Red Hat

Red Hat Certified System
Administrator (RHCSA) EX200

هنا ملخص لتجارب مجموعة من الأشخاص حيث توصلنا لهذه النتائج بعد جهدٍ جهيد من البحث و التعليم الذاتي إلى ان اكرمنا الله باجتياز اختبار هذه الشهادة و من باب زكاة العلم نشره , قررنا مشاركته فإن اصبنا فيه فهذا توفيق وتيسير من الله سبحانه و تعالى

أولاً , ماهي هذه الشهادة ؟

شهادة RHCSA، أو Red Hat Certified System Administrator

تُعتبر مرجعاً قوياً للمحترفين الذين يعملون في مجال نظام التشغيل Linux.

يقدم هذا الامتحان تقييماً شاملاً لمهارات الفرد في إدارة الأنظمة التي تعمل بنظام التشغيل Red Hat Enterprise Linux.

تعتمد الشهادة على أداء الفرد في مجموعة من المهام العملية، مثل إدارة الملفات والمجلدات، وإعداد الشبكة، وإدارة المستخدمين والصلاحيات، وإدارة الخدمات والمهام الجدولية، والأمان والتحكم في الوصول، وغيرها من المهارات الأساسية في إدارة الأنظمة.

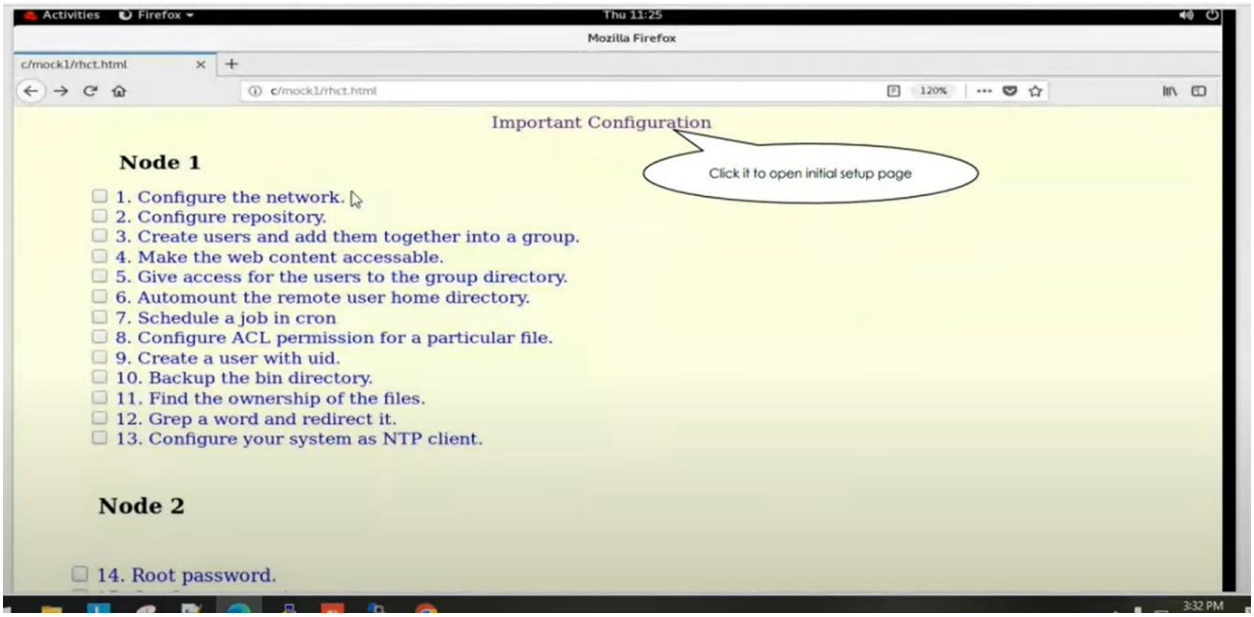
يُعتبر حصول الفرد على شهادة RHCSA مؤشراً على مهاراته الفنية في إدارة نظام التشغيل Linux، كما أنها تعكس التزامه بالتطوير المهني والسعي للحصول على المعرفة والخبرة في هذا المجال المتطور.

تتطلب الاختبارات التي تؤدي إلى الحصول على شهادة RHCSA مهارات عملية على أجهزة الكمبيوتر، وتحديداً على نظام التشغيل Red Hat Enterprise Linux. ويتعين على الفرد تحضير الاختبار بدقة واتقان، من خلال دراسة المواد التعليمية والتدريب العملي على الأدوات والتقنيات المستخدمة في نظام التشغيل.

