RHCSA Practicals

1. User Administration

2. Cron Scheduling

3. Prmissions

Scenario #1

You are an SA who has been given a responsibility to manage the security of a new project named SALESPD on a new production server. Create the following users and groups with appropriate password assignments. Make sure that you force the users to change their password on the first logon

Groups Users Password

salesrep ajit, peter, mark, kiran A#!8903P

salesmgr jason, anup Q87$81j

Scenario #2

As a System Administrator you are responsible to take a backup of your /etc directory every night. Build a shell script to take a backup of the /etc/directory using the tar command. The backup script should be named as /root/backup.sh. Schedule this script to run at 11:00 PM every night – except Sundays.

Scenario #3

Find out the list of all users in the /etc/passwd file who have not been assigned a "/bin/bash" shell. Save this list in a file named /tmp/non_bash_user_list.txt. This list should be alphabetically arranged from z-a. Make sure that this list contains the names of the users ONLY. no other information like shell, home directory is required

Scenario # 4

No users should be able to read this file other than the users from the "salesrep" group. It is assumed that root can read any files.

Scenario # 5

Create a user named jackie with UID of 3002 and default login shell as "/bin/ksh"/ This user's password should e set to Qip587#

Scenario # 6

Setup a cron job for user jackie to execute a command /bin/echo “Hi How are you” at 1:20 PM on January 18, 2012.

Scenario # 7

Download a file named a.txt from the ftp server 172.24.8.111. The ftp server is configured as an anonymous FTP server. The file has been kept inside /pub directory of the ftp server. When you download the file, keep it in the /tmp directory with a name of b.txt. Set up the permissions and ownership on this file as follows.

1. Owner of file : anup

2. All users from the “salesmgr” group should be able to read and write to this file.

3. But user named “jason” should not be able to modify any contents of this file even if he is a member of “salesmgr” group.

Scenario # 8

Create a directory named /SAPESPD. This directory should be owned by root. Set up this directory in such a way that:

1. Any member of group “salesrep” should be able to create files in this directory.

2. Any member of the “salesrep” group should not be able to delete any file other that the files created by him/her in this directory.

Storage Management

Scenario #1

You have been given a task by your manager to plan for the future disk space requirement of your server. As a first step towards this task, you are required to find out the following information about your server. Please run appropriate commands to gather the information.

- Names of the disks attached to your server.
- What are their sizes?
- How much of free space is left on each disk?

Scenario #2

As a continuation of the above exercise, you are also required to find out the following.

- Names of the partitions, their sizes and their mount points?
- How much of free space is left in each partition?
- Which of these partitions can be resized, if necessary?

Scenario #3

Is LVM implemented for any of the partitions. If yes, find out the following information.

- Physical Volumes
  - o Names of all Physical volumes
  - o Sizes of all Physical volumes
- Volume Groups
  - o Names of all Volume groups
  - o Sizes of all Volume groups
  - o Size of the physical extent of each volume group.
  - o How many physical extents are present in each volume group.
  - o How much of free space is left in each Volume Group
  - o How many extents are free in each volume group

 Logical Volume

o Names of all LVs and the VG that they belong to

o Sizes of all Logical volumes

o Mount points for each Logical volume, if mounted

Scenario #4

You have recently deployed a new web application on your Red Hat server. You have realized that the memory requirement of this web application is high. You, therefore, have decided to increase the swap space to take care of this issue. In such a situation, configure your server to have additional swap space of 500 MB. This additional swap should be made available to the system when the server reboots.

Scenario #5

A new project has been started in your organization. The developers of this project need additional disk space for the source code programs related to this project to be stored in their respective home directories. Increase the size of /home to 650MB. If for some reason your are unable to resize it to 650MB, any size between 630MB and 660 MB will suffice.

Note: While performing the above operation there should not be any data loss of existing data in the /home directory.

Scenario #6

For the above mentioned new project, there is a need to keep large data files on the server. You need to cerate a separate mount point named /sales_data for this purpose. Create a new volume group and a logical volume for this purpose from the remaining free space on your disk/s. The size of Physical extent of the volume group should be 8MB. The logical volume should have 50 extents. This mount point should get automatically mounted at the boot time.

Scenario # 7

Resize the file system /opt from its current size of 500 MB to 400 MB. Do not lose any data while performing the resizing.

VM – (no servers to be installed)

1. /boot – partition – 100MB

2. / - partition – 3GB

3. Swap – vg1 – lv1 (pe size = 4M for vg1) – 500MB

4. /home – vg1 – lv2 (400MB)

5. /opt –vg1 –lv3 (500MB)

Scenario #1

You need to deploy an http server. Configure this server in such a way that it can render html pages from his Document Root directory. Download an already developed HTML page from an ftp server 172.24.0.254. The name of this HTML page file is abc.html. Configure your web server so that this web page will be displayed when a user hits your web site. You may rename this HTML file if necessary.

Open the appropriate port of your firewall for this web site to be accessible from other machines.

KERNEL UPGRADATION AND NTP CLIENT

Scenario #1

You need to create YUM repository on your YUM server. For this reason, a RPM package named "createrepo" has to be installed on your YUM server. The "createrepo" RPM and its dependent RPMs are kept in /tmp/rpm directory.

Scenario #2

You are required to change Boot Loader's Splash Screen to display the name of your Organization 'ABC Corporation' instead of the default 'Red Hat Enterprise Linux' at the boot time.

Scenario #3

A new version of Linux Kernel is available. As a System Administrator you have been given a task to upgrade your existing kernel to the new one. You must keep the old kernel on the system as a backup. Make your system to boot with the newer kernel.

The newer kernel is available at ftp://server1.example.com/pub/updates

Scenario #4

There is a need for a cluster setup in your company for providing High Availability of production servers. For this reason, all servers in the cluster must have the exact system time. You are required to setup your current server's system time to sync with the TIME server in your organization as your current is part of a cluster. The IP address of the Time Server is 172.24.0.254.

NFS

Scenario #1

An NFS Server in your organization has exported certain directories. Identify these directories and mount one of them (/var/nfs) on to a local directory named /remote_nfs.

Check if you can modify the files or create any files in the mounted directory.

Scenario #2

An NFS Server in your organization has exported certain directories. Identify these directories and auto-mount one of them (/home/guests) underneath the /remote_nfs1 directory.

Check if the NFS share automatically gets mounted when you 'cd' into /remote_nfs1.

I/O redirection

Scenario #1

Find out the list of all users in the /etc/passwd file who have not been assigned a "/bin/bash" shell. Save this list in a file named /tmp/non_bash_user_list.txt. This list should be alphabetically arranged from z-a. Make sure that this list contains the names of the users ONLY. no other information like shell, home directory is required

Scenario #2

Locate all files owned by 'yogesh' and copy them to /root/yogesh_files directory.

Scenario #3

Search all the line from /usr/share/dict/words containing a word "start" and save them to a file named /root/dict_words. Arrange these words alphabetically. There should not be any blank lines redirected to /root/dict_words.

Users, passwords & groups

User with UID

Shekhar - Collaborative dir & other permissions

Std Permissions + Shekhar - special permissions

Mandar - Kernel upgrade + grub changes

Cron

Mandar - NTP Client

Find

Grep

ftp server

web server

Satish - Increase swap

Satish LVM – resize /home

Satish - Pv + vg + lv + mount

LDAP Client

LDAP NFS Automount