
Linux for Administrators Eğitimi

Eğitim Hakkında

Linux for Administrators Giriş kursu, katılımcılara Linux sistemlerini nasıl kuracaklarını, yapılandıracaklarını, bakımını yapacaklarını ve güvenli hale getireceklerini öğretir.

Neler Öğreneceksiniz

- Linux'u kurmayı ve yapılandırmayı,
- Önyükleme sürecini anlamayı,
- Ana kullanıcı ve grup yönetimini,
- Kotalar, FACL'ler, RAID ve LVM dahil dosya sistemi yönetimiyle çalışmayı,
- Görevleri otomatikleştirmeyi,
- Ana istemci ağını.

Eğitim İçeriği

Linux Hardware Discovery, Interaction, & Control

- Hardware Discovery Tools
- Configuring New Hardware with hwinfo
- Hardware and System Clock
- Console
- Virtual Terminals
- Serial Ports
- SCSI Devices
- USB Devices
- USB Configuration
- Common UNIX Printing System
- Defining a Printer
- Managing Optical Media
- Tape Libraries
- Managing Linux Device Files
- Kernel Hardware Info - /sys/
/sys/ Structure
udev

- Kernel Modules
- Configuring Kernel Components and Modules
- Handling Module Dependencies
- Configuring the Kernel via /proc/

Boot Process and SYSV INIT

- Booting Linux on PCs
- GRUB Configuration
- Boot Parameters
- Initial ramdisk
- /sbin/init
- System Init Styles
- Linux Runlevels
- /etc/inittab
- /etc/rc.d/rc.sysinit
- SUSE /etc/init.d/boot
- Runlevel Implementation
- System Configuration Files
- RHEL6 Configuration Utilities
- SLES11 Configuration Utilities
- Typical SysV Init Script
- The /etc/rc.local File
- The /etc/init.d/*.local Files
- Managing Daemons
- Controlling Service Startup
- Shutdown and Reboot

Software Maintenance [RPM and Yum coverage is specific to RHEL and CentOS; we could cover apt for Ubuntu or YaST for SUSE upon request]

- Managing Software
- RPM Features
- RPM Architecture
- RPM Package Files
- Working with RPMs
- Querying and Verifying with rpm
- Updating the Kernel RPM
- Dealing with RPM & YUM Digest Changes
- YUM Plugins
- YUM Repositories
- Compiling/Installing from Source
- Manually Installed Shared Libraries
- Installing Source RPM Packages

File System Administration

- Partitioning Disks with fdisk
- Partitioning Disks with parted
- File system Creation
- Mounting File system file systems
- File system Maintenance

- Persistent Block Devices
- Resizing File system file systems
- Swap
- File system Structures
- Determining Disk Usage With df and du
- Configuring Disk Quotas
- Setting Quotas
- Viewing and Monitoring Quotas
- File system Attributes
- Backup Software

LVM & RAID

- Logical Volume Management
- Implementing LVM
- Creating Logical Volumes
- Manipulating VGs & LVs
- Advanced LVM Concepts
- system-config-lvm
- SLES Graphical Disk Tool
- RAID Concepts
- Array Creation with mdadm
- Software RAID Monitoring
- Software RAID Control and Display

Remote Storage Administration

- Remote Storage Overview
- Remote File system file system Protocols
- Remote Block Device Protocols
- File Sharing via NFS
- NFSv4
- NFS Clients
- NFS Server Configuration
- Implementing NFSv4
- AutoFS
- AutoFS Configuration
- Accessing Windows/Samba Shares from Linux
- SAN Multipathing
- Multipath Configuration
- Multipathing Best Practices
- iSCSI Architecture
- Open-iSCSI Initiator Implementation
- iSCSI Initiator Discovery
- iSCSI Initiator Node Administration
- Mounting iSCSI Targets at Boot
- iSCSI Multipathing Considerations

User/Group Administration

- User and Group Concepts

- User Administration
- Modifying Accounts
- Group Administration
- Password Aging
- Default User Files
- Controlling Logins
- Manual DS Client Configuration
- system-config-authentication
- SLES Graphical DS Client Configuration
- System Security Services Daemon (SSSD)

Pluggable Authentication

- Modules (PAM)
- PAM Overview
- PAM Module Types
- PAM Order of Processing
- PAM Control Statements
- PAM Modules
 - pam_unix
 - pam_nologin.so
 - pam_limits.so
 - pam_wheel.so
 - pam_xauth.so

Security Administration

- Security Concepts
- Tightening Default Security
- SuSE Security Checker
- Security Advisories
- File Access Control Lists
- Manipulating ACLs
- Viewing ACLs
- Backing Up ACLs
- File Creation Permissions with umask Daemon
- User Private Group Scheme
- Alternatives to UPG
- AppArmor
- SELinux Security Framework
- SELinux Modes
- SELinux Commands
- Choosing an SELinux Policy
- SELinux Booleans
- Permissive Domains
- SELinux Policy Tools
- Basic Firewall Activation

Basic Networking

- IPv4 Fundamentals
- TCP/UDP Fundamentals
- Linux Network Interfaces
- Ethernet Hardware Tools
- Network Configuration with ip Command
- Configuring Routing Tables
- IP to MAC Address Mapping with ARP
- Starting and Stopping Interfaces
- NetworkManager
- DNS Clients
- DHCP Clients
- system-config-network{tui,cmd}
- SUSE YaST Network Configuration Tool [covered if using SUSE]
- Network Diagnostics
- Information from netstat and ss
- Managing Network-Wide Time
- Continual Time Sync with NTP
- Configuring NTP Clients
- Useful NTP Commands

Advanced Networking

- Multiple IP Addresses
- Configuring a DHCP server
- Enabling IPv6
- Interface Bonding
- Interface Bridging
- 802.1q VLANs
- Tuning Kernel Network Settings

Log File Administration

- System Logging
- Syslog-ng
- Rsyslog
- /etc/rsyslog.conf
- Log Management
- Log Anomaly Detector

Monitoring & Troubleshooting

- System Status - Memory
- System Status - I/O
- System Status - CPU
- Performance Trending with sar
- Troubleshooting Basics: The Process
- Troubleshooting Basics: The Tools
- strace and ltrace
- Common Problems
- Troubleshooting Incorrect File Permissions
- Inability to Boot
- Typos in Configuration Files

CorruptFile system file systems

RHEL Rescue Environment [covered if using RHEL]

SUSE Rescue Environment [covered if using SUSE]