

همراه با حمایت فنی رایگان از طریق ایمیل  
همراه با اعطاء مدرک معتبر



# مالتی مدیای CCNA

## Routing and Switching 200-120

به زبان فارسی (۱ DVD – ۵۶ ساعت)

این ۱ DVD شامل:

۳۸ بخش آموزشی با بیش از ۲۵۰ درس به زبان انگلیسی و فارسی ✓

۲۲ بخش طراحی , Configuration کامل و عیب یابی روترها و سوئیچ های Cisco ✓

۱۳ بخش سناریوهای فنی به همراه توضیحات ✓

Utilities شامل: ابزارهای نرم افزاری. E-Book ها و مطالب جدید CCNA: ✓

Advanced EIGRP, OSPF, IPv6, PPPoE, IP Services, HA, Datacenter

PT 6, NETSIM 8, IOS 15, Nexus, VPN, MPLS, VSAT, Virtualization ✓

### System Requirements

- Windows XP with SP 2
- 256 MB RAM
- CD-ROM or DVD
- 1024 x 768 High Resolution Video Card & Monitor

# CCNA Routing and Switching 200-120

## Routing Units

### Unit-1 Internetworking

- 1.1 Internetworking
- 1.2 OSI Model
- 1.3 Ethernet Networks
- 1.4 Ethernet Cabling
- 1.5 Network Domain
- 1.6 Ethernet Addressing
- 1.7 Cisco 3-Layer Hierarchical Model
- 1.8 Ethernet Frame Types

### Unit-2 TCP/IP Addressing & Protocols

- 2.1 IP Addressing Overview
- 2.2 IP Subnetting Part I
- 2.3 VLSM Part I
- 2.4 NAT Overview

### Unit-3 Basic Router Configuration

- 3.1 Cisco Routers
- 3.2 Connecting to a Cisco Router
- 3.3 Booting a Cisco Router
- 3.4 Cisco Router Components
- 3.5 Cisco Router Models
- 3.6 Cisco Router Passwords
- 3.7 Cisco Router Commands
- 3.8 Cisco Router Banner
- 3.9 Cisco Router Interfaces
- 3.10 Cisco Router Serial Interfaces
- 3.11 Router Configuration Commands
- 3.12 Troubleshooting
- 3.13 Verifying Router Configuration

### Unit-4 IP Routing & Routing Protocols

- 4.1 Distance Vector vs. Link State Routing
- 4.2 Link State Operation
- 4.3 Routing Updates
- 4.4 Routing Tables

### Unit-5 Dynamic Routing Protocols Part I

- 5.1 RIP v1 Overview
- 5.2 IGRP Overview
- 5.3 EIGRP Overview
- 5.4 OSPF Overview

## Switching & WAN Units

### Unit-1 Layer-2 Switching

- 1.1 Ethernet Overview
- 1.2 Switch vs. Bridge
- 1.3 Switch Functions
- 1.4 How a Switch Works (Example)
- 1.5 LAN Switch Types
- 1.6 Configuring Cisco 1900 Series
- 1.7 Configuring Cisco 2950 Series
- 1.8 Cisco Switch Verification
- 1.9 Switch Port Security
- 1.10 Static MAC Addresses
- 1.11 Port Security on 1900
- 1.12 Port Security on 2950
- 1.13 CDP Overview
- 1.14 CDP Commands

### Unit-2 Spanning Tree Protocol

- 2.1 STP Overview
- 2.2 STP Terminology
- 2.3 STP Operation
- 2.4 STP Port States
- 2.5 When to use STP
- 2.6 STP Examples

### Unit-3 Virtual LANs

- 3.1 VLAN Overview
- 3.2 VLAN Trunking
- 3.3 VLAN Trunking Protocols
- 3.4 VTP Pruning
- 3.5 Routing between VLANs
- 3.6 Configuring VLANs
- 3.7 Configuring Trunk Ports
- 3.8 Configuring Inter-VLAN Routing
- 3.9 Configuring VTP

### Unit-4 Wide Area Network

- 4.1 Introduction to WANs
- 4.2 WAN Terminology
- 4.3 WAN Interface Types
- 4.4 WAN Connection Types
- 4.5 WAN Protocols (HDLC)
- 4.6 WAN Protocols (PPP & Its Components)
- 4.7 PPP LCP Configuration Options
- 4.8 PPP Session Establishment & Auth. Methods
- 4.9 Configuring & Verifying PPP

## **Unit-6 Managing a Cisco Router & Internetwork**

- 6.1 Router Configuration Register**
- 6.2 Router Password Recovery**
- 6.3 IOS Image Backup and Upgrade**
- 6.4 IP Host Tables**

## **Unit-7 IP Access Lists**

- 7.1 Standard IP Access List**
- 7.2 Extended IP Access List**

## **Routing, Switching & WAN Part II**

### **Unit-1 TCP/IP Addressing & Protocols**

- 1.1 IP Subnetting Part II**
- 1.2 VLSM Part II**
- 1.3 TCP/IP Suite Overview**
- 1.4 Application Layer Protocols**
- 1.5 Transport Layer Protocols**
- 1.6 Internet Layer Protocols**

### **Unit-2 Cisco's IOS and Security Device Manager**

- 2.1 SSH, Do Command & using the PIPE**
- 2.2 Cisco Security Device Manager (SDM)**
- 2.3 Cisco ASDM 5.2 for ASA (Demo)**
- 2.4 SDM User Guide**

### **Unit-3 IP Routing & Routing Protocols**

- 3.1 Routing Basics**
- 3.2 IP Routing Examples**
- 3.3 Routing Loops**
- 3.4 RIPv2**

### **Unit-4 Dynamic Routing Protocols Part II**

- 4.1 EIGRP Overview**
- 4.2 Configuring EIGRP**
- 4.3 OSPF**
- 4.4 Configuring OSPF**
- 4.5 Configuring EIGRP & OSPF Summary Routes**
- 4.6 Route Redistribution**

## **Unit-5 Frame Relay**

- 5.1 Introduction to Frame Relay**
- 5.2 Frame Relay Technology and Terminology**
- 5.3 Frame Relay Encapsulation, VCs & DLCI**
- 5.4 Local Management Interface**
- 5.4E Example: LMI Configuration**
- 5.5 Frame Relay Congestion Control**
- 5.6 Subinterfaces**
- 5.7 Monitoring Frame Relay**

## **Routing, Switching & WAN Part II**

### **Unit-5 Managing a Cisco Router & Internetwork**

- 5.1 Boot System Command and using Cisco IFS**
- 5.2 Using SDM to Manage the Flash Memory**
- 5.3 Backup & Restore & using SDM**
- 5.4 CDP, SDM & Telnet & Debugging**

### **Unit-6 Layer-2 Switching & Advanced STP Topics**

- 6.1 Cisco 2960 Switches**
- 6.2 Switching Services**
- 6.3 PostFast, UplinkFast & BackboneFast**
- 6.4 RSTP & Etherchannel**
- 6.5 Catalyst Switch Configuration**
- 6.6 Configuring PortFast, BPDUGuard, BPDU Filter, UplinkFast & BackboneFast**
- 6.7 Configuring RSTP & Etherchannel**
- 6.8 Verifying Catalyst Switch Configuration**
- 6.9 Cisco Network Assistant**

### **Unit-7 Voice VLANs**

- 7.1 Configuring Voice VLANs**
- 7.2 Configuring IP Phone Voice Traffic**

### **Unit-8 Security**

- 8.1 Secured Networking and Cisco IOS Firewalls**
- 8.2 Advanced ACLs**

### **Unit-9 Network Address Translation**

- 9.1 NAT, NAT Types & NAT Names**
- 9.2 How NAT Works**
- 9.3 Testing & Troubleshooting NAT**
- 9.4 Using ASDM for ASA to Configure NAT**

## Unit-10 Cisco's Wireless Technologies

- 10.1 Wireless Networking Overview
- 10.2 802.11 Standards
- 10.3 Cisco's Unified Wireless Solution
- 10.4 Split MAC Architecture
- 10.5 Wireless Security

## Unit-11 IPv6

- 11.1 Needs and Benefits of IPv6
- 11.2 IPv6 Addressing & Address Types
- 11.3 IPv6 Autoconfiguration
- 11.4 Configuring Cisco Routers with IPv6, DHCPv6 & ICMPv6
- 11.5 IPv6 Routing Protocols
- 11.6 Migrating to IPv6
- 11.7 Configuring IPv6

## Unit-12 WAN Part II

- 12.1 Cable & DSL
- 12.2 Using ASDM for ASA for WAN Connections
- 12.3 VPNs
- 12.4 Introduction to Cisco IOS IPsec
- 12.5 Using ASDM for ASA for VPN and IPsec
- 12.6 Effective Bandwidth

## Unit-13 VoIP, Multicast, DHCP

- 13.1 VoIP
- 13.2 Multicast
- 13.3 DHCP Overview
- 13.4 Configuring DHCP
- 13.5 DHCP Verification Commands

## Routing Configuration Labs

- Lab-1 Basic Router
- Lab-2 Routing in Two Subnets
- Lab-3 Routing in Four Subnets
- Lab -4 Using Static and Default Routes
- Lab -5 Serial Communication
- Lab -6 Configuring RIPv1
- Lab -7 Configuring IGRP
- Lab -8 Configuring EIGRP
- Lab -9 Configuring OSPF
- Lab -10 Configuring IP ACLs

## Switching and WAN Configuration Labs

- Lab-1 PC to PC Communication
- Lab-2 Configuring CDP
- Lab-3 LAN Switching 2950
- Lab-4 Configuring 1900 Series Switches
- Lab-5 Configuring the 2950 Switches
- Lab-6 Configuring STP on 1900 Series
- Lab-7 Configuring VLAN on 1900 Series
- Lab-8 Configuring VLAN on 2950 Switches
- Lab-9 Configuring VLAN Trunking
- Lab-10 Configuring & Verifying PPP
- Lab-11 Configuring and Verifying Frame Relay
- Lab-12 Configuring and Verifying FR Subinterfaces

