

Linux Trouble Shooting (NI308)

24 Hours

Outline

Trouble shooting is a science of providing answer to unknown problems. An instinct and a technique. In this courser, sysadmin/devops will study techniques to troubleshoot a live Linux system and how to use the troubleshooting tools available on most of distributions of Linux. This course is a 3-day, designed to provide its attendees with tool-set to learn and improve their troubleshooting skills. Students will gain troubleshooting knowledge by debugging live, virtualized and production systems

Target Audience

Linux sysadmins/devops, system developers who have basic knowledge of Linux fundamentals of file/folder management, permissions, network and some scripting experience with a Linux system and who wish to deepen their understanding of troubleshooting on Linux

Prerequisites

- Linux fundamentals.
- Linux System management
- General structure of Linux file-systems: extfs and xfs.
- Solid understanding of Linux kernel structure
- Some knowledge of basic monitoring tools: top, htop, glances and ps.

Contents

Basic methodologies of monitoring

Terminology and methods of monitoring log files, hardware, file systems, and system and network performance, in addition to several approaches of configuration and development a data recovery

Booting Issues

Work with advanced GRUB features and external ways to recover boot information.

Hardware Issues

Protecting against hardware failures, redundant configurations errors, and tools that help identify hardware failures and intermittent problems.

File System Issues

Locate unauthorized changes audit software file system tuning and repair file recovery.

Disk Issues

Rescuing LVM volumes and maintenance of encrypted volumes.

Networking Issues

Manual configuration of network cards, connectivity issues, network diagnostic tools, tune kernel parameters, troubleshoot SAN communication.

Application Issues

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

Security Issues

Working effectively with security tools, including SELinux/Apparmor, authentication, and firewall.