



Appendix A

Prepare a System for the Sample Exams

Randy Russell, Red Hat’s Director of Certification, stated in a 2009 blog entry that the Red Hat exams no longer require “a bare-metal installation.” In other words, when you sit down for a Red Hat exam today, a preinstalled system will be provided for you. In this appendix, you’ll set up a preinstalled system that will work for the sample exams included in electronic format on the DVD in the Exams/ subdirectory. Each exam is described on the first page of Appendixes B through E, and the answers follow.

If you’re just studying for the RHCSA, read the following section. If you’re also studying for the RHCE, read the section after that as well.

Basic Sample Exam System Requirements

A test system for RHEL 7 requires more. There is no requirement for a *physical* “bare-metal” installation in the objectives for either the RHCSA or the RHCE exam. However, for the RHCSA, you do need to “configure a physical machine to host virtual guests.” You can also expect to “install Red Hat Enterprise Linux systems as virtual guests.”

The default RHEL 7 virtual machine solution (KVM) requires a CPU that supports hardware-enabled virtualization, as discussed in Chapter 1. You may need to enable hardware virtualization support in your BIOS.

With those objectives in mind, you can set up a test system based on the following criteria:

- **Installation on physical 64-bit hardware**
 - A dual-boot configuration with another operating system is acceptable.
 - Enable hardware virtualization support in the BIOS.
- **Sufficient hard drive space**
 - A total of 60–70GB should be sufficient (though more would be helpful).
 - Also, 16GB each for two or three virtual machine systems should be sufficient.

In some cases, it is possible to install a virtual machine within a virtual machine. While we did not test such a configuration for this book, virtual machine solutions such as VMware Workstations can in turn host a guest hypervisor running other virtual machines. If this is too expensive or complex, just install RHEL 7 on a physical 64-bit system.

Since one of the objectives is to “configure a physical machine to host virtual guests,” you’ll need to set up a physical system without installing KVM software. (Of course, you should be prepared to install KVM during an exam.) As discussed in Chapter 1, it’s ideal if you have a genuine release of RHEL 7 for this purpose. Rebuild distributions such as Scientific Linux 7, CentOS 7, and even Oracle Linux 7 should work equally well, as they are based on the publicly available RHEL 7 source code.

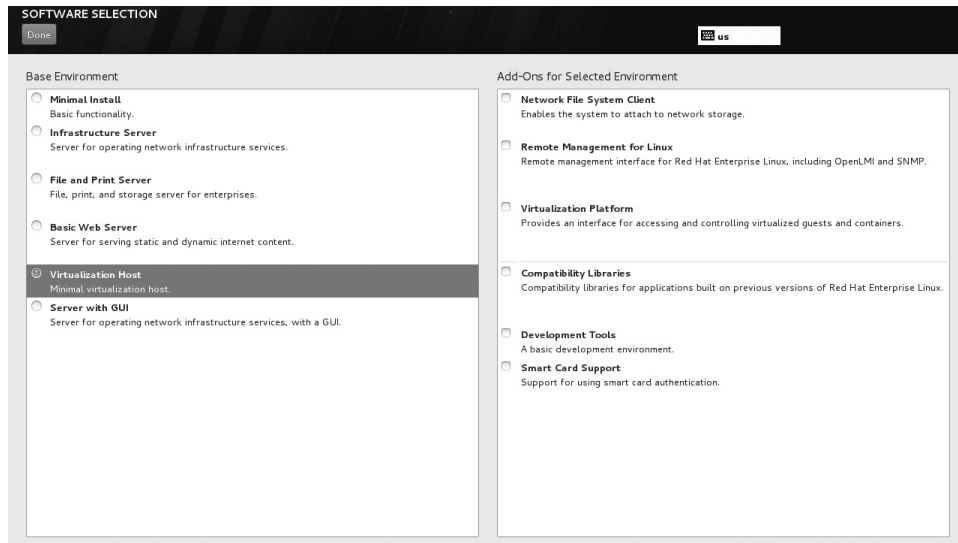
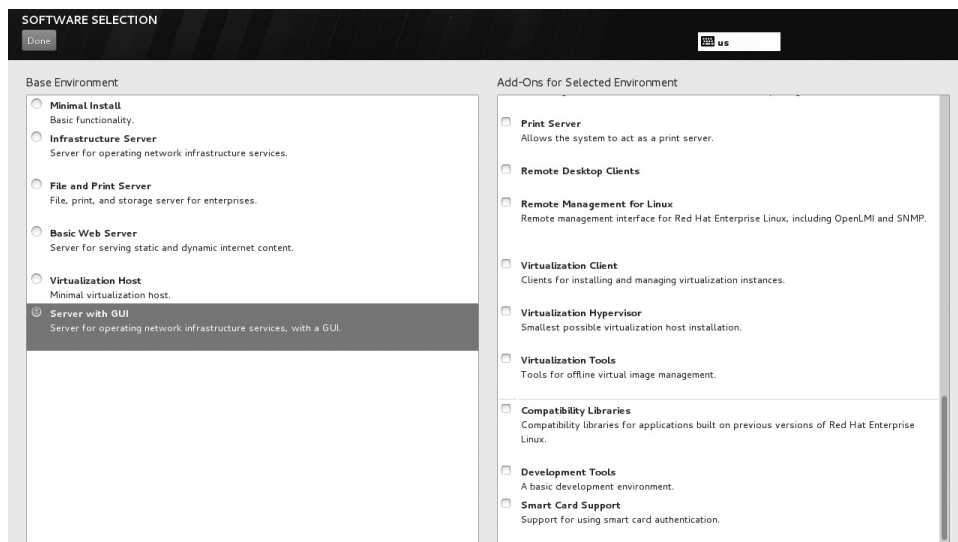
However, you should not use Fedora Linux to study for the Red Hat exams. Although RHEL 7 is based on Fedora Linux, RHEL 7 has a different look and feel. In some cases, it has a different functionality from the most similar Fedora releases, Fedora 19 and Fedora 20.

With those provisos in mind, you should prepare a 64-bit physical test system per the requirements described in Chapter 1. As suggested in that chapter, you should configure a Virtualization Host installation, as shown in Figure A-1.

You may also set up a GUI, as also discussed in Chapter 1. For that purpose, you should select the Server with GUI base environment during the installation process. This includes the following optional package groups:

- **Virtualization Client** Includes clients for installing and managing virtualization instances
- **Virtualization Hypervisor** Installs the smallest possible virtualization host installation
- **Virtualization Tools** Includes tools for offline virtual image management

But to meet the implied requirements of a test system for the RHCSA, you’ll need to make sure that virtual machine software is not installed during the installation process, as shown in Figure A-2.

FIGURE A-1 RHEL 7 Virtualization Host installation**FIGURE A-2** RHEL 7 Server with GUI installation, no virtual machine software

Once installation is complete, the system will be ready for the RHCSA exam. But there is one more step required. You'll need to set up an installation repository for the local network. It's okay to do so on the physical host system. One method is described in Chapter 1, Lab 2.

Additional Sample Exam System Requirements for the RHCE

To be ready for the RHCE exam, you'll need to do more. Specifically, you'll want at least two virtual machine systems on the physical host system. Three virtual machine systems, plus a spare, were configured on two different networks in Chapter 1.

If you're just studying for the RHCE, you can choose to include virtual machine software in the installation process for the physical host system. You should set up the virtual systems per the requirements discussed in Chapters 1 and 2. Kickstart files `ks.cfg`, `ks1.cfg`, and `ks2.cfg` are available on the DVD, in the `Exams/` subdirectory, to help create those virtual systems.