Exam	**EX300**
Title	**Red Hat Certified Engineer - RHCE v7**

Product Type	**88 Q&A**

QUESTION: 1
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
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Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
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Certainly, you do not need to care these buttions if you don't need them.
Configure SELINUX
Modify the state of selinux to Enforcing mode.
Use VIM /etc/selinux

Answer:

```
getenforce    // View the current SELINUX mode
setenforce  1    // Sets the selinux temporarily to enforcing mode
vim /etc/selinux/config
SELINUX=enforcing
:wq
getenforce
enforcing
```

QUESTION: 2
CORRECT TEXT
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Configure the SSH Access as required:
Users can visit your two virtual machine systems via clients of domain group3.example.com through SSH remote.

Answer:
Solution 1:
Modify file /etc/hosts.allow
Add a line: sshd: 172.24.11.
Modify file /etc/hosts.deny
Add a line: sshd: 172.25.0.
Both of them need to be configured.
Solution 2:
Add a firewall
firewall-cmd –zone=block --add-source=172.25.11.0/24 --permanent firewall-cmd –reload
Both of them need to be configured

QUESTION: 3
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group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
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Customize the User Environment
Create a custom command on system1 and system2 named as qstat, and this custom command will execute the following command:
/bin/ps - Aopid,tt,user,fname,rsz
This command is valid for all users in the system.

Answer:

```
vim /etc/bashrc   //Restart remain valid
alias qstat=' /bin/ps -Ao pid, tt, user, fname,
rsx'
:wq
source /etc/bashrc
alias //Check if there is qstat
qstat
```

// You need to configure that on both two systems -

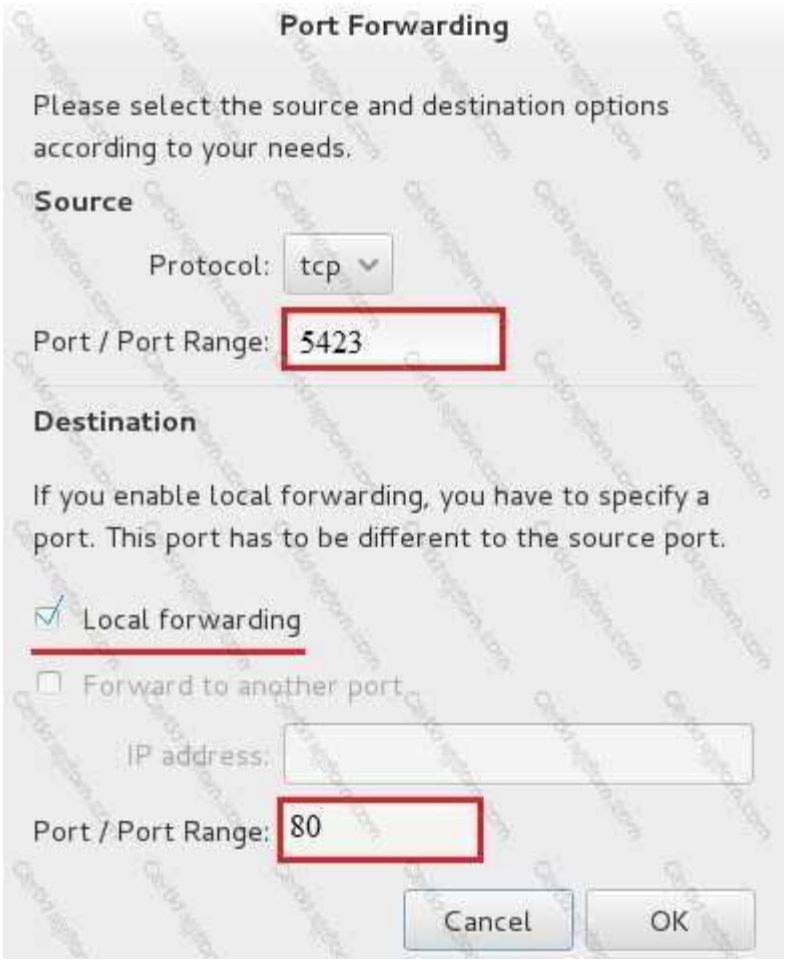
QUESTION: 4
CORRECT TEXT
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Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel

Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
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Configure port forwarding on the system1, as required:
1. The systems in the network 172.24.11.0/24, local port 5423 for accessing system1 will be forwarded to 80
(2) This setting must be permanent

Answer:
Use Graphical interface to configure
Use firewall-config to open the Graphical interface in CLI
Adjust the configuration: drop-down menu to permanent
Add a strategy to the public area of the "Port Forwarding"



systemctl restart firewalld.service // Reload the firewall strategy

---

QUESTION: 5
CORRECT TEXT
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host.group3.example.com provides a centralized authentication service domain

GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

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Configure Link Aggregation
Configure a link between systeml.group3.example.com and system2. group3.example.com as required:
? This link uses interfaces eth1 and eth2
? This link still can work when one interface failes
? This link uses the following address 172.16.3.20/255.255.255.0 on systeml
? This link uses the following address 172.16.3.25/255.255.255.0 on system2
? This link remains normal after the system is restarted
?

Answer:
If you forget how to write the name, you can search examples in /var/share/doc/team-1.9/example_configs/

```
nmcli connection  add con-name team0 type team ifname team0 config
'{"runner":{"name":"activebackup"}}'
nmcli con modify team0 ipv4.addresses '172.16.11.25/24'
nmcli connection modify team0 ipv4.method manual
nmcli connection add type team-slave con-name team0-p1 ifname eth1
master team0
nmcli connection add type team-slave con-name team0-p2 ifname eth2
master team0
nmcli connection up team0

nmcli con up team0-p1
nmcli con up team0
```

QUESTION: 6
CORRECT TEXT
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Configure IPV6 Address
Configure interface eth0 on your test system, using the following IPV6 addresses:
1) The address of system1 should be 2003:ac18::305/64
(2) The address of system2 should be 2003:ac18::30a/64
(3) Both two systems must be able to communicate with systems in network 2003:ac18/64
(4) The address must still take effect after restart
(5) Both two systems must maintain the current Ipv4 address and can communicate

Answer:
Solution:

```
nmcli con mod eth0 ipv6.addresses "2003:ac18::305/64"
nmcli con mod eth0 ipv6.method manual
systemctl restart network

nmcli con mod eth0 ipv6.addresses "2003:ac18::30a/64"
nmcli con mod eth0 ipv6.method manual
systemctl restart network

ping6 2003:ac18::30a
```

QUESTION: 7
CORRECT TEXT
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Configure the Local Mail Service
Configure the mail service on system1 and system2, as required:
1. These systems do not accept external sending mails
2. Any mails sent locally are automatically routed to rhgls.domain11.example.com
3. Mails sent from these systems will be displayed from rhgls.domain11.example.com

4. You can send mail to local user ‘arthur’ to test your configuration system
rhgls.domain11.example.com
5. You have already configured this user’s mail to the following URL
rhgls.domain11.example.com/received_mail/11

Answer:
solution

```
postconf -e local_transport=err:XX
vim /etc/postfix/main.cf
relayhost=[rhgls.domain11.exmaple.com]
postconf -e myorigin=domain11.example.com
systemctl restart postfix
echo aaa | mail -8 hello dave
```

Open rhgls.domain11.example.com/received_mail/11 in a browser

---

QUESTION: 8
CORRECT TEXT
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Share directories via SMB.
Configure the SMB service on the system1.
Your SMB server must be a member of the STAFF Working Group.
Share the folder /common and the name must be common.
Only clients of domain11.example.com can access the common share.
Common must be able to browse.
User Andy must be able to read the content of the share, if necessary, verification code is redhat.

