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RHCSA (EX200) EXAM DUMPS (1)

RHCSA (EX200) EXAM DUMPS

Two virtual machines will be given in RHCSA Exam Paper. (Node1 and Node2), on which

you have to perform all the given tasks.

After logging into the base machine, you will to see "Activities" on top right corner, after

clicking on it:

1. RedHat icon will show your question paper and the menu where all the basic

configuration information like Node1 root password are present.

2. Below that we have a VM icon, which we will allow us to open both the machines

Node1 and Node2, we can start them and click on open console to get a proper view.

After restarting Node1 accessing the console of Node1, you are to login as root and given

password (from important configuration information tab in question paper)

NODE 1

Question 1:

Setup Networking

IP Address: 172.25.10.11

Subnet Mask: 255.255.255.0

Default Gateway: 172.25.10.254

Nameserver: 72.25.254.254

Hostname as primary.netX.example.com

Solution:

# nmtui

- Edit a Connection
- select "Wired Connection1"
- go to "IPv4 Configuration"
- select "Manual"
- Click on "show"

Enter Details as asked:

Add Addresses = 172.25.10.11/24

Gateway = 172.25.10.254

DNS = 172.25.254.254

Do "OK" and then go to previous menu

- Activate a Connection
- "Wired Connection 1"
- Deactivate and then Activate after 1 minute

Then go to previous menu by pressing "back"

- Set System Hostname
- Enter hostname given in the question

Verify:

```
# exec bash (After this your changed hostname will be visible)
# ifconfig (To verify the IP and other changes made)
```

Question 2:

Yum Repository Configuration

Configure the yum repository using the following links:

- http://content.example.com/rhel8.0/x86_64/dvd/BaseOS
- http://content.example.com/rhel8.0/x86_64/dvd/AppStream

Solution:

```
# vim /etc/yum.repos.d/new.repo
[BaseOS]
name = BaseOS
baseurl = http://content.example.com/rhel8.0/x86_64/dvd/BaseOS
enabled = true
gpgcheck = false
[AppStream]
name = AppStream
baseurl = http://content.example.com/rhel8.0/x86_64/dvd/AppStream
enabled = true
gpgcheck = false
:wq!
```

Verify:

```
# yum repolist (Should list the newly added repos - BaseOS and AppStream)
# yum install httpd -y (Package should install without errors)
```

Question 3:

Debug SELinux

The httpd service is serving on non-standard 82 port on your machine, your system is not

able to connect to httpd service at port 82. Fix and debug issue, the HTML files are

stored under /var/www/html directory and you don’t have to make any changes to it. The

content should be accessible at port 82 and should start at boot time.

You can check the output at : curl localhost:82/file1

It should be: "Welcome to the EX200 Exam!"

Solution:

```
# semanage port --a --t http_port_t --p tcp 82 (Map 82 port on SE-Linux Policy)

# firewall-cmd --permanent --add-port=82/tcp (Allow port 82 on Firewall)

# firewall-cmd --reload

# systemctl restart httpd

# systemctl enable httpd
```

Verify:

```
# curl localhost:82/file1 (As given in question)
```

Output should be

"Welcome to the EX200 Exam!"

Question 4:

Configure a Cron Job

Type 1:

The user natasha must configure a cron job that runs daily at 13:30 local time and executes

/bin/echo hello

Solution:

```
# useradd natasha (If not present already)
# crontab -e -u natasha
30 13 * * * /bin/echo hello
:wq!
```

Verify:

```
# crontab -l -u natasha (Cronjob should be visible)
```

Type 2:

The user natasha must configure a cron job that runs daily at every 3-minute local time

and executes /bin/echo new1

Solution:

```
# useradd natasha (If not present already)
# crontab -e -u natasha
```

- /3 * * * * /bin/echo new1

```
:wq!
```

Verify:

```
# crontab -l -u natasha (Cronjob should be visible)
```

Question 5:

Create the following users, groups, and group memberships.