- الاختبار كامل على نظام لينكس
- مدة الاختبار 3 ساعات (عن بعد او حضوري في مراكز اختبار)
- 22 سؤال تقريباً
- الأسئلة نفسها لـ V9 تتكرر من شخص لآخر(المختبرين في المركز) لكن فيه سؤال واحد فقط المختلف و راح اذكر الأسئلة المختلفة تحت خانة منفصلة (extra questions)
- درجة الاختبار 300 و درجة النجاح 210

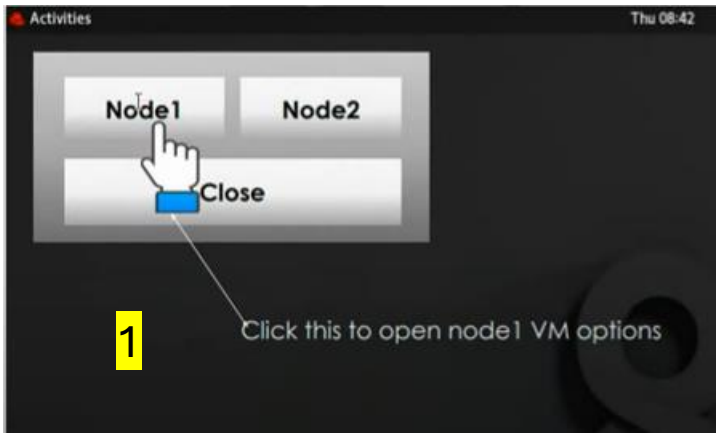
بيئة الاختبار نفس هذي الصورة بالضبط :

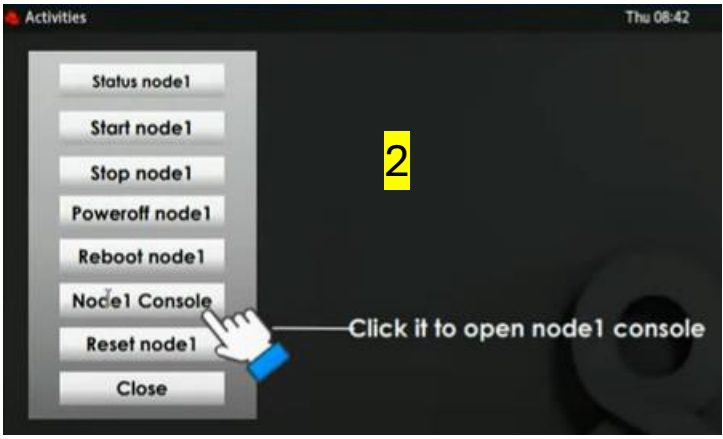
- **الخيار الأول** بـ يفتح لك صفحة الأسئلة و التعليمات بهذا الشكل :



- **الخيار الثاني** بيفتح لك مثل هالشكل 1 عشان تشغل النود الأولى او الثانية , ولكل نود عدة خيارات مثل الإيقاف و التشغيل ... الخ , الموجودة في الصورة 2.

وعشان نبدأ حل , نفتح الكونسول لكن من سلبياته انك ما تقدر تنسخ وتلصق فيه عشان كذا الأفضل نشتغل من التيرمنال الموجود في النقطة القادمة .





- **الخيار الثالث** بيفتح لكم تيرمنال للـ workstation و تقدرون منه تتصلون عن طريق ssh على النود الأولى او الثانية و منها بيكون النسخ و اللصق اسهل .

ملاحظة , كل سيرفس تسوونها اتبعوا هذي الخطوات :

Systemctl start ------

Systemctl enable ---

الشغل اللي بتسوونه

Systemctl restart ----

Systemctl enable ----

احتياط تشيكون على حالة السيرفس سواء في البداية او النهاية ---- systemctl status

Node 1 :

Q1: Network Configuration :

hostname =node1.lab.example.com

ip-address =172.25.250.10

subnetmask =255.255.255.0

gateway =172.25.250.254

dns =172.25.254.254

Solution :

#nmcli connection show

#nmcli connection modify "Wired connection 1" ipv4.address 172.25.250.10/24 ipv4.gateway 172.25.250.254 ipv4.dns 172.25.254.254 ipv4.method manual connection.autoconnect yes

hostnamectl set-hostname nod1.lab.example.com

#systemctl restart NetworkManager

#systemctl enable NetworkManager

#nmcli connection up "Wired connection 1"

Verify:

#reboot

#hostname

#cat /etc/resolv.conf

#ip a

#route -n

ping 172.25.250.10

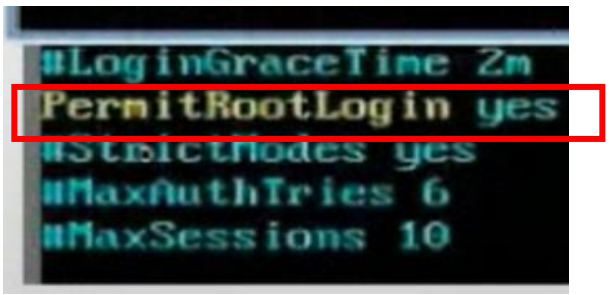
ping 172.25.250.254

```
Red Hat Enterprise Linux 9.0 (Plow)
Kernel 5.14.0-70.13.1.el9_0.x86_64 on an x86_64

Activate the web console with: systemctl enable --now cockpit.socket

serverb login: root
Password:
[root@serverb ~]#
[root@serverb ~]# hostnamectl set-hostname  serverb.lab.example.com
[root@serverb ~]#
[root@serverb ~]# hostname
serverb.lab.example.com
[root@serverb ~]#
[root@serverb ~]# nmcli connection
NAME                UUID                                  TYPE      DEVICE
Wired connection 1  3968ff00-0373-3010-a63f-1c4bb0f967fe  ethernet  eth0
[root@serverb ~]#
[root@serverb ~]# 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  manual
[root@serverb ~]#
[root@serverb ~]# nmcli connection up "Wired connection 1"
Connection successfully activated (D-Bus active path: /org/freedesktop/NetworkManager/ActiveConnection/2)
[root@serverb ~]#
[root@serverb ~]# ping 172.25.250.11
PING 172.25.250.11 (172.25.250.11) 56(84) bytes of data.
64 bytes from 172.25.250.11: icmp_seq=1 ttl=64 time=0.125 ms
^C
--- 172.25.250.11 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.125/0.125/0.125/0.000 ms
[root@serverb ~]#
[root@serverb ~]# ping 172.25.250.254
PING 172.25.250.254 (172.25.250.254) 56(84) bytes of data.
64 bytes from 172.25.250.254: icmp_seq=1 ttl=64 time=0.625 ms
^C
--- 172.25.250.254 ping statistics ---
1 packets transmitted, 1 received, 0% packet loss, time 0ms
rtt min/avg/max/mdev = 0.625/0.625/0.625/0.000 ms
[root@serverb ~]#
[root@serverb ~]# vi  /etc/ssh/sshd_config
```

في كل من النود 1 و النود 2 مغلق اتصال الـ ssh و راح نشغله بهذي الطريقة :

#vim /etc/ssh/sshd_config

بنلقى كلمه ثانية مكتوبة نحذفها و نكتب yes



systemctl restart sshd

#Systemctl enable sshd

الان نقدر نوصل للنود 1 و 2 عن طريق التيرمنال بهذي الطريقة :

#Ssh root@node1

Q2: configure repository: Configure YUM repository with the 2 given links (BaseOs and AppStream)

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

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

Solution :

yum repolist

#vim /etc/yum.repos.d/local.repo

نكتب داخل هالملف :

[BaseOS]

name=BaseOS

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

enabled=1

gpgcheck=0

[AppStream]