Answer:
system1:

```
yum -y install samba samba-client
firewall-cmd --add-service=samba --permanent
firewall-cmd --add-service=mountd -permanent
systemctl restart firewalld
vim /etc/samba/smb.conf
workgroup = STAFF
[common]
     path = /common
     hosts allow = 172.24.11.
     browseable = yes
:wq
mkdir /common
chcon -R -t  samba_share_t   /common/
smbpasswd -a andy
systemctl start smb
systemctl enable samba
```

system2:

```
yum install -y cifs-utils samba-client
```

QUESTION: 9
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Configure Multi-User SMB Mounts.
Share the directory /devops through SMB on the systeml, as required:
1. The share name is devops
2. The shared directory devops just can be used by clients in domain11.example.com
3. The shared directory devop must be able to be browsed
4. User silene must be able to access this share through read, access code is redhat
5. User akira must be able to access this share through read and write, access code is redhat
6. This share permanently mount to system2. domain11.example.com the user /mnt/dev, make user silene as authentication any users can get temporary write permissions from akira

Answer:
system1:

```
mkdir /devops
chcon -R -t samba_share_t /devops/
chmod o+w /devops/
vim /etc/samba/smb.conf
[devops]
        path = /devops
        hosts allow = 172.24.11.
        browseable = yes
        writable = no
        write list = akira
:wq
systemctl restart smb
smbpasswd -a silene
smbpasswd -a akira
```

system2:

```
mkdir /mnt/dev
smbclient -L /system1/ -U silene
vim /etc/fstab
//system1/devops /mnt/dev cifs
defaults,multiuser,username=silene,password=redhat,sec=ntlmssp 0 0
df -hT
```

Switch to user akira on the system2, access to /mnt/dev and view files
suakira cd /mnt/dev
lscifscreds add
system1 touch 1

QUESTION: 10
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5

system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don’t need them.
Configure NFS service
Configure the NFS service on the system1, as required:
1. Share the directory /public in read only way, just can be accessed by systems in domain11.example.com at the same time.
2. Share the directory /protected in rad and write way, Kerberos security encryption required, you can use the key provided by the following URL:
http://host.domain11.example.com/materials/nfs_server.keytab
3. The directory /protected should contain the sub directory named project and the owner name is deepak;
4. User deepak can access /protected/project in read and write ways

Answer:
system1:

```
vim /etc/exports
/protected 172.24.11.0/24(rw,sync,sec=krb5p)
/public 172.24.11.0/24(ro,sync)
wget -O /etc/krb5.keytab
http://host.domain11.example.com/materials/nfs_server.keytab
vim /etc/sysconfig/nfs
RPCNFSDARGS="-V 4.2 "
:wq
systemctl restart nfs
systemctl start nfs-secure-server
systemctl enable nfs-secure-server
exportfs -ra
showmount -e
firewall-cmd --add-service=nfs -permanent
firewall-cmd --add-service=rpc-bind -permanent
firewall-cmd --add-service=mountd-permanent
systemc    tl restart fiewalld
mkdir -p /protected/project
chown deepak /protected/project/
ll /protected/
chcon -R -t public_content_t /protected/project/
```

QUESTION: 11
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to

be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Mount a NFS Share
Mount a NFS Share to system1.domain11.example.com on the system2, as required:
1. Mount the /public to the directory /mnt/nfsmount
2. Mount the /protected to the directory /mnt/nfssecure, in a security way, key download from the following URL:
http://host.domain11.example.com/materials/nfs_client.keytab
3. User deepak can create files in /mnt/nfssecure/project
4. These file systems automatically hang up when the system is started

Answer:

system2:

```
showmount -e system1
mkdir -p /mnt/nfsmount
vim /etc/fstab
system1:/public   /mnt/nfsmount nfs defaults  0 0
mount -a
df -h

mkdir /mnt/nfssecure
wget -O /etc/krb5.keytab
http://host.domain11.example.com/materials/nfs_client.keytab
vim /etc/fstab
```

system1:

```
/protected   /mnt/nfssecure nfs defaults,sec=krb5p,v4.2  0 0
:wq
mount -a
```

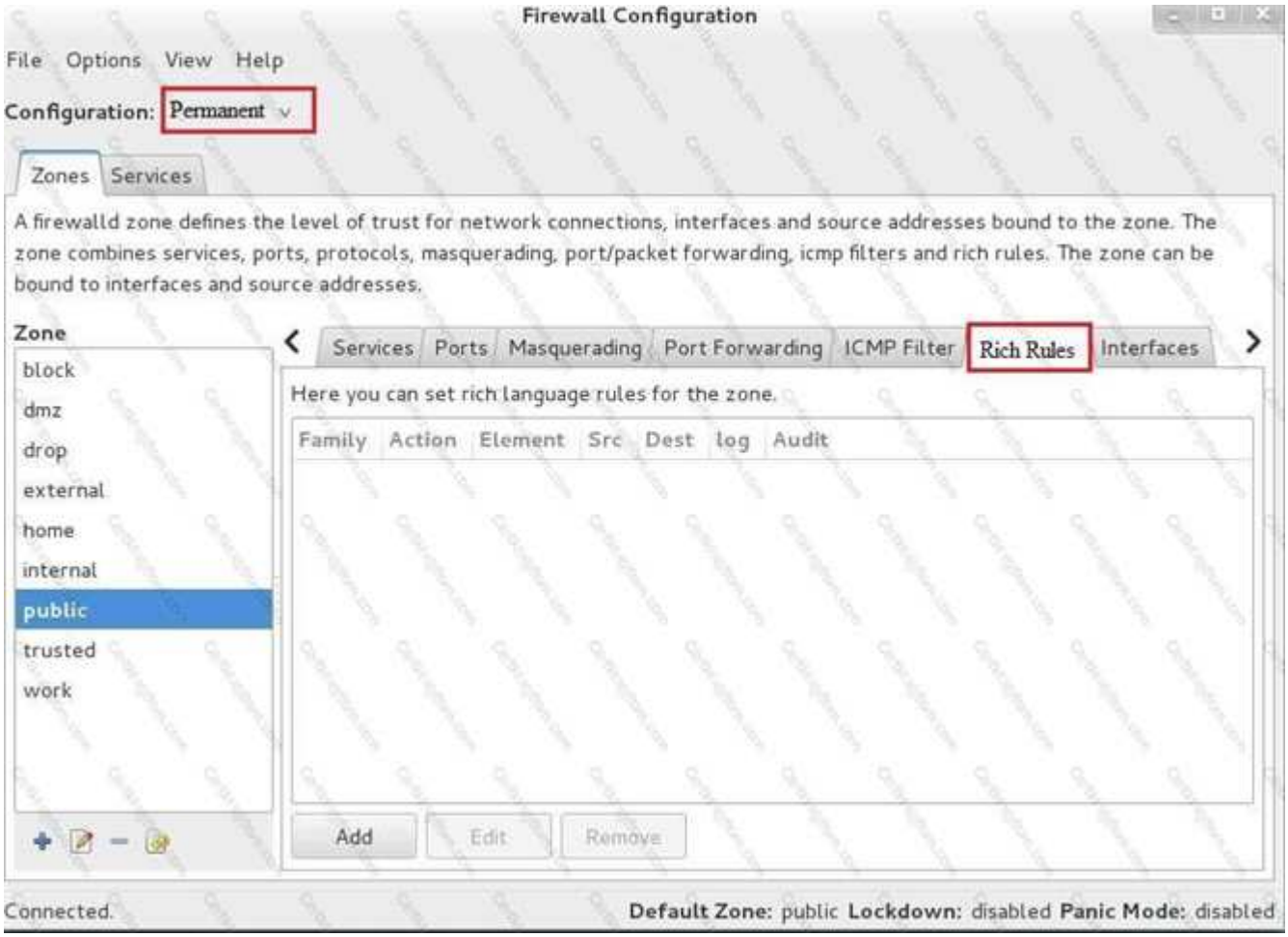
QUESTION: 12
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Implement/configure a Web Service.
Configure a site http://systeml. domain11.example.com/ on the system1, then execute the following steps:
(1) Download file from http://rhgls.domain11.example.com/materials/station.html and rename this files index.html, don't modify the file contents;
(2) Copy the file index.html to your web server's DocumentRoot directory
(3) Clients from domain group3.example.com can access to this web service
(4) Clients from domain my133t.org deny access to this web service

Answer:

```
yum groupinstall web\* -y
systemctl start httpd
systemctl enable httpd
vim /etc/httpd/conf/httpd.conf
/ServerName
ServerName server1.domain11.example.com:80
systemctl restart httpd
wget -O index.html
http://rhgls.domain11.example.com/materials/station.html
firewall-config
```


