

# Interconnecting Cisco Networking Devices (CCNA), Part 4 of 5: Wide Area Networks

page 1

**Meet the expert:** As a certified Microsoft Instructor, Ken has focused his career on various security aspects of computer and network technology since the early 1980s. He has offered a wide variety of IT training and high level consulting projects for Fortune 500 companies globally. Through the course of his extensive career, he has taught a full line of Microsoft, CompTIA, Cisco, and other high level IT Security curricula.

**Prerequisites:** This is part 4 of the series

**Runtime:** 03:18:41

**Course description:** The Interconnecting Cisco Networking Devices Part 2 (ICND2) is the exam associated with the Cisco Certified Network Associate certification. This course covers the WAN and access across large geographical distances. It will cover cables, equipment, service providers, and protocols as well as Frame Relay and VPN.

## Course outline:

### Establish WAN Connection Using Frame Relay

- Introduction
- What Is Frame Relay
- What Is Frame Relay Continued
- Topologies
- Reachability Issues
- Reachability Issues Continued
- Frame Relay Signaling
- Frame Relay Mapping
- Frame Relay Mapping Continued
- Manual Frame Relay Mapping
- How to Configure Frame Relay
- How to Configure Frame Relay Continued
- Split Horizon
- Configure Point-to-Point Frame Relay
- Multipoint Frame Relay Configuration
- How to Verify Frame Relay
- How to Verify Frame Relay Continued
- Summary
- Summary

### Configuring Serial Encapsulation

- Introduction
- Configuring Serial Encapsulation
- Configuring a Serial Interface
- Configuring a Serial Interface Continued
- HDLC Protocol
- HDLC Protocol Continued
- Other Point-to-Point Protocols

- Configuring PPP
- Configuring PPP Continued
- PAP
- CHAP
- How to Configure CHAP
- How to Configure CHAP Continued
- Verify CHAP
- Verify CHAP Continued
- Troubleshooting Serial Interfaces
- MLP
- MLP Configuration
- MLP Configuration Continued
- PPPoE
- PPPoE Client
- PPPoE Client Continued
- Verify PPPoE Client
- Summary
- Summary

### Understanding WAN Technologies

- Introduction
- What Is the WAN
- What Is the WAN Continued
- WAN Components
- WAN Components Continued
- WAN Serial Cabling
- L2 WAN Protocols
- Options for the WAN
- Options for the WAN Continued

- Summary
- Summary

### VPN Solutions

- Introduction
- Benefits of Secure VPNs
- Benefits of Secure VPNs Continued
- Other Cisco SSL Solutions
- Characteristics of IPSec
- Summary
- Summary

### WAN Demo

- Introduction
- Demo: Break Serial Link
- Demo: Verifying Authentication
- Demo: Frame Relay Connection
- Demo: Frame Relay Mapping
- Demo: Verifying Frame Relay
- Demo: Configure Interface
- Demo: Troubleshooting a Connection
- Demo: Troubleshooting a Connection Continued
- Demo: Topology Table
- Demo: Advertising Routes
- Summary

### Configure GRE Tunnels

- Introduction
- Demo: Default Tunneling
- Demo: Ends of the Tunnel
- Demo: Using a Tunnel
- Demo: GRE Tunnel
- GRE Tunnel

- Demo: Home Network
- Demo: Virtual Template
- Demo: Pinging a Home Network
- GRE Tunnel Overview
- How to Configure the GRE
- How to Configure the GRE (Cont.)
- Verify the Tunnel
- Summary
- Summary