name=Appstream

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

enabled=1

gpgcheck=0

_____

#yum clean all انظف كل البكجات السابقة

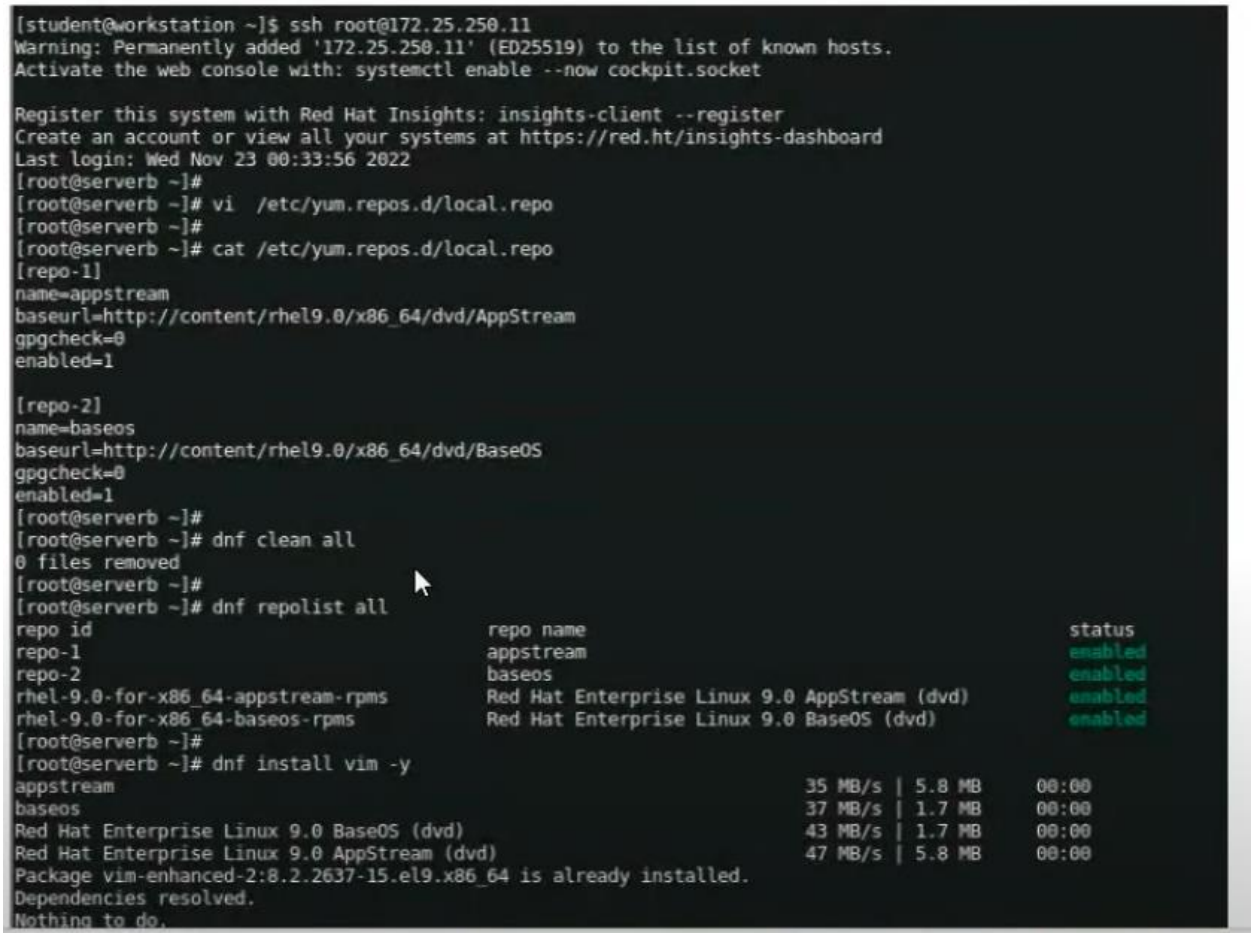
#yum update اسوي تحديث للبكجات

Verify:

yum repolist

بتطلع لنا repository اللي نزلناهم

#yum install nmap -y


[student@workstation ~]$ ssh root@172.25.250.11
Warning: Permanently added '172.25.250.11' (ED25519) to the list of known hosts.
Activate the web console with: systemctl enable --now cockpit.socket
Register this system with Red Hat Insights: insights-client --register
Create an account or view all your systems at https://red.ht/insights-dashboard
Last login: Wed Nov 23 00:33:56 2022
[root@serverb ~]#
[root@serverb ~]# vi /etc/yum.repos.d/local.repo
[root@serverb ~]#
[root@serverb ~]# cat /etc/yum.repos.d/local.repo
[repo-1]
name=appstream
baseurl=http://content/rhel9.0/x86_64/dvd/AppStream
gpgcheck=0
enabled=1
[repo-2]
name=baseos
baseurl=http://content/rhel9.0/x86_64/dvd/BaseOS
gpgcheck=0
enabled=1
[root@serverb ~]#
[root@serverb ~]# dnf clean all
0 files removed
[root@serverb ~]#
[root@serverb ~]# dnf repolist all
repo id repo name status
repo-1 appstream enabled
repo-2 baseos enabled
rhel-9.0-for-x86_64-appstream-rpms Red Hat Enterprise Linux 9.0 AppStream (dvd) enabled
rhel-9.0-for-x86_64-baseos-rpms Red Hat Enterprise Linux 9.0 BaseOS (dvd) enabled
[root@serverb ~]#
[root@serverb ~]# dnf install vim -y
appstream 35 MB/s | 5.8 MB 00:00
baseos 37 MB/s | 1.7 MB 00:00
Red Hat Enterprise Linux 9.0 BaseOS (dvd) 43 MB/s | 1.7 MB 00:00
Red Hat Enterprise Linux 9.0 AppStream (dvd) 47 MB/s | 5.8 MB 00:00
Package vim-enhanced-2:8.2.2637-15.el9.x86_64 is already installed.
Dependencies resolved.
Nothing to do.

Q3 : Debug SELinux

Web server running on non-standard port “82” is having issues serving content, Debug and fix the issues.

-The web server can server all the existing HTML files from '/var/www/html', Don't make any changes to these files.

-Web service should automatically start at boot time.

- curl servera.lab.example.com:82

Solution :

#systemctl start httpd

#systemctl enable httpd

semanage port -l | grep http

semanage port -a -t http_port_t -p tcp 82

semanage port -l | grep http

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

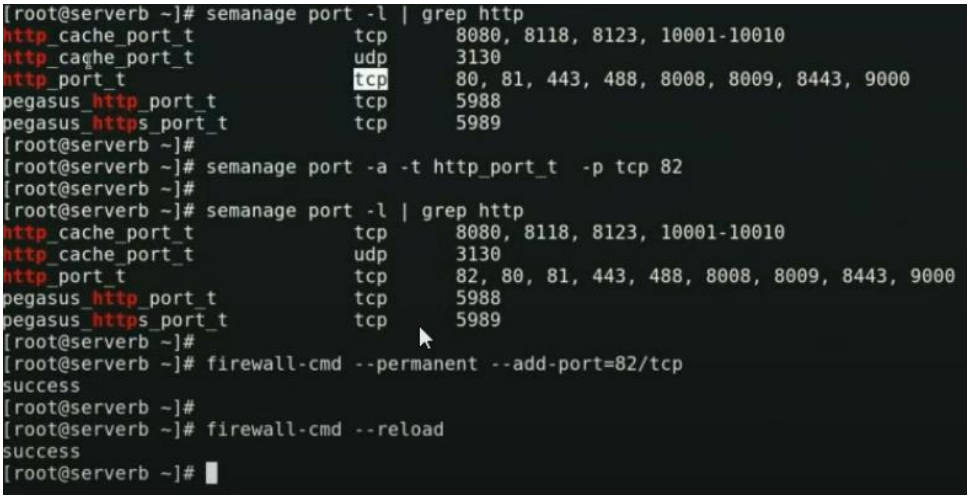
#firewall-cmd -- reload

Verify:

#systemctl restart httpd

#curl servera.lab.example.com:82

راح تطلع لكم رسالة معينة مذكورة في السؤال



Q4: Cron Job

-Configure a cron job that runs every 1minutes and executes: logger "EX200 in progress" as the user natasha.

