



# Cisco Certified Network Associate – CCNA (640-802)

## Why take CCNA with IT Enabler:

- Solid 5 days / 10 sessions of training with 80% lab based and 20% theory based.
- Covers latest **CISCO CCNA Exam 640-802 syllabus** requirements including using router for some lab sessions.
- Hands-on to real high-end CISCO routers (25xx, 26xx) models and enterprise grade switches (Catalyst 29xx).
- 1 student to 1-PC and maximum 2 to 1 CISCO routers & comfortable classroom environment.
- Use multimedia clips to illustrate TCP/IP and Routing concepts.
- More than sufficient tips and exam practice questions and lab sessions.
- Taught by experienced and Cisco Certified instructor.

## Prerequisite:

Working knowledge on networking and internet networking.

## Certificate Of Attendance :

Certificate Of Attendance will be awarded to students completing the course achieving minimum 75% attendance.

## Training Methodology & Materials:

- Practical hands-on sessions, 80% lab-based and 20% theory-based.
- Additional and well-designed labs handouts are given to enhance further enhance the courseware given.

## Training Duration:

Full-Time : 5 weekdays or 5 Sats

Time : 9.30am – 5.30pm

Part-Time : 10 sessions

Time : 6.30pm – 10.00pm (twice a week)

## Cisco Certification exams

This course will help the student to prepare for the Exam 640-802.

## DETAILED COURSE OUTLINE

### 1. Internetworking

- 1.1. Internetworking Basic
- 1.2. Internetworking Models
- 1.3. The OSI Reference Model
- 1.4. Ethernet Networking
- 1.5. Ethernet Cabling
- 1.6. Data Encapsulation
- 1.7. The Cisco Three-Layer Hierarchical Model

### 2. Introduction to TCP/IP

- 2.1. TCP/IP and the DoD Model
- 2.2. IP Addressing
- 2.3. Broadcast Address

### 3. Subnetting, Variable Length Subnet Masks (VLSMs), and Troubleshooting TCP/IP

- 3.1. Subnetting Basics
- 3.2. Variable Length Subnet Masks (VLSMs)
- 3.3. Summarization
- 3.4. Troubleshooting IP Addressing

### 4. Cisco's Internetworking Operating System (IOS) and Security Device Manager (SDM)

- 4.1. The IOS User Interface
- 4.2. Command-Line Interface
- 4.3. Router and Switch Administrative Configurations
- 4.4. Cisco's Security Device Manager (SDM)

### 5. Managing a Cisco Internetwork

- 5.1. The Internal Components of a Cisco Router
- 5.2. The Router Boot Sequence
- 5.3. Managing Configuration Register
- 5.4. Backing up and Restoring the Cisco IOS
- 5.5. Backing Up and Restoring the Cisco Configuration
- 5.6. Using Cisco Discovery Protocols (CDP)
- 5.7. Using Telnet
- 5.8. Resolving Hostnames
- 5.9. Checking Network Connectivity and Troubleshooting

### 6. IP Routing

- 6.1. Routing Basics
- 6.2. The IP Routing Process
- 6.3. Configuring IP Routing in Our Network
- 6.4. Dynamic Routing

- 6.5. Distance-Vector Routing Protocols
- 6.6. Routing Information Protocol (RIP)
- 6.7. Inferior Gateway Routing Protocol (IGRP)
- 6.8. Verifying your Configuration
- 7. Enhanced IGRP (EIGRP) and Open Shortest Path First (OSPF)**
  - 7.1. EIGRP Features and Operation
  - 7.2. Using EIGRP to Support Large Networks
  - 7.3. Configuring EIGRP
  - 7.4. Load Balancing with EIGRP
  - 7.5. Verifying EIGRP
  - 7.6. Open Shortest Path First (OSPF) Basics
  - 7.7. Configuring OSPF
  - 7.8. Verifying OSPF Configuration
  - 7.9. OSPF DR and BDR Elections
  - 7.10. OSPF and Loopback Interfaces
  - 7.11. Troubleshooting OSPF
  - 7.12. Configuring EIGRP and OSPF Summary Routes
- 8. Layer 2 Switching and Spanning Tree Protocol (STP)**
  - 8.1. Before Layer 2 Switching
  - 8.2. Switching Services
  - 8.3. Spanning Tree Protocol (STP)
  - 8.4. Configuring Catalyst Switches
  - 8.5. Cisco Network Assistant
- 9. Virtual LANs (VLANs)**
  - 9.1. VLAN Basics
  - 9.2. VLAN Memberships
  - 9.3. Identifying VLANs
  - 9.4. VLAN Trunking Protocol (VTP)
  - 9.5. Routing between VLANs
  - 9.6. Configuring VLANs
  - 9.7. Configuring VTP
  - 9.8. Telephony: Configuring Voice VLANs
  - 9.9. Using the CAN to Configure VLANs and Inter-VLAN Routing
- 10. Security**
  - 10.1. Perimeter, Firewall and Internal Routers
  - 10.2. Recognizing Security Threats
  - 10.3. Mitigating Security Threats
  - 10.4. Introduction to Access Lists
  - 10.5. Standard Access Lists
  - 10.6. Extended Access Lists
  - 10.7. Advanced Access Lists
  - 10.8. Monitoring Access Lists
  - 10.9. Configuring Access Lists Using SDM
- 11. Network Address Translation (NAT)**
  - 11.1. When Do We Use NAT?
  - 11.2. Types of Network Address Translation
  - 11.3. NAT Names
  - 11.4. How NAT Works
  - 11.5. Testing and Troubleshooting NAT
  - 11.6. Configuring NAT on Our Internetwork
  - 11.7. Configuring NAT Using SDM
- 12. Cisco's Wireless Technologies**
  - 12.1. Introduction to Wireless Technology
  - 12.2. Cisco's Unified Wireless Solution
  - 12.3. Configuring Our Wireless Internetwork
- 13. Internet Protocol Version 6 (IPv6)**
  - 13.1. Why Do We Need IPv6
  - 13.2. The Benefits and Uses of IPv6
  - 13.3. IPv6 Addressing and Expressions
  - 13.4. How IPv6 Works in an Internetwork
  - 13.5. IPv6 Routing Protocols
  - 13.6. Migrating to IPv6
  - 13.7. Configuring IPv6 on Our Internetwork
- 14. Wide Area Networks**
  - 14.1. Introduction to Wide Area Networks
  - 14.2. Cable and DSL
  - 14.3. Cabling the Serial Wide Area Network
  - 14.4. High-Level Data-Link Control (HDLC) Protocol
  - 14.5. Point-to-Point Protocol (PPP)
  - 14.6. Frame Relay
  - 14.7. Using SDM for WAN Connections
  - 14.8. Virtual Private Networks

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