LearnKey

Cisco® CCNA 2.0™ Training Course

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Certified Cisco Network Associate

with Gary Crothers

LearnKey's training materials for Cisco® CCNA™ exam preparation will give you the latest technical knowledge of Cisco® LAN and WAN routers and LAN switches. Expert Gary Crothers will show you how to configure a network to increase bandwidth, improve response times, and to enhance reliability and quality of service. At the conclusion of this course, you will solidify your knowledge of Cisco Systems® routing and switching technologies and be prepared to pass Cisco® exam #640-507.

5 Sessions
15 hours of Interactive Training

Also Available:
- Study Guide
- Test Prep
- eSupport

Gary Crothers

Gary Crothers is a CCIE™, CCNA™, Cisco Certified Solutions Instructor™, and a Cisco Certified Sales Instructor™. For over 17 years, Gary has provided computer and internetworking consulting services for many major corporations including Cisco Systems®, Hughes Aircraft and Southwestern Bell. He currently teaches and develops technology and technnology marketing courses at Cisco® Worldwide Training Headquarters.

Session 1

Section A: Internetworking Overview
- Interconnectivity
- Interoperability
- Internetworking & Types of Networks
- Key Network Characteristics

Section B: The OSI Model
- OSI Basics
- Encapsulation
- OSI Layers 1 & 2
- OSI Layer 3 & 4
- OSI Layers 5, 6 & 7

Section C: LAN Networking Topologies
- Ethernet & Token Ring
- ANSI FDDI

Section D: WAN Networking Topologies
- EIA/TIA (RS)-232
- Physical Layer V.35
- HSSI Interface/BRI Interface
- Point to Point WAN Implementations
- Frame Relay
- ISDN & ATM
- Network Layer X.25

Section E: Basic Internetworking Devices
- Cisco® Routers, Switches & Hubs

Section F: Lab Overview
- WAN Setup

Section G: Power Up & Basic Router Access
- Turning On the Power
- Executive Modes
- Basic "Show" Commands
- Using "Show" Commands
- Configuration Register

Section H: IOS Start Up
- Start Up Extensions
- Configuration Modes

Section I: Managing IOS & Configuration Files
- IOS File Handling
- Configuration File Handling
- Copying IOS Image to Router
- Copying Configuration to a Server

Total Time: 99 Minutes

Session 2

Section A: Command Line Basics
- Basic & Line Editing Commands
- Exit, Enable & Logout Commands

Section B: Configuring a New Router
- Router Elements
- Login Security
- Configuring Passwords

Section C: Configuring an IP Ethernet Port
- Setting the IP Address
- Show & Bring Up the IP Interface
- Testing the Interface

Section D: IP Addressing
- IP Address Characteristics
- Class A & B IP Address Rules
- Class C, D & E IP Address Rules
- IP Addresses in Our Lab Network

Section E: IP Subnetting
- IP Subnet Masking
- Variable Length Subnet Masking
- Subnetting
- IP Address Planning
- Manipulating the Subnet Mask
- Efficient IP Addressing

Section F: Routing Protocol Theory
- Need for Routing
- What are Routing Protocols?
- How Routing Protocols Work
- Routing Terms

Section G: Routing Protocols
- Dynamic Routing
- Network Layer-IP Routing Protocols
- Lab Setup
- Distance Vector Protocols
- RIP, IGRP & EIGRP
- Link State Protocols
- OSPF & Static Routes

Section H: Frame Relay for IP
- Setting Up Frame Relay
- Configuring the Interface

Section I: Configuring IGRP
- Configuring an Ethernet Interface
- Configuring a Token Ring Interface
- Setting Up IGRP

Total Time: 118 Minutes

Session 3

Section A: Configuring EIGRP
- Configuring EIGRP on Chicago
- Configuring EIGRP on RD

Section B: Configuring OSPF
- OSPF Setup in LearnKey Lab
- Configure OSPF for WAN Router
- Redistributing IGRP into OSPF
- Redistributing OSPF into IGRP
- Redistributing OSPF, RIP, EIGRP
- Static Route

Section C: Diagnostic Commands
- Debugging
- Trace Routing & Ping Commands

Section D: Installing Aids
- Login Banners
- Setup Commands & Auto Install

Section E: TCP/IP Protocol Suite
- Protocols & Services
- TCP/IP vs. OSI
- Layer Services
- Transports & Services
- TCP, Flow Control & UDP
- IP & IP Helper Addresses
- Main Network Layer Protocols
- Network Layer Services
- ICMP
- UNIX & Windows Commands

Section F: DHCP & DNS
- Configuring DHCP
- DNS Overview
- Configuring DNS

Section G: IPX Protocol
- Protocol Stack
- IPX vs. OSI
- IPX Datagram & Addresses
- Packet Encapsulation Types
- IPX SAP
- Routing IPX
- IPX RIP
- Multiple Frame Types
- Building an IPX Network
- Checking the Work

Total Time: 85 Minutes

Session 4

Section A: AppleTalk Protocol
- AppleTalk Protocol
- Network Addresses
- Zone Information & Routing Protocols
- Services & Routing
- Lab Config. & AppleTalk Commands
- Enabling AppleTalk Interface
- Verifying AppleTalk Configuration

Section B: Access Lists for IP
- Access List Review
- Standard, Extended & Named IP
- Applying IP Access
- Building IP Access
- Apply & Remove IP Access
- Verifying IP Access

Section C: Access Lists for IPX
- Standard & SAP IPX Access
- Applying & Removing Standard IPX
- Applying SAP Filters
- Verifying IPX Access

Section D: Access Lists for AppleTalk
- AppleTalk Access Lists
- Apply & Remove AppleTalk Lists
- Verifying AppleTalk Access Lists

Section E: LAN Switching & VLAN
- Why Do We Have Them?
- Spanning Tree Algorithm
- The Default VLAN Configuration
- Globally Configuring VLAN
- Assigning Ports VLANs
- System Configuration
- Network Management Console
- Configuring VLANs
- Assigning Ports to a VLAN
- Setting Up the Router
- Testing the Configuration

Section F: WAN Technologies
- ISDN & PPP Configuration
- Additional ISDN Features
- Using Multiple Links
- Configuring Frame Relay
- Configuring X.25
- Configuring ATM

Total Time: 112 Minutes

Session 5

Section A: Bridging
- Bridging Overview
- Broadcast Storms/Loop Avoidance
- Spanning-Tree Protocol Terms & Operations
- Path Costing/Spanning-Tree Logic
- DPDU Frames/Topology Change
- Convergence

Section B: Switching & VLANs
- Duplex Modes
- VLAN Advantages & Definition
- VLAN Components & Network
- Default VLANs/VLAN Domains
- Inter-Switch Link & Frame Tagging
- VLAN Trunking
- VTP Device Modes & Pruning
- Spanning-Tree per VLAN/VLAN Membership
- Routing Between VLANs

Section C: Switching & VLANs Lab
- Catalyst 1900 Ports
- Configuration Guidelines & Steps
- VTP Guidelines/Catalyst Defaults
- Set Parameters
- Configure Ports
- Advanced Switch Configuration
- MAC Table/Port Security
- Spanning-Tree Options
- Configuration via TFTP/Delete Configuration

Total Time: 78 Minutes