Firewall Configuration
File Options View Help
Configuration: Permanent
Zones Services
A firewalld zone defines the level of trust for network connections, interfaces and source addresses bound to the zone. The zone combines services, ports, protocols, masquerading, port/packet forwarding, icmp filters and rich rules. The zone can be bound to interfaces and source addresses.
Zone
block
dmz
drop
external
home
internal
public
trusted
work
Services Ports Masquerading Port Forwarding ICMP Filter Rich Rules Interfaces
Here you can set rich language rules for the zone.
Family Action Element Src Dest log Audit
Add Edit Remove
Connected.
Default Zone: public Lockdown: disabled Panic Mode: disabled



systemctl restart firewalld

QUESTION: 13
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10

The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don’t need them.
Configure Security Web Service
Configure a TLS encryption for the site http://systeml.domain11.example.com, encrypt/, get a signed certificate from http://host.domain11.example.com/materials/system1.crt.
Get the certificate key from http://host.domain11.example.com/materials/system1.key. Get the signature authorization information of the certificate from
http://host.domain11.example.com/materials/domain11.crt

Answer:

```
<virtualhost *:80>
documentroot /var/www/html
servername system1.domain11.example.com
</virtualhost>
<virtualhost *:443>
documentroot /var/www/html
servername system1.domain11.example.com
SSLEngine on
SSLCertificateFile /etc/pki/tls/certs/server1.crt
SSLCertificateKeyFile /etc/pki/tls/private/server1.key
SSLCertificateChainFile /etc/pki/tls/certs/domain11.crt
<virtualhost>
systemctl restart httpd
firewall-cmd --add-service=https -permanent
systemctl restart firewalld
```

QUESTION: 14
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Configure the Virtual Host.
Expand your web server on the system1, create a virtual host for the site http://www.domain11.example.com then perform the following steps:
1. Set the DocumentRoot to /var/www/virtual from http://rhgls.domain11.example.com/materials/www.html
2. Download a file, rename as index.html, don't modify file index.html content
3. Put the file index.html under the directory DocumentRoot of Virtual Host
4. Ensure that user Andy can create files under directory /var/www/virtual
Note: original site http://systeml.domian11.example.com/ must still be able to be accessed.
Name server domain11.example.com provide the domain name resolution for host name of www.domain11.example.com

Answer:

```
mkdir -p /var/www/ virtual
cd  /var/www/ virtual
wget -O index.html
http://rhgls.domain11.example.com/materials/www.html
vim /etc/httpd/conf/httpd.conf
<virtualhost *:80>
documentroot /var/www/virtual
servername www.domain11.example.com
</virtualhost>
setfacl -m u:andy:rwx /var/www/virtual
su andy
touch /var/www/virtual/11.html
```

QUESTION: 15
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct

multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Configure the Access to the Web Content
Create a directory private under the directory DocumentRoot in the web server on the system1, requirements are the following:
? Download a file copy to this directory from http://rhgls.domain11.example.com/materials/private.html and rename it as index.html.
? Don't make any changes to this file content
? Any users from the system1 can browse the content of the private, but cannot access this directory content through other systems
?

Answer:

```
mkdir /var/www/virtual/private
mkdir /var/www/html/private
cd /var/www/virtual/private
wget -O index.html
http://rhgls.domain11.example.com/materials/private.html
cd /var/www/html/private
wget -O index.html
http://rhgls.domain11.example.com/materials/private.html
<Directory "/var/www/html/private">
    AllowOverride none
    Require all denied
    Require local
</Directory>
<Directory "/var/www/virtual/private">
    AllowOverride none
    Require local
    Require all denied
</Directory>
```

QUESTION: 16
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Dynamic WEB content
Configure dynamic web content to provide on the system1, as required:
? Dynamic content provided by a virtual machine named dynamic.domain11.example.com
? Virtual host listening on port 8909
? Download a script from http://rhgls.domain11.example.com/materials/webapp.wsgi, then put it in the right place, don't modify the file content in any situations
? Dynamically generated web page should be received when clients access http://dynamic.domain11example.com:8909.
? This http:// dynamic.domain11.example.com:8909/ must be able to be accessed by all system of domain11.example.com
?

Answer:

```
yum -y install mod_wsgi
vim /etc/httpd/conf/httpd.conf
Listen 80
Listen 8909
   <virtualhost *:8909>
   servername dynamic.domain11.example.com
WSGIScriptAlias //var/www/html/webapp.wsgi  // Please note the uppercase letters
</virtualhost>
cd /var/www/html
wget http://rhgls.domain11.example.com/materials/webapp.wsgi
```



```
systemctl restart firewalld
semanage port -a -t http_port_t -p tcp 8909
systemctl restart httpd
```

QUESTION: 17
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0,

and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Create a script
Create a script named /root/foo.sh on the system1, make it provide the following characteristics:
? When running /root/foo.sh redhat, the output is fedora
? When running /root/foo.sh fedora, the output is redhat
? When there is no parameter or parameter is not redhat or fedora, the following information will be generated by the error output: /root/foo.sh redhat:fedora
?

Answer:

```
cd ~
vim foo.sh
#~/bin/bash
case $1 in
      redhat)
            echo fedora
            ;;
      fedora)
            echo redhat
            ;;
      *)
            echo 'root/foo.sh redhat:fedora'
esac
:wq
chmod +x foo.sh
./foo.sh redhat
./foo.sh fedora
./foo.sh 1
```

QUESTION: 18
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.

Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Create a script to add users
Create a script named /root/mkusers on the system1, this script can achieve to add local users for the system1, and user names of these users are all from a file which contains the usernames list, and meet the following requirements at the same time:
? This script is required to provide a parameter; this parameter is the file which contains the usernames list

? This script need provide the following message: Usage:/root/mkusers if it does not provide a parameter, then exit and return the corresponding value
? This script need provide the following message: Input file not found if it provides a name that does not exist, then exit and return the corresponding value
? Create a user shell log into /bin/false
? This script does not need to set password for users
? You can get the usernames list from the following URL as a test: http://rhgls. domain11.example.com/materials/ userlist

Answer:

```
vim mkusers.sh      // Please note the white space
#! /bin/bash
if [ $# -eq 0 ];then
    echo 'Usage:/root/mkusers'
    exit 1
fi
if [ ! -f $1 ]; then

    echo 'Input file not found'
    exit
fi
while read line
do
    useradd -s /bin/false $line
done < $1
:wq
chmod  +x  mkusers.sh
wget http://rhgls.domain11.example.com/materials/userlist
./mkusers.sh userlist
id username   // Check whether the user is added
// Then check the result whether meet the requirements of the subject
```

