uCertify

Course Outline

Red Hat RHCSA 8



27 Mar 2024

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2. Pre-Assessment
3. Exercises, Quizzes, Flashcards & Glossary

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4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
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8. Chapter & Lessons

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   Chapter 2: Installing Red Hat Enterprise Linux

   Chapter 3: Using Essential Tools

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   Chapter 5: Working with Text Files

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1. Course Objective

Pass the RHCSA certification exam with the Red Hat RHCSA 8 course and lab. The lab provides a hands-on learning experience in a safe and online environment. The RHCSA study guide covers the EX-200 exam objectives and teaches how to operate running systems, configure local storage, manage users and groups, and manage security. The RHCSA training also imparts skills tested in this exam are the foundation for system administration across all Red Hat products.

2. Pre-Assessment

Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

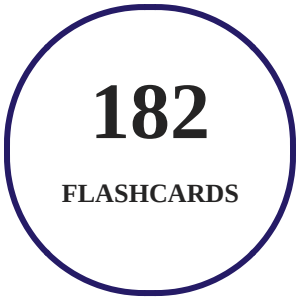
3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.



4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.



6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Introduction

- Goals and Methods
- Who Should Read This Course?
- How This Course Is Organized
- Exam Objective to Lesson Mapping

Chapter 2: Installing Red Hat Enterprise Linux

- Preparing to Install Red Hat Enterprise Linux
- Performing a Manual Installation

- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 3: Using Essential Tools

- Basic Shell Skills
- Editing Files with vim
- Understanding the Shell Environment
- Finding Help
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 4: Essential File Management Tools

- Working with the File System Hierarchy
- Managing Files
- Using Links
- Working with Archives and Compressed Files

- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 5: Working with Text Files

- Using Common Text File–Related Tools
- A Primer to Using Regular Expressions
- Using grep to Analyze Text
- Working with Other Useful Text Processing Utilities
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 6: Connecting to Red Hat Enterprise Linux 8

- Working on Local Consoles
- Using SSH and Related Utilities
- Summary
- Review Questions
- End-of-Lesson Labs

Chapter 7: User and Group Management

- Different User Types
- Managing User Accounts
- Creating and Managing Group Accounts
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 8: Permissions Management

- Managing File Ownership
- Managing Basic Permissions
- Managing Advanced Permissions
- Managing ACLs
- Setting Default Permissions with umask
- Working with User-Extended Attributes
- Summary
- Review Questions

- End-of-Lesson Lab

Chapter 9: Configuring Networking

- Networking Fundamentals
- Managing Network Addresses and Interfaces
- Validating Network Configuration
- Configuring Network Configuration with nmtui and nmcli
- Setting Up Hostname and Name Resolution
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 10: Managing Software

- Managing Software Packages with yum
- Using yum
- Managing Package Module Streams
- Managing Software Packages with rpm
- Summary
- Review Questions

- End-of-Lesson Labs

Chapter 11: Managing Processes

- Introduction to Process Management
- Managing Shell Jobs
- Using Common Command-Line Tools for Process Management
- Using top to Manage Processes
- Using tuned to Optimize Performance
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 12: Working with Systemd

- Understanding Systemd
- Managing Units Through Systemd
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 13: Scheduling Tasks

- Configuring Cron to Automate Recurring Tasks
- Configuring at to Schedule Future Tasks
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 14: Configuring Logging

- Understanding System Logging
- Configuring rsyslogd
- Rotating Log Files
- Working with journald
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 15: Managing Storage

- Understanding MBR and GPT Partitions

- Managing Partitions and File Systems
- Mounting File Systems
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 16: Managing Advanced Storage

- Understanding LVM
- Creating LVM Logical Volumes
- Resizing LVM Logical Volumes
- Configuring Stratis
- Configuring VDO
- Summary
- Review Questions
- End-of-Lesson Labs

Chapter 17: Basic Kernel Management

- Understanding the Role of the Linux Kernel
- Working with Kernel Modules

- Upgrading the Linux Kernel
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 18: Managing and Understanding the Boot Procedure

- Managing Systemd Targets
- Working with GRUB 2
- Summary
- Review Questions
- End-of-Lesson Labs

Chapter 19: Essential Troubleshooting Skills

- Understanding the RHEL 8 Boot Procedure
- Passing Kernel Boot Arguments
- Using a Rescue Disk
- Fixing Common Issues
- Recovering Access to a Virtual Machine

- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 20: An Introduction to Bash Shell Scripting

- Understanding Shell Scripting Core Elements
- Using Variables and Input
- Using Conditional Loops
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 21: Configuring SSH

- Hardening the SSH Server
- Using Other Useful sshd Options
- Configuring Key-Based Authentication with Passphrases
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 22: Managing Apache HTTP Services

- Configuring a Basic Apache Server
- Understanding Apache Configuration Files
- Creating Apache Virtual Hosts
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 23: Managing SELinux

- Understanding SELinux Working and Modes
- Understanding Context Settings and the Policy
- Restoring Default File Contexts
- Using Boolean Settings to Modify SELinux Settings
- Diagnosing and Addressing SELinux Policy Violations
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 24: Configuring a Firewall

- Understanding Linux Firewalling
- Working with Firewalld
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 25: Accessing Network Storage

- Using NFS Services
- Using CIFS Services
- Mounting Remote File Systems Through fstab
- Using Automount to Mount Remote File Systems
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 26: Configuring Time Services

- Understanding Local Time

- Using Network Time Protocol
- Managing Time on Red Hat Enterprise Linux
- Summary
- Review Questions
- End-of-Lesson Lab

Chapter 27: Final Preparation

- General Tips

Chapter 28: Theoretical Pre-Assessment Exam

Chapter 29: RHCSA Practice Exam A

- General Notes

Chapter 30: RHCSA Practice Exam B

- General Notes

Chapter 31: RHCSA Practice Exam C

- General Notes

Chapter 32: RHCSA Practice Exam D

- General Notes

Chapter 33: Appendix A: Study Planner

11. Practice Test

Here's what you get

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PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Using Essential Tools

- Using Internal and External Commands from the Shell
- Using I/O Redirection and Pipes
- Working with History
- Using Bash Completion
- Working with vim
- Managing the Shell Environment
- Using man -k
- Using info

Essential File Management Tools

- Getting an Overview of Current Mounts
- Working with Directories
- Working with Files
- Creating a Hard Link
- Working with Symbolic Links and Hard Links

- Using tar

Working with Text Files

- Applying Basic less Skills
- Using Basic head and tail Operations
- Using Common grep Options

Connecting to Red Hat Enterprise Linux 8

- Working on Several Terminal Windows Simultaneously
- Working with Pseudo Terminals

User and Group Management

- Switching User Accounts
- Creating User Accounts
- Working with Groups

Permissions Management

- Managing Basic Permissions
- Working with Special Permissions
- Managing Advanced Permissions Using ACLs

Configuring Networking

- Validating Network Configuration
- Verifying Network Settings
- Managing Network Connections with nmcli
- Changing Connection Parameters with nmcli

Managing Software

- Creating Your Own Repository
- Using yum for Package Management
- Working with Modules

- Using RPM Queries

Managing Processes

- Managing Jobs
- Managing Processes from the Command Line
- Using tuned

Working with Systemd

- Managing Units with systemctl
- Changing the Unit Configuration

Scheduling Tasks

- Running Scheduled Tasks Through cron
- Scheduling Jobs with at

Configuring Logging

- Using Live Log Monitoring and Logger
- Changing rsyslog.conf Rules
- Discovering journalctl
- Making the journald Journal Permanent

Managing Storage

- Creating MBR Partitions and File System
- Creating Logical Partitions
- Creating GPT Partitions with gdisk
- Creating Partitions with parted
- Creating a Swap Partition
- Mounting Partitions Through /etc/fstab

Managing Advanced Storage

- Creating a Physical Volume, Volume Group, and Logical Volume

- Resizing Logical Volumes
- Managing Stratis Volumes
- Creating Partitions and Filesystems

Basic Kernel Management

- Managing Kernel Modules from the Command Line
- Loading Kernel Modules with Parameters

Managing and Understanding the Boot Procedure

- Isolating Targets
- Applying Modifications to GRUB 2

Essential Troubleshooting Skills

- Exploring Troubleshooting Targets
- Using the Rescue Option

An Introduction to Bash Shell Scripting

- Writing a Simple Shell Script
- Working with Positional Parameters
- Working with Input
- Using if ... then ... else

Configuring SSH

- Configuring SSH Security Options

Managing Apache HTTP Services

- Setting Up a Basic Web Server

Managing SELinux

- Manipulating SELinux Modes

- Setting a Context Label on a Nondefault Apache Document Root
- Installing SELinux-Specific Man Pages
- Using restorecon to Relabel Files

Configuring a Firewall

- Managing the Firewall with firewall-cmd

Accessing Network Storage

- Setting Up a Samba Server

Configuring Time Services

- Managing Local Time

Here's what you get

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LIVE LABS

13. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.