

Date: \_\_\_\_\_

Name: \_\_\_\_\_

Station Number: \_\_\_\_\_

Email: \_\_\_\_\_

Check here if you are already an RHCT under this release: \_\_\_\_\_

## **RHCE Certification Exam**

### **Confidentiality Agreement**

I understand that the integrity of the RHCE certificate and fairness to all current and future candidates depends on confidentiality of the RHCE Certification Exam content. By taking the RHCE Certification Exam, I agree to keep all content, questions, and solutions confidential. I will not share this information, whether from memory or from notes, with any other parties in any way.

Signed: \_\_\_\_\_

Duration: 2.5 hours

Start Time: \_\_\_\_\_

**NOTE: You must sign and return this document to the examiner, even if you elect not to complete any of the exam.**

version: 5.1-3.1.7

## RHCE Exam Overview

The Red Hat Certified Engineer (RHCE) Certification exam has two parts:

- Section I, Troubleshooting and System Maintenance (2.5 hours)
- Section II, Installation and Configuration (3.0 hours)

In order to earn RHCE, you must meet the following requirements:

- Successful completion of the compulsory troubleshooting problems in Section I within one hour of that section's start time
- A score of 80 or higher for Section I
- A score of 70 or higher on the Section II elements we designate as "RHCT" or "Local", and
- A score of 70 or higher on the Section II elements we designate as "RHCE" or "Network Services".

It is possible for someone to earn the designation Red Hat Certified Technician (RHCT) by successfully completing a subset of the RHCE requirements. In order to earn RHCT, you must meet the following criteria:

- Successful completion of the compulsory troubleshooting problems in Section I within one hour of that section's start time; and
- A score of 70 or higher on the RHCT elements in Section II

In addition, please note the following:

- Only section scores will be reported, no report of performance on specific exam items will be given.

Please initial all of the above items to indicate that you have read these requirements and accept the terms under which you will be evaluated. If you do not initial these items, we will not evaluate your exam results.

In addition, please note that the attached Confidentiality Agreement must be signed in order to take the exam, and that Red Hat expects and enforces compliance with its terms. Compliance includes restrictions on discussion of exam-specific information with anyone, including those who are taking the exam with you today. Failure to comply with the terms of the Confidentiality Agreement can result in any or all of the following:

- nullification of your results and no certificate
- nullification of certifications earned at an earlier date
- being barred from taking this or other Red Hat exams again
- legal action

Please initial the items above to indicate you understand the terms of our Confidentiality Agreement.

Good luck on the exam!

Red Hat Global Learning Services

## Troubleshooting and System Maintenance

Total Duration: 2.5 hours

Goal: To demonstrate skill in troubleshooting and maintaining Red Hat Enterprise Linux.

Section I of the exam tests your troubleshooting, diagnostic, and system maintenance skills in two phases that we describe below. Please be aware that communicating with other candidates or connecting to their systems is not allowed, and that attempts to do so will nullify your results. If `sshd` or `rhcehd` are running on your system, they should not be disabled.

Please be aware that re-installation of the operating system will not be considered an appropriate fix, and that we may treat attempts to do so as cheating.

### Phase A Overview

For the first Phase, we have performed a simple installation and have created seven problems for you to solve. We express these problems in terms of end states. The conditions below will not exist on your system at the beginning. Your task in Phase A is to fix or modify the Red Hat Enterprise Linux installation on your system such that these conditions do exist:

- Compulsory 1:(T01) the examiner can log into your system as `root` using the password `rW9ySX`. The home directory must be `/root`. (compulsory)
- Compulsory 2:(T02) `ping 172.25.254.254` is successful, and your system uses static networking as described in `/root/network.txt` (compulsory)
- Compulsory 3:(T03) `dig server1.my133t.org` successfully resolves that hostname using DNS (compulsory)
- Compulsory 4:(T09) your system has a new 100MB physical partition mounted under `/mnt/new` with a 100MB ext3 filesystem. Note: because partition sizes are seldom exactly what is specified when they are created, anything within the range of 90 to 110MB is acceptable (compulsory).
- Services:(T05) the requirement described in `/root/services` is met
- Wildcard:(T06) the requirement described in `/root/wildcard` is met
- Storage:(T10) the requirement described in `/root/lvm` is met

We refer to four (4) of these conditions as Compulsory problems. You must successfully correct all of the Compulsory problems within one hour to earn certification. They carry a combined score of 50. The remaining five problems are non-compulsory, meaning that you need not successfully complete them all. To earn RHCE, however, you must successfully complete at least three (3) of them.

### Evaluation of Phase A Compulsory Problems

When you have completed the four Compulsory problems, notify the examiner that you wish to have them evaluated. The examiner will instruct you to reboot your system before evaluating it, and must observe that the reboot was performed without any manual intervention. You must successfully complete the four Compulsory problems within 1 hour of the start time, so do not wait until you have solved all seven Phase A problems.

Should the examiner find that you have not fixed all four Compulsory problems, you may continue working on them. Once they are really fixed, request evaluation again.

After you have fixed the Compulsory problems and have had them evaluated, work on solving the remaining non-Compulsory problems for Phase A.

### Evaluation of Non-compulsory Phase A Problems

Notify the examiner when you wish to have the remaining Phase A problems evaluated. As with the Compulsory problems, your system must be rebooted first and the examiner must observe that there was no manual intervention with the boot process. If the examiner's evaluation indicates that the criteria have not been met, you may continue working on the problems. After the problems are fixed, request evaluation again.

You may elect to move on to Phase B at any time. However, you cannot return to Phase A after you have done so, and you will not receive points for unsolved problems in Phase A. Bear in mind that you must complete three non-compulsory problems in order to earn RHCE, and that Phase B only provides two of these, so at a minimum you must complete one of the Phase A non-compulsory problems to earn RHCE.

### Phase B Overview and Evaluation

Phase B will require a new installation on your system that should only take a few minutes. This time is part of the allotted exam period. While your system is being installed, you are not permitted to use the keyboard or access it in any way until the installation is complete.

In Phase B, you must solve problems involving incorrectly specified bootloader or kernel parameters, modules, filesystems, or other subsystems that can affect the ability to boot a Red Hat Enterprise Linux system. Because of the nature of the problems in Phase B, you will be given boot media that can provide a rescue environment. Please note the following settings you will need in order to use this environment:

- Install type: NFS
- NFS server: 172.24.254.254
- NFS Directory: /var/ftp/pub

The requirements for this phase are simple:

- If the examiner can boot your system into run level 3 or 5 without intervention, you receive 20 points
- If it is only possible to boot into a `sulogin` shell, you receive 10 points
- If we cannot boot the system at all, you receive zero points.

As in Phase A, your system must be rebooted and the examiner must observe that the boot process took place without any intervention before it can be evaluated.

When you have completed this section of the exam, please wait for the next section in the designated area.