

Course Description: Troubleshooting is both an art and a science, an instinct (typically informed by experience) and a technique. In RH142 Linux Troubleshooting Techniques and Tools, participants will learn techniques for troubleshooting a Linux system and will learn to use a variety of troubleshooting tools available on Red Hat Enterprise Linux. RH142 Linux Troubleshooting Techniques and Tools is a 4 day heavily lab-oriented class designed to help participants learn (or improve) their troubleshooting skills using tools available in Red Hat Enterprise Linux. Labs will offer a range of problems from RHCT level and up to allow participants to extend their knowledge and techniques. Participants will have the opportunity to debug live systems, exercising their new troubleshooting skills on a working system so that they can start to (or continue to) develop troubleshooting experience.

Who Should Attend: This course is for Linux system administrators who understand how to install and configure a Red Hat Enterprise Linux system and who wish to deepen their understanding of troubleshooting on Linux.

Prerequisites: Students must have successfully completed RH131 or RH133 or hold a current RHCT certification, or have equivalent system administration knowledge under Red Hat Enterprise Linux.

Benefits of Attendance: Upon completion of this course, students will be able to:

- Identify, diagnose, and resolve problems on a Red Hat Enterprise Linux system.
- Take preventative action to avoid problems.

Course Outline:

Unit 1 - Troubleshooting Techniques

An introduction to troubleshooting methods, best practices, and tools.

Unit 2 - Common Troubleshooting Tools

Analysing log files; monitoring file changes; Rebuilding the RPM database.

Unit 3 - Troubleshooting Boot Issues

Working with advanced GRUB features; rescue and GRUB CDs; advanced ext2/ext3 filesystem repair; rescuing RAID and LVM volumes.

Unit 4 - Revision control

An example to track configuration changes with a revision control system.

Unit 5 - Hardware

Preempting hardware failures (looking for the signs); protecting against hardware failures; redundant configurations; tools to help identify hardware failures and intermittent problems.

Unit 6 - Applications

An overview of tools and techniques for troubleshooting applications. Some common application problems and how to solve them.

Unit 7 - Network

Manual configuration of network cards, troubleshooting advanced setups (bonded interfaces, virtual interfaces); connectivity issues; network diagnostic tools.

Unit 8 - Security

Working effectively with (and not against) security tools, including SELinux, SSL, and authentication.

Unit 9 - Red Hat Resources and Reporting Problems

Support options; Knowledgebase; certified training; initiating support calls; TAM support; developer support; bugzillas; support workflow; diagnostic and information-gathering tools.