

TK016: Linux Troubleshooting

Duration

5.0 Days

Course Content

1. Troubleshooting methodology

- 1.1. The Troubleshooting Mindset
- 1.2. Evaluating Possible Solutions
- 1.3. Identifying and Implementing Change
- 1.4. Define and Follow Policies
- 1.5. Working with Others

2. Troubleshooting tools

- 2.1. Common Troubleshooting Tools
- 2.2. RPM Queries and Verification
- 2.3. SRPM and spec Files
- 2.4. Hardware Discovery Tools
- 2.5. Configuring New Hardware with hwinfo
- 2.6. strace and ltrace
- 2.7. lsof and fuser
- 2.8. ipcs and ipcrm
- 2.9. iostat, mpstat, and vmstat
- 2.10. Using hdparm to Measure
- 2.11. Troubleshooting with the ip command
- 2.12. Name Resolution
- 2.13. ss/netstat and rpcinfo

2.14. nmap

2.15. Netcat

2.16. tcpdump and wireshark

3. rescue environments

3.1. Diagnostic/Recovery

3.2. Rescue Procedures

3.3. Recovery: mount & chroot

3.4. Recovery: Network Utilities

4. Advanced troubleshooting

4.1. Linux Boot Process

4.1.1. System Boot Method Overview

4.1.2 systemd System and Service Manager

4.1.3. Booting Linux on PCs

4.1.4. Troubleshooting With GRUB 2

4.1.5. Boot Process Troubleshooting

4.1.6. Troubleshooting: Linux and Init

4.2. Process Management

4.2.1 Process Management Tools

4.2.2. Troubleshooting Processes: top

4.2.3. Filesystem Concepts and Troubleshooting

4.2.4. Backup Concepts and Troubleshooting

4.3. Networking Tools

4.3.1. Linux Network Interfaces

4.3.2. Networking Commands Review

4.3.3. NetworkManager

4.3.4. Networking Troubleshooting

- 4.3.5. Virtual Interfaces/IP Aliases
- 4.3.6. Network Teaming
- 4.3.7. Xinetd Concepts and Troubleshooting
- 4.3.8. TCP Wrappers Concepts and Troubleshooting
- 4.3.9. Netfilter/iptables Concepts and Troubleshooting
- 4.4. X11 Concepts and Troubleshooting
 - 4.4.1. Rsyslog Concepts
 - 4.4.2. System Logging
 - 4.4.3. systemd Journal
 - 4.4.4. Secure Logging with Journal's Log Sealing
 - 4.4.5. Syslog Troubleshooting
- 4.5. RPM Concepts and Troubleshooting
 - 4.5.1. Common Unix Printing System Concepts and Troubleshooting
 - 4.5.2. at & cron Usage and Troubleshooting
 - 4.5.3. Users and Groups Concepts and Troubleshooting
- 4.6. PAM Concepts and Troubleshooting
 - 4.6.1. Filesystem Quotas
 - 4.6.2. Quotas Troubleshooting
 - 4.6.3. File Access Control Lists Concepts and Troubleshooting
- 4.7. SELinux Concepts and Troubleshooting
 - 4.7.1. Kernel Modules Concepts and Troubleshooting
 - 4.7.2. Logical Volume Management
 - 4.7.3. Creating Logical Volumes
 - 4.7.4. LVM Deployment Issues
 - 4.7.5. VG Migration, PV Resizing & Troubleshooting
 - 4.7.6. Software RAID Overview

4.7.7. RAID Troubleshooting

4.8. Multipathing Overview

4.9. SAN Multipathing

4.10. Multipath Configuration and best Practices

4.11. LDAP and OpenLDAP Concepts and Troubleshooting

4.12. NIS and NIS+ Concepts and Troubleshooting

4.13. DNS Concepts and Troubleshooting

4.14. Apache Concepts and Troubleshooting

4.15. FTP Concepts and Troubleshooting

4.16. Squid Concepts and Troubleshooting

4.17. Samba Concepts and Troubleshooting

4.18. Postfix Concepts and Troubleshooting

4.19. IMAP & POP Concepts and Troubleshooting

4.20. MariaDB Concepts and Troubleshooting