Exam A

QUESTION 1
SIMULATION

Configure your Host Name, IP Address, Gateway and DNS.
Host name: station.domain40.example.com
/etc/sysconfig/network
hostname=abc.com
hostname abc.com
IP Address:172.24.40.40/24
Gateway172.24.40.1
DNS:172.24.40.1

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # cd /etc/syscofig/network-scripts/
# ls
# vim ifcfg-eth0 (Configure IP Address, Gateway and DNS) IPADDR=172.24.40.40
GATEWAY=172.24.40.1
DNS1=172.24.40.1

vim /etc/sysconfig/network
(Configure Host Name)
HOSTNAME= station.domain40.example.com

OR

Graphical Interfaces:
System->Preference->Network Connections (Configure IP Address, Gateway and DNS) Vim /etc/sysconfig/network

(Configure Host Name)

QUESTION 2
SIMULATION

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: See explanation below.

Explanation

Explanation/Reference:
Explanation: # useradd -G admin harry
useradd -G admin natasha
useradd -s /sbin/nologin tom
id harry;id Natasha (Show additional group)
cat /etc/passwd
(Show the login shell)

OR

system-config-users

QUESTION 3
SIMULATION

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 also be the admin group.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # cd /home/
mkdir admins /
chown .admin admins/
chmod 770 admins/
chmod g+s admins/

QUESTION 4
SIMULATION

Configure a task: plan to run echo hello command at 14:23 every day.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # which echo
crontab -e
23 14 * * * /bin/echo hello
crontab -l (Verify)

QUESTION 5
SIMULATION

Find the files owned by harry, and copy it to catalog: /opt/dir

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # cd /opt/
mkdir dir
find / -user harry -exec cp -rfp {} /opt/dir/ \;

QUESTION 6
SIMULATION

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: See explanation below.

Explanation

Explanation/Reference:

Explanation: # cat /etc/testfile | while read line;
do
echo $line | grep abcde | tee -a /tmp/testfile
done

OR

grep `abcde' /etc/testfile > /tmp/testfile

QUESTION 7
SIMULATION

Create a 2G swap partition which take effect automatically at boot-start, and it should not affect the original swap partition.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # fdisk /dev/sda
p
(check Partition table)
n
(create new partition: press e to create extended partition, press p to create the main partition, and the extended partition is further divided into logical partitions) Enter
+2G
t
l
W
partx -a /dev/sda
partprobe
mkswap /dev/sda8

Copy UUID
swapon -a
vim /etc/fstab
UUID=XXXXX swap swap defaults 0 0

(swapon -s)

QUESTION 8
SIMULATION

Create a user named alex, and the user id should be 1234, and the password should be alex111.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # useradd -u 1234 alex
passwd alex
alex111
alex111

OR

echo alex111|passwd -stdin alex

QUESTION 9
SIMULATION

Install a FTP server, and request to anonymous download from /var/ftp/pub catalog. (it needs you to configure yum direct to the already existing file server.)

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # cd /etc/yum.repos.d
vim local.repo
[local]
name=local.repo

baseurl=file:///mnt
enabled=1
gpgcheck=0

# yum makecache
# yum install -y vsftpd
# service vsftpd restart
# chkconfig vsftpd on
# chkconfig --list vsftpd
# vim /etc/vsftpd/vsftpd.conf
anonymous_enable=YES

QUESTION 10
SIMULATION

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: See explanation below.

