3. Troubleshooting SELINUX issue

4. User and group creation, adding group members and setting password

5. creating a collaborative directory and changing group ownership, giving full permission to the group and assigning group special permission.

6. Configure automatic mount of the network shared domain user home directory.

7.Crontab job scheduling

8. ACL permissions

9.NTP synchronizing our system time with NTP Provider

10.find the owner of the user file and copy to destination

11.grep the string and redirect it to file

12. Create a user with specific id and assign the password

13.backup the directory in a archived file

16.1 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.

16.2 Set the Password expire date
a) The password for all user in node1 should expires after 20 days.

16.3 Assign Sudo Privilege
Assign the Sudo Privilege for Group "admin" and other users can administrate without any password.

Vm -2 serverb

1. VM Password break

2. Create a repository

3. Creating a Logical Volume

4. Creating a SWAP of specific size

5. Exetending the Logical Volume

6. Vdo storage Management

7. Set the Recommended tuning profile for your VM computer

RHCSA VERSION-8.2

DURATION:3hrs   **PASSMARK=210/300**

They provide 2 VM's

1, server-b (This is we consider VM-1, In exam give another name like alpha,red,primary)
2, server-a (This is we consider VM-2, In exam give another name like
beta,blue,secondary)

Note:
1st VM –>1st question do only on console
2nd VM –> 2nd question do only on console

VM-1 (we configure server-a vm)

Open server-a virtual machine and login as root user with the given password.

root

 passwd-> **redhat** (successfully login serverb VM)

1. Set hostname and Assign ip address

hostnamectl   set-hostname serverb.lab.example.com

hostname

nmcli connection show

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

nmcli connection up "Wired connection 1"

ping 172.25.250.11

ping 172.25.250.254
minimize or close the serverb virtual machine console

2. Create a repository

vi   /etc/yum.repos.d/app.repo

```
[123]
name=app
baseurl=http://classroom.example.com/content/rhel8.0/x86_64/dvd/AppStream
gpgcheck=0
enabled=1

[456]
name=base
baseurl=http://classroom.example.com/content/rhel8.0/x86_64/dvd/BaseOS
gpgcheck=0
enabled=1
```

yum clean all

yum repolist

To list the two repo status

yum   install vim   -y (only for exam not now)

3. Configure webserver.

semanage port   -l |grep   http

semanage port   -a -t http_port_t -p tcp 82

semanage port   -l |grep   http   (verify the port)

firewall-cmd   --permanent   --add-port=82/tcp

firewall-cmd   --reload

firewall-cmd   --list-ports (verify the port)

yum   install httpd   -y

systemctl start httpd.service

systemctl enable httpd.service

vim /etc/httpd/conf/httpd.conf   (search the "/Listen") and verify the port

```
<virtualhost   172.25.250.11:82>
servername   serverb.lab.example.com
documentroot   /var/www/html
</virtualhost>
```

Save the vim editor

httpd -t

systemctl restart   httpd.service

output:

curl 172.25.250.11:82/file1

(check the output this command or using firefox also)

4. Users and groups management

groupadd admin

useradd -G admin harry

useradd –G admin natasha

useradd -s /sbin/nologin sarah

useradd -G   admin sandy

passwd --stdin harry (To repeat the all users)

tail   -4 /etc/passwd (verify the users info)

 # tail -5 /etc/group (verify the group info)

5.create a directory and assign the basic permissions.

mkdir -p /common/admin

ls -ld /common/admin

chgrp admin /common/admin

chmod 770 /common/admin

chmod g+s /common/admin

ls –ld /common/admin

su – harry

touch /common/admin/file1

ls –l /common/admin/file1

6. Configure the auto filesystem

NOT FOR EXAM:

> # ssh root@workstation
>
> # lab rhcsa-compreview3 start (run from workstation VM not for Global exam)
>
> # logout

yum install autofs -y

systemctl start autofs.service

systemctl enable autofs.service

getent passwd production5 (verify the centralized user)

vim /etc/auto.master

 add last line (don't' edit the existing contents)

/localhome   /etc/auto.misc

vim /etc/auto.misc
 add last line
 production5 -rw,soft,intr   servera.lab.example.com:/home-directories/production5

\# systemctl   restart   autofs

\# su - production5

\# pwd

\# df -hT

\# exit   **(logout from remote user)**

7. Configure crontab

\# crontab -eu harry

30 12 * * * /bin/echo "hello"   (note: at 12:30 pm) or

 */3   *   *   *   * /bin/echo "hello" (note: This is to print message hello for every 3 minutes)