A group named sysadmin. A user ryan who belongs to sysadmin as a secondary group. A

user sarah who also belongs to sysadmin as a secondary group. A user harry who does

not have access to an interactive shell on the system, and who is not a member of

sysadmin. ryan, sarah and harry should all have their password as atenorth.

Solution:

```
# groupadd sysadmin (To create the group)
# useradd -G sysadmin ryan (Create user ryan with secondary group as sysadmin)
# useradd -G sysadmin sarah (Create user sarah with secondary group as sysadmin)
# useradd –s /sbin/nologin harry (Create user harry with nologin shell)
# passwd ryan (Set password to "atenorth")
# passwd sarah (Set password to "atenorth")
# passwd harry (Set password to "atenorth")
```

Verify:

```
# id ryan (To see ryan user is created and sysadmin as secondary group)
# id sarah (To see sarah user is created and sysadmin as secondary group)
# tail /etc/passwd (To see the nologin shell entry of harry user)
```

Question 6:

Create a Collaborative Directory

Group ownership of /common/admin is to be set to sysadmin. The directory should be

readable, writable, and accessible to members of sysadmin, but not to any other user. (It

is understood that root has access to all files and directories on the system.)

Files created in /common/admin should automatically have group ownership set to the

sysadmin group.

Solution:

```
# mkdir –p /common/admin (-p to create parent directories as well)

# chgrp sysadmin /common/admin (Change group of the directory)

# chmod 2770 /common/admin (Set SGID and permissions as given)
```

Verify:

```
# ls -l /common (The Permission of "admin" directory should be rwxrws--- )
```

Question 7:

Configure NTP

Configure NTP in your system so that it is an NTP client of utility.domain0.example.com

Solution:

```
# vim /etc/chrony.conf

(Comment Line No.3, which starts with "pool")

#pool 2.rhel.pool.ntp.org iburst (comment this line)

server utility.domain0.example.com iburst (Add this line)

:wq!

# systemctl restart chronyd
```

Verify:

```
# chronyc sources (Here the new server entry should be visible)
```

Question 8:

Using the Linux Find Command

Find the files in your system which is owned by "simone" user & copy all the files to the

this directory: /root/found.

Solution:

```
# mkdir /root/found (Create the directory without fail)
```

```
# find / -user simone -exec cp {} /root/found \;
```

Verify:

```
# ls /root/found (You should see files present here)
```

Question 9:

Configure AutoFS

A remoteuser5 home directory is exported via NFS, which is available on

nfsserver.domain5.example.com (172.25.254.254) and your NFS-exports directory is

/rhome for remoteuser5.

remoteuser5’s home directory is located at nfsserver.domain5.example.com:/rhome/

remoteuser5

remoteuser5's home directory should be automounted through autofs service.

Home directories must be writable by their users.

The only home directory that is accessible from your system is remoteuser5

Solution:

```
# yum install -y autofs (install autofs package)
# vim /etc/auto.master.d/new.autofs
/- /etc/auto.misc
:wq!
# vim /etc/auto.misc
remoteuser5 -rw,soft,intr nfsserver.domain5.example.com:/rhome/remoteuser5
(At last line of file)
:wq!
# systemctl start autofs
# systemctl enable autofs
```

Verify:

```
# su – remoteuser5
# pwd (The result should be /rhome/remoteuser5)
```

If you are getting this output then Automounting is complete.

Question 10:

User of Specific UID

Create a user james UID of this user should be 2112 and set password as: sestiver

Solution:

```
# useradd -u 2112 james
# passwd james
```

Verify:

```
# id james (UID should be as 2112)
```

Question 11:

Sudo Privilege

There is a group named 'elite', give the group administrative privilege without password.

Solution:

```
# visudo
(Add the new line)
%elite ALL = (ALL) NOPASSWD: ALL
:wq
```

Question 12:

Archiving Data

Create a archive file using bzip2 compression.