Explanation

Explanation/Reference:
Explanation: # yum install -y httpd
chkconfig httpd on
cd /var/www/html
wget http://ip/dir/example.html
cp example.com index.html
vim /etc/httpd/conf/httpd.conf
NameVirtualHost 192.168.0.254:80
<VirtualHost 192.168.0.254:80>
DocumentRoot /var/www/html/
ServerName station.domain40.example.com
</VirtualHost>

QUESTION 11
SIMULATION

Configure the verification mode of your host account and the password as LDAP. And it can login successfully through ldapuser40. The password is set as "password". And the certificate can be downloaded from http://ip/dir/ldap.crt. After the user logs on the user has no host directory unless you configure the autofs in the following questions.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: system-config-authentication
LDAP Server: ldap//instructor.example.com (In domain form, not write IP)

OR

yum groupinstall directory-client (1.krb5-workstation 2.pam-krb5 3.sssd)
system-config-authentication

1.User Account Database: LDAP
2.LDAP Search Base DN: dc=example,dc=com
3.LDAP Server: ldap://instructor.example.com (In domain form, not write IP) 4.Download CA Certificate
5.Authentication Method: LDAP password
6.Apply
getent passwd ldapuser40

QUESTION 12
SIMULATION

Configure autofs to make sure after login successfully, it has the home directory autofs, which is shared as / rhome/ldapuser40 at the ip: 172.24.40.10. and it also requires that, other ldap users can use the home directory normally.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # chkconfig autofs on
cd /etc/
vim /etc/auto.master
/rhome /etc/auto.ldap
cp auto.misc auto.ldap
vim auto.ladp
ldapuser40 -rw,soft,intr 172.24.40.10:/rhome/ldapuser40
* -rw,soft,intr 172.16.40.10:/rhome/&
# service autofs stop
# server autofs start
# showmount -e 172.24.40.10
# su - ladpuser40

QUESTION 13
SIMULATION

Configure the system synchronous as 172.24.40.10.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: Graphical Interfaces:
System-->Administration-->Date & Time

OR

system-config-date

QUESTION 14
SIMULATION

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: See explanation below.

Explanation

Explanation/Reference:
Explanation: # 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

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)

OR

e2fsck -f /dev/vg1/lvm02
resize2fs -f /dev/vg1/lvm02
mount /dev/vg1/lvm01 /mnt
lvreduce -L 1G -n /dev/vg1/lvm02
lvdisplay (Verify)

QUESTION 15
SIMULATION

Create a volume group, and set 16M as a extends. And divided a volume group containing 50 extends on volume group lv, make it as ext4 file system, and mounted automatically under /mnt/data.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # pvcreate /dev/sda7 /dev/sda8
# vgcreate -s 16M vg1 /dev/sda7 /dev/sda8
# lvcreate -l 50 -n lvm02
# mkfs.ext4 /dev/vg1/lvm02
# blkid /dev/vg1/lv1
# vim /etc/fstab
# mkdir -p /mnt/data
UUID=xxxxxxxx /mnt/data ext4 defaults 0 0

vim /etc/fstab

mount -a
mount
(Verify)

QUESTION 16
SIMULATION

Upgrading the kernel as 2.6.36.7.1, and configure the system to Start the default kernel, keep the old kernel available.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # cat /etc/grub.conf
# cd /boot
# lftp it
# get dr/dom/kernel-xxxx.rpm
# rpm -ivh kernel-xxxx.rpm
# vim /etc/grub.conf
default=0

QUESTION 17
SIMULATION

Create a 512M partition, make it as ext4 file system, mounted automatically under /mnt/data and which take effect automatically at boot-start.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # fdisk /dev/vda
n
+512M
w
partprobe /dev/vda
mkfs -t ext4 /dev/vda5
mkdir -p /data
vim /etc/fstab
/dev/vda5 /data ext4 defaults 0 0
mount -a

QUESTION 18
SIMULATION

Create a volume group, and set 8M as a extends. Divided a volume group containing 50 extends on volume group lv (lvshare), make it as ext4 file system, and mounted automatically under /mnt/data. And the size of the floating range should set between 380M and 400M.

Answer: See explanation below.

Explanation

Explanation/Reference:

Explanation: # fdisk
partprobe
pvcreate /dev/vda6
vgcreate -s 8M vg1 /dev/vda6 -s
lvcreate -n lvshare -l 50 vg1 -l
mkfs.ext4 /dev/vg1/lvshare
mkdir -p /mnt/data
vim /etc/fstab
/dev/vg1/lvshare /mnt/data ext4 defaults 0 0
mount -a
df -h

QUESTION 19
SIMULATION

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: See explanation below.

Explanation

Explanation/Reference:
Explanation: # 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 20
SIMULATION

Add admin group and set gid=600

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # groupadd -g 600 admin

QUESTION 21
SIMULATION

Add user: user1, set uid=601
Password: redhat
The user's login shell should be non-interactive.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # useradd -u 601 -s /sbin/nologin user1
passwd user1
redhat

QUESTION 22

SIMULATION

Add users: user2, user3.
The Additional group of the two users: user2, user3 is the admin group Password: redhat

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # useradd -G admin user2
useradd -G admin user3
passwd user2
redhat
passwd user3
redhat

QUESTION 23
SIMULATION

Copy /etc/fstab to /var/tmp name admin, the user1 could read, write and modify it, while user2 without any permission.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: # cp /etc/fstab /var/tmp/
chgrp admin /var/tmp/fstab
setfacl -m u:user1:rwx /var/tmp/fstab
setfacl -m u:user2:--- /var/tmp/fstab
ls -l
-rw-rw-r--+ 1 root admin 685 Nov 10 15:29 /var/tmp/fstab

QUESTION 24
SIMULATION

Configure a task: plan to run echo "file" command at 14:23 every day.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: (a) Created as administrator
crontab -u natasha -e
23 14 * * * /bin/echo "file"
(b)Created as natasha
# su - natasha
$ crontab -e
23 14 * * * /bin/echo "file"

QUESTION 25
SIMULATION

Configure a default software repository for your system.

One YUM has already provided to configure your system on http://server.domain11.example.com/pub/ x86_64/

Server, and can be used normally.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: Yum-config-manager --add-repo=http://content.example.com/rhel7.0/x86-64/dvd" is to generate a file vim content.example.com_rhel7.0_x86_64_dvd.repo, Add a line gpgcheck=0

Yumcleanall
Yumrepolist

Almost 4305 packages are right, Wrong Yum Configuration will lead to some following questions cannot be worked out.

QUESTION 26
SIMULATION

Adjust the size of the Logical Volume.

Adjust the size of the vo Logical Volume, its file system size should be 290M. Make sure that the content of this system is complete.

Note: the partition size is rarely accurate to the same size as required, so in the range 270M to 320M is acceptable.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: Addition
df -hT
lvextend -L +100M /dev/vg0/vo
Lvscan
xfs_growfs /home/ //home is the mounted directory of the LVM, this step just need to do in the practice environment, and test EXT4 does not need this step.
resize2fs /dev/vg0/vo// use this command to update in examination.
df -hT

OR

Subtraction
e2fsck -f/dev/vg0/vo
umount /home
resize2fs /dev/vg0/vo // the final required partition capacity is 100M lvreduce -l 100M /dev/vg0/vo
mount /dev/vg0/vo/home
df -hT

QUESTION 27
SIMULATION

Create User Account.

Create the following user, group and group membership:
Adminuser group
User natasha, using adminuser as a sub group
User Harry, also using adminuser as a sub group

User sarah, can not access the SHELL which is interactive in the system, and is not a member of adminuser, natashaharrysarah password is redhat.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: groupadd adminuser
useradd natasha -G adminuser
useradd haryy -G adminuser
useradd sarah -s /sbin/nologin

Passwd user name // to modify password or echo redhat | passwd --stdin user name id natasha // to view user group.

QUESTION 28
SIMULATION

Configure /var/tmp/fstab Permission.

Copy the file /etc/fstab to /var/tmp/fstab. Configure var/tmp/fstab permissions as the following:
Owner of the file /var/tmp/fstab is Root, belongs to group root
File /var/tmp/fstab cannot be executed by any user
User natasha can read and write /var/tmp/fstab
User harry cannot read and write /var/tmp/fstab
All other users (present and future) can read var/tmp/fstab.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: cp /etc/fstab /var/tmp/
/var/tmp/fstab view the owner setfacl -m u:natasha:rw- /var/tmp/fstab setfacl -m u:haryy:--- /var/tmp/fstab

Use getfacl /var/tmp/fstab to view permissions

QUESTION 29
SIMULATION

Configure a cron Task.

User natasha must configure a cron job, local time 14:23 runs and executes: */bin/echo hiya every day.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: crontab –e –u natasha
23 14/bin/echo hiya
crontab -l -u natasha // view
systemctlenable crond
systemcdlrestart crond

QUESTION 30
SIMULATION

Create a Shared Directory.

Create a shared directory /home/admins, make it has the following characteristics:
/home/admins belongs to group adminuser
This directory can be read and written by members of group adminuser Any files created in /home/ admin, group automatically set as adminuser.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: mkdir /home/admins
chgrp -R adminuser /home/admins
chmodg+w /home/admins
chmodg+s /home/admins

QUESTION 31
SIMULATION

Install the Kernel Upgrade.

Install suitable kernel update from:
http://server.domain11.example.com/pub/updates.
Following requirements must be met:
Updated kernel used as the default kernel of system start-up.
The original kernel is still valid and can be guided when system starts up.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: Using the browser open the URL in the question, download kernel file to root or home directory.
uname –r// check the current kernel version
rpm –ivh kernel-*.rpm
vi /boot/grub.conf// check

Some questions are: Install and upgrade the kernel as required. To ensure that grub2 is the default item for startup.
Yum repo : http://content.example.com/rhel7.0/x86-64/errata

OR

uname -r // check kernel

Yum-config-manager --add-repo="http://content.example.com/rhel7.0/x86-64/ errata"

Yum clean all
Yum list kernel// install directly
Yum -y install kernel// stuck with it, do not pipe! Please do not pipe!

Default enable new kernel grub2-editenv list// check
Modify grub2-set-default "kernel full name"
Grub2-mkconfig –o/boot/grub2/grub.cfg// Refresh

QUESTION 32
SIMULATION

Binding to an external validation server.

System server.domain11.example.com provides a LDAP validation service, your system should bind to this service as required:
Base DN of validation service is dc=example,dc=com
LDAP is used for providing account information and validation information Connecting and using the certification of http://server.domain11.example.com/pub/EXAMPLE-CA-CERT to encrypt
After the correct configuration, ldapuser1 can log into your system, it does not have HOME directory until you finish autofs questions, ldapuser1 password is password.

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: yum -y install sssd authconfig-gtk krb5-workstation authconfig-gtk // open the graphical interface

Modify user account database to ldap, fill up DN and LDAP SERVER as questions required, use TLS to encrypt connections making tick, write http://server.domain11.example.com/pub/EXAMPLE-CA-CERT to download ca, authentication method choose ldap password.
You can test if the ldapuser is added by the following command:

Id ldapuser1

Note: user password doesn't not need to set

QUESTION 33
SIMULATION

Configure NTP.

Configure NTP service, Synchronize the server time, NTP server: classroom.example.com

Answer: See explanation below.

Explanation

Explanation/Reference:
Explanation: Configure the client:

Yum -y install chrony
Vim /etc/chrony.conf

Add: server classroom.example.com iburst
Start: systemctl enable chronyd
systemctl restart chronyd
Validate: timedatectl status

QUESTION 34
SIMULATION

Configure autofs.

Configure the autofs automatically mount to the home directory of LDAP, as required:
server.domain11.example.com use NFS to share the home to your system. This file system contains a pre

configured home directory of user ldapuserX.
Home directory of ldapuserX is:
server.domain11.example.com /home/guests/ldapuser