
TCP/IP Networking

Duración: 5 Días Código del Curso: GK9025

Temario:

Learn the essential skills needed to set up, configure, support, and troubleshoot your TCP/IP-based network. TCP/IP is the globally accepted group of protocols at the core of the Internet and organizational intranets. A solid understanding of each of these protocols and how they work will give you the ability to deploy the most effective network for your organization. In this course, you will gain the essential knowledge and skills required to set up, configure, support, and troubleshoot your TCP/IP-based network. Our expert instructors and extensive hands-on labs will prepare you to face and overcome the challenges of today's complex networks. This course-the longest running of its kind in the industry-also prepares you for more specialized courses in network security, wireless integration, and Voice over IP, as well as for product-specific training such as Cisco, Nortel, and Microsoft.

Dirigido a:

Anyone who is responsible for designing, installing, configuring, and maintaining TCP/IP networks or who needs to understand TCP/IP protocol structures and functions will benefit from this course. This course also provides excellent preparation for more advanced networking training.

Objetivos:

- How switches and routers interconnect using equipment from multiple vendors
 - IP addressing and how to create subnets
 - How TCP/IP works and how to configure it on various devices
 - Capture and view network traffic using a protocol analyzer
 - Wireless network options available
 - Basic security and firewall issues
 - How Ethernet works and how all of the various forms can be connected
 - Basics of layered network protocols
 - Difference between logical and physical network segments
 - Install Cat 5e UTP and fiber optic cables
 - How VLANs function
 - When and how to use NAT
 - Function of various routing protocols such as RIP, IGRP, and OSPF
 - An overview of WAN technologies
 - Functions of NetBIOS and NetBEUI
 - Benefits and issues of Instant Messaging
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Prerequisitos:

- Haber asistido al curso GK3150 - Understanding Networking Fundamentals
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Siguientes cursos recomendados:

- GK3277 - Voice over IP Foundations
 - GK3605 - Wireless LAN Foundations
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Contenido:

1. Network Overview

- What Is a Network?
- Why Use a Network?
- Network History
- Network Types
- Network Parts
- Network Services

2. Network Functions and Standards

- Generic Network Functions
- Single Solution or Protocol Layering
- Networking Standards
- OSI Model
- TCP/IP Model
- Models Compared

3. Local Signaling Media

- Serial
- Twisted Pair
- Fiber Optic
- Wireless
- Design and Installation

4. Ethernet

- CSMA/CD
- Collision Domain
- Standards
- Size
- Addresses
- Frame Format
- 802.3 and Ethernet II
- POE

5. Switching

- Overview
- Operation
- Learning
- Forwarding
- Filtering
- Flooding
- Spanning Tree
- Configuration
- Security
- VLAN
- Quality of Service

6. Logical Addressing

- Overview
- Binary Numbering
- Dotted Decimal Notation
- Classful Addressing
- Reserved Addresses
- Private Addresses
- Masking
- Classless Addressing

7. Address Resolution Protocol

8. Subnetting

- Overview
- Why Subnet?
- Basic Decision Points
- Budgeting Bits
- Case Study

9. Routing

- Overview
- Routing Methods
- Interior Protocols Compared
- Decision Process
- BGP

10. WAN Overview

- Telecommunications Infrastructure
- Connection Types: PVC and SVC
- WAN Technologies
- Multiplexing
- SONET
- WAN Service Options
- Leased Lines
- Switched Lines
- Packet-Switching Networks

11. Network Layer Process

- Overview
- Features
- Header Functions
- Options

12. Session Handling

- Overview
- Features
- Port Numbers
- Connectionless Functions
- Connection-Based Functions
- Sockets
- NAT/PAT

13. Supporting Processes

- Overview
- ICMP
- DHCP
- DNS

14. Net BIOS and Net BEUI

- What is NetBIOS?
- NetBIOS Name
- NetBIOS Sessions
- NetBIOS Datagrams
- NetBIOS over TCP/IP
- NetBEUI
- NetBIOS Limitations
- NetBIOS Management Software

15. Security

- Threats
- Defenses
- VPN
- Assess Vulnerability
- Develop a Security Plan
- Multilayer Protection

16. User and Manager Processes

- Overview
- Telnet
- FTP
- SMTP
- HTTP
- POP
- TFTP
- SNMP

17. Wireless

- Overview
- Components
- Standards
- SSID
- Security
- Non-Standard Offerings

18. Instant Messaging

- Overview
- Integrated Communications
- Server Location(s)
- Security Issues
- SOX

19. Networking Advances

- IPv6
- VoIP
- Wireless Broadband
- Video

- Overview
- Process
- ARP Cache
- ARP commands
- Gratuitous ARP

Más información:

Para más información o para reservar tu plaza llámanos al (34) 91 425 06 60

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