-Configure a cron job for user "natasha", cron must runs daily at 2:23pm and inside executes the /usr/bin/echo "welcome"

Solution:

#systemctl start crond

#systemctl enable crond

#crontab -eu natasha

*/1 * * * * logger "EX200 in progress"

23 14 * * * /usr/bin/echo "welcome"

#systemctl restart crond

#systemctl enable crond

#crontab -lu natasha

Verify :

#tail -f /var/log/messages | grep "EX200"

#crontab -lu natasha

Q5: Create User accounts with supplementary group .

group: sysadms

-users: natasha harry sarah (with nologin shell)

-natasha and harry should be the member of sysadms group.

-password for all users should be "trootent"

Solution :

#groupadd sysadms

#useradd -G sysadms natasha

#useradd -G sysadms harry

#which nologin

#useradd -s /usr/sbin/nologin sarah

#passwd natasha

#passwd harry

#passwd sarah

Verify :

#cat /etc/group (or cat /etc/group | grep sysadms)

#cat /etc /passwd

```
[root@servera ~]# groupadd sysadms
[root@servera ~]# useradd -G sysadms natasha
[root@servera ~]# useradd -G sysadms harry
[root@servera ~]# which nologin
/usr/sbin/nologin
[root@servera ~]# useradd -s /usr/sbin/nologin sarah
[root@servera ~]# passwd natasha
Changing password for user natasha.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@servera ~]# passwd harry
Changing password for user harry.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@servera ~]# passwd sarah
Changing password for user sarah.
New password:
BAD PASSWORD: The password is shorter than 8 characters
Retype new password:
passwd: all authentication tokens updated successfully.
[root@servera ~]# cat /etc/group
```

Q6: Create a collaborative DIR. (change group owner, set the permissions along with sgid)

-Create the Directory "/home/sysadms" with the following characteristics.

-Group ownership of "/home/sysadms" should go to "sysadms" group.

-The directory should have full permission for all members of "sysadms" group but not to the other users except "root".

-Files created in future under "/home/sysadms" should get the same group ownership.

Solution :

#mkdir -p /home/sysadms

#chgrp sysadms /home/sysadms

#ls -ld /home/sysadms

#chmod 770 /home/sysadms

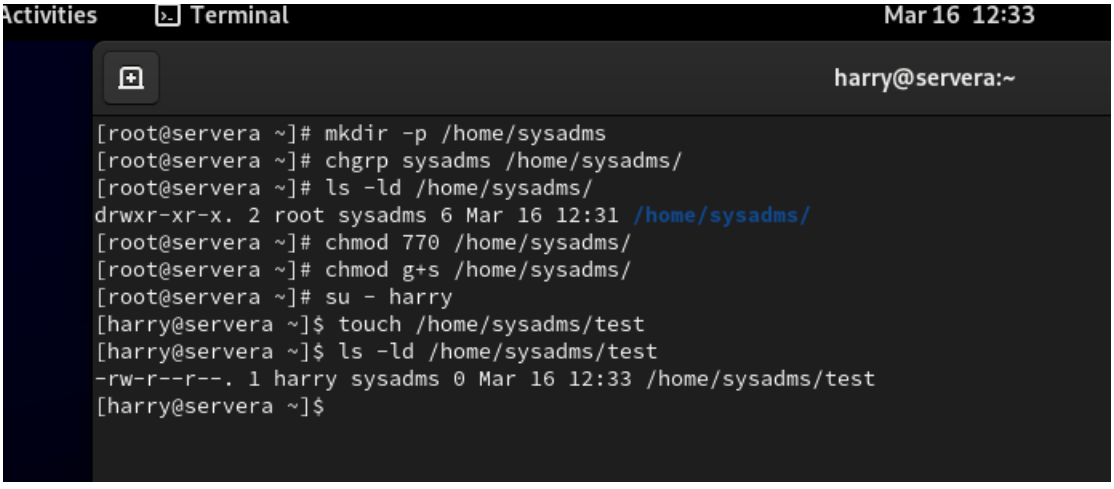
#chmod g+s /home/sysadms

Verify :

#su - harry

#touch /home/sysadms/test

#ls -ld /home/sysadms/test



Q7: Configure NTP chrony server is "classroom.example.com"

Solution:

#systemctl start chronyd

#systemctl enable chronyd

#timedatectl

#timedatectl set-ntp true

#timedatectl

#vim /etc/chrony.conf

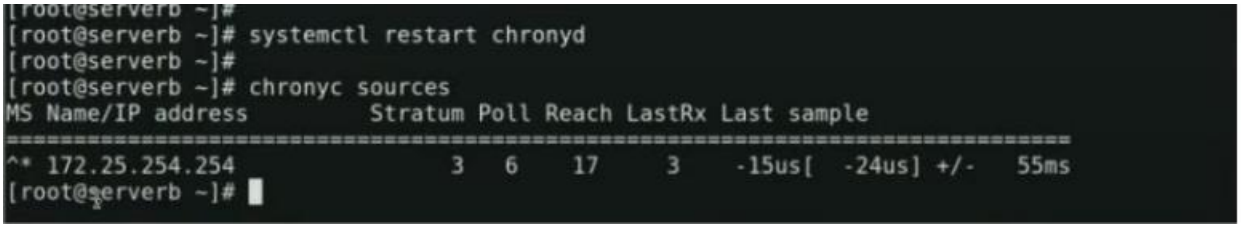
Write the name of server inside the file :

#systemctl restart chronyd

#systemctl enable chronyd

Verify:

#chronyc sources



Q8: configure AutoFS

NfS exports the /home/guests to your system .

-remoteuser6 home directory is **classroom.example.com:/home /remoteuser6**

-remoteuser6 home directory should be automounted locally beneath at **/home/guests/ remoteuser6**

-while login with remoteuser6 then only home directory should accessible from your system that remoteuser6 and password is "redhat"

Solution:

#systemctl start autofs

#systemctl enable autofs

#getent passwd remoteuser6

#vim /etc/auto.master

Inside file:

/home /etc/auto.misc

_____

#vim /etc/auto.misc

Inside file:

Remoteuser6 -rw,nfs,sync **classroom.example.com:/home /remoteuser6**

_____

#systemctl restart autofs

#systemctl enable autofs

Optional : chmod 777 /home/

Verify:

#su – remoteuser6

#pwd

Q9: . Create user 'bob' with 2112 uid and set the password 'trootent'

Solution:

#useradd -u 2112 bob

#passwd bob

Verify :

#id bob

Q10: create an archive '/root/test.tar.gz' of '/var/tmp' dir and compress it with gzip..

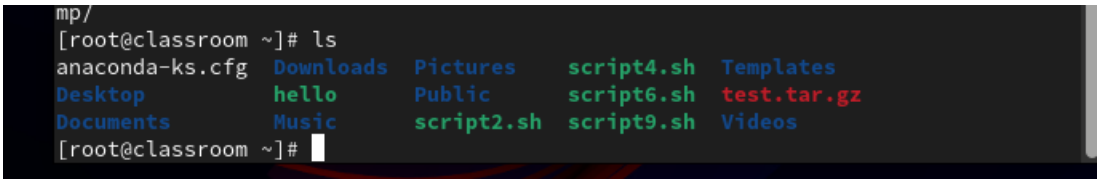
Compress type	option	Extension
gzip	-zcvf	.gz
bzip	-jcvf	.bz2

Solution:

#tar -zcvf /root/test.tar.gz /var/tmp

Verify :

#ls



Q11: locate all files owned by sarah and copy it under /root/find_user

Solution:

#mkdir /root/find_user

#find / -user sarah -type f

#find / -user sarah -type f -exec cp -rfvp {} /root/find_user \;

Verify:

#ls /root/find_user

```
[root@classroom ~]# mkdir /root/find_user
[root@classroom ~]# find / -user sarah -type
find: missing argument to `-type'
[root@classroom ~]# find / -user sarah -type f
find: ‘/proc/2485/task/2485/fdinfo/6’: No such file or directory
find: ‘/proc/2485/fdinfo/5’: No such file or directory
/var/spool/mail/sarah
/home/sarah/.bash_logout
/home/sarah/.bash_profile
/home/sarah/.bashrc
[root@classroom ~]# find / -user sarah -type f -exec cp -rfvp {} /root/find_user/ \;
find: ‘/proc/2505/task/2505/fdinfo/6’: No such file or directory
find: ‘/proc/2505/fdinfo/5’: No such file or directory
'/var/spool/mail/sarah' -> '/root/find_user/sarah'
'/home/sarah/.bash_logout' -> '/root/find_user/.bash_logout'
'/home/sarah/.bash_profile' -> '/root/find_user/.bash_profile'
'/home/sarah/.bashrc' -> '/root/find_user/.bashrc'
[root@classroom ~]# ls -a /root/find_user
.  ..  .bash_logout  .bash_profile  .bashrc  sarah
```

Q12. Find a string ' home ' from '/etc/passwd' and put it into '/root/search.txt' file

Solution:

#grep "home" /etc/passwd

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

Verify:

#cat /root/search.txt

```
[root@classroom ~]# grep "home" /etc/passwd
revan:x:1000:1000:revan:/home/revan:/bin/bash
bob:x:2112:2112::/home/bob:/bin/bash
najd:x:2113:2113::/home/najd:/bin/bash
revan1:x:2114:2114::/home/revan1:/bin/bash
natasha:x:2115:2116::/home/natasha:/bin/bash
harry:x:2116:2117::/home/harry:/bin/bash
sarah:x:2117:2118::/home/sarah:/usr/sbin/nologin
remoteuser6:x:2118:2119::/home/remoteuser6:/bin/bash
[root@classroom ~]# grep "home" /etc/passwd > /root/search.txt
[root@classroom ~]# cat /root/search.txt
revan:x:1000:1000:revan:/home/revan:/bin/bash
bob:x:2112:2112::/home/bob:/bin/bash
najd:x:2113:2113::/home/najd:/bin/bash
revan1:x:2114:2114::/home/revan1:/bin/bash
natasha:x:2115:2116::/home/natasha:/bin/bash
harry:x:2116:2117::/home/harry:/bin/bash
sarah:x:2117:2118::/home/sarah:/usr/sbin/nologin
remoteuser6:x:2118:2119::/home/remoteuser6:/bin/bash
[root@classroom ~]#
```

Q13: create a container image named monitor with this link (-------) do not edit the Container file

login with user "student" to perform all the questions related to container

في هذا السؤال راح نفتح نافذتين في التيرمنال و نسوي اتصالين ssh واحد للمستخدم المذكور في السؤال وواحد للروت

solution:

as user

#ssh **student**@node1

#podman login ---------- (link in instruction)

User:

Password

#wget ---------- (link in question)

#podman build -t monitor . النقطة ترا ضمن الكوماند انتبهوا لها

#podman images

Q14 :

1. Create a Container name asciipdf

2. Use monitor image for asciipdf which you previously created

3. Create a systemd services name container-asciipdf for "student" user only

4. Service will automatically started accross reboot do no any manual instrument.

5. Local host Directory /opt/files attach to Container directory /opt/incoming.

6. Local host Directory /opt/processed attach to container host directory /opt/outgoing (you don't have to install podman or container-tools everything is pre installed)

Solution:

As root :

#ssh **root**@node1

#mkdir /opt/files /opt/processed

#chown student:student /opt/files /opt/processed

#chmod 777 /opt/files /opt/processed

#loginctl enable-linger student

as user

#podman run -d - - name ascii2pdf -v /opt/files/:/opt/incoming/:Z -v /opt/processed/:/opt/outgoing/:Z monitor

#podman ps

To verify that container works (you will see the result of last command that the files is pdf) :

#touch /opt/files/data

#ls /opt/processed

#file /opt/processed/data

#mkdir -p .config/systemd/user

#cd .config/systemd/user

#podman generate systemd - -name ascii2pdf - -new - - files

#ls

#systemctl - - user daemon-reload

#systemctl - - user start container-ascii2pdf.service

#systemctl - - user enable container-ascii2pdf.service

As root :

reboot

As user:

#ssh user@node1

#podman ps

```
[root@serverb ~]# mkdir /opt/files  /opt/processed
[root@serverb ~]#
[root@serverb ~]# chown student:student /opt/files  /opt/processed
[root@serverb ~]#
[root@serverb ~]# chmod 777 /opt/files  /opt/processed
[root@serverb ~]#
[root@serverb ~]# loginctl enable-linger student
[root@serverb ~]#
```

Now as a Student user,

```
[student@serverb ~]$ podman run -d --name ascii2pdf -v /opt/files/:/opt/incoming/:Z -v /opt/processed/:/opt/outcoming/:Z  monitor
9225e642c00f809d21cfe313fea1eb7e18466a49552bf0e3813b1e32f7672f0a
[student@serverb ~]$
[student@serverb ~]$ podman ps
CONTAINER ID  IMAGE                   COMMAND              CREATED         STATUS             PORTS       NAMES
9225e642c00f  localhost/monitor:latest  /bin/bash -c /usr...  2 seconds ago  Up 3 seconds ago               ascii2pdf
[student@serverb ~]$
```

```
[student@serverb ~]$ touch /opt/files/data
[student@serverb ~]$
[student@serverb ~]$ ls /opt/processed/
data
[student@serverb ~]$
```

```
[student@serverb ~]$ file /opt/processed/data
/opt/processed/data: PDF document, version 1.4
[student@serverb ~]$
[student@serverb ~]$ mkdir -p .config/systemd/user
[student@serverb ~]$
[student@serverb ~]$ cd .config/systemd/user
[student@serverb user]$
[student@serverb user]$ podman generate systemd --name ascii2pdf --new --files
/home/student/.config/systemd/user/container-ascii2pdf.service
[student@serverb user]$
[student@serverb user]$ ls
container-ascii2pdf.service
[student@serverb user]$
[student@serverb user]$ systemctl --user daemon-reload
```

```
[student@serverb user]$
[student@serverb user]$ systemctl --user start container-ascii2pdf.service
[student@serverb user]$
[student@serverb user]$ systemctl --user enable container-ascii2pdf.service
Created symlink /home/student/.config/systemd/user/default.target.wants/container-ascii2pdf.service → /home/student/.confi
g/systemd/user/container-ascii2pdf.service.
[student@serverb user]$
[student@serverb user]$ podman ps
CONTAINER ID  IMAGE                   COMMAND              CREATED         STATUS             PORTS       NAMES
695f96e7fb78  localhost/monitor:latest  /bin/bash -c /usr...  10 seconds ago  Up 10 seconds ago              ascii2pdf
[student@serverb user]$
```

Node2:

Q15 : break node 2 password

نختار الخيار الموجود في الصورة عشان نعيد تشغيل النود بعدين نختار grub 2 او الخيار اللي عنده سهم

1-Ctrl + e

2-write (rd.break) in end linux line

#mount -o remount,rw /sysroot

#chroot /sysroot

#passwd root

#touch /.autorelabel

#exit

#exit

It will reboot automatically

Q16: configure yum repository (same as question 2 but with different links)

Q17: swap partition : . Add a swap partition of 512MB and mount it permanently.

