**RHCSA Practice Exam**

**Description**

In this hands-on lab, we will prepare for the Red Hat EX200 v9 exam. We will encounter a number of exercises that cover all the sections of the course. Upon successful mastery of this lab, students will be ready to take the RHCSA v9 exam.

**This practice is not approved or sponsored by Red Hat.**

**Objectives**

Successfully complete this lab by achieving the following learning objectives:

**Prerequisite**:

* Import **rhcsa1.exam.sample.com** and **rhcsa2.eam.sample.com** servers from class website into your VirtualBox.
* Bridge Network Adapter.
* You don’t have access to root password. Reset the root password to california on **rhcsa2.exam.sample.com**. Also, setup password of student account to california **rhcsa2.exam.sample.com.**
* No need to reset password on **rhcsa1.exam.sample.com.** Password is california for all users include root account.

1. Deploy **rhcsa1.exam.sample.com** and **rhcsa2.exam.sample.com** to network with the following information.

**rhcsa1.exam.sample.com**:

 - IP address= A.A.A.85 (replace **A.A.A** with the network ID=PORTION of your home network)

- Default Gateway = your home network gateway

- Subnet mask = 255.255.255.0

- DNS1 = 8.8.8.8

- DNS2 = 8.8.4.4

- Hostname= [rhcsa1.exam.sample.com](about:blank)

**rhcsa2.exam.sample.com**:

- IP address= A.A.A.90 (replace **A.A.A** with the network ID=PORTION of your home network)

- Default Gateway = your home network gateway

- Subnet mask = 255.255.255.0

- DNS1 = 8.8.8.8

- DNS2 = 8.8.4.4

- Hostname= [rhcsa2.exam.sample.com](about:blank)

1. **Configure yum repos on both servers to be able to install Packages**

**Alma 9 BaseOS**:

baseurl=https://repo.almalinux.org/almalinux/$releasever/BaseOS/$basearch/os/

**Alma 9 AppStream**:

baseurl=https://repo.almalinux.org/almalinux/$releasever/AppStream/$basearch/os/

1. List all lines that have string “**max**” in /etc/systemd/journald.conf and dump them into /var/max.txt file.
2. Check the SELinux and make sure it is in enforcing mode.
3. Troubleshoot and fix apache httpd web application issue and ensure that it is browse-able using the server IP and display content “This is rhcsa exam test”
4. Find All Files in ***/etc*** (not subdirectories) that where modified more than 180 days ago.
5. Create a group named "supervisor"

a-    User “John” and “sams” should belong to “supervisor” group as a secondary group

b-    User “shawn” should have non-interactive shell and she should not be a member of “supervisor” group

c-    Password for all users created should be “california”.

1. Create the Directory "/var/master" with the following characteristics.

a-     Group ownership of “/var/master” should go to “supervisor” group.

b-      Members of “supervisor” group should be able to read write and access /var/master.

c-      Newest files create inside /var/master should get the same group ownership as the directory.

d-     All other users should have no access to the directory.

1. Archive /var/log to /tmp/log\_archive.tgz using bzip2 compression.
2. Find all setuid files on the system and save the list
3. Find all log messages in /var/log/messages that contain "ACPI", and export them to a file called /root/log. Then archive all of /var/log and save it to /tmp/log\_archive1.tgz
4. Write a script named backup.sh under /root which will search files less than 2M from /usr and store it in /root/backup
5. Install the Stratis software packages, start the Stratis service, and mark it for autostart on subsequent system reboots
6. The user Alain must configure a cron job that run every day at 6:15pm as himself and do the following: echo “This is Alain Job”
7. Create the archive file **/root/local.tgz** for **/usr/local** compressed by **gzip**.
8. Create the user malick with uid 2333 with password "california".
9. Configure the NTP service and sync the server time to the following NTP server   **1.amazon.pool.ntp.org**
10. The user student must configure a cron job that run every two minutes as himself the command “cat /etc/passwd”
11. Set your server to use the recommended tuned profile.
12. Find the files that are larger than 20M owned by root user and redirect them to /var/findfiles.
13. Find all files owned by Alain user and redirect them to /root/findfiles directory.
14. Update your system setting so that any future user created will have account expiring in next 20 days.
15. Create a logical volume with the name “LVo” by using 60PE’s from the volume group “VGo”. Consider the PE size as “8MB”. Mount it on /mnt/redhat8 with ext3 filesystem.
16. Resize /newlv file system so that it is 400MB. Any size in between 380 and 430
17. Create a 1G swap space. Make sure the current partition where the swap is mounted is not altered.
18. Add a new 10GiB virtual disk sdb to your virtual machine. On this disk, add a VDO volume with a size of 30GiB and mount it persistently to /mnt/vdo.
19. Copy the file /etc/fstab to /var/tmp/fstab.

a-     The file /var/tmp/fstab is owned by the “root”

b-    The file /var/tmp/fstab belongs to the group “root”

c-     The file /var/tmp/fstab should not be executable by anybody.

d-    Group should be able to read the file, but don’t forget root owns the file.

e-     The user “Sams” should be able to read and write to the file.

f-      The user “John” can neither read nor write to the file.

g-     Other users (Future and current) should not be able to do anything with the file.

1. You have Download and import rhcsa2.exam.sample.com to your virtual box**. Make sure you Bridge the network adapter**, complete **question 1** and **2 on this server also**, modify the /etc/hosts with a proper IP addresses and use this machine for the next questions on this project.
2. Use the NFS share /nfsrhcsa that are provided by **rhcsa.exam.sample.com** from the first system to setup an auto mount on rhcsa2.examp.sample.com. Configure system so that **/nfsrhcsa/kamil** is accessible with its contents when user login into system.
3. In rhcsa2.exam.sample.com imported, perform the following tasks:
4. Create /apache/html/rhcsa.txt file with the following content: “This is the website from our container”
5. As student user, create a detached Apache HTTP Server container named website. Use the rhel8/httpd-24 image with the tag 1-105 from the registry.redhat.io registry. Map port 8080 in the container to port 8080 on the host. Mount the /apache/html directory on the host as /var/www in the container. Declare the environment variable HTTPD\_MPM with **event** for the value.
6. As the student user, configure systemd so that the website container starts automatically with the server.

NOTE: To access the container image registry at registry.redhat.io, create a free account from red hat website [www.redhat.com](about:blank) if you don’t have one yet. Use your red hat account username and password to access the registry.