

**EX294**

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**EX294**



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**Red Hat Certified Engineer (RHCE) exam for Red Hat Enterprise Linux 8**

**Sections**

- 1. Topic 1
- 2. Topic 2
- 3. Topic 3
- 4. Topic 4

**Exam A**

## QUESTION 1

### SIMULATION

Configure a mail alias to your MTA, for example, send emails to harry but mary actually is receiving emails.

**Correct Answer:** Please see explanation

**Section:** Topic 2

#### Explanation

**Explanation/Reference:**

Explanation:

```
Modify /etc/aliases,add:  
harry: mary harry  
After completing modification:  
[root@server1 virtual]# newaliases
```



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#### Notice:

This problem is a trap. The question no 31 requires that harry must be able to receive remote emails but the problems in the question no 32 requires mary to receive harry's emails. So harry must be added when you are deploying aliases.

## QUESTION 2

### SIMULATION

Create a Shell script /root/program:

- The shell script will come back to "user" parameter when you are entering "kernel" parameter.
- The shell script will come back to "kernel" when you are entering "user" parameter.

- It will output the standard error when this script “usage:/root/program kernel|user” don’t input any parameter or the parameter you inputted is entered as the requirements.

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:

```
[root@server1 virtual]# cat /root/program
#!/bin/bash
param1="$1"
if [ "$param1" == "kernel" ]; then
echo "user"
elif [ "$param1" == "user" ]; then
echo "kernel"
else
echo "usage:/root/program kernel|user"
if
[root@server1 ~]# chmod +x /root/program
```

### QUESTION 3

#### SIMULATION

Given the kernel of a permanent kernel parameters: sysctl=1.  
It can be shown on cmdline after restarting the system.  
Kernel of /boot/grub/grub.conf should be a34dded finally, as:

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:

Kernel of /boot/grub/grub.conf should be added finally, as:

```
kernel /vmlinuz-2.6.32-279.1.1.el6.x86_64 ro
root=/dev/mapper/vg_srv-root
rd_LVM_LV=vg_srv/root    rd_NO_LUKS    LANG=en_US.UTF-8
rd_LVM_LV=vg_srv/swap rd_NO_MD
SYSFONT=latencyrheb-sun16 crashkernel=auto KEYBOARDTYPE=pc
KEYTABLE=us rd_NO_DM rhgb quiet
rhgb quiet sysctl=1
```

#### QUESTION 4

##### SIMULATION

Prevent Mary from performing user configuration tasks in your system.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

Modify the /etc/cron.deny, add:

```
[root@server1 ~]# cat /etc/cron.deny
mary
```

#### Conclusions:

1. I find that it is common to add various service access limits in the exam RHCE. The exercises like: require one network segment can be accessed another network segments can not be accessed, the following are some conclusions for various service:

tcp\_wrappers: /etc/hosts.allow, /etc/hosts.deny

tcp\_wrappers can filter the TCP's accessing service. TCP whether has the filtering function which depends on this service whether use the function library of tcp\_wrappers, or this service whether has the xinetd process of starting function of tcp\_wrappers. tcp\_wrappers's main configuration file is /etc/hosts.allow, /etc/hosts.deny.

And the priority of the documents in hosts. allow is higher than hosts. deny. Visit will be passed if no match was found.

sshd, vsftpd can use the filtering service of tcp\_wrappers.

