# RHCSA Sample Exam 1

Start with the preconfigured RHEL 9 system specified in Appendix A. You have a total of 150 minutes to execute the following tasks. These tasks must be carried out on server1.example.com unless otherwise instructed.

1. Set the root password to RedHat4Ever! (note: the existing root password is unknown).
2. Configure network settings: set the hostname as server1.example.com, assign the IP address x.y.z.100 (x.y.z.0 is the NAT subnet address of your VMware Workstation Player setup) with a netmask /24. Set the default gateway and DNS server to the IP address of the gateway of your VMware Workstation NAT subnet.
3. Register your system to the Red Hat Subscription Management and enable automatic attachment of subscriptions to the system.
4. Set up a yum repository named epel pointing to http://linuxsoft.cern.ch/epel/9/Everything/x86\_64/. Disable GPG checks. From this repository, install the htop RPM package.
5. Configure a new 500MiB partition in the remaining unoccupied space of the drive. Create a physical volume on the new partition and a volume group vg01 with a physical extent size of 8MB. On the new volume group, create a logical volume named lv\_project with a size of 32 logical extents.
6. Format the new logical volume with the XFS filesystem and mount it on the /project directory. Make sure it is automatically mounted when the system is booted. Utilize the UUID of the new volume for this.
7. Identify all files in the /etc directory ending with the .conf extension and store their full pathnames in the file /root/configfiles.txt.
8. Generate a **bzip**-compressed tar archive named /tmp/etc.tar.bz2, encompassing the contents of the /etc directory.
9. Set up the following RHEL users: nancy, randy, donna, and mike. Set their passwords to changeme!. Include users nancy and randy in a group named engineers with GID 2000. Generate a /home/engineers directory, permitting them to share files without modifying permissions or ownership of any file in this directory. Users donna and mike should not be granted read access to this directory.
10. Ensure that user mike’s account expires after a period of seven days.
11. Schedule a job to delete all standard files in the /home/mike/tmp directory every second day of the month at 03:50 a.m.
12. Create a project.test file in the /opt directory. Configure ownership and permissions on the project.test file to enable user donna to read this file and mike to read and write to it.
13. Create a script /usr/local/bin/backup.sh that accepts a directory as an argument and creates a backup of all files in that directory into a tar-gzipped archive in the present directory. If no argument is given, the script should display the error message:

Usage: backup.sh <DIRECTORY>

If the argument given is not a directory, the script should display an error message. Schedule the script to run automatically at 2:00 a.m. daily, creating a backup of the /home directory in the /tmp filesystem.

1. Create a user named sam with UID 1234. Assign user sam’s home directory to /nethome/sam. The directory /nethome/sam must be mounted via the automounter from tester1.example.com:/exports/sam using NFS in read-write mode.
2. Configure SELinux on tester1.example.com to permit the Apache web server to bind to port 8234.
3. On tester1.example.com, configure SELinux to allow the Apache web server to serve files from the DocumentRoot on the /html directory. Change the firewall settings so that you can connect from other hosts to the web server on tester1.example.com.
4. As user mike, run a rootless container using the Red Hat UBI httpd-24 image, with the directory /home/mike/html mounted to /var/www/html in the container and the web server accessible on TCP port 8081 on the host. Ensure that the container starts as a systemd service named container-httpd at boot.
5. Ensure that all your changes persist after a system reboot. Power off the exam system.