****for ldap question stop nscd (A Name Service Caching Daemon (nscd))service as it will crash with ldap client just because that is also an ldap client****

complete all the questions within 2.5 hours and everything will be checked after rebooting your system. assign a static ip addrees to your server system ;172.25.x.11;. your gateway is 172.25.x.254 and dns will be provided by the 172.25.254.254 server. your repositories will be available at http://content.example.com/rhel7.0/x86_64/dvd perform the below tasks on your server system.

QUESTION NO: 1 set your root password to rhcsatest

Pass the parameter rd.break at the boot time and then reset the password like below
mount –o remount,rw /sysroot
chroot /sysroot
passwd
touch /.autorelabel
exit
exit

QUESTION NO: 2 Configure your Host Name, IP Address, Gateway and DNS. Host name: system1.example.com IP Address: 172.25.x.11/24 Gateway: 172.25.254.254 DNS: 172.25.254.254

Answer:
hostnamectl --set-hostname system1.example.com

vim /etc/syscofig/network-scripts/ifcfg-eth0

DEVICE=eth0
IPADDR=172.25.x.11
GATEWAY=172.25.x.254
DNS1=172.25.254.254
ONBOOT=yes
BOOTPROTO=static
NETMASK=255.255.255.0

OR use the graphical interface nm-connection-editor

OR use the nmcli command line tool

nmcli connection add con-name exam ifname eth0 type ethernet ip4 172.25.0.11/24 gw4 172.25.0.254
nmcli connection modify exam ipv4.method manual
nmcli connection modify exam connection.autoconnect yes
nmcli connection down “System eht0”
nmcli connection up exam
nmcli con mod “System eth0” connection.autoconnect no

*********CREATE THE REPO FILE***********
cd /etc/yum.repos.d
vim exam.repo
[test]
name=examrepo
baseurl=http://content.example.com/rhel7.0/x86_64/dvd
gpgcheck=0

or

yum-config-manager –addrepo=http://content.example.com/rhel7.0/x86_64/dvd
and then set gpgcheck=0 on that file

#yum repolist (check the status value for new repo, it cannot be 0)

QUESTION NO: 3 Set your selinux type to permissive
#vim /etc/sysconfig/selinux
Set to permissive

QUESTION NO: 4 Add 3 users: harry, natasha, tom. The requirements: The Additional group of the two users: harry, Natasha is the admin group. The user: tom's login shell should be non-interactive.

Answer:
groupadd admin
useradd harry
usermod -aG admin harry
useradd natasha
usermod -aG admin natasha
useradd -s /sbin/nologin tom
id harry;id Natasha (Show additional group)
cat /etc/passwd | grep tom (Show the login shell)

QUESTION NO: 5 Create a catalog under /home named admins. Its respective group is requested to be the admin group. The group users could read and write, while other users are not allowed to access it. The files created by users from the same group should be group owned by admin group. And the people within the group shouldn’t be able to delete others files.

Answer:
mkdir /home/admins
chown :admin /home/admins
chmod 770 /home/admins OR chmod g+w /home/admins
chmod g+s /home/admins
chmod o+t /home/admins

QUESTION NO: 6 Configure a task: plan to run echo hello command at 14:23 every day.

Answer:

```
# which echo
# crontab -e
23 14 * * * /bin/echo hello > /tmp/examfile
# crontab -l (Verify)
```

QUESTION NO: 7 Find the files owned by harry, and copy it to catalog: /opt/dir

Answer:

```
# cd /opt/
# mkdir dir
# find / -type f -user harry -exec cp -ar {} /opt/dir/ \;
```

QUESTION NO: 8 Find the rows that contain abcde from file /etc/testfile, and write it to the file/tmp/testfile, and the sequence is requested as the same as /etc/testfile.

Answer:

```
# cat /etc/testfile | grep “abcde” > /tmp/testfile
```

OR

```
grep “abcde” /etc/testfile > /tmp/testfile
```

QUESTION NO: 9 Create a 2G swap partition which take effect automatically at boot-start, and it should not affect the original swap partition.

Answer:

```
# fdisk -l /dev/sda (check Partition table) or gdisk –l /dev/sda
# fdisk /dev/sda
# mkswap /dev/sda8
# Copy UUID
# swapon -a
# vim /etc/fstab UUID=XXXX swap swap defaults 0 0 (swapon -s)
```

QUESTION NO: 10 Create a user named alex, and the user id should be 1234, and the password should be alex111.

Answer:

```
# useradd -u 1234 alex
# passwd alex alex111 alex111 OR echo alex111|passwd -stdin alex
```

QUESTION NO: 11 Install a FTP server, and request to anonymous download from /var/ftp/pub catalog.

```
# yum install -y vsftpd
# systemctl start vsftpd
# systemctl enable vsftpd OR chkconfig vsftpd on
# vim /etc/vsftpd/vsftpd.conf anonymous_enable=YES
```

QUESTION NO: 12 Configure a HTTP server, which can be accessed through http://station.domain40.example.com. Please download the released page from http://ip/dir/example.html.

Answer:

```
# yum install -y httpd
# systemctl enable httpd
# cd /var/www/html
# wget http://ip/dir/example.html
# cp example.com index.html
# systemctl start httpd.service
# curl http://station.domain40.example.com
```

QUESTION NO: 13 Configure the verification mode of your host account and the password as LDAP. And it can use ldapuser40. The password is set as password. Use the dc=example,dc=com for the controller domain.And the certificate to login successfully can be downloaded from http://classroom.example.com/pub/EXAMPLE-CA-CERT. After the user logs on the user has no host directory unless you configure the autofs.