QUESTION: 19
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP

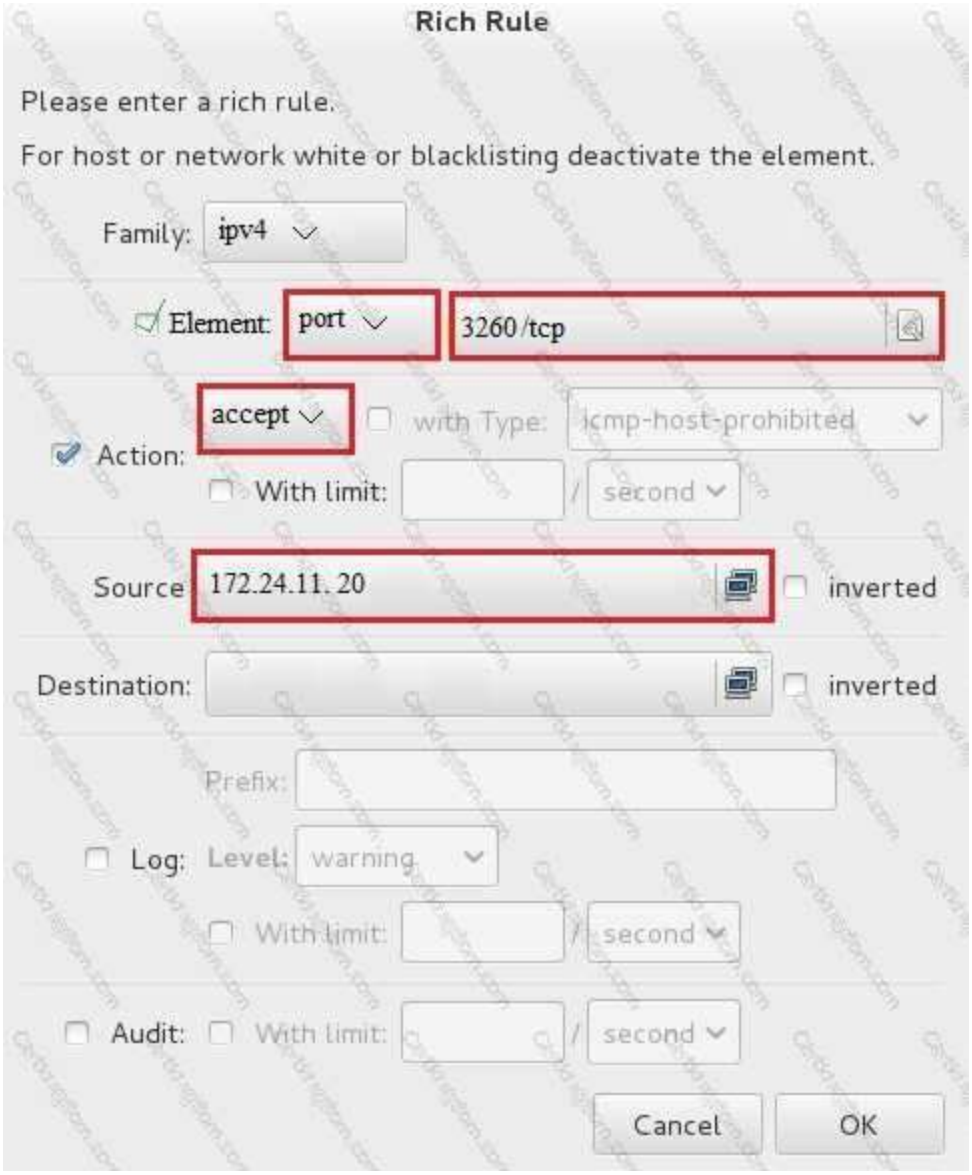
in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don’t need them.
Configure the iSCSI Server
Configure the system1 to provide a ISCSI service disk named iqn.2014-09.com.example.domain11:system1 and meet the following requirements at the same time:
? The Server Port is 3260
? Use iSCSI-store as its back-end volume, its size is 3G
? This service just can be accessed by system2.domian11.example.com
?

Answer:

```
fdisk /dev/sda
partprobe /dev/sda
yum install -y  targetcli\*
targetcli
cd backstores/
block/ create block1 /dev/sda3
cd /iscsi
create iqn.2014-09.com.example.domain11:system1
cd iqn.2014-09.com.example.domain11:system1/
cd tpg1/
acls/ create iqn.2014-09.com.example.domain11:system
luns/ create /backstores/block/block1
portals/ create system1.domain11.example.com
exit
systemctl start target
systemctl enable target
firewall-config
```



systecmctl restart firewalld

QUESTION: 20
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10

The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don’t need them.
Configure iSCSI Clients
Configure the system2 to make it can link to iqn.2014-09.com.example.domain11:system1 provided by the system, meet the following requirements at the same time:
? Block device iSCSI contains a 2100MIB partition, and is formatted as ext4.
? This partition mount to the /mnt/data and mount automatically during the system start-up.
1. iSCSI device automatically loads during the system start-up.

Answer:

```
yum install -y iscsi-initiator-utils.i686
vim /etc/iscsi/initiatorname.iscsi
InitiatorName=iqn.2014-09.com.example.domain11:system
systemctl start iscsid
systemctl is-active iscsid
iscsiadm --mode discoverydb --type sendtargets --portal 172.24.11.10
-discover
iscsiadm --mode node --targetname iqn.2014-
09.com.example.domain11:system1 --portal 172.24.11.10:3260 -login
fdisk -l
fdisk /dev/sdb
mkfs.ext4 /dev/sdb1
partprobe
mkdir /mnt/data
vim /etc/fstab
/dev/sdb1 /mnt/data ext4 _netdev 0 0
```

QUESTION: 21
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Configure a Database
Create a Maria DB database named Contacts on system1 and meet the following requirements at the same time:
? The database should contain the contents of the database replication, URL for copying files is:
http://rhgls.domain11.example.com/materials/users.mdb
? Database just can be accessed by localhost
? In addition to the root user, this database only can be searched by user Luigi, user's password is redhat
? The password for root user is redhat, does not allow empty password
?

Answer:

```
yum install -y mariadb*
systemctl start mariadb
systemctl enable mariadb
cd /
wget http://rhgls.domain11.example.com/materials/users.mdb
mysql
create database Contacts;
show databases;
use Contacts
source /users.mdb
show tables;

grant select on Contacts .* to Luigi@'localhost' identified by
'redhat';
exit
mysqladmin -uroot -p password 'redhat'
mysql -uroot -p  Enter password redhat
mysql -uLuigi -p  Enter password redhat
```

QUESTION: 22
CORRECT TEXT
RHCE Test Configuration Instructions
Information for the two systems you will use in test is the following:
system1.group3.example.com: is one of the main sever. system2.group3.example.com: mainly used as a client.
Password for both of the two systems is atenorth
System's IP is provided by DHCP, you can regard it as normal, or you can reset to Static IP in accordance with the following requirements:
system1.group3.example.com: 172.24.3.5
system2.group3.example.com: 172.24.3.10
The subnet mask is 255.255.255.0
Your system is a member of DNS domain group3.example.com. All systems in DNS domain group3.example.com are all in subnet 172.24.3.0/255.255.255.0, the same all systems in this subnet are also in group3.example.com, unless specialized, all network services required to be configured can be accessed by systems of domain group3.
host.group3.example.com provides a centralized authentication service domain GROUP3.EXAMPLE.COM, both system1 and system2 have already been pre-configured to be the client for this domain, this domain provides the following user account:

```
krishna (password: atenorth)
sergio (password: atenorth)
kaito (password: atenorth)
```

Firewall is enabled by default, you can turn it off when deemed appropriate, other settings about firewall may be in separate requirements.
Your system will be restarted before scoring, so please ensure that all modifications and service configurations you made still can be operated after the restart without manual intervention, virtual machine instances of all examinations must be able to enter the correct multi-user level after restart without manual assistance, it will be scored zero if the test using virtual machine system cannot be restarted or be properly restarted.
Corresponding distribution packages for the testing using operating system Red Hat Enterprise Linux version can be found in the following link:
http://server1.group3.example.com/rhel
Part of the requirements include host security, ensure your host security limit does not prevent the request to allow the host and network, although you correctly configured the network service but would have to allow the host or network is blocked, this also does not score.
You will notice that some requirements which clearly do not allow services be accessed by service domain my133t.org, systems of this domain are in subnet 172.25.1.0/252.255.255.0, and systems of these subnets also belong to my 133t.org domain.
PS: Notice that some test questions may depend on other exam questions, for example, you might be asked to perform a series of restrictions on a user, but this user creation may be required in other questions. For convenient identification, each exam question has some radio buttions to help you identify which questions you have already completed or not completed. Certainly, you do not need to care these buttions if you don't need them.
Database Query
Use database Contacts on the system1, and use the corresponding SQL to search and answer the following questions:
? What's the person name whose password is solicitous?
? How many people's names are John and live is Shanghai at the same time?
?

Answer:

```
mysql -uroot -p
show tables;      // View the table structure
desc table name;      // View the table field
select bid,password from pass where password='tangerine';
 // To find the ID number of password
 select * from name where aid='3' ;          // To find the name via password
 select * from name where firstname='John';    // To find the people with same
 name
 select * from loc where loction='Santa Clara';  // To find the people who live
 in the same city
```

QUESTION: 23
CORRECT TEXT
In accordance with the following requirements to deploy ssh login service:
? harry belongs to example.com which can remote login your systems.
? However, users of remote.test cannot use ssh login to your machine.
?

Answer:

```
[root@server1 ~]# grep sshd /etc/hosts.allow
sshd:.example.com
[root@server1 ~]# grep sshd /etc/hosts.deny
sshd:.remote.test
```

Notice:
tcp_wrappers has two configuration files and their priority level is /etc/hosts.allow->/etc/hosts.deny

QUESTION: 24
CORRECT TEXT
Via nfs service share the /common directory in your system, just doing ONE share in example.com domain.

Answer:

```
[root@server1 ~] # grep common /etc/exports
/common *.example.com (ro,sync)
```

QUESTION: 25
CORRECT TEXT
According to the following requirements, deploy your ftp login rule:
? Users in example.com domain must be able to login to your ftp server as an anonymous user.
? But users outside the example.com domain are unable to login to your server
?

