



Red Hat Enterprise Performance Tuning (RH442)

Course Content

Red Hat® Enterprise Performance Tuning teaches senior Linux® system administrators about performance tuning for Red Hat Enterprise Linux. This course discusses system architecture with emphasis on:

- Understanding the implications on system performance
- Methods for testing the effects of performance adjustments
- Open source benchmarking utilities
- Methods for analyzing system and networking performance
- Tuning configurations for specific application loads

This course can also help you prepare for the [Red Hat Certificate of Expertise in Performance Tuning Exam](#) (EX442).

Who should attend

Senior Linux system administrators responsible for maximizing resource utilization through performance tuning.

Certifications

[Red Hat Certified Architect — RHCA®](#)

RHCA certification represents a depth of knowledge in Red Hat Enterprise Linux and breadth of knowledge across other Red Hat technologies.

[Certificates of Expertise](#)

Certificates of Expertise are incremental credentials attached to an RHCE certification that demonstrate skills and knowledge in specialized areas.

Prerequisites

Red Hat Certified Engineer (RHCE®) certification or equivalent experience



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Course Objectives

During this course, you will learn:

- Tuning for use-case scenarios (for example, HPC, large memory, database, and file server)
- Tuning for power consumption
- Tuning virtual machines (host and guest)
- Tuning memory and caches
- Tuning CPU and memory utilization using cgroups
- Gathering performance metrics and other data for tuning purposes

Outline: Red Hat Enterprise Performance Tuning (RH442)

Module 1: Introduction to performance tuning

Understand the basic principles of performance tuning and analysis.

Module 2: Collecting, graphing, and interpreting data

Gain proficiency using basic analysis tools and evaluating data.

Module 3: General tuning

Learn basic tuning theory and mechanisms used to tune the system.

Module 4: Limiting resource usage

Module 5: Hardware profiling

Understand and analyze hardware.

Module 6: Software profiling

Analyze CPU and memory performance of applications.

Module 7: Small file tuning

Tune a server for a workload involving frequent reads and writes of small files.

Module 8: Large memory workload tuning

Understand memory management and tuning.



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Module 9: Tuning for a CPU-intensive workload

Understand tuning for CPU-bound applications.

Module 10: File server tuning

Understand storage and network tuning in the context of a file server application.

Module 11: Database server tuning

Tune memory and network performance using a database application as an example.

Module 12: Power usage tuning

Tune systems with power consumption in mind.

Module 13: Virtualization tuning

Tune 'host' and 'guest' for efficient virtualization.