

RHCE EX294 Exam Prep: Red Hat Ansible Automation & Practice Course

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Course Overview:

"Red Hat RHCE Exam Prep Training Course: Learn, Practice & Pass EX294" is a comprehensive 1-week training program designed to help IT professionals prepare for the RHCE certification exam EX294. This hands-on course focuses on Ansible automation, RHEL 9 system administration, and enterprise Linux security hardening. Participants will gain practical skills in using Ansible Playbooks, managing systems efficiently, securing Linux environments with SELinux and firewalld, and deploying compliance and vulnerability remediations using enterprise-grade tools. The course also introduces virtual lab environments, guiding learners in setting up RHCE online labs with VirtualBox. The course combines theory and practice to ensure participants are fully equipped to pass the RHCE EX294 exam with confidence.

Target Audience:

- Linux System Administrators
- DevOps Engineers
- IT Infrastructure Specialists
- Automation Engineers
- Red Hat Certified System Administrators RHCSA preparing for next level

Targeted Organizational Departments:

- IT Infrastructure and Operations
- DevOps and Automation
- Cybersecurity Teams
- Cloud Services and Linux Engineering Teams

Targeted Industries:

- Information Technology
- Telecommunications
- Cloud Hosting and Managed Services
- Financial Services and Banking
- Government and Defense
- Healthcare and Critical Infrastructure

Course Offerings:

By the end of this course, participants will be able to:

- Use Ansible to automate RHEL 9 systems and services
- Write and manage Ansible Playbooks and Roles for system administration
- Harden Linux systems using SELinux, firewalld, and FIPS policies
- Perform compliance scans and automate remediations with Ansible
- Configure secure SSH, automate system encryption with LUKS, and NBDE
- Prepare and simulate RHCE EX294 exam tasks in a VirtualBox lab environment

Training Methodology:

This course uses a blended learning methodology to maximize engagement and retention. Participants will engage in interactive instructor-led sessions, live demonstrations, and practical labs using Ansible and RHEL 9. Real-world case studies and hands-on assignments will enhance the application of key concepts. Daily knowledge checks and group problem-solving sessions will be incorporated to reinforce learning. Participants will receive RHCE exam-style scenario questions for practice and reflection.

Course Toolbox:

- RHCE Exam-style Scenario Sheets
- Ansible Playbook Templates and Sample Code
- Lab Setup Guide for RHCE with VirtualBox
- Task Checklists & Exam Readiness Rubric
- SELinux and Firewalld Configuration Examples

Note: Tools are not provided, but the course offers insights, examples, and references for practical use.

Course Agenda:

Day 1: Getting Started with RHCE and Ansible Fundamentals

- **Topic 1:** Overview of RHCE EX294 Exam Structure and Competency Areas
- **Topic 2:** Installing and Configuring Ansible on RHEL 9
- **Topic 3:** Inventory Management and Ad-hoc Commands in Ansible
- **Topic 4:** Writing and Running Basic Ansible Playbooks
- **Topic 5:** Using Variables, Handlers, and Templates in Playbooks
- **Topic 6:** Troubleshooting Initial Configuration Tasks
- **Reflection & Review:** RHCE Exam Focus Review + Ansible Basics Recap

Day 2: Advanced Ansible and Role-Based Automation

- **Topic 1:** Creating Reusable Roles and Managing Role Dependencies
- **Topic 2:** Structuring Ansible Projects with Best Practices
- **Topic 3:** Using Ansible Galaxy and Collections for Automation
- **Topic 4:** Debugging and Testing Ansible Playbooks
- **Topic 5:** Ansible Vault and Credential Management
- **Topic 6:** Validating and Refactoring Automation Workflows
- **Reflection & Review:** RHCE Ansible Role Automation + Practice Labs

Day 3: RHEL 9 System Administration for RHCE

- **Topic 1:** Managing Users, Groups, and Permissions via Ansible
- **Topic 2:** Configuring Networking and System Services
- **Topic 3:** Managing Storage, LVM, and Mounts with Playbooks
- **Topic 4:** Software Management and Service Control via Automation
- **Topic 5:** Task Automation and Cron Jobs Using Ansible
- **Topic 6:** Applying System Settings Across Multiple Hosts
- **Reflection & Review:** Practical Tasks from RHCE System Administration

Day 4: Security Hardening with SELinux, Firewalld, and FIPS

- **Topic 1:** Implementing SELinux Modes, Booleans, and Contexts
- **Topic 2:** Managing and Automating firewalld Rules and Zones
- **Topic 3:** Enabling and Managing FIPS Mode and Crypto Policies
- **Topic 4:** Encrypting Block Devices with LUKS and NBDE
- **Topic 5:** Compliance Scanning and Auto-Remediation with OpenSCAP & Ansible
- **Topic 6:** Secure Configuration of SSH and Audit Rules
- **Reflection & Review:** Security Hardening Simulation Labs for RHCE

Day 5: RHCE Practice Lab and Exam Simulation

- **Topic 1:** Setting Up RHCE Virtual Lab Environments with VirtualBox
- **Topic 2:** Full RHCE Practice Exam Timed Simulation
- **Topic 3:** Common Pitfalls and Debugging Exam Tasks
- **Topic 4:** Reviewing the RHCE Evaluation Criteria and Sample Solutions
- **Topic 5:** Personalized Study and Improvement Plan Creation
- **Topic 6:** Final Checklist for Certification Readiness
- **Reflection & Review:** Final Review + Exam Day Strategies + Q&A

FAQ:

What specific qualifications or prerequisites are needed for participants before enrolling in the course?

RHCSA certification is recommended. Participants should be familiar with basic Linux system administration and the command line.

How long is each day's session, and is there a total number of hours required for the entire course?

Each day's session is generally structured to last around 4-5 hours, with breaks and interactive activities included. The total course duration spans one week, approximately 20-25 hours of instruction.

What is the best way to prepare for system hardening topics like SELinux and firewalld for the RHCE exam?

Use real-world scenarios to practice configuring SELinux booleans, managing contexts, and building Ansible tasks to automate firewall and compliance configurations.

How This Course is Different from Other RHCE Exam Prep Courses:

Unlike typical RHCE prep courses that only focus on exam content, "Red Hat RHCE Exam Prep Training Course: Learn, Practice & Pass EX294" incorporates real-world use cases, lab setup guides, and security hardening practices using tested Linux tools and workflows. With dedicated lab simulation days, step-by-step task breakdowns, and a focus on automation with Ansible, this course empowers participants not only to pass the EX294 exam but to become effective Red Hat Certified Engineers in production environments.

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