Answer:

```
[root@server1 ~]# grep vsftpd /etc/hosts.deny
vsftpd: . example.com

[root@server1 ~]# grep vsftpd /etc/hosts.deny
vsftpd:ALL

/etc/vsftpd/vsftpd.conf:
anonymous_enable=YES
```

QUESTION: 26
CORRECT TEXT
Deploying your exam system: link to the iscsi target in the instructor.example.com and distinguish it well, then format as ext3 file system. You must be able to mount the file system of the iscsi target to the /mnt/iscsi directory in your own system and make this file system can automatically mount (permanently mount) after system restart.

Answer:

```
[root@server1 ~]# iscsiadm --mode discoverydb --type sendtargets --portal
instructor.example.com --discover
192.168.0.254:3260,1 iqn.2010-09.com.example:rdisks.server1
[root@server1 ~]# iscsiadm --mode node -targetname
iqn.2010-09.com.example:rdisks.server1
 --portal instructor.example.com --login
 Logging in to [iface:default, target:
 ign.2010-09.com.example:rdisks.server1,portal:
 192.168.0.254,3260] (multiple)
 Login to [iface:default, target:
 iqn.2010-09.com.example:rdisks.server1.portal:
 192.168.0.254,3260] successful.
```

Note: This part also needs to be formatted and modify /etc/fstab mount -

QUESTION: 27
CORRECT TEXT
In accordance with the following requirements, share /common directory through smb service.
-- your sub service must be in the SAMBA working-set
-- the shared name of common is common
-- the common share just can be shared by the customers in the example.com domain
-- the common must be available for browsing
-- mary must be able to login to the SMB share and for read operation, “password” is the secret code if it need to be verified.

Answer:

```
[root@server1 iscsi]# grep -v "^\s*#" /etc/samba/smb.conf
| grep -v
"^\s*;" | grep -v "^\s*$"
[global]
workgroup = SAMBA
server string = Samba Server Version %v
hosts allow = 127. 192.168.0.
security = user passdb
backend = tdbsam
[common]
comment = Public
Stuff path = /common
public = no
browseable = yes
printable = no read
only = mary

Add SMB Mary users
smbpasswd -a mary
Modify the security context of /common directory
chcon -R -t samba_share_t /common
```

QUESTION: 28
CORRECT TEXT
Arrange a web service address is: http://serverX.example.com, X is the number of your exam machine. Deploy it in accordance with the following requirements:

? Download ftp://instructor.example.com/pub/rhce/server.html
? Cannot do any modification to file document server.html
? Rename file document server.html as index.html
? Copy the file document server.html to DocumentRoo
?

Answer:

```
[root@server1 common]# cd /var/www/html/
[root@server1 html]# lftp instructor.example.com
lftp instructor.example.com:~> cd pub/rhce
cd ok, cwd=/pub/rhce
lftp instructor.example.com:/pub/rhce> get server.html
20 bytes transferred
[root@server1 html]# mv server.html index.html
[root@server1 html]# restorecon -Rv /var/www/html/
[root@server1 html]# /etc/init.d/httpd restart
Stopping httpd:  [ OK ]
Starting httpd:  [ OK ]
[root@server1 html]# chkconfig httpd on
```

QUESTION: 29
CORRECT TEXT
Expand your web service including a virtual hosting, the address is:http://wwwX.example.com, X is the number of your exam machine. However, requiring you do as the following:
-- Set up the DocumentRoot of this virtual hosting as /var/http/virtual
-- Download ftp://instructor.example.com/pub/rhce/www.html
-- Rename www.html file document as index.html
-- Move this file document to this virtual hosting's DocumentRoot
-- Don't do any changes to this document
-- Making sure that harry users are able to create project in /var/http/virtual
Attention: Original web address is http://serverX.example.com must also can be browsed.
The DNS of the Server instructor.example.com has already been analyzed as the domain wwwX.example.com.

Answer:

```
[root@server html]# mkdir -p /var/http/virtual
[root@server html]# cd /var/http/virtual/
[root@server virtual]# lftp instructor.example.com
lftp instructor.example.com: ~> cd pub/rhce
lftp instructor.example.com:/pub/rhce> get www.html
17 bytes transferred
lftp instructor.example.com:/pub/rhce> quit
[root@server virtual]# mv www.html index.html
[root@server virtual]# useradd harry
[root@server virtual]# chgrp harry.
[root@server virtual]# chmod 775.
Edit /etc/httpd/conf/httpd.conf, add the follow content:
NameVirtualHost *:80
<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>
<VirtualHost *:80>
DocumentRoot /var/www/html/
Servername server1.example.com
```

Notice: The priority level order of deny, allow is deployed: The back is higher than in front of the priority. It means allow -> deny

QUESTION: 30
CORRECT TEXT
Deploy your SMTP mail service and complete it by the following requirements:
-- Your mail service must be able to receive the local and remote mails
-- harry must be able to receive the remote mail
-- The mail which is delivered to mary should be put into the mail /var/spool/mail/mary

Answer:

```
Modify /etc/postfix/main.cf, open the following parameters:

inet_interfaces = all
[root@server1 virtual] # /etc/init.d/postfix restart
Shutting down postfix: [OK]
Starting postfix: [OK]
[root@server1 virtual]# chkconfig postfix on
```

QUESTION: 31
CORRECT TEXT
Configure a mail alias to your MTA, for example, send emails to harry but mary actually is receiving emails.

Answer:



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: 32
CORRECT TEXT
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.
?

Answer:

```
[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: 33
CORRECT TEXT
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:

Answer:

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

kernel /vmlinuz-2.6.32-279.1.1.e16.x86_64 ro
root=/dev/mapper/vgsrv-root
rd_LVM_LV=vgsrv/root    rd_NO_LUKS  LANG=en_US.UTF-8
rd_LVM_LV=vgsrv/swap rd_NO_MD
SYSFONT-latercyrheb-sun16 crashkernel=auto KEYBOARDTYPE=pc
KEYTABLE=us rd_NO_DM rhgb quiet
rhgb quiet sysctl=1
```

QUESTION: 34
CORRECT TEXT
Prevent Mary from performing user configuration tasks in your system.

Answer:

```
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
chkconfigNetworkManager 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: 35
CORRECT TEXT
Please set the selinux status as enforcing.

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

Answer:

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

QUESTION: 36
CORRECT TEXT
Please open the ip_forward and take effect permanently.

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

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

QUESTION: 37
CORRECT TEXT
Configure ssh to allow user harry to access, reject the domain t3gg.com (172.25.0.0/16) to access.

Answer:

```
# 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: 38
CORRECT TEXT
Configure the ftp to allow anonymously download the directory /var/ftp/pub, and reject the domain t3gg.com to access.

Answer:

```
# 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: 39
CORRECT TEXT
Shutdown the /root/cdrom.iso under /opt/data and set as boot automatically mount.

Answer:

```
# 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: 40
CORRECT TEXT
Configure the web server, which can be accessed by http://station.domain30.example.com.

Answer:

```
# 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: 41
CORRECT TEXT
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.

Answer:

```
# 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: 42
CORRECT TEXT
Download file from http://ip/dir/restircted.html, and the local user harry can access it by http://station.domain30.example.com/restircted.html, and cannot be accessed by t3gg.com.

Answer:

```
# cd /var/www/html
# wget http://ip/dir/restircted.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: 43
CORRECT TEXT
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.

Answer:

```
# 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: 44
CORRECT TEXT
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.

Answer:

```
# 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: 45
CORRECT TEXT
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.

Answer:

```
# 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: 46
CORRECT TEXT
Connect to the email server and send email to admin, and it can be received by harry.

Answer:

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

QUESTION: 47
CORRECT TEXT
Configure the kernel parameters: rhelblq=1, and it is requested that your kernel parameters can be verified through /proc/cmdline.

Answer:

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

QUESTION: 48
CORRECT TEXT

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

Answer:

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

QUESTION: 49
CORRECT TEXT
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".

Answer:

```
# 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: 50
CORRECT TEXT
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.

Answer:

```
# yum install -y iscsi*
# chkconfig iscsid on
# iscsiadm -m discovery -t st -p 172.24.30.100
 # iscsiadm -m node -T iqn.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: 51
CORRECT TEXT
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.

Answer:

```
1. vi /etc/sysconfing/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: 52
CORRECT TEXT
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.

Answer:

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

QUESTION: 53
CORRECT TEXT
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?

Answer:
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: 54
CORRECT TEXT
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.

Answer:
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: 55
CORRECT TEXT
Create the group named sysusers.

Answer:
1. groupaddsysusersgroupadd command is used to create the group and all group information is stored in /etc/group file.

QUESTION: 56
CORRECT TEXT
Create the users named jeff, marion, harold

Answer:
? useraddjeff
? useraddmarion
? useraddharold
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: 57
CORRECT TEXT
Make Secondary belongs the jeff and marion users on sysusers group. But harold user should not belongs to sysusers group.

Answer:
? usermod -G sysusersjeff
? usermod -G sysusermarion
? 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: 58
CORRECT TEXT
Create the directory /storage and group owner should be the sysusers group.

Answer:
? chgrpsysusers /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.
chownroot:sysusers /storage

QUESTION: 59
CORRECT TEXT
Make on /storage directory that only the user owner and group owner member can fully access.

Answer:
? chmod 770 /storage

? 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: 60
CORRECT TEXT
Whoever creates the files/directories on /storage group owner should be automatically should be the same group owner of /storage.

Answer:
? chmodg+s /storage
? Verify using: ls -ld /stora
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: chmodg+s directory
To Remove the SGID bit: chmod g-s directory

QUESTION: 61
CORRECT TEXT
Install the Cron Schedule for jeff user to display "Hello" on daily 5:30.

Answer:
? Login as a root user
? cat >schedule.txt
30 05 * * * /bin/echo "Hello"
? crontab -u jeff schedule.txt
? 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: 62
CORRECT TEXT
Give Full Permission to owner user and owner group member but no permission to others on /data.

Answer:
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. chmodu+rwx /data
2 .chmodg+rwx /data
3. chmod o-rwx /data
or
chmod 770 /data
4 Verify the /data: ls -ld /data
5. You will get drwxrwx---

QUESTION: 63
CORRECT TEXT
Whoever creates the file on /data make automatically owner group should be the group owner of /data directory.

Answer:
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. chmodg+s /data
2. Verify using: ls -ld /data
You will get: drwxrws---

QUESTION: 64
CORRECT TEXT
One Package named zsh is dump on ftp://server1.example.com under pub directory. Install the package from ftp server.

Answer:
? rpm -ivh ftp://server1.example.com/pub/zsh-*
? 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: 65
CORRECT TEXT
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.

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

QUESTION: 66
CORRECT TEXT
Add a cron schedule to take full backup of /home on every day at 5:30 pm to /dev/st0 device.

Answer:
1. vi /var/schedule
30 17 * * * /sbin/dump -0u /dev/st0 /dev/hda7
2. crontab /var/schedule
3. servicecrond 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: 67
CORRECT TEXT
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.

Answer:

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

After reboot and verify with this command

```
# getenforce
```

QUESTION: 68
CORRECT TEXT
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

Answer:

```
# 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: 69
CORRECT TEXT
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

Answer:

```
# 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
```

QUESTION: 70
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Configure port forwarding.
Configure server X to forward traffic incoming on port 80/tcp from source network 172.25.X.0/255.255.255.0 to port on 5243/tcp.

Answer:

```
firewall-cmd --add-rich-rule='rule family="ipv4" source
address="172.25.1.0/24" forward-port port="5423" protocol="tcp" to-
port="80" --permanent
firewall-cmd --reload
```

QUESTION: 71
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place

? system2, some configuration here
Customize the User Environment
? Create a command called qstat on both serverX and desktop.
? It should be able to execute the following command (ps –eopid, tid, class, rtprio, ni, pri, psr, pcpu, stat, wchan:14, comm).
? The command should be executable by all users.

Answer:

```
vim/etc/bashrc
alias qstat='ps -eo pid,tid,class,rtprio,ni,pri,psr,pcpu,stat,wchan:14,comm'
source /etc/bashrc
```

QUESTION: 72
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Configure IPv6 network.
? Configure eth0 with a static IPv6 addresses as follows
? Configure a Static IPv6 address in serverX as fddb:fe2a:ab1e::c0a8:64/64
? Configure a Static IPv6 address in desktopX as fddb:fe2a:ab1e::c0a8:02/64
? Both machines are able to communicate within the network fddb:fe2a:able/64
? The changes should be permanent even after the reboot
On ServerX:

```
nmcli conn show ----> to find the connection name that attaches to the eth0 interface

nmcli conn modify "System eth0" ipv6.addresses fddb:fe2a:able::c0a8:64/64
nmcli conn modify "System eth0" connection.autoconnect true
nmcli conn modify "System eth0" ipv6.method manual

nmcli conn down  "System eth0"
nmcli conn up "System eth0"
```

On DesktopX:

```
nmcli conn show ----> to find the connection name that attaches to the eth0 interface

nmcli conn modify "System eth0" ipv6.addresses fddb:fe2a:able::c0a8:02/64
nmcli conn modify "System eth0" connection.autoconnect true
nmcli conn modify "System eth0" ipv6.method manual

nmcli conn down  "System eth0"
nmcli conn up "System eth0"
```

Answer:
On ServerX:

```
ping6 -I eth0 ddb;fe2a:able::c0a8:02
```

On DesktopX:

```
ping6 -I eth0 fddb:fe2a:able::c0a8:64
```

QUESTION: 73
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Link aggregation.
? Configure your serverX and desktop, which watches for link changes and selects an active port for data transfers.
? serverX should have the address as 192.169.X.10/255.255.255.0
? desktopX should have the address as 192.168.X.11/255.255.255.0
(Note: where X is your station number)

Answer:
On Server Machine:

```
nmcli con add type team con-name Team1 ifname Team1
              config '{"runner":{"name":"activebackup"}}'
nmcli con modify Team1 ipv4.addresses 192.168.1.10/24
nmcli con modify Team1 ipv4.method manual
nmcli con add type team-slave con-name Team1-slave1 ifname eth1 master Team1
nmcli con add type team-slave con-name Team1-slave2 ifname eth2 master Team1

nmcli con up Team1
nmcli con up Team1-slave1
nmcli con up Team1-slave2
```

Verification & Testing:

```
teamdctl Team1 state
nmcli dev dis eth1 ---> Disconnect device for verification
nmcli con up Team1-slave1
teamnl Team1 ports
teamnl Team1 getoption activeport
teamnl Team1 setoption activeport PORT_NUMBER

ping -I Team1 192.168.1.11
```

On Desktop Machine:

```
nmcli con add type team con-name Team1 ifname Team1 config '{"runner":
{"name": "activebackup"}}'
nmcli con modify Team1 ipv4.addresses 192.168.1.11/24
nmcli con modify Team1 ipv4.method manual
nmcli con add type team-slave con-name Team1 -slave1 ifname eth1 master
Team1
nmcli con add type team-slave con-name Team1 -slave2 ifname eth2 master
Team1

nmcli con up Team1
nmcli con up Team1 -slave1
nmcli con up Team1 -slave2
```

Verification & Testing:

```
teamdctl Team1 state
nmcli dev dis eth1 ---> Disconnect device
for verification
nmcli con up Team1-slave1
teamnl Team1 ports
teamnl Team1 getoption activeport
teamnl Team1 setoption activeport
PORT_NUMBER

ping-I Team1 192.168.1.10
```

QUESTION: 74
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
SMTP Configuration.
? Configure the SMTP mail service on serverX and desktopX which relay the mail only from local system through station.network0.example.com, all outgoing mail have their sender domain as example.com. Ensure that mail should not store locally.
? Verify the mail server is working by sending mail to a natasha user.
? Check the mail on both serverX and desktopX with the below URL
http://station.network0.example.com/system1
http://station.network0.example.com/system2

Answer:

```
vim /etc/postfix/main.cf
inet_interfaces = loopback-only

mydestination =
muorigin=example.com
mynetworks = 127.0.0.0/8, [;;1]/128
relayhost = [station.network0.example.com]
local_transport = error: local delivery dosabled
```

QUESTION: 75
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
NFS server.
? Configure serverX with the following requirements
? Share the /nfsshare directory within the example.com domain clients only, share must be writable
? Share the /nfssecure, enable krb5p security to secure access to the NFS share from URL http://station.network0.example.com/pub/keytabs/serverX.keytab
? Create a directory named as protected under /nfssecure
? The exported directory should have read/write access from all subdomains of the example.com domain
? Ensure the directory /nfssecure/protected should be owned by the user harry with read/write permission