*/2   *   *   *   * logger user.debug "hello" (note: This is to print log message hello for every 2 minutes)

\# systemctl restart   crond.service

\# crontab -lu harry

8. ACL permission

\# cp   /etc/fstab   /var/tmp

\# getfacl   /var/tmp/fstab

\# setfacl -m u:harry:rw-   /var/tmp/fstab

\# setfacl -m u:natasha:--- /var/tmp/fstab

\# getfacl /var/tmp/fstab

9.NTP configuration

\# vim /etc/chrony.conf

put '#' for existing iburst argument line (or)

put '#' for existing server or pool line

add a new below argument

server   classroom.example.com   iburst

systemctl   restart   chronyd.service

chronyc   sources -v

10.find the owner of the file

mkdir   /root/find.user

find   /   -user   sarah   -type   f

find   /   -user   sarah   -type   f   -exec   cp   {}   /root/find.user/   \;

ls   -a /root/find.user

11. grep the "home" string from /etc/passwd

grep home /etc/passwd

grep home /etc/passwd > /root/search.txt

cat   /root/search.txt

12. Create a user with UID and set given password

useradd   -u 1326   alies

passwd --stdin   alies
redhat

13.backup the /var/tmp file

tar   -zcvf   /root/test.tar.gz   /var/tmp   (its gzip compression tool)

tar   -jcvf   /root/test.tar.bz2 /var/tmp   (its bzip2 compression tool)

14th and 15th question container,s

16.1 Set the Permission
#su – natasha

#ls -a (you can find out the .bash_profile file)

#vim .bash_profile

add last line (don't disturb the existing contents)
umask **277** (enter the calculated value)
:wq!

#source .bash_profile
#mkdir test

#ls -ld test (To verify the permission)

#touch testfile

#ls -l testfile (To verify the permission)

16.2 Set the Password expire date

#vim /etc/login.defs
(find the PASS_MAX_DAYS line and change the value)

PASS_MAX_DAYS   99999 -----→ PASS_MAX_DAYS   20
:wq!

#reboot

16.3 Assign Sudo Privilege

#vim /etc/sudoers
:se nu (then go to line 111 the enter)

%admin ALL=(ALL) NOPASSWD: ALL

(completed VM-1 tasks Do reboot)

16.4 Configure the application

su – alies

ls –a

# vim .bash_profile (Go to the last line and type)
RHCSA="Welcome to Advantage Pro"
export RHCSA
echo $RHCSA

:wq!

source .bash_profile

logout

su – alies (verify the message was showing)

16.5 Create the script file

 #mkdir /root/myfiles
 #vim mysearch

 #!/bin/sh
find /usr/share/ -type f -size -1M -exec cp {} /root/myfiles/   \;
(or)
find /usr/share/ -type f -size -1M –perm /4000 -exec cp {} /root/myfiles/   \; (For u+s)
(or)
find /usr/share/ -type f -size +800M –size -900M –perm /2000 -exec cp {} /root/myfiles/ \; (For g+s)
(or)
find /usr/share/ -type f -size +800M –size -900 –perm /1000 -exec cp {} /root/myfiles/ \; (For o+t)

:wq! (save the file)

#chmod +x mysearch
./mysearch
ls -a /root/myfiles/

After you Complete all the question in VM-1 you need to reboot and wait to system bootup then verify all outputs.

VM-2 (we configure server-a VM)

NOT FOR EXAM

take ssh from base machine to workstation machine

```
# ssh  root@workstation

  password: redhat

# ping servera

# lab  boot-resetting start

 # logout
```

In exam you start from below steps

1. Break the password on server-a VM

* open console and reboot machine

* select send-key and choose ctrl-alt-delete

* Automatically Rebooting the system

* Press "e" to edit the first kernel entry and Move the cursor to the kernel command line (search the line that starts with "linux" then press "End" key in the keyboard).

