

# RH415

## Red Hat Security: Linux in Physical, Virtual, and Cloud

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### Course description

Manage security of Red Hat Enterprise Linux systems deployed in bare-metal, virtual, and cloud environments

Red Hat Security: Linux in Physical, Virtual, and Cloud (RH415) is designed for security administrators and system administrators who need to manage the secure operation of servers running Red Hat® Enterprise Linux®, whether deployed on physical hardware, as virtual machines, or as cloud instances.

This course is based on Red Hat Enterprise Linux 7.5, Red Hat Satellite 6.3, Red Hat Ansible® Engine 2.5, Red Hat Ansible Tower 3.2, and Red Hat Insights.

Maintaining security of computing systems is a process of managing risk through the implementation of processes and standards backed by technologies and tools. In this course, you will learn about resources that can be used to help you implement and comply with your security requirements.

### Course summary

- Manage compliance with OpenSCAP.
- Enable SELinux on a server from a disabled state, perform basic analysis of the system policy, and mitigate risk with advanced SELinux techniques.
- Proactively identify and resolve issues with Red Hat Insights.
- Monitor activity and changes on a server with Linux Audit and AIDE.
- Protect data from compromise with USBGuard and storage encryption.
- Manage authentication controls with PAM.
- Manually apply provided Ansible Playbooks to automate mitigation of security and compliance issues.
- Scale OpenSCAP and Red Hat Insights management with Red Hat Satellite and Red Hat Ansible Tower.

## Audience for this course

System administrators, IT security administrators, IT security engineers, and other professionals responsible for designing, implementing, maintaining, and managing the security of Red Hat Enterprise Linux systems and ensuring their compliance with the organization's security policies.

## Prerequisites for this course

- Be a Red Hat Certified Engineer (RHCE®), or demonstrate equivalent Red Hat Enterprise Linux knowledge and experience

## Outline for this course

- Manage security and risk
- Define strategies to manage security on Red Hat Enterprise Linux servers.
- Automate configuration and remediation with Ansible
- Remediate configuration and security issues with Ansible Playbooks.
- Protect data with LUKS and NBDE
- Encrypt data on storage devices with LUKS and use NBDE to manage automatic decryption when servers are booted.
- Restrict USB device access
- Protect system from rogue USB device access with USBGuard.
- Control authentication with PAM
- Manage authentication, authorization, session settings, and password controls by configuring pluggable authentication modules (PAMs).
- Record system events with audit
- Record and inspect system events relevant to security, using the Linux kernel's audit subsystem and supporting tools.
- Monitor file system changes
- Detect and analyze changes to a server's file systems and their contents using AIDE.
- Mitigate risk with SELinux
- Improve security and confinement between processes by using SELinux and advanced SELinux techniques and analyses.
- Manage compliance with OpenSCAP
- Evaluate and remediate a server's compliance with security policies by using OpenSCAP.
- Automate compliance with Red Hat Satellite
- Automate and scale your ability to perform OpenSCAP checks and remediate compliance issues using Red Hat Satellite.
- Analyze and remediate issues with Red Hat Insights
- Identify, detect, and correct common issues and security vulnerabilities with Red Hat Enterprise Linux systems by using Red Hat Insights.
- Perform a comprehensive review
- Review the content covered in this course by completing hands-on review exercises.

As a result of attending this course, you should be able to use security technologies included in Red Hat Enterprise Linux to manage security risk and help meet compliance requirements.

**You should be able to demonstrate these skills:**

- Analyze and remediate system compliance using OpenSCAP and SCAP Workbench, employing and customizing baseline policy content provided with Red Hat Enterprise Linux.
- Monitor security-relevant activity on your systems with the kernel's audit infrastructure.
- Explain and implement advanced SELinux techniques to restrict access by users, processes, and virtual machines.
- Confirm the integrity of files and their permissions with AIDE.
- Prevent unauthorized USB devices from being used with USBGuard.
- Protect data at rest but provide secure automatic decryption at boot using NBDE.
- Proactively identify risks and misconfigurations of systems and remediate them with Red Hat Insights.
- Analyze and remediate compliance at scale with OpenSCAP, Red Hat Insights, Red Hat Satellite, and Red Hat Ansible Tower.