# Chapter 3 Lab Questions

During the RHCSA exam, tasks will be presented electronically. Therefore, this book presents most of the labs electronically as well. For more information, see the “Lab Questions” section toward the end of Chapter 3.

## Lab 1

To prepare the server1.example.com system for this lab, download the file ch03lab01.sh from the companion website, copy the file to server1 using **scp**, and run the script as root:

# chmod +x ch03lab01.sh
# ./ch03lab01.sh

Don’t look try to understand what the script does. Just run the script. Then, reboot the system.

Log in to the system, troubleshoot network connectivity, and fix the configuration.

A backup of the network configuration file is available on your system in the /root/backup directory.

## Lab 2

Repeat the same steps as in Lab 1, but this time use the ch03lab02.sh file.

## Lab 3

Repeat the same steps as in Lab 1, but this time use the ch03lab03.sh file.

## Lab 4

In this lab, you’ll set up an /etc/hosts file for the different systems on the local network. The instructions in this lab are based on the server1 and tester1 systems described in Chapter 1.

1. Back up the /etc/hosts file to an appropriate directory, such as /root.
2. Open the /etc/hosts file. You’ll probably see IPv4 and IPv6 entries for their respective loopback hostnames and addresses. That can serve as a model for the other entries that you’ll make in this file.
3. When all the noted systems are running, test the result. Run the **ping** command, first on each IP address in /etc/hosts, and then on each hostname in /etc/hosts.

## Lab 5

In this lab, you’ll use the **nmtui** tool. But before you do so, remember to back up appropriate configuration files. As this is a console tool, you’ll have to use the TAB and ENTER or SPACEBAR keys to make selections.

1. Back up the network configuration files:

# mkdir /root/backup 2>/dev/null
# cp /etc/NetworkManager/system-connections/\* /root/backup

1. Open the **nmtui** configuration tool from a command line with the command of the same name.
2. In the console menu that appears, select Edit a Connection and press ENTER.
3. In the Select A Device menu that appears, select the connection profile and press ENTER.
4. Make a change in the current configuration. Assuming a static IP address configuration for one of the systems described in Chapter 1, you should be able to make a minor change in the IP address. For example, you could change the server1.example.com IPv4 address from 172.16.0.100 to 172.16.0.101. Highlight OK and press ENTER.
5. You’re taken back to the connection screen. Highlight the Back option and press ENTER.
6. You’re taken back to the initial screen. Highlight Activate a Connection and press ENTER.
7. In the next screen, deactivate and reactivate the connection, then highlight the Back option and press ENTER.
8. Make sure Quit is highlighted and press ENTER.
9. Check the IP configuration with the **ip addr show** command.
10. Use the **diff** command to analyze the difference between the configuration files in the /etc/NetworkManager/system-connections and /root directories.
11. To restore the original configuration, restore the connection file to the /etc/NetworkManager/system-connections directory and deactivate/activate the connection.

## Lab 6

Repeat the process described in Lab 5 with the Network Connection Editor tool. To open it, run **nm-connection-editor** from a GNOME terminal.