Answer:

```
# systemctl stop nscd
# systemctl disable nscd && systemctl mask nscd
# yum install authconfig-gtk krb5-workstation sssd
# authconfig-gtk

# getent passwd ldapuser40
```

QUESTION NO: 14 Configure autofs to make sure after login successfully, it has the home directory autofs, which is shared as /rhome/ldapuser40 at the ip: 172.25.254.254. and it also requires that, other ldap users can use the home directory normally.

Answer:

```
# yum install autofs
# systemctl enable autofs
# systemctl start autofs
# vim /etc/auto.master
```

```
/rhome /etc/auto.ldap
# vim /etc/auto.ladp
ldapuser40 -rw 172.24.40.10:/rhome/ldapuser40
OR
* -rw 172.16.40.10:/rhome/&(only if asked to configure for all ldap
users)

# service autofs stop
# server autofs start
# su - ladpuser40
```

```
 QUESTION NO: 15 Configure the system to sync time from 172.25.254.254.
 Answer:
 vim /etc/chronyc.conf
server classroom.example.com iburst
systemctl restart chronyd
```

```
QUESTION NO: 16 Change the logical volume capacity named vo from 190M to
300M. and the size of the floating range should set between 280 and 320.
(This logical volume has been mounted in advance.)
 Answer:
# vgdisplay (Check the capacity of vg, if the capacity is not enough,
need to create pv , vgextend , lvextend)
# lvdisplay (Check lv)
# lvextend -L +110M /dev/vg2/lv2
# resize2fs /dev/vg2/lv2 OR xfsgrowfs /dev/vg2/lv2(if using xfs file
system)
# mount -a (Verify)




---------- (Decrease lvm)------------------
# umount /media
# fsck -f /dev/vg2/lv2
# resize2fs -f /dev/vg2/lv2 100M
# lvreduce -L 100M /dev/vg2/lv2
# mount -a
# lvdisplay (Verify)
```

```
QUESTION NO: 17 Create a volume group, and set extend size as 16M. And
create a logical volume containing 50 extends and name lvm02, make it as
ext4 file system, and mounted automatically under /mnt/data.
 Answer:
# fdisk /dev/sda or gdisk /dev/sda accordingly
# pvcreate /dev/sdaX
# vgcreate -s 16M vg1 /dev/sdaX
```

```
# lvcreate -l 50 -n lvm02
# mkfs.ext4 /dev/vg1/lvm02
# blkid /dev/vg1/lv1
# mkdir -p /mnt/data
# vim /etc/fstab
UUID=xxxxxxxx /mnt/data ext4 defaults 0 0
# mount -a
# mount (Verify)
```

QUESTION NO: 18 A new kernel is the repository http://classroom.example.com/content/rhel7.0/x86_64/errata/ Update your kernel to use the new kernel. The system should boot from the new kernel and the old kernel should remain the same.

Answer:

```
# vim /etc/yum.repos.d/kernel.repo
[ker]
name=kern
baseurl=http://classroom.example.com/content/rhel7.0/x86_64/errata/
gpgcheck=0

# yum repolist
# yum install kernel
# uname -r
(if you want to change the booting kernel use the command ;grub2-set-default=0 Or 1;)
```

Question NO: 19 add the kernel parameter max_loop=16 to the kernel which will affect after booting up.

Answer:

```
Vim /boot/grub2/grub.cfg
Add max_loop=16 to thr end of the line which starts as linux16
```

QUESTION NO: 20 Create a 512M partition, make it as ext4 file system, mounted automatically under /mnt/datanew and which take effect automatically at boot-start add the label test to the partition.

Answer:

```
# fdisk /dev/vda
# partx -a /dev/vda
# mkfs -t ext4 /dev/vda5
# mkdir /mnt/datanew
# vim /etc/fstab
/dev/vda5 /mnt/datanew ext4 defaults 0 0
# mount -a
```

QUESTION NO: 21 Download ftp://192.168.0.254/pub/boot.iso to /root, and mounted automatically under /media/cdrom and which take effect automatically at boot-start.
Answer:

```
# cd /root
# wget ftp://192.168.0.254/pub/boot.iso
# mkdir -p /media/cdrom
# vim /etc/fstab
/root/boot.iso /media/cdrom iso9660 defaults,loop 0 0
# mount -a mount [-t vfstype] [-o options] device dir
```

QUESTION NO: 22 Add admin group and set gid=600
Answer:

```
# groupadd -g 600 admin
```

QUESTION NO: 23 Create two users call saman and nimal. create a directory call /testqadata. both users should have write access to /testqadata directory. and user saman should have write access to the future files also.
Answer:

```
# useradd saman
# useradd nimal
# mkdir /testqadata
# setfacl -m u:saman:rwx /testqadata
# setfacl -m u:nimal:rwx /testqadata
# setfacl -m d:u:saman:rwx /testqadata
# getfacl /testqadata
```

QUESTION NO: 24 Create a 400MB partition and mount it under /mnt/newfat after formatting using vfat file system.
Answer:

```
Fdisk /dev/vda
Create a new partition
Mkfs.vfat /dev/vda7
Vim /etc/fstab
/dev/vda7  /mnt/newfat vfat defaults 0 0
```