

Trainings

Linux System Administration



Zielgruppe: IT-Engineers mit
Linux-Grundkenntnissen

Dauer: 4 Tage

Abstract

In diesem Training steht die Praxis im Vordergrund: Die Teilnehmer lernen, wie sich Linux-Systeme mit den drei großen Linux-Distributoren Red Hat, SUSE und Debian/Ubuntu verwalten, konfigurieren und aktualisieren lassen, welche Werkzeuge und Konzepte beherrscht werden müssen, um eine Enterprise-fähige Linux-Infrastruktur effizient zu erstellen und zu verwalten und wie modernste Techniken der Systemadministration in der Praxis eingesetzt werden.

Dieses Training befähigt die Teilnehmer zur erfolgreichen Teilnahme an der LFCS-Prüfung.

Agenda:

1. Einführung

- Linux Foundation
- Linux Foundation Training
- Linux Foundation Certifications
- Laboratory Exercises, Solutions and Resources
- Distribution Details
- Labs

2. Linux Filesystem Tree Layout

- Data Distinctions
- FHS Linux Standard Directory Tree
- root (/) directory
- /bin
- /boot
- /dev
- /etc
- /home
- /lib and /lib64
- /media
- /mnt
- /opt
- /proc
- /sys
- /root
- /sbin
- /srv
- /tmp
- /usr
- /var
- /run
- Labs

3. Processes

- Programs and Processes
- Process States
- Execution Modes
- Daemons
- Creating Processes
- Process Limits
- Process Monitoring
- Signals
- niceness
- Libraries
- Labs

4. Package Management Systems

- Software Packaging Concepts
- RPM (Red Hat Package Manager)
- DPKG (Debian Package)
- Revision Control Systems
- Labs

5. Package Installers

- Package Installers
- yum
- zypper
- APT

- Labs

6. Partitioning and Formatting Disks

- Common Disk Types
- Disk Geometry
- Partitioning
- Naming Disk Devices
- Sizing up partitions
- Partition table editors
- Labs

7. Linux Filesystems

- Filesystem Basics
- Available Filesystems
- Virtual Filesystem (VFS)
- Filesystem Concepts
- Disk and Filesystem Usage
- Extended Attributes
- ext4
- XFS
- btrfs
- Creating and formatting Filesystems
- Checking and Repairing Filesystems
- Mounting Filesystems
- Swap

- Filesystem Quotas
- Labs

8. Encrypting Disks

- Filesystem Encryption
- LUKS
- Using an Encrypted Partition
- Labs

9. RAID and LVM

- RAID
- RAID Levels
- Software RAID Configuration
- Logical Volume Management (LVM)
- Volumes and Volume Groups
- Working with Logical Volumes
- Resizing Logical Volumes
- LVM Snapshots
- Labs

10. Kernel Services and Configuration

- Kernel Overview
- Kernel Configuration
- sysctl
- Kernel Modules

- Module Utilities
- Module Configuration
- udev and Device Management
- Labs

11. User and Group Account Management

- User Accounts
- Management
- Passwords
- Restricted Shells and Accounts
- The root Account
- Group Management
- PAM (Pluggable Authentication Modules)
- Authentication Process
- Configuring PAM
- LDAP Authentication
- File Permissions and Ownership
- SSH
- Labs

12. Networking

- IP Addresses
- Hostnames
- Network Devices
- ip and ifconfig

- Network Configuration Files
- Network Manager
- Routing
- DNS and Hostname Resolution
- Network Diagnostics
- Labs

13. Firewalls

- Firewalls
- Interfaces
- firewalld
- Zones
- Source Management
- Service and Port Management
- Labs

14. System Startup and Shutdown

- Understanding the Boot Sequence
- The Grand Unified Boot Loader
- GRUB Configuration Files
- System Configuration Files in /etc
- The init Process
- systemd
- SysVinit Startup
- chkconfig and service

- Upstart
- Shutting down/Rebooting the System
- Labs

15. Backup and Recovery Methods

- Backup Basics
- tar
- Compression: gzip, bzip2 and xz and Backups
- dd
- rsync
- dump and restore **
- mt **
- Backup Programs
- Labs

16. Local System Security

- Local System Security
- Creating a Security Policy
- Updates and Security
- Physical Security
- Filesystem Security
- Linux Security Modules
- Labs

17. Basic Troubleshooting and System Rescue

- Troubleshooting Overview
- Things to Check: Networking
- Boot Process Failures
- Filesystem Corruption and Recovery
- Virtual Consoles
- Rescue Media and Troubleshooting
- System Rescue and Recovery
- Labs

Hinweis:

- Die Kursgebühr beinhaltet Schulungsunterlagen, Mittagessen, Getränke und Snacks.
- Die Teilnehmer müssen ein eigenes Notebook zum Training mitbringen.

Sollten Sie Fragen zum Training haben, eine Hotelempfehlung benötigen oder ein anderes Anliegen rund um unsere Trainings haben, kontaktieren Sie uns bitte unter trainings@inovex.de oder unseren Academy-Leiter Collin Rogowski unter Tel. +49 (0)172 5673497. Vielen Dank! Wir freuen uns auf Sie!