Backup the /var/tmp as /root/data.tar.bz2

Solution:

```
# yum install bzip2
# tar –cvjf /root/data.tar.bz2 /var/tmp
```

Variations: (-J for xz, -j for bz2, -z for gz)

Verify:

```
# ls -l /root (tar file should be visible and it should have some size)
```

Question 13:

Set Password Expiry

The password for all new users in node1.domain18.example.com should expires after 20

days.

Solution:

```
#vim /etc/login.defs
```

(Find this line and make the changes)

```
PASS_MAX_DAYS 20
```

```
:wq!
```

Question 14:

Working with Strings

Copy all words with ‘wired’ from /usr/share/dict/words to the file /tmp/data

Solution:

```
# grep 'wired' /usr/share/dict/words > /tmp/data
```

Verify:

```
# cat /tmp/data
```

Question 15:

Set Umask Permanently

Set default permissions of rahul user after creating a file be "r--r--r--" and after creating a

directory to be "r-xr-xr-x"

Solution:

```
# su - rahul
# vim .bash_profile
(Add this line at end of the file)
umask 222
:wq!
```

Verify:

```
# mkdir new
# ll (new permission should be: r-xr-xr-x)
```

Deep ShahQuestion 16:

Simple Shell Script

Write a script "mysearch" to list the contents of /usr that are smaller 10M and have SGID

permission.

After execution, the script should list the names of all the files in /root/search_file.

The script should be present in /usr/local/bin.

Solution:

```
# touch /root/search_file
# vim mysearch
```

```
#!/bin/bash
find /usr -size -10M -perm /2000 > /root/search_file
:wq!
# chmod a+x mysearch
# cp mysearch /usr/local/bin
# mysearch
```

Verify:

```
# cat /root/search_file (Content should be visible)
```

Question 17:

Configure Application

Configure an Application EX200 as albert user, when the user logs in it will show the
message "Welcome to the EX200 Exam"

Solution:

```
# useradd albert
# su - albert
# vim EX200
#!/bin/bash
echo "Welcome to the EX200 Exam"
:wq!
# chmod a+x /home/albert/EX200
# cd (To come to albert home directory)
# ls -a
```

# vim .bash_profile

(At the end of file)

sh /home/albert/EX200

:wq!

Verify:

# exit (Come back to Root user)

# su - albert

Welcome to EX200 Exam (Message should print automatically)

Question 18:

Creating a Container Image

As Andrew user, build an image using the following link and name it "watcherimage"

Link: http://server1.net3.example.com/materials/3/Containerfile

Solution:

# ssh Andrew@localhost **(MANDATORY TO GO VIA SSH)**

# wget http://server1.net3.example.com/materials/3/Containerfile

# podman build -t watcherimage .

Verify:

# podman image ls

Question 19:

Creating Service from a Container

- Create a container using the image you created with following conditions:
- Create the container using Andrew user
- Container should run in background
- Container name should be "watcher"
- mount the /opt/files directory to /opt/incoming and /opt/processes to /opt/outgoing in

the container

- container should run as a system service, so configure it as a service with name

"container-watcher.service"

- container service should run at boot time.

This container will convert an ascii text file into a pdf file, so when you create a simple file

in /opt/ files the container will automatically convert that file into a pdf and save it in /opt/

processes.

Solution (Part 1):

```
# exit (Switch to Root User)
# mkdir -p /opt/files
# mkdir -p /opt/processes
# chown Andrew:Andrew /opt/files
# chown Andrew:Andrew /opt/processes
# ssh Andrew@localhost (Now switch back to Andrew user)
# Podman run -d --name watcher -v /opt/files:/opt/incoming:Z -v /opt/processes:/
opt/outgoing:Z watcherimage
```

Verify:

```
# podman ps (Container "watcher" should be running)
```

Solution (Part 2):

Now in Andrew's home directory

```
# mkdir -p .config/systemd/user
# cd .config/systemd/user
# podman generate systemd --name watcher (name of container) --new --files
# systemctl --user daemon-reload
# systemctl --user enable container-watcher.service
# systemctl --user start container-watcher.service
# loginctl enable-linger
```

Verify:

```
# systemctl --user status container-watcher.service
```

NODE 2

Question 1:

Password Break

Crack the password of Node 2 and set it as "redhat"

Solution:

From the VM Manager, open the console of Node 2 and restart Node2.

