RH442: Red Hat Performance Tuning: Linux in Physical, Virtual, and Cloud

Course Code: RH442
Duration: 4 days
Instructor-led Training (ILT) | Virtual Instructor-led Training (VILT)

OVERVIEW

Performance tuning and capacity planning for Red Hat Enterprise Linux

Red Hat Performance Tuning: Linux in Physical, Virtual, and Cloud (RH442) teaches senior Linux® system administrators the methodology of performance tuning. This course discusses system architecture with an emphasis on understanding its implications on system performance, performance adjustments, open source benchmarking utilities, networking performance, and tuning configurations for specific server use cases and workloads.

This course is based on Red Hat® Enterprise Linux 8.

Following course completion, hands-on lab access will remain available for up to 45 days for any live course that includes a virtual environment.

SKILLS COVERED

- Analyze and tune for resource-specific scenarios
- Applying tuning profiles with the tuned tool
- Tune in virtual environments (hosts and guests)
- Trace and profile system events and activities
- Tune resource limits and utilization using systemd-integrated cgroups
- Gather performance metrics and benchmarking data

WHO SHOULD ATTEND?

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

PREREQUISITES

- Become a Red Hat Certified Engineer (RHCE®), or demonstrate equivalent experience

MODULES

Module 1: Introduce performance tuning

- Describe performance tuning concepts and goals

Module 2: Select performance monitoring tools

- Evaluate the large selection of performance monitoring tools that are included with Red Hat Enterprise Linux

Module 3: View hardware resources

- View and interpret hardware resource listings

Module 4: Configure kernel tunables and tuned profiles

- Configure the operating system to tune for different workload requirements

Module 5: Manage resource limits with control groups

- Manage resource contention and set limits for resource use on services,

applications, and users using group configuration

Module 6: Analyze performance using system tracing tools

- Diagnose system and application behaviors using a variety of resource-specific tracing tools

Module 7: Tune CPU utilization

- Manage CPU resource sharing and scheduling to control utilization

Module 8: Tune memory utilization

- Manage settings for efficient memory utilization for different types of workloads

Module 9: Tune storage device I/O

- Manage settings for efficient disk utilization in various use cases

Module 10: Tune file system utilization

- Manage application efficiency for file system utilization

Module 11: Tune network utilization

- Manage application efficiency for network utilization

Module 12: Tune in virtualization environments

- Distinguish the requirements for tuning in virtualized environments

Module 13: Perform comprehensive review

- Demonstrate skills learned in this course by observing system performance using the appropriate tools, evaluating system metrics, and configuring settings to improve performance

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