Answer:

```
yum install -y nfs*
```

```
mkdir -p /nfsshare
chmod 0777 /nfsshare
```

```
vim /etc/exports
/nfsshare *.example.com(rw)
```

```
systemctl restart nfs-server
systemctl enable nfs-server
firewall-cmd --permanent --add- service=nfs
firewall-cmd --reload
```

```
mkdir -p /nfssecure
wget -O /etc/krb5.keytab
http://station.network0.example
.com/pub/keytabs/serverX.keytab
```

```
vim /etc/sysconfig/nfs
RPCNFSDARGS="-V 4.2"
```

```
systemctl enable nfs-secure-server
mkdir /nfssecure/protected
vim /etc/exports
/nfssecure * .example.com(rw,sec=krb5p,sync)
grep -i "harry" /etc/passwd
(If it return nothing, then create the user harry)
[indent =1]  useradd -u 300 harry --- IT SHOULD BE
nologin or not? [/indent]
chown harry /nfssecre/protected

Best it do like this:
setfacl -m u:harry:rwX/nfssecure/protected
exportfs -r

semanage fcontext -a -t public_content_rw_t
"/nfsshare(/.*)?"
semanage fcontext -a -t public_content_rw_t
"/nfsshare(/.*)?"
restorecon -Rv /nfssecure/
firewall-cmd --permanent --add-service=rpc-bind
firewall-cmd --permanent --add-service=mountd
firewall-cmd -reload

systemctl restart nfs-server
systemctl restart nfs-secure-server
systemctl enable nfs-secure-server
```

QUESTION: 76
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place

? system2, some configuration here
Configure NFS mount.
? Mount /nfsshare directory on desktopX under /public directory persistently at system boot time.
? Mount /nfssecure/protected with krb5p secured share on desktopX beneath /secure/protected provided with keytab
station.network0.example.com/pub/keytabs/desktopX.keytab">http://station.networ
k0.example.com/pub/keytabs/desktopX.keytab
? The user harry is able to write files on /secure directory

Answer:

```
yum install -y nfs-utils
wget -O /etc/krb5.keytab
http://station.network0.example.com/pub/keytabs/desktopX.keytab
systemctl start nfs-secure
systemctl enable nfs-secure

mkdir -p /public
vim /etc/fstab
server1.example.com:/nfsshare /public nfs defaults, sync 0 0
mkdir -p /secure/protected
vim /etc/fstab
server1.example.com:/nfssecure/protected /secure/protected nfs
defaults,v4.2,sec=krb5p,sync 0 0
```

Verification from DesktopX:

```
ssh harry@localhost
cd /secure/protected
echo "Is it writeable?" >>test.txt
```

QUESTION: 77
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Configure smb access.
? Share the /sambadir directory via SMB on serverX
? Your SMB server must be a member of the TESTGROUP workgroup
? The share name must be data
? The data share must be available to example.com domain clients only
? The data share must be browseable
? susan must have read access to the share, authenticating with the same password "password", if necessary

---

? Configure the serverX to share /opstack with SMB share name must be cluster
? The user frankenstein has readable, writeable, accessable to the /opstack SMB share
? Both users should have the SMB passwd “SaniTago”

Answer:

```
yum install samba samba-client
systemctl start smb nmb
systemctl enable smb nmb
firewall-cmd --permanent --add-service=samba
firewall-cmd --reload
mkdir -p /sambadir
semanage fcontext -a -t samba_share_t
"/sambadir(/.*)?"
restorecon -Rv /sambadir
setfacl -m u:susan:r-X /sambadir
vim /etc/samba/smb.conf
workgroup = TESTGROUP
[data]
comment = data share
path = /sambadir
browseable = yes
valid users = susan
read only = yes
hosts allow = 172.25.1. #(ifconfig and get
your ip and only use the 3 octets)
grep -i "susan" /etc/passwd
(It it return nothing to create a user
first)
useradd -s /sbin/nologin susan
smbpasswd -a susan
mkdir -p /opstack
semanage fcontext -a -t samba_share_t
"/opstack (/.*)?"
restorecon -Rv / opstack
vim /etc/samba/smb.conf
[cluster]
comment = opstack share
path = /opstack
write list = frankenstein
writable = no
useradd -s /sbin/nologin frankenstein
useradd -s /sbin/nologin martin
smbpassword -a Frankenstein
smbpassword -a martin
#Allow Frankenstein write access & Martin read access to the directory
[indent=1]1) setfacl -m u:frankenstein:rwX /opstack/[/indent]
[indent=1]2) setfacl -m u:frankenstein:r-X /opstack/
```

[/indent]

QUESTION: 78
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Smb multiuser mount
? Mount the samba share /opstack permanently beneath /mnt/smbspace on desktopX as a multiuser mount.
? The samba share should be mounted with the credentials of frankenstein.

Answer:

```
yum -y install cifs-utils samba-client
mkdir -p /mnt/smbspace
vim /root/smb-multiuser.txt
username=frankenstein
password=SaniTago
chmod 0600 /root/multiuser.txt
vim /etc/fstab
//server1/cluster /mnt/smbspace cifs defaults,sec =ntlmssp,
credentials=/root/smb-multiuser.txt,multiuser 0 0
```

QUESTION: 79
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Webserver.
? Implement a webserver for the site http://serverX.example.com
? Download the webpage from http://station.network0.example.com/pub/rhce/rhce.html
? Rename the downloaded file in to index.html
? Copy the file into the document root
? Do not make any modification with the content of the index.html
? Clients within my22ilt.org should NOT access the webserver on your systems

Answer:

```
yum install httpd httpd-manual

systemctl start httpd
systemctl enable httpd

firewall-cmd --permanent --add-service=http
firewall-cmd –reload


wget http://station.network0.example.com/pub/rhce/rhce.html

mv rhce.html /var/www/html/index.html

cd /etc/httpd/conf.d/

vim server1.conf

<VirtualHost *:80>
ServerAdmin webmaster@server1.example.com
ServerName server1.example.com
DocumentRoot /var/www/html
CustomLog "logs/server1_access_log" combined
ErrorLog "logs/server1_error_log"
</VirtualHost>

<Directory "/var/www/html">
<RequireAll>
        Require all granted
        Require not host my22ilt.org
</RequireAll>
</Directory>


systemctl restart httpd
```

QUESTION: 80
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Secured webserver.
? Configure the website https://serverX.example.com with TLS
? SSLCertificate file
http://classroom.example.com/pub/rhce/tls/certs/system1.networkX.crt
? SSLCertificatekeyfilehttp://classroom.example.com/pub/rhce/tls/private/system1.netw
orkX.key
? SSL CA certificate file http://classroom.example.com/pub/example-ca.crt

Answer:

```
yum install –u mod_ssl

wget http://classroom.example.com/pub/rhce/tls/certs/system1.network1.crt

wget http://classroom.example.com/pub/rhce/tls/private/system1.network1.key

wget http://classroom.example.com/pub/example-ca.crt

mv system1.network1.crt /etc/pki/tls/certs/
mv system1.network1.key /etc/pki/tls/private/
mv example-ca.crt /etc/pki/tls/certs/

# Very Important, Fix the Permission on Key File
chmod 0600 /etc/pki/tls/private/system1.network1.key

vim /etc/httpd/conf.d/server1.conf

(Add the following)

<VirtualHost *:443>

ServerName server1.example.com
DocumentRoot /var/www/html

SSLEngine on
SSLCertificateFile /etc/pki/tls/certs/localhost.crt
SSLCertificateKeyFile /etc/pki/tls/private/localhost.key
#SSLCertificateChainFile /etc/pki/tls/certs/server-chain.crt

</VirtualHost>

firewall-cmd --permanent --add-service=https
firewall-cmd –reload
```

QUESTION: 81
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Webpage content modification.
? Implement website for serverX.examp">http://serverX.example.com/owndir
? Create a directory named as “owndir” under the document root of webserver
Download
station.network0.example.com/pub">http://station.network0.example.com/pub/rhce/restri
ct.html
? Rename the file into ondex.html
? The content of the owndir should be visible to everyone browsing from your local
system but should not be accessible from other location

