Linux Networking

Duration: 2 Days **Course Code: LN**

Overview:

Linux Networking Course Overview

English - Please note this course is only available in English.
Nederlands - Let op: deze training is alleen in het Engels beschikbaar.
Français - Veuillez noter que ce cours est uniquement disponible en anglais.
This highly practical instructor led Linux Networking course introduces the delegate to the main concepts of Linux networking and TCP/IP. It describe

Target Audience:

Who will the Course Benefit?

Users and Administrators who need to design,implement,troubleshoot and oversee TCP/IP networks. This Linux Networking course is also suitable for delegates who need an understanding of TCP/IP and are required to maintain a network.

Objectives:

- Course Objectives
- To provide the skills necessary for the delegate to design,build,test and subnet TCP/IP Networks. The delegate will also learn how to capture packets and trace and rectify faults on the network.

Prerequisites:

There are no formal pre-requisites,although knowledge and understanding of an operating system is essential. Having LINUX/UNIX knowledge is particularly advantageous,as the course is built around TCP/IP and LINUX/UNIX.

Follow-on-Courses:

Further Learning

- Linux System Security
- Linux Fundamentals
- Linux Introduction
- Linux Shell Programming
- Linux Advanced Shell Programming Tools
- Linux Bash Shell Programming
- Linux System Administration (LPI)
- Linux Advanced System Administration (LPI)
- Apache Web Server
- AIX Basics
- AIX Fundamentals
- Solaris Fundamentals
- UNIX Shell Programming for Developers
- UNIX Fundamentals
- UNIX Introduction
- UNIX Advanced Shell Programming Tools

Content:

Linux Networking Training Course Course Contents - DAY 1

Course Introduction

- Administration and Course Materials
- Course Structure and Agenda
- Delegate and Trainer Introductions

Session 1: NETWORKING FUNDAMENTALS

- Network Hardware
- Data Bandwidth and Speed
- Attenuation and Noise
- Latency
- Network Types and Topologies
- Network Ports and Sockets
- MAC Addresses
- Exercise

Session 2: NETWORKING MODELS AND STANDARDS

- OSI Model
- Institute of Electrical and Electronic Engineers
- Internet Society and Internet Engineering Task Force
- Exercise

Session 3: IP ADDRESSING

- Internet Protocol Addressing
- Classful IP Addressing
- Reserved IP Address Ranges
- Classless Inter-Domain Routing (CIDR)
- Subnetting Considerations
- Extended Network Prefix
- Exercise

Session 4: PRACTICAL TCP/IP

- Origins of TCP/IP
- TCP/IP and the OSI Model
- TCP and UDP Headers
- TCP Data Flow
- The Address Resolution Protocol
- Capturing packet information with tcpdump
- Installing Wireshark and Viewing Frames
- Exercise

Session 5: IP CONFIGURATION

- Microsoft Windows
- Linux Graphical Configuration
- Network Manager Configuration
- Network Testing Commands
- Network,host and port scanning
- Exercise Linux Networking Training Course Course Contents - DAY 2

Session 6: IPV6

- IPv6 Address Format and Allocation
- IPv6 Auto Configuration
- IPv6 Configuration
- Exercise

Session 7: ROUTING

- Routing Principles
- Default Gateway
- Static Routing
- Routing Protocols
- Routing Protocols and Software
- Viewing the Routing Table
- Exercise

Session 8: FURTHER WIRESHARK OPERATIONS

- Filtering with Wireshark
- Further Wireshark Filters
- Filtering IPv6 Traffic
- Exercise

Session 9: APPLICATION LAYER PROTOCOLS

- Secure Shell (SSH)
- Domain Name System (DNS)
- Domain registration and Root Name Servers
- Dynamic Host Configuration Protocol (DHCP)
- Network Time Protocol (NTP)
- Precise Time Protocol (PTP)
- NTP vs PTP
- Internet Control Message Protocol (ICMP)
- Hypertext Transfer Protocol (HTTP)
- File Transfer Protocol (FTP)
- Simple Mail Transfer Protocol (SMTP)
- Simple Network Management Protocol (SNMP)
- Remote Procedure Calls (RPC)
- Systemd Sockets
- Network File Sharing Programs (NFS ; Samba)
- Remote Desktop Programs
- Exercise

Session 10: NETWORK MONITORING AND TROUBLESHOOTING

- Network Troubleshooting
- Performance Analysis
- Detecting Network Errors with Wireshark
- Wireshark Expert Information
- Retransmission and Connection Resets

Further Information:

For More information, or to book your course, please call us on 0800/84.009

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www.globalknowledge.com/en-be/