



THE UNIVERSITY OF ARIZONA

CONTINUING AND PROFESSIONAL EDUCATION

Cisco CCNA and CCNP

MSIT105 / 240 Hours / 12 Months / Self-Paced / Materials Inc

Course Overview:

The 100-101 Interconnecting Cisco Networking Devices Part 1 (ICND1) is the course associated with the certification and a tangible first step in achieving the Cisco Certified Network Associate certification. This course includes topics on network security and wireless concepts; routing and switching fundamentals; the TCP/IP and OSI models; IP address configuration; configuring RIPv2, static and default routing; implementing NAT and DHCP; and

By the end of this course, you will be able to:

- Identify the steps for building and securing a simple network
- Identify the steps for managing and configuring routers
- Comprehend the features and steps for implementing LANs, WLANs, and WANs
- Identify steps for managing Cisco software and devices
- Comprehend methods for LAN, WLAN, and WAN connections and security

This CCNA Interconnecting Cisco Networking Devices Part 2 (ICND2) course prepares for the exam associated with the Cisco Certified Network Associate certification. This course provides the knowledge and skills required to successfully install, operate, and troubleshoot a small branch office network. Topics covered include VLSM and IPv6 addressing; extending switched networks; troubleshooting VLANs; the VTP, RSTP, OSPF and EIGRP protocols; determining IP routes; managing IP addresses; establishing point-to-point connections; and establishing Frame Relay Connections.

Prerequisite: Cisco ICND Part 1

By the end of this course, you will be able to:

- Comprehend the steps for small network implementation and security
- Identify the steps for implementing and configuring medium-sized networks both switched and routed
- Identify steps for implementing Single Area OSPFs and EIGRPs
- Identify the steps for configuring Access Control Lists
- Identify the steps for configuring an LAN to WAN connection

Our Cisco Certified Network Professional (CCNP) certification training course provides students with the

configure and troubleshoot converged local and wide area networks with 100 to 500 or more nodes. Our topics such as managing the routers and switches that form the network core and managing the edge and security into the network.

This course provides you with a state-of-the-art training course that is guaranteed to prepare you for your training, you will be fully prepared to reach your goal of becoming a professional CCNP.

CCNP certification requires three exams. The Cisco Certified Network Professional Complete Training Path for certification: 642-902 ROUTE Implementing Cisco IP Routing, 642- 813 SWITCH Implementing Cisco Troubleshooting and Maintaining Cisco IP Networks.

By the end of this course, you will be able to:

- Identify the steps for implementing an EIGRP based solution
- Identify the steps for implementing a Multi-Area OSPF Network
- Identify the steps for implementing an eBGP based solution
- Identify the steps for implementing an IPv6 based solution and the difference between IPv4 and IPv6
- Identify the steps for implementing a Layer 3 Path Control solution
- Identify the steps for implementing a VLAN based solution
- Identify the steps for implementing a Security Extension of a Layer 2 solution
- Identify the steps for implementing a Switch based Layer 3 solution
- Comprehend methods for preparing infrastructure to support advanced services
- Identify steps for implementing a high availability solution
- Comprehend the principles for maintaining and monitoring network performance
- Identify the steps for troubleshooting EIGRP, OSPF, and EBGP system networks
- Identify the steps for troubleshooting DHCP client and server solutions and NATs
- Identify the steps for troubleshooting IPv6 routing and IPv4 interoperability
- Identify the steps for troubleshooting VLAN based solutions

Course Outline:

ICND1 1.1: Interconnecting Cisco Networking Devices Part 1

- [Cisco ICND1 1.1: Fundamentals of Networking](#)
- [Cisco ICND1 1.1: Network Connections and Communications](#)
- [Cisco ICND1 1.1: Switching in LANs](#)
- [Cisco ICND1 1.1: Optimizing and Troubleshooting Switch Security](#)
- [Cisco ICND1 1.1: Implementing Wireless LANs](#)
- [Cisco ICND1 1.1: Routing and Cisco Routers](#)
- [Cisco ICND1 1.1: The Packet Delivery Process, Router Security, and Remote Access](#)
- [Cisco ICND1 1.1: WAN Technologies](#)

- [Cisco ICND1 1.1: WAN Encapsulation and RIP Routing](#)
- [Cisco ICND1 1.1: Managing the Network Environment](#)
- [Cisco ICND1 1.1: LAN Addressing](#)

ICND2 1.1: Interconnecting Cisco Networking Devices Part 2

- [Cisco ICND2 1.1: Implementing VLANs and Trunks](#)
- [Cisco ICND2 1.1: Spanning-Tree Protocol and Inter-VLAN Routing](#)
- [Cisco ICND2 1.1: Securing and Troubleshooting the Switched Network](#)
- [Cisco ICND2 1.1: Medium-Sized Routed Network Construction](#)
- [Cisco ICND2 1.1: Single-Area OSPF Implementation](#)
- [Cisco ICND2 1.1: EIGRP Implementation](#)
- [Cisco ICND2 1.1: Introducing ACL Operation](#)
- [Cisco ICND2 1.1: Configuring and Troubleshooting ACLs](#)
- [Cisco ICND2 1.1: Scaling the Network with NAT and PAT](#)
- [Cisco ICND2 1.1: Transitioning to IPv6](#)
- [Cisco ICND2 1.1: VPN and Point-to-Point WAN Connections](#)
- [Cisco ICND2 1.1: Frame Relay Connections](#)

ROUTE 1.0: Implementing Cisco IP Routing

- [Cisco ROUTE 1.0: Routing Services for Converged Networks](#)
- [Cisco ROUTE 1.0: EIGRP Implementation for the Enterprise](#)
- [Cisco ROUTE 1.0: EIGRP Authentication and Advanced Feature Implementation](#)
- [Cisco ROUTE 1.0: The OSPF Routing Protocol](#)
- [Cisco ROUTE 1.0: Implementing an OSPF-Based Solution](#)
- [Cisco ROUTE 1.0: Configuring and Verifying Route Redistribution](#)
- [Cisco ROUTE 1.0: Implementing Path Control](#)
- [Cisco ROUTE 1.0: Connecting the Enterprise to ISPs](#)
- [Cisco ROUTE 1.0: Configuring and Verifying BGP operations](#)
- [Cisco ROUTE 1.0 eLT: Implementing Path Control](#)
- [Cisco ROUTE 1.0 eLT: IPv6 Addressing and Unicast](#)
- [Cisco ROUTE 1.0 eLT: Implement RIPng, OSPFv3, EIGRP and Redistribution in IPv6](#)
- [Cisco ROUTE 1.0 eLT: IPv6 Transition Techniques](#)
- [Cisco ROUTE 1.0 eLT: NAT and PAT with IPv6](#)
- [Cisco ROUTE 1.0 eLT: Routing for Branch Offices and Mobile Workers](#)

TSHOOT 1.0: Troubleshooting and Maintaining Cisco IP Networks

- [Cisco TSHOOT 1.0: Planning Maintenance for Complex Networks](#)
- [Cisco TSHOOT 1.0: Planning Troubleshooting Processes for Networks](#)
- [Cisco TSHOOT 1.0: Maintenance, Troubleshooting Tools, & Applications](#)
- [Cisco TSHOOT 1.0: Troubleshooting VLANs, STP, and SVIs](#)
- