

CCNA version 3.0 Topic List

1/27/03

CCNA 1

Module 1: Introduction

- 1.1 Connecting to the Internet
- 1.2 Network Math

Module 2: Networking Terminology

- 2.1 Network Terminology
- 2.2 Bandwidth
- 2.3 Network Models

Module 3: Networking Media

- 3.1 Copper Media
- 3.2 Optical Media
- 3.3 Wireless

Module 4: Cable Testing

- 4.1 Background
- 4.2 Signals and Noise

Module 5: Cabling LANs and WANs

- 5.1 Cabling the LAN
- 5.2 Cabling the WAN

Module 6: Ethernet Fundamentals

- 6.1 Ethernet Fundamentals
- 6.2 Ethernet Operation

Module 7: Ethernet Technologies

- 7.1 10/100 Mbps Ethernet
- 7.2 1000 Mbps/10Gbps Ethernet

Module 8: Ethernet Switching

- 8.1 Ethernet Switching
- 8.2 Collision and Broadcast Domains

Module 9: IP Addressing

- 9.1 Introduction to TCP/IP
- 9.2 Internet Addresses
- 9.3 Obtaining an IP Address

Module 10: IP Routing

- 10.1 Internet Protocol (IP)
- 10.2 IP Routing Protocols
- 10.3 Mechanics of Subnetting

Module 11: TCP/IP Transport and Application Layers

11.1 TCP/IP Transport Layer

11.2 TCP/IP Application Layer

Case Study: Structured Cabling

What has changed from CCNA versions 2.x?

- More information on optical and wireless
- More cable testing terminology and concepts
- More details on the operation of Ethernet
- Focus on Fast, Gigabit, and 10 Gigabit Ethernet
- Structured cabling resource materials moved to case study
- Case study required; format and timing determined by Local Academy
- More interactive flash activities
- Lab focus on cable-making, building small networks, interconnecting devices

CCNA 2

Module 1: WANs and Routers

- 1.1 WANs
- 1.2 Routers

Module 2: Router Fundamentals

- 2.1 Operating Cisco IOS
- 2.2 Starting a Router

Module 3: Router Configuration

- 3.1 Configuring a Router
- 3.2 Finishing the Configuration

Module 4: Learning About Other Network Devices

- 4.1 Discovering and Connecting to Neighbors
- 4.2 Getting Information About Remote Sites

Module 5: The Router's Operating System

- 5.1 Router Boot Sequence and Verification
- 5.2 Managing the Cisco Router File System

Module 6: Routing

- 6.1 Overview of Static Routing
- 6.2 Dynamic Routing Overview
- 6.3 Routing Protocols Overview

Module 7: Distance Vector Routing Protocols

- 7.1 Distance Vector Routing
- 7.2 RIP
- 7.3 IGRP

Module 8: TCP/IP Error and Control Messages

- 8.1 TCP/IP Error Messages
- 8.2 TCP/IP Control Messages

Module 9: Basic Router Troubleshooting

- 9.1 Examining the Routing Table
- 9.2 Network Testing
- 9.3 Troubleshooting Router Issues

Module 10: Intermediate TCP

- 10.1 TCP Operation
- 10.2 Transport Layer Ports

Module 11: Access Lists

11.1 ACL Fundamentals

11.2 Access Control Lists

Case Study: Routing

What has changed from CCNA versions 2.x?

- More emphasis on router configuration early in semester
- More efficient presentation and practice of IOS
- IGRP moved from CCNA 3 to CCNA 2
- Access Lists moved from CCNA 3 to CCNA 2
- Revisions to TCP/IP coverage
- Focus on understanding routing tables
- Case study required; format and timing determined by Local Academy
- More interactive flash activities
- Sequence of > 40 eLabs
- Lab focus on 2-router labs

CCNA 3

Module 1: Introduction to Classless Routing

- 1.1 VLSM
- 1.2 RIP Version 2

Module 2: Single-Area OSPF

- 2.1 Link State Routing Protocols
- 2.2 Single Area OSPF Concepts
- 2.3 Single Area OSPF Configuration

Module 3: EIGRP

- 3.1 EIGRP Concepts
- 3.2 EIGRP Configuration
- 3.3 Troubleshooting Routing Protocols

Module 4: Switching Concepts

- 4.1 Introduction to Ethernet/802.3 LANs
- 4.2 Introduction to LAN Switching
- 4.3 Switch Operation

Module 5: Switches

- 5.1 LAN Design
- 5.2 LAN Switches

Module 6: Switch Configuration

- 6.1 Starting the Switch
- 6.2 Configuring the Switch

Module 7: Spanning Tree Protocol (STP)

- 7.1 Redundant Topologies
- 7.2 STP Overview

Module 8: VLANs

- 8.1 VLAN Concepts
- 8.2 VLAN Configuration
- 8.3 Troubleshooting VLANs

Module 9: VTP

- 9.1 Trunking
- 9.2 VTP
- 9.3 Inter-VLAN Routing

Case Study: Campus Routing and Switching

What has changed from CCNA versions 2.x?

- Removal of IPX, Network Management, and TCS Chapters
- Case study required; format and timing determined by Local Academy
- IGRP and Access Lists moved to CCNA 2
- Addition of VLSM (IP Address technique for “subnetting subnets”)
- Addition of RIP v2, EIGRP, and Single-Area OSPF routing protocols
- Addition of CLI configuration of switches
- Additional material on VLANs and VTP
- More interactive Flash activities
- Sequence of > 40 eLabs
- Lab focus on intermediate routing and command-line interface configuration of switches

CCNA 4

Module 1: Scaling IP Addresses

- 1.1 Scaling Networks with NAT and PAT
- 1.2 DHCP

Module 2: WAN Technologies

- 2.1 WAN Technologies Overview
- 2.2 WAN Technologies
- 2.3 WAN Design

Module 3: PPP

- 3.1 Serial Point to Point Links
- 3.2 PPP
- 3.3 PPP Configuration

Module 4: ISDN and DDR

- 4.1 ISDN Concepts
- 4.2 ISDN Configuration
- 4.3 DDR Configuration

Module 5: Frame Relay

- 5.1 Frame Relay Concepts
- 5.2 Basic Frame Relay Configuration

Module 6: Introduction to Network Administration

- 6.1 Workstations and Servers
- 6.2 Network Management

Module 7: Emerging Technologies

- 7.1 Basics of Optical Networks
- 7.2 Optical Transmission and Multiplexing

Case Study: WANs

Appendix: Preparation for Certification Exam

What has changed from CCNA versions 2.x?

- Removal of Net Plus and TCS Chapters
- Case study required; format and timing determined by Local Academy
- Addition of More WAN Terminology (especially Cable Modem and Broadband)
- Addition of Emerging Technologies Module
- Revision of Network Management Materials
- More interactive Flash activities
- Sequence of > 40 eLabs
- Lab focus on hands-on labs; more eLab support for Academies without Adtrans