Configuration example:

```
sshd:example.com 192.168.0. 192.168.0.0/255.255.255.0 150.203.
EXCEPT 150.203.6.66
```

Notice:

The two configuration files' syntax can refer to `hosts_access` (5) and `hosts_options`(5) **sshd\_config**

There are four parameters in this configuration file: `DenyUsers`, `AllowUsers`, `DenyGroups`, `AllowGroups`, they are used to limit some users or user groups to proceed Remote Login through the SSH. These parameters' priority level is `DenyUsers->AllowUsers->DenyGroups->AllowGroups` Configuration example:

```
AllowUsers tim rain@192.168.1.121 kim@*.example.com
```

### httpd Service

Through the `/etc/httpd/conf/httpd.conf` in parameters, can add `<Directory>` to control the url access. Just as:

```
<VirtualHost *:80>

DocumentRoot /var/http/virtual

ServerName www1.example.com

<Directory /var/http/virtual/limited>

Options Indexes MultiViews FollowSymlinks

order deny,allow

deny from all

allow from 192.168.0.

</Directory>

</VirtualHost>
```

Notice:

So pay attention, `deny`'s and `allow`'s priority level in `order deny,allow` is: the backer has the higher priority level. But here, `allow`'s priority has a higher priority level.

**nfs Service** nfs service directly control the visits through file `/etc/exports`, just as:

```
/common *.example.com(rw, sync) 192.168.0.0/24(ro, sync)
```

### samba Service

Parameter hosts allow in /etc/samba/smb.conf which is used as Access Control, just as:

```
hosts allow = 192.168.0. 192.168.1.0/255.255.255.0 .example.com
```

2. Paying attention to use Mount parameters: \_netdev,defaults when you are mounting iSCSI disk.

3. Stop the NetworkManager

```
/etc/init.d/NetworkManager stop chkconfig
```

```
NetworkManager off
```

4. When you are deploying ifcfg-ethX, add parameters:

```
PEERDNS=no
```

5. Empty the firewall in RHCSA RHCE、 :

```
iptables -F
```

```
iptables -X
```

```
iptables -Z
```

```
/etc/init.d/iptables save
```

6. Narrow lv steps:

```
1.umount /dev/mapper/lv
```

```
2.e2fsck -f /dev/mapper/lv
```

```
3.resize2fs /dev/mapper/lv 100M
```

```
4.lvreduce -L 50M /dev/mapper/lv
```

```
5.mount -a
```

7. Mount the using command - swap which is newly added in /etc/fstab

8. If Verification is not passed when you are installing software, can import public key: rpm import /etc/pki/rpm.../...release and so on. In yum.repo, you also can deploy gpgkey, for example, gpgkey=/etc/pki/rpm.../...release

9. When you are using "Find" command to search and keep these files, paying attention to use cp -a to copy files if you use user name and authority as your searching methods.

## QUESTION 5

## SIMULATION

Please set the selinux status as enforcing.

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:

```
# getenforce 1
# vim /etc/sysconfig/selinux
    SELINUX=enforcing
```

## QUESTION 6

### SIMULATION

Please open the ip\_forward and take effect permanently.

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:

```
# vim /etc/sysctl.conf
    net.ipv4.ip_forward = 1
# sysctl -w (takes effect immediately)
```

**If no “sysctl.conf” option, use these commands:**

```
# sysctl -a |grep net.ipv4
# sysctl -P net.ipv4.ip_forward = 1
# sysctl -w
```

## QUESTION 7

### SIMULATION

Configure ssh to allow user harry to access, reject the domain t3gg.com (172.25.0.0/16) to access.



**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# yum install -y sshd
# chkconfig sshd on
# vim /etc/hosts.deny
    sshd: 172.25.0.0/16
# service sshd restart
```

Use iptables:

```
# chkconfig iptables on
# iptables -F
# iptables -X
# iptables -Z
# iptables -nvL
# iptables -A INPUT -s 172.25.0.0/16 -p tcp --dport 22 -j REJECT
# services iptables save
# iptables -nvL
# cat /etc/services (check port)
```

## QUESTION 8

### SIMULATION

Configure the ftp to allow anonymously download the directory /var/ftp/pub, and reject the domain t3gg.com to access.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:



```
# yum install -y vsftpd
# chkconfig vsftpd on
# services vsftpd start

# vim /etc/hosts.deny
vsftpd: 172.25.0.0/16
```

OR

```
# iptables -A INPUT -s 172.25.0.0/16 -p tcp -dport 20:21 -j REJECT
# services iptables save
```

## QUESTION 9

### SIMULATION

Shutdown the /root/cdrom.iso under /opt/data and set as boot automatically mount.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# cd /opt/
# mkdir data
# mount -t iso9660 -o loop /root/cdrom.iso /opt/data
# vim /etc/fstab
    /root/cdrom.iso /opt/data iso9660 defaults,loop 0 0
# mount -a
# mount
```

## QUESTION 10

### SIMULATION

Configure the web server, which can be accessed by <http://station.domain30.example.com>.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# yum install -y httpd
# chkconfig httpd on
# cd /etc/httpd/conf/

# vim httpd.conf
    NameVirtualHost 172.24.30.5:80
    <VirtualHost 172.24.30.5:80>
        DocumentRoot /var/www/html/
        ServerName tation.domain30.example.com
    </VirtualHost>
# service httpd restart
```



## QUESTION 11

### SIMULATION

Configure the web server and implement the virtual host.

http://www.domain30.example.com can access the pages under the directory: http://ip/dir/example.html. And make sure, http://station.domain30.example.com can also access the previous content.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# mkdir -p /www/virtual
# cd /www/virtual
# wget http://ip/dir/example.com
# cp example.com index.html
# se manage fcontext -a -t httpd_sys_content_t '/www (/.*)?'
# restorecon -vRF /www
# vim /etc/httpd/conf/httpd.conf (Add new VirtualHost)
    <VirtualHost 172.24.30.5:80>
        DocumentRoot /www/virtual/
        ServerName www.domain30.example.com
    </VirtualHost>
# chcon -R --reference=/var/www/html/ /www/
# service httpd restart
```

Use elinks to test.

OR

```
# mkdir -p /www/virtual
# cd /www/virtual
# wget http://ip/dir/example.html
# mv example.html index.html
# chcon -R --reference=/var/www/html/ /www/
# ls -ldZ /www/virtual
# vim /etc/httpd/conf/httpd.conf
    NameVirtualHost *:80
    <VirtualHost *:80>
```



```
DocumentRoot /var/www/html/  
ServerName station.domain30.example.com  
</VirtualHost>  
<VirtualHost *:80>  
DocumentRoot /www/virtual/  
ServerName www.domain30.example.com  
</VirtualHost>  
# service httpd restart
```

## QUESTION 12

### SIMULATION

Download file from <http://ip/dir/restricted.html>, and the local user harry can access it by <http://station.domain30.example.com/restricted.html>, and cannot be accessed by t3gg.com.

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:



```
# cd /var/www/html
# wget http://ip/dir/restricted.htm
# iptables -A INPUT -s 172.25.0.0/16 -p tcp -dport 80 -j REJECT
# service iptables save
```

OR

```
# yum install httpd
# service httpd restart
# chkconfig httpd on
# cd /var/www/html
# wget http://ip/dir/restricted.html
# iptables -A INPUT 172.25.0.0/16 -p tcp --dport 80 -j REJECT
# service iptables save
# service iptables restart
# elinks http://station.domain30.example.com/restricted.html
```

### QUESTION 13

#### SIMULATION

Configure the nfs server, share the /common directory to domain30.example.com, and allow client to have the root user right when access as a root user.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# yum install -y nfs
# chkconfig nfs on
# chkconfig rpcbind on
# vim /etc/exports
    /common 172.24.30.0/255.255.255.0(rw,no_root_squash)
# showmount -e 172.16.30.5
# mount -t nfs 172.16.30.5:/common /mnt (Test)
```

## QUESTION 14

### SIMULATION

Configure the samba server, share /common, which can be browsed. The user harry can only read it. If it is needed, the password for harry is harryuser.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:



```
# yum install -y samba samba-common samba-client
# chkconfig smb on
# chkconfig nmb on      (nmb is a dependency of smb to resolve netbios)
# service smb start
# service nmb start