* Add "rd.break" at end of the line and Press Ctrl+x to boot with the changes.

mount -o   remount,rw   /sysroot (if u facing any interrupt use "ctr+c")

chroot /sysroot

passwd   --stdin root

 northate

touch   /.autorelabel

exit

exit   (now rebooting the VM after reboot try to login with root user)
 Minimize the servera VM

Take ssh from base machine to serverb VM

#ssh   root@172.25.250.10

2 configure repository

vi /etc/yum.repos.d/app.repo/

[123]
name=app
baseurl=http://classroom.example.com/content/rhel8.0/x86_64/dvd/AppStream
enabled=1
gpgcheck=0

[456]
name=base
baseurl=http://classroom.example.com/content/rhel8.0/x86_64/dvd/BaseOS
enabled=1
gpgcheck=0

yum clean all

yum repolist

yum install vim -y (only for exam not now)

Storage structure in Exam
1. vda - ONLY For OS (Don't touch)
2. vdb - Swap and LVM [In Exam, your Proctor already created one
swap and lvm in partition no 1 & 2 (Don't alter), You need to
create another swap and LVM in partition no 3 & 4]
3. vdc - ONLY For VDO question (Don't create partition)

Note: For Lvextend question use proctor's LVM, Don't extent
newly created LVM

3. Create a swap partition

free -m (check the existing swap size)

#lsblk

fdisk   /dev/vdb

-> Command (m for help): **n**
-> Select (default p): **p**
-> Partition number (3-4, default3): **3**
-> First sector (4196352-10485759, default 4196352):
-> Last sector, +sectors or +size{K,M,G,T,P} (4196352-10485759, default 10485759):
+512M
-> Created a new partition 2 of type 'Linux' and of size 512 MiB.
-> Command (m for help): **t**
-> Partition number (1,2,3 default 3): **3**
-> Hex code (type L to list all codes): **82**
-> Changed type of partition 'Linux' to 'Linux swap / Solaris'.
-> Command (m for help): **w**

partprobe

#lsblk

mkswap /dev/vdb3

blkid

vim /etc/fstab

 add last line (don't' change the existing contents)
 /dev/vdb3   swap   swap   defaults   0   0

swapon -a

free -m

4. Create a lvm partition

(They provide 3 different disk like VDA,VDB,VDC you don't touch VDA disk)

lsblk

fdisk /dev/vdb

-> Command (m for help): **n**
-> Select (default p): **p**
-> Partition number (2-4, default 2): **2**
-> First sector (2048-10485759, default 2048):
-> Last sector, +sectors or +size{K,M,G,T,P} (2048-10485759, default 10485759): **+2G**
-> Created a new partition 1 of type 'Linux' and of size 2 GiB.

-> Command (m for help): **t**
-> Selected partition :**2**
-> Hex code (type L to list all codes): **8e**
-> Changed type of partition 'Linux' to 'Linux LVM'
-> Command (m for help): **w**
partprobe

#lsblk

pvcreate   /dev/vdb2

vgcreate -s 8 datastore /dev/vdb2

vgdisplay datastore

lvcreate   -l   50   -n database datastore

lvdisplay   /dev/datastore/database

mkfs.ext3   /dev/datastore/database

blkid

mkdir   /mnt/database

vim   /etc/fstab
 add last line (don't' disturb the existing contents)

/dev/datastore/database   /mnt/database   ext3   defaults   0   0

mount   -a

df   -hT or lsblk   (verify the lvm partition)

5. Resize the lvm partition.

df   -hT

lvextend -L 700M -r   /dev/mapper/datastore-database

df -hT

6. Create a VDO Disk

yum   install vdo* -y (Not Now only for Exam)

systemctl start vdo.service

systemctl enable vdo.service

lsblk

vdo create --name=vectra --device=/dev/vdc   --vdoLogicalSize=50G

vdo   list

mkfs.xfs   /dev/mapper/vectra

udevadm settle
mkdir /test

vim /etc/fstab

 add last line (don't disturb the exesting contents)
 /dev/mapper/vectra /test xfs defaults,x-systemd.requires=vdo.service 0   0

mount -a

df -hT

reboot

successfully created VDO disk

Resolving Maintenance mode

(enter root password for maintenance): redhat

mount –o remount,rw /

vim /etc/fstab
/dev/mapper/vectra /test xfs defaults,x-systemd.requires=vdo.service 0   0
(if you have time, correct the mistakes, else put '#' in front of this line)

mount –a

reboot (*must)

7.set the tuned profile

yum install tuned   -y   (not now only for exam)

systemctl   start   tuned.service

systemctl   enable tuned.service

tuned-adm active (check the current active profile)

tuned-adm   recommend

 virtual-guest   -> (This one is recommended)

tuned-adm   profile virtual-guest

tuned-adm   active

After you Complete all the question in VM-2 you need to reboot and wait to system bootup then verify all outputs.