

## Red Hat Enterprise Performance Tuning with Exam (RH 443)

### COURSE OVERVIEW:

Red Hat Enterprise Performance Tuning teaches senior Linux® system administrators about performance tuning for Red Hat Enterprise Linux.

This course discusses system architecture with an 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). This version of the course includes the exam

### WHO WILL BENEFIT FROM THIS COURSE?

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

### PREREQUISITES:

- Red Hat Certified Engineer (RHCE®) certification or equivalent experience.
- Candidates who have not earned their RHCE, can confirm they have the correct skills by passing our online skills assessment.

### COURSE OBJECTIVES:

- Tuning for use-case scenarios (for example, HPC, large memory, database, and file server)
- Applying tuning profiles with tuned
- Tuning virtual machines (primarily guest, but host is discussed)
- Tuning memory and caches
- Tuning CPU and memory utilization using cgroups (integrated in systemd)
- Gathering performance metrics and other data for tuning purposes

### COURSE OUTLINE:

#### Introduction to performance tuning

- Understand the basic principles of performance tuning and analysis.

#### Collecting, graphing, and interpreting data

- Gain proficiency in using basic analysis tools and evaluating data.

#### General tuning

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

#### Limiting resource usage

#### Hardware profiling

- Understand and analyze hardware.

#### Software profiling

- Analyze CPU and memory performance of applications.

**Small file tuning**

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

**Large memory workload tuning**

- Understand memory management and tuning.

**Tuning for a CPU-intensive workload**

- Understand tuning for CPU-bound applications.

**File server tuning**

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

**Database server tuning**

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

**Power usage tuning**

- Tune systems with power consumption in mind.

**Virtualization tuning**

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

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