## Review Scenarios

- OSI, Ethernet, NAT , Connections
- TCP/IP Protocols, Addressing, Subnetting
- IOS Commands, Routes, IP Routing Table
- CDP & Administrative Distance
- Routing Protocols
- RIP, IGRP, EIGRP & OSPF
- Switch & Switch Configuration
- STP General, Port States, Root Bridge
- VLAN Configuration, VLAN Troubleshooting, VTP
- Configuration Registration, Password Recovery, Configuration Files, IOS Images
- Standard IP ACLS, Extended IP ACLs
- WAN (HDLC & PPP & ATM)
- Frame Relay & Troubleshooting

## Utilities Folder

- Exam
- Tools
- NETSIM 8
- Packet Tracer 6
- Cisco Configuration White Papers and Guides: Protocols, IOS 15, NEXUS Switches
- Cisco Video Mentor

## Appendix-A

- A-1 Cisco IOS Threat Defenses**
  - A1.1 Introducing the Cisco IOS Firewall
  - A1.2 Configuring Cisco IOS Firewall
  - A1.3 Introducing Cisco IOS IPS
  - A1.4 Configuring Cisco IOS IPS
  - A1.5 Introduction to Adaptive Security Appliance
  
- A-2 Switch Port Aggregation with EtherChannel**
  - A2.1 EtherChannels, PAgP & LACP Protocols
  - A2.2 Etherchannel Configuration
  
- A-3 Multilayer Switching**
  - A3.1 Routing Considerations
  - A3.2 Configuring Routing between VLANs
  - A3.3 Routing Configuration on a Switch
  - A3.4 Router on a Stick Setup
  - A3.5 Multi Layer Switching (MLS) Overview
  - A3.6 MLS using CEF
  - A3.7 CEF Example
  
- A-4 Layer-3 High Availability**
  - A4.1 HSRP Part I
  - A4.2 HSRP Part II
  - A4.3 Configuring HSRP
  - A4.4 VRRP
  - A4.5 VRRP Commands
  - A4.6 GLBP Operation and Load Balancing

## Appendix-C

- C-1 Advanced Routing Protocols Configuration**
  - C1.1 Advanced EIGRP Configuration
  - C1.2 Advanced OSPF Configuration
  - C1.3 MPLS Introduction
  - C1.4 MPLS Label
  - C1.5 MPLS Operation
  - C1.6 MPLS Configuration

## Appendix-B

- B-1 Integrating Wireless LANs**
  - B1.1 WLAN QoS
  - B1.2 WLAN Security Issues
  - B1.3 WLAN Management
  - B1.4 Configuring Switch Ports for WLAN Use
  
- B-2 Securing Switch Access**
  - B2.1 Switch Security
  - B2.2 Authentication, Authorization & Accounting (AAA)
  - B2.3 Switch Port Security
  - B2.4 Port-based Authentication with 802.1X
  - B2.5 Mitigating Spoofing Attacks
  
- B-3 VPN, PPPoE, Advanced NAT, VSAT & Internet Service**
  - B3.1 VPN
  - B3.2 Cisco VPN
  - B3.3 PPPoE
  - B3.4 Advanced NAT
  - B3.5 VSAT
  - B3.6 Internet Service
  
- B-4 IP QoS**
  - B4.1 Introduction to QoS
  - B4.2 Identifying and Comparing QoS Models
  
- B-5 New Cisco Technologies**
  - B5.1 Cloud Computing
  - B5.2 Virtualization I
  - B5.3 Virtualization II
  - B5.4 Cisco Nexus Switches
  - B5.5 Cisco NX-OS/IOS Configuration Comparison
  - B5.6 Data Centers
  - B5.7 Cisco IOS Software Release 15 M&T

## **C-2 IPv6 Part I**

- C2.1 IPv6 Features**
- C2.2 IPv6 Address**
- C2.3 IPv6 Address Types**
- C2.4 IPv6 Prefix and Subnetting**
- C2.5 IPv6 Interface ID**

## **C-3 IPv6 Part II**

- C3.1 IPv6 Address Assignment Methods**
- C3.2 IPv6 Address Command List**
- C3.3 IPv6 Routing Protocols**
- C3.4 IPv6 Routing Protocols Review**
- C3.5 IPv4 and IPv6 Interoperability**
- C3.6 IPv6 Link Types**

## **C-4 Tools for Troubleshooting**

- C4.1 Network Time Protocol (NTP)**
- C4.2 Logging & SNMP**
- C4.3 Saving Configurations**
- C4.4 Show Commands**
- C4.5 Configuring SPAN**
- C4.6 Configuring RITE**
- C4.7 PING & Telnet**