Solution:

#free -m

#lsblk

#fdisk /dev/vdb

-n

-p

Enter

Enter

+512MiB

-t

Enter

- L to list types of partitions and enter the number (or you could directly write "swap")

-w

#partprobe /dev/vdb

#mkswap /dev/vdb1

It will print UUID , copy it and paste it in fstab file

#vim /etc/fstab

Inside file :

UUID=219c38e0309480923849823894038 swap swap defaults 0 0

#free -m

#swapon -a

#free -m

Verify :

#reboot

#lsblk

Q18 : Create a logical Volume and mount it permanently.

- Create the logical volume with the name "lvname" by using 50 from the volume group "groupname ".

- Consider size of volume group as "8MB".

- Mount it on '/mnt/ lvname with file system ext3.

Solution :

#lsblk

#fdisk /dev/vdb

-n

-p

Enter

Enter

+1G

-t

Enter

- L to list types of partitions and enter the number (or you could directly write "lvm")

-w

#partprobe /dev/vdb

#pvcreate /dev/vdb2

#pvs

#vgcreate -s 8M groupname /dev/vdb2

#vgs

#lvceate -l 50 -n lvname groupname

#mkfs.ext3 /dev/groupname/lvname

#mkdir /mnt/lvname

Inside file :

/dev/groupname/lvname /mnt/lvname ext3 defaults 0 0

#mount -a

#lsblk

Verify:

#reboot

#lsblk

Q19: Resize the logical volume "lvname" to be 230Mib . after reboot size should be in between 200MB to 300MB

Solution:

#lvextend -r -L 320MiB /dev/groupname/lvname

#mount -a

#resize2fs /dev/groupname/lvname

Note : if the file system was xfs the command will be (xfs_growfs /dev/groupname/lvname)

Verify :

#reboot

#lsblk

Q20: configure System Tuning:

-Choose the recommended 'tuned' profile for your system and set it as the default

Solution:

#systemctl start tuned

#systemctl enable tuned

#tuned-adm active

#tuned-adm recommend

#tuned-adm profile --------- ونكتب اللي طلع لنا في الكوماند السابق

#tuned-adm active

#systemctl restart tuned

#systemctl enable tuned

Extra Questions:

Q1: Make a Simple script :

Create a mysearch script to:

-locate all files under /usr/share having size 10M.

-after executing mysearch script file and searched files has to be copied under /root/myfiles

Solution :

#mkdir /root/myfiles

#vim mysearch.sh

Inside file:

#!/bin/bash

find /usr/share -type f -size -10M -exec cp -prvf {} /root/myfiles \;

_____

#chmod u+x mysearch.sh

#./mysearch.sh

Verify:

#ls -a /root/myfiles

Q2: Expire password :

To make all the local users present in the system should passwd expire in 30 days

-for single user harry , 30 days :

#chage -M 30 harry

-for all users , make changes in file :

#vim /etc/login.defs

Inside file : search for PASS_MAX_DAYS and change the number

PASS_MAX_DAYS 30

Verify:

#cat /etc/shadow

Q3: Configure application

Configure the application RHCSA as a harry user , when login it will show the message "welcome to advantage pro"

Solution:

#su – harry

#vim .bash_profile

Inside file :

RHCSA="welcome to advantage pro"

export RHCSA

echo $RHCSA

____

#source .bash_profile

Verify:

Logout

su – harry

Welcome to advantage pro

Q4: Sudo privileges

Configure sudo for group 'elite' so that its members should have sudo access with no password

Solution :

#visudo

Inside file :

%elite ALL=(ALL) NOPASSWD: ALL

Verify :

Switch to user from elite group " if there is no user then create one and add it to elite group "

#su – username

#sudo useradd test

#sudo /etc/passwd

Q5: ACL

Copy "/etc/fstab" file to " /var/tmp then configure "var/tmp/fstab" file permissions with ACL

-the file /var/tmp/fstab should owned by the "root"

-the file /var/tmp/fstab should belongs to the group "root"

-the file /var/tmp/fstab shouldn't be execuyable by anyone

-the user "sarah" should be able to read and write to the file

-the user "harry" can neither read nor write to the file

-other users (future and current) should be able to read /var/tmp/fstab

Solution:

#cp /etc/fstab /var/tmp

#chown root:root /var/tmp/fstab

#chmod ugo-x /var/tmp/fstab

#setfacl -m u:sarah:rw /var/tmp/fstab

#setfacl -m u:harry:0 /var/tmp/fstab

#chmod o=r /var/tmp/fstab