

IT Networks Training: Design, Troubleshooting & Diagnostics (NETINF, 4 jours)

Description

The course Design, Troubleshooting & Diagnostics (IT Networks Training) is an introduction to networking in a multi-platform environment. Beginning with the design and architecture of the physical network, the course proceeds to a discussion of logical network design for IPv4 & IPv6. The training includes IPv4 & IPv6 addressing, VLANs, routing protocols (RIP, OSPF, BGP), naming services (DNS & DNSv6), autoconfiguration services (DHCP & DHCPv6), as well as QoS & security considerations. The course also includes a thorough discussion on troubleshooting tools & techniques for corporate networks.

Tarifs

- Tarification: \$3,750/person
- Rabais de 10% lorsque vous inscrivez 3 personnes.

Plan de cours

Introduction to Networking

Introducing TCP/IP

About TCP/IP and Accessible Networks

IP Addresses and the Network Card

Static versus Dynamic Addresses

The IP Address, the Subnet Mask and the Default Gateway

About Routers, Switches and Bridges

The role of the DHCP Server

The role of the DNS Server

Understanding the Entire Network

IPV4 Essentials

TCP/IP Technologies

About DHCP for IPV4

About DNS for IPV4

Sub-netting for IPV4

Planning an IPV4 Network

IPV4 and Security/Encryption

IPV4 and Wireless Networks

Implementing IPV4

Implementing IPV4

Installing the DNS Server

Configuring the DNS Server

Installing Active Directory

Configuring DHCPV4

Managing Reservations and Leases

Adding Clients to the Network

Adding File Shares

Adding Printers

Managing the Network

IPV6 Essentials

The Need for IPV6: An Overall Strategy

Hardware Considerations

Exploring IPV6 Addresses

About Subnets and Sites

Planning the IPV6 Network

DHCP for IPV6 Architecture

DNS for IPV6 Architecture

What about IPV6 and IPV4 Coexistence?

Using DHCP

What is DHCP?

How DHCP Provides a Leased IP Address

How does the Client choose a DHCP Server?

Lease Renewal

Obtain an IP Address Automatically

Obtain a DNS Server Address Automatically

Automatic Private IP Addressing (APIPA)

Static Alternate IP Address Configuration

Using the Connection Repair Button

Confirm IP Address Assignment using the Command Prompt

Troubleshooting DHCP Clients using the Command Prompt

Using Windows Components Wizard to Install the DHCP Server Service

Authorizing a DHCP Server

Creating Multiple DHCP Scopes

Configuring a DHCP Scope

Exclusion Ranges

Connecting to the Internet using NAT

Possible Scenarios

NAT Architecture and Process

The NAT Address Allocation Lifecycle

Implementing NAT

Configuring NAT

Configuring the Browser for Internet Access

Connecting LINUX Clients

Configuring LINUX Clients

Configuring Linux Based Security

Supporting LINUX Clients

LINUX Command Line Tools

Troubleshooting

Troubleshooting: Best Practices

Tracing the Route

Reaching the Gateway

Reaching the Destination

Dealing with Name Resolution Problems

Dealing with IP Address Conflicts

Dealing with Hardware Failure

Dealing with Network Connectivity Errors

Dealing with Cross Platform Connectivity Issues

A Complete Networking Troubleshooting Lab