Answer:

```
mkdir /var/www/html/owndir
restorecon -Rv /var/www/html
cd /var/www/html/owndir

wget http://station.network0.example.com/pub/rhce/restrict.html
my restrict.html intex.html

vi/etc/httpd/conf.d/server1.conf

(Add this)


<Directory "/var/www/html/owndir">
AllowOverride None
Require all Denied
Require local
</Directory>

systemctl restart httpd
```

QUESTION: 82
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Virtual hosting.
? Setup a virtual host with an alternate document root.
? Extend your web to include a virtual for the site
vhostsX.example.com">http://vhostsX.example.com
? Set the document root as /usr/local/vhosts
? Downloadstation.network0.example.com/pub/rhce/vhost/html">http://station.netwo
rk0.example.com/pub/rhce/vhost/html
? Rename it as index.html
? Place this document root of the virtual host
? Note: the other websites configures for your server must still accessible.
vhosts.networkX.example.com is already provided by the name server on
example.com

Answer:

Check that the mentioned document root exists by:

```
cd /usr/local/vhosts
```

If it doesn't exist then create it:

```
mkdir /usr/local/vhosts

cd /usr/local/vhosts
wget http://station.network0.example.com/pub/rhce/vhost.html
mv vhost.html index.html

semanage fcontext -a -t httpd_sys_content_t "/usr/local/vhosts(/.*)?"
restorecon -Rv /usr/local/vhosts/
```

Create the configuration of new virtual host:

```
vim /etc/httpd/conf.d/vhosts.conf

<VirtualHost *:80>
ServerAdmin webmaster@vhosts1.example.com
ServerName vhosts1.example.com
DocumentRoot /usr/local/vhosts
CustomLog "logs/vhosts_access_log" combined
ErrorLog "logs/vhosts_error_log"
</VirtualHost>

<Directory "/usr/local/vhosts">
AllowOverride None
# Allow open access:
Require all granted
</Directory>

systemctl restart httpd
```

QUESTION: 83
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Dynamic Webpage Configuration.
? Configure website wsgiX.example.com:8961">http://wsgiX.example.com:8961 on system1 with the documentroot /var/www/scripts
? Site should execute webapp.wsgi
? Page is already provided on classroom.example.com/pub/webapp.wsgi">http://classroom.example.com/pub/webapp.wsgi
? Content of the script should not be modified

Answer:

```
yum install -y mod_wsgi

mkdir –p /var/www/scripts
cd /var/www/scripts
wget http://classroom.example.com/pub/webapp.wsgi
restorecon –Rv /var/www/scripts

vim /etc/httpd/conf/httpd.conf

Listen 8961

vim /etc/httpd/conf.d/wsgi1.conf

<VirtualHost *:8961>
ServerAdmin webmaster@wsgi1.example.com
ServerName wsgi1.example.com
DocumentRoot /var/www/scripts # We don't need it,only testing
WSGIScriptAlias / /var/www/scripts/webapp.wsgi
CustomLog "logs/wsgi_access_log" combined
ErrorLog "logs/wsgi_error_log"

</VirtualHost>

<Directory "/var/www/scripts">
AllowOverride None
# Allow open access:
Require all granted
</Directory>

firewall-cmd --permanent --add-port=8961/tcp
firewall-cmd --reload

semanage port -a -t http_port_t -p tcp 8961

systemctl status httpd
```

Verification from Server2:

```
yum install -y elinks
links --dump http://wsgi1.example.com:8961
Should present with the desired page
```

QUESTION: 84
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Script1.

? Create a script on serverX called /root/random with the following details
? When run as /root/random postconf, should bring the output as “postroll”
? When run as /root/random postroll, should bring the output as “postconf”
? When run with any other argument or without argument, should bring any other argument or without argument, should bring the stderr as “/root/random postconf|postroll”

Answer:

```
vim /root/random

#!/bin/bash
case S@ in
postconf)
    echo "postroll"
    ;;
postroll)
    echo postconf"
    ;;
*)
    echo "/root/random postconf|postroll"
    ;;
esac
chmod +x /root/random
```

QUESTION: 85
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Script2.
? Create a script on serverX called /root/createusers
? When this script is called with the argument, it should add all the users from the file
? Download the file from
station.network0.example.c">http://station.network0.example.com/pub/testfile
? All users should have the login shell as /bin/false, password not required
? When this script is called with any other argument, it should print the message as “Input File Not Found”
? When this script is run without any argument, it should display “Usage:/root/createusers”
? NOTE: if the users are added no need to delete

Answer:

```
cd /root
wget [url="http://station.network0.example.com/pub/testfile"]http://station.network0.example.com/pub/testfile[/url]

vim /root/createusers

#!/bin/bash
a=''
case $@ in
testfile)

        for user in $(cat $1);do
        echo "Adding this user:" $user
        useradd -s /bin/false $user
        done
        ;;
$a)
        echo "Usage: /root/createusers"
        ;;
*)
        echo "Input File Not Found"
        ;;
esac

chmod +x /root/createusers
```

QUESTION: 86
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
Configure SCSI storage.
? Create a new 1 GB target on your serverX.example.com
? The block device name should be data_block
? The server should export an iscsi disk called iqn.2014-10.com.example:serverX
? This target should only be allowed to desktop
.

Answer:

```
yum install -y targetcli
systemctl start target
systemctl enable target
firewall-cmd --permanent --add-port=3260/tcp
firewall-cmd -reload
#targetcli
backstores/block/create data-block /dev/sdb1
iscsi/ create iqn.2014-10.com.example:server1
cd iscsi/iqn.2014-10.com.example:server1/tpg1/
acls create iqn.2014-10.com.example:desktop1
luns/ create backstores/block/data_block
portals Server_IP(172.25.x.11) 3260
exit
```

QUESTION: 87
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
iSCSI Initiator
? The serverX.example.com provides an iscsi port (3260). Connect the disk with desktopX.example.com and configure filesystem with the following requirements.
? Create 800 MB partition on iSCSI block device and assign the filesystem as xfs
? Mount the volume under /mnt/initiator at the system boot time
? The filesystem should contain the copy of http://station.network0.example.com/pub/iscsi.txt
? The file should be owned by root with 0644 permission
? NOTE: the content of the file should not be modified

Answer:

```
yum install –y iscsi-initiator-utils

vim /etc/iscsi/initiatorname.iscsi
InitiatorName=iqn.2014-11.com.example:desktop1

systemctl start iscsi
systemctl start iscsid

systemctl enable iscsi
systemctl enable iscsid

iscsiadm --mode discoverydb --type sendtargets --portal server1.example.com --discover
iscsiadm --mode node --targetname iqn.2014-11.com.example:server1 --portal server1.example.com:3260 --login
```

Verification:

```
iscsiadm –m session –P 3 (it should show the State: running)
lsblk

fdisk /dev/sdb
Create the partition of 800M

mkfs.xfs /dev/sdb1

mkdir –p /mnt/initiator
mount /dev/sdb1 /mnt/initiator

blkid /dev/sdb1

vim /etc/fstab

UUID=c9213938-6753-4001-b939-4b5720c8ec5e /mnt/initiator xfs _netdev 0 0

cd /mnt/initiator
wget http://station.network0.example.com/pub/iscsi.txt
chown root iscsi.txt
chmod 0644 iscsi.txt
```

QUESTION: 88
CORRECT TEXT
There were two systems:
? system1, main system on which most of the configuration take place
? system2, some configuration here
MariaDB
? Restore a database on serverX from the backup file
classroom.com/pub/rhce/backup.m">http://classroom.com/pub/rhce/backup.mdb
? The database name should be Contacts. It should be access only within the localhost
? Set a password for root user as “Postroll”. Other than the root user, the user Andrew is able to read the query from the above mentioned database. The user should be authenticated with the password as “Postroll”.

Answer:

```
yum groupinstall -y mariadb mariadb-client
systemctl start mariadb
systemctl enable mariadb
```
(We don't need to open firewall port because it says that only access from localhost)
```
mysql secure installation
wget http://classroom.example.com/pub/rhce/backup.mdb
mysql -u root -p
CREATE DATABASE Contacts;
CREATE USER andrew@localhost IDENTIFIED BT 'Postroll';
GRANT SELECT ON Contacts.* TO andrew@localhost;
mysql -u root -p Contacts<backup.mdb
```