Make sure to interfere and stop on the Grub Screen using arrow keys.

Hover onto the 2nd Kernel (Maintenance Kernel)

Press "e"

Go to end of 4th line paragraph (linux line) and add "rd.break"

Press "ctrl + x"

Press enter and then you will receive a shell to perform tasks

```
# mount -o remount,rw /sysroot

# chroot /sysroot

# passwd root

Enter password: redhat

Re-enter password: redhat

# touch /.autorelabel

# exit

# exit
```

Verify:

Machine will start and you can login using root user and give password as "redhat" and

login will succeed

Question 2:

Yum Repository Configuration

Configure the yum repository using the following links:

http://content.example.com/rhel8.0/x86_64/dvd/BaseOS

http://content.example.com/rhel8.0/x86_64/dvd/AppStream

Solution:

```
# vim /etc/yum.repos.d/new.repo
[BaseOS]
name = BaseOS
baseurl = http://content.example.com/rhel8.0/x86_64/dvd/BaseOS
enabled = true
gpgcheck = false
[AppStream]
name = AppStream
baseurl = http://content.example.com/rhel8.0/x86_64/dvd/AppStream
enabled = true
gpgcheck = false
:wq!
```

Verify:

```
# yum repolist (Should list the newly added repos - BaseOS and AppStream)
# yum install httpd -y (Package should install without errors)
```

Question 3:

Set Tuning Profile

Set a recommended tuning profile for your system. (Profile already available)

Solution:

```
# yum install tuned -y (Install tuned package)
# systemctl enable --now tuned (Start and Enable the tuned service)
# tuned-adm recommend (To find the recommended tuning profile)
```

# tuned-adm profile <name of recommended profile> (To set the profile)

Verify:

# tuned-adm active (Verify the profile is set)

Question 4:

Create SWAP Partition

Create a SWAP partition of 250 megabyte and make available at next reboot.

Partition is already available.

Solution:

# lsblk (Find a partition to make it)

# fdisk /dev/vda (create partition)

- n
- p
- 1
- <blank>
- +250M
- t
- swap
- w

# lsblk

# mkswap /dev/vda4

# swapon /dev/vda4

```
# vim /etc/fstab (Make permanent entry for mounting)
/dev/vda4 swap swap defaults 0 0
:wq
# mount –a (To verify entries in fstab file are correct)
```

Verify:

```
# swapon –s
```

Question 5:

Create LVM Partition

Create the volume group with name "myvol" with 8 MiB P.E. and create and lvm with

name "mydatabase" with its size as 50 P.E. and format this lvm with ext3 and create a

directory /database and mount this lvm permanently on /database.

Solution:

```
# fdisk /dev/vda
```

- n
- p
- 1
- <blank>
- +2G
- t
- lvm
- w

```
# pvcreate /dev/vda5
# vgcreate -s 8M myvol /dev/vda5
# vgdisplay (To verify volume group and designated PE)
# lvcreate -l 50 -n mydatabase myvol
# lvdisplay (Verify size of LV which should be 8*50)
# mkfs.ext3 /dev/myvol/mydatabase
# mkdir /database
# vim /etc/fstab
/dev/myvol/mydatabase /database ext3 defaults 0 0
:wq
# mount -a (To verify entries in fstab file are correct)
```

Verify:

```
# lsblk (LVM should be visible)
```

Question 6:

Resize LVM

Resize the LVM partition "home" to 150MiB.

Solution:

```
# lvdisplay (To find all details LVM home)
# lvresize -r -L 150MiB /dev/vgroup/home
```

Verify:

```
# lsblk (Size of LVM should be 150MiB)
```