# useradd harry
# smbpasswd -a harry
# mkdir /common
# vim /etc/samba/smb.conf
    [common]
        comment = common
        path = /common
        browseable = yes
        valid user = harry
        read only = yes

testparm
# getsebool -a |grep samba_share_nfs
# setsebool -P samba_share_nfs=1
# chcon -R --reference=/var/spool/samba/ /common/
# services smb restart
# mount -t cifs //172.16.30.5/common /mnt -o
username=harry,password=harryuser
# smbclient //172.24.50.5/common -U harry
```



## QUESTION 15

### SIMULATION

Configure an email server domain30.example.com, and it requests to send and receive emails from the local server or the user harry can send or receive emails from network. The email of user harry is /var/spool/mail/harry. Please note: the DNS server has already been MX record analyzed.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# yum install -y postfix
# service postfix restart
# chkconfig postfix on
# vim /etc/postfix/main.cf
    inet_interfaces = all
    mydestination = example.com, domain30.example.com, localhost
    mynetworks = 172.16.30.0/24, 127.0.0.1/8
# services postfix restart
```

Test:

```
# netstat -tulnp |grep 25
# hostname
# echo hello |mail -s "test"root@example.com
# cat /var/spool/mai/harry
```

**QUESTION 16****SIMULATION**

Connect to the email server and send email to admin, and it can be received by harry.

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:

```
# vim /etc/aliases
    admin: harry
# newaliases
```







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### QUESTION 17

#### SIMULATION

Configure the kernel parameters: rhelblq=1, and it is requested that your kernel parameters can be verified through /proc/cmdline.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# vim /boot/grub/grub.conf
    rhelblq=1 (Add to end of the line "kernel....")
Restart
# cat /proc/cmdline
```

### QUESTION 18

#### SIMULATION

Configure cron and don't allow the user tom to use.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**



**Explanation/Reference:**

Explanation:

```
# useradd tom
# vim /etc/cron.deny
tom
```

**QUESTION 19****SIMULATION**

Write a script /root/program. The request is when you input the kernel parameters for script, the script should return to user. When input the user parameters, the script should return to kernel. And when the script has no parameters or the parameters are wrong, the standard error output should be “usage:/root/program kernel| user”.

**Correct Answer:** Please see explanation

**Section: Topic 2**

**Explanation**

**Explanation/Reference:**

Explanation:



```
# vim /root/program
# !/bin/bash

if [ $# -ne 1 ];then
    echo "usage:/root/program kernel|user"
else
    if [ "$1" -eq "kernel"];then
        echo "user"
    elif [ "$1" -eq "user"];then
        echo "kernel"
    else
        echo "usage:/root/program kernel|user"
    fi
fi
```

**Test:**

```
# chmod a+x /root/program
./root/program kernel
./root/program user
./root/program lll
```

**QUESTION 20****SIMULATION**

You access the iscsi shared storage. The storage server ip is 172.24.30.100. Separate of 1500M space, format as ext3 file system, mount under /mnt/data, and make sure the root-start automatically mount.

**Correct Answer:** Please see explanation

**Section:** Topic 2

**Explanation**

**Explanation/Reference:**

Explanation:

```
# yum install -y iscsi*
# chkconfig iscsid on
# iscsiadm -m discovery -t st -p 172.24.30.100
# iscsiadm -m node -T ign.2011 -p 172.24.30.100 -l
# dmesg|tail
# fdisk /dev/sdb9
#
# mkfs.ext3 /dev/sdb9
# cd /mnt
# mkdir data
# blkid /dev/sdb1 (Check UUID number)

# vim /etc/fstab
    UUID=xxxxxxxxxxxxxxxxxxxx /mnt/data ext3 _netdev,defaults 0
0
# mount -a
# mount
```

OR

```
# vim /dev/fstab
    UUID=xxxxxxxxxxxxxxxxxxxx /mnt/data ext3 defaults 0 0
# chkconfig netfs2 on
```

## QUESTION 21

### SIMULATION

There are two different networks 192.168.0.0/24 and 192.168.1.0/24. Where 192.168.0.254 and 192.168.1.254 IP Address are assigned on Server. Verify your network settings by pinging 192.168.1.0/24 Network's Host.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

```
1. vi /etc/sysconfig/network
NETWORKING=yes
HOSTNAME=station?.example.com
GATEWAY=192.168.0.254
2. service network restart
Or
1. vi /etc/sysconfig/network-scripts/ifcfg-eth0
DEVICE=eth0
ONBOOT=yes
BOOTPROTO=static
IPADDR=X.X.X.X
NETMASK=X.X.X.X
GATEWAY=192.168.0.254
2. ifdown eth0
3. ifup eth0
```

## QUESTION 22

### SIMULATION

One Logical Volume is created named as myvol under vo volume group and is mounted. The Initial Size of that Logical Volume is 400MB. Make successfully that the size of Logical Volume 200MB without losing any data. The size of logical volume 200MB to 210MB will be acceptable.

**Correct Answer:** Please see explanation

**Section:** Topic 3

**Explanation**

**Explanation/Reference:**

Explanation:



```
1. First check the size of Logical Volume: lvdisplay /dev/vg/myvol
2. Make sure that the filesystem is in a consistent state before
reducing:
# fsck -f /dev/vg/myvol
3. Now reduce the filesystem by 200MB.
# resize2fs /dev/vg/myvol 200M
4. It is now possible to reduce the logical volume.
#lvreduce /dev/vg/myvol -L 200M
4. Verify the Size of Logical Volume: lvdisplay /dev/vg/myvol
5. Verify that the size comes in online or not: df -h
```

### QUESTION 23

#### SIMULATION

You are giving RHCE exam. Examiner gave you the Boot related problem and told to you that make successfully boot the System. When you started the system, System automatically asking the root password for maintenance. How will you fix that problem?

**Correct Answer:** Please see explanation

**Section:** Topic 3

**Explanation**



**Explanation/Reference:**

Explanation:

Maintenance mode also known as emergency mode. System boots on emergency mode when file system error occurred. It is due to unknown partition, bad filesystem specified in /etc/fstab. To solve follow the steps:

```
1. Give the Root password
2. fdisk -l Verify the Number of parations.
3. Identify the Root partition, e2label /dev/hda1, e2label
/dev/hda2.....
4. Remount the root partation on rw mode: mount -o remount,defaults
/dev/hda6 /
5. vi /etc/fstab
Correct all partitions, mount point, mount options, file system etc.
6. Press ctrl+d
```

### QUESTION 24

## SIMULATION

You are working as an Administrator. There is a common data shared (/data) from 192.168.0.254 to all users in your local LAN. When user's system start, shared data should automatically mount on /common directory.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

To automatically mount at boot time, we use the /etc/fstab file. Because /etc/rc.d/rc.sysinit file reads and mounts all file system specified in /etc/fstab. To mount Network Sharing Files also use the /etc/fstab but filesystem is nfs.

```
1. vi /etc/fstab
192.168.0.254:/data / common nfs defaults 0 0
2. reboot the system.
```



## QUESTION 25

### SIMULATION

Create the group named sysusers.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. groupadd sysusers groupadd command is used to create the group and all group information is stored in /etc/group file.

## QUESTION 26

### SIMULATION

Create the users named jeff, marion, harold

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. useradd jeff
2. useradd marion
3. useradd harold

**Note:**

useradd command is used to create the user.

All user's information stores in /etc/passwd and user's shadow password stores in /etc/shadow.

## QUESTION 27

### SIMULATION

Make Secondary belongs the jeff and marion users on sysusers group. But harold user should not belongs to sysusers group.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. usermod -G sysusers jeff
2. usermod -G sysuser marion 3. Verify by reading /etc/group file

**Note:**

Using usermod command we can make user belongs to different group. There are two types of group one primary and another is secondary. Primary group can be only one but user can belong to more than one group as secondary. usermod -g groupname username - To change the primary group of the user. usermod -G groupname username - To make user belongs to secondary group.

## QUESTION 28

### SIMULATION



Create the directory /storage and group owner should be the sysusers group.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

```
chgrp sysusers /storage  
Verify using ls -ld /storage command.
```

You should get like drwxr-x--- 2 root sysusers 4096 Mar 16 17:59 /storage chgrp command is used to change the group ownership of particular files or directory. Another way you can use the chown command.

```
chown root:sysusers /storage
```

### QUESTION 29

#### SIMULATION

Make on /storage directory that only the user owner and group owner member can fully access.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. chmod 770 /storage
2. Verify using : ls -ld /storage

#### Note:

Preview should be like: drwxrwx--- 2 root sysusers 4096 Mar 16 18:08 /storage

To change the permission on directory we use the chmod command. According to the question that only the owner user (root) and group member (sysusers) can fully access the directory so: chmod 770 /archive

### QUESTION 30

#### SIMULATION

Whoever creates the files/directories on /storage group owner should be automatically should be the same group owner of /storage.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. `chmod g+s /storage`
2. Verify using: `ls -ld /storage`

**Note:**

Permission should be like:

`drwxrws---` 2 root sysusers 4096 Mar 16 18:08 /storage If SGID bit is set on directory then who every users creates the files on directory group owner automatically the owner of parent directory.

To set the SGID bit: `chmod g+s directory`

To Remove the SGID bit: `chmod g-s directory`

### QUESTION 31

#### SIMULATION

Install the Cron Schedule for jeff user to display "Hello" on daily 5:30.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. Login as a root user
2. `cat >schedule.txt`  
`30 05 * * * /bin/echo "Hello"`
3. `crontab -u jeff schedule.txt`
4. `service crond restart`

The cron system is essentially a smart alarm clock. When the alarm sounds, Linux runs the commands of your choice automatically. You can set the alarm clock to run at all sorts of regular time intervals. Alternatively, the system allows you to run the command of your choice once, at a specified time in the future.

Red Hat configured the cron daemon, `crond`. By default, it checks a series of directories for jobs to run, every minute of every hour of every day. The `crond` checks the `/var/spool/cron` directory for jobs by user. It also checks for scheduled jobs for the computer under `/etc/crontab` and in the `/etc/cron.d` directory. Here is the format of a line in `crontab`. Each of these columns is explained in more detail: #minute, hour, day of month, month, day of week, command

\* \* \* \* \* command

Entries in a crontab Command Line

Field Value

Minute 0-59

Hour Based on a 24-hour clock; for example, 23 = 11 p.m.

Day of month 1-31

Month 1-12, or jan, feb, mar, etc.

Day of week 0-7; where 0 and 7 are both Sunday; or sun, mon, tue, etc.

Command: The command you want to run

### QUESTION 32

#### SIMULATION

Give Full Permission to owner user and owner group member but no permission to others on /data.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:



We can change the permission of file/directory either character symbol method or numeric method. Permission: r-Read w-Write

x-Execute Permission Category u- Owner

User g- Owner Group o- Others Operators

+ -> Add the Permissions

- -> Remove the Permissions = -> Assign the Permissions Numeric Method:

4 -> Read

2 -> Write

1 -> Execute

Total: 7, total for owner user, owner group member and for others: 777

1. chmod u+rw /data

2. chmod g+rw /data 3. chmod o-rwx /data or

chmod 770 /data

4. Verify the /data: ls -ld /data

5. You will get drwxrwx---

### QUESTION 33

SIMULATION

Whoever creates the file on /data make automatically owner group should be the group owner of /data directory.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

When user creates the file/directory, user owner will be user itself and group owner will be the primary group of the user.

There is one Special Permission SGID, when you set the SGID bit on directory. When users create the file/directory automatically owner group will be same as a parent.

1. `chmod g+s /data`
2. Verify using: `ls -ld /data` You will get: `drwxrws---`

### QUESTION 34

SIMULATION

One Package named zsh is dump on `ftp://server1.example.com` under pub directory. Install the package from ftp server.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

1. `rpm -ivh ftp://server1.example.com/pub/zsh-*`
2. Package will install

rpm command is used to install, update and remove the package, -i means install, -v means verbose and -h means display the hash mark.

### QUESTION 35

SIMULATION

There are Mail servers, Web Servers, DNS Servers and Log Server. Log Server is already configured.

You should configure the mail server, web server and dns server to send the logs to log server.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

According to question, log server is already configured. We have to configure the mail, web and dns server for log redirection. In mail, web and dns server:

1. vi /etc/syslog.conf mail.\* @logserveraddress 2. service syslog restart mail is the facility and \* means the priority. It sends logs of mail services into log server.

### **QUESTION 36**

#### **SIMULATION**

Add a cron schedule to take full backup of /home on every day at 5:30 pm to /dev/st0 device.

**Correct Answer:** Please see explanation

**Section: Topic 3**

**Explanation**

**Explanation/Reference:**

Explanation:

```
1. vi /var/schedule
30 17 * * * /sbin/dump -0u /dev/st0 /dev/hda7
2. crontab /var/schedule
3. service crond restart
```



We can add the cron schedule either by specifying the scripts path on /etc/crontab file or by creating on text file on crontab pattern.

cron helps to schedule on recurring events. Pattern of cron is: Minute Hour Day of Month Month

Day of Week Commands

0-59 0-23 1-31 1-12 0-7 where 0 and 7 mean Sunday.

Note \* means every. To execute the command on every two minutes \*/2.

### **QUESTION 37**

#### **SIMULATION**

There were two systems:

- system1, main system on which most of the configuration take place
- system2, some configuration here

Configure selinux.

Configure your systems that should be running in Enforcing.

**Correct Answer:** Please see explanation

**Section: Topic 4**

**Explanation**

**Explanation/Reference:**

Explanation:

```
# vim /etc/selinux/config
SELINUX=enforcing
```

After reboot and verify with this command

```
# getenforce
```

### QUESTION 38

#### SIMULATION

There were two systems:

- system1, main system on which most of the configuration take place ▪
- system2, some configuration here

Configure repository.

Create a Repository for your virtual machines. The URL is [http://station.network.0.example.com/content/rhel7.0/x86\\_64/dvd](http://station.network.0.example.com/content/rhel7.0/x86_64/dvd)

**Correct Answer:** Please see explanation

**Section: Topic 4**

**Explanation**

**Explanation/Reference:**

Explanation:

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

```
[localrepo]
name = Local Repo for RHCE Exam
baseurl = http://station.network0.example.com/content/rhel7.0/x86_64/dvd
gpgcheck = 0
enabled = 1
```

Save and Exit (:wq)

Then run this:

```
# yum clean all
# yum repolist
```

### QUESTION 39

#### SIMULATION

There were two systems:

- system1, main system on which most of the configuration take place
- system2, some configuration here

SSH configuration.

- Configure SSH access on your virtual hosts as follows.
- Clients within my22ilt.org should NOT have access to ssh on your systems

**Correct Answer:** Please see explanation

**Section:** Topic 4

**Explanation**

**Explanation/Reference:**

Explanation:

```
# vim /etc/hosts.deny
sshd: .my22ilt.org
```

Save and Exit (:wq) Then

run this:

```
systemctl restart sshd
```

Optional:

```
systemctl enable sshd
firewall-cmd --permanent --add-service=ssh
firewall-cmd --reload
```





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