Fast Lane

Red Hat Certified Specialist in Linux Performance Tuning Exam (EX442)

ID EX442   **Price** CHF 557.—(excl. VAT)   **Duration** 4 hours

Who should attend

- Experienced Linux system administrators responsible for maximizing resource utilization through performance tuning
- A Red Hat Certified Engineer (RHCE®) interested in becoming a Red Hat Certified Architect (RHCA)

Prerequisites

- Be a Red Hat Certified System Architect (RHCSA®) or have comparable work experience and skills (RHCE would be even better)
- Take Red Hat Performance Tuning und System Monitoring (RH442) or have extensive work experience in performance tuning
- Review the objectives for this exam

Red Hat encourages you to consider taking Red Hat Performance Tuning: Linux in Physical, Virtual, and Cloud (RH442) to help prepare. Attendance in this class is not required, so one can choose to take just the exam. Many successful candidates who have come to class already possessing substantial skills and knowledge have reported that the class made a positive difference for them.

While attending Red Hat classes can be an important part of one's preparation to take this exam, attending class does not guarantee success on the exam. Previous experience, practice, and native aptitude are also important determinants of success.

Many books and other resources on system administration for Red Hat's products are available. Red Hat does not officially endorse any as preparation guides for its exam. Nevertheless, you may find additional reading deepens understanding and can prove helpful.

Course Content

You should be able to perform the tasks listed below:

- Use utilities such as vmstat, iostat, mpstat, sar, gnome-system-monitor, top, and powertop to analyze and report system and application behavior
- Configure systems to provide performance metrics, using utilities such as Performance Co-Pilot (PCP)
- Use the pluggable authentication module (PAM) mechanism to implement restrictions on critical system resources
- Use /proc/sys, sysctl, and /sys to examine, modify, and set kernel run-time parameters
- Use utilities such as dmesg, dmidecode, x86info, and sosreport to profile system hardware configurations
- Analyze system and application behavior using tools such as ps, strace, top, and Valgrind
- Configure systems to run SystemTap scripts
- Alter process priorities of both new and existing processes
- Configure systems to support alternate page sizes for applications that use large amounts of memory
- Given multiple versions of applications that perform the same or similar tasks, choose which version of the application to run on a system based on its observed performance characteristics
- Configure disk subsystems for optimal performance using mechanisms such as swap partition placement, I/O scheduling algorithm selection, and file system layout
- Configure kernel behavior by altering module parameters
- Calculate network buffer sizes based on known quantities such as bandwidth and round-trip time, then set system buffer sizes based on those calculations
- Select and configure tuned profiles
- Manage system resource usage using control groups

As with all Red Hat performance-based exams, configurations must persist after reboot without intervention.

Exam format

This exam is a performance-based evaluation of system administration skills and knowledge. Candidates perform a number of routine system administration tasks and are evaluated on whether they have met specific objective criteria. Performance-based testing means that candidates must perform tasks similar to what they perform on the job.

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Prospective employers of a Red Hat Certified Specialist in Linux Performance Tuning should verify any and all claims by people claiming to hold this credential by requesting their certificate number and verifying it using the Red Hat certification verification tool.

Scores and reporting

Official scores for exams come exclusively from Red Hat Certification Central. Red Hat does not authorize examiners or training partners to report results to candidates directly. Scores on the exam are usually reported within 3 U.S. business days.

Exam results are reported as section scores. Red Hat does not report performance on individual items, nor will it provide additional information upon request.

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Training Centres worldwide

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