



Enhanced Network Solutions Group

Systems Integration • Learning Solutions • CIO Consulting
Managed Outsourcing • Healthcare Solutions • Security Solutions

7224 Engle Road - Fort Wayne, IN 46804 - Phone: (260) 432-1364 - Fax: (260) 432.3168

ICND1 Interconnecting Cisco Network Devices Part 1

(Note: Combined 5-day format available including ICND2)

ICND1 Rev 05.11

5 days

Description

This course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small branch office Enterprise network, including configuring a switch, a router, and connecting to a WAN and implementing network security. A student should be able to complete configuration and implementation of a small branch office network under supervision.

Prerequisites

- None

Course Objectives

After completing this course, the learner will be able to meet these overall objectives:

- Describe how networks function, identifying major components, function of network components, and the Open System Interconnection (OSI) reference model
- Using the host-to-host packet delivery process, describe issues related to increasing traffic on an Ethernet LAN. and identify switched LAN technology solutions to Ethernet networking issues
- Describe the reasons for extending the reach of a LAN and the methods that can be used with a focus on RF wireless access
- Describe the reasons for connecting networks with routers and how routed networks transmit data through networks using TCP/IP
- Describe the function of Wide Area Networks (WANs), the major devices of WANs, and configure PPP encapsulation, static and dynamic routing, PAT and RIP routing
- Use the command-line interface to discover neighbors on the network and manage the router's startup and configuration

Course Outline

Module 1: Building a Simple Network

Lesson 1: Exploring the Functions of Networking

Lesson 2: Securing the Network

Lesson 3: Understanding the Host-to-Host Communications Model

Lesson 4: Understanding the TCP/IP Internet Layer

Lesson 5: Understanding the TCP/IP Transport Layer

Lesson 6: Exploring the Packet Delivery Process

Lesson 7: Understanding Ethernet

Lesson 8: Connecting to an Ethernet LAN

Module 2: Ethernet Local Area Networks

Lesson 1: Understanding the Challenges of Shared LANs

Lesson 2: Solving Network Challenges with Switched LAN Technology

Lesson 3: Exploring the Packet Delivery Process

Lesson 4: Operating Cisco IOS Software



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- Lesson 5: Starting a Switch
- Lesson 6: Understanding Switch Security
- Lesson 7: Maximizing the Benefits of Switching
- Lesson 8: Troubleshooting Switch Issues

Module 3: Wireless Local Area Networks

- Lesson 1: Exploring Wireless Networking
- Lesson 2: Understanding WLAN Security
- Lesson 3: Implementing a WLAN
- Lesson 4: VoIP Requirements

Module 4: Exploring the Functions of Routing

- Lesson 1: Exploring the Functions of Routing
- Lesson 2: Understanding Binary Basics
- Lesson 3: Constructing a Network Addressing Scheme
- Lesson 4: Starting a Cisco Router
- Lesson 5: Configuring a Cisco Router
- Lesson 6: Exploring the Packet Delivery Process
- Lesson 7: Understanding Cisco Router Security
- Lesson 8: Using Cisco SDM
- Lesson 9: Using a Cisco Router as a DHCP Server
- Lesson 10: Accessing Remote Devices

Module 5: Wide Area Networks

- Lesson 1: Understanding WAN Technologies
- Lesson 2: Enabling the Internet Connection
- Lesson 3: Enabling Static Routing
- Lesson 4: Configuring Serial Encapsulation
- Lesson 5: Enabling RIP

Module 6: Network Environment Management

- Lesson 1: Discovering Neighbors on the Network
- Lesson 2: Managing Cisco Router Startup and Configuration
- Lesson 3: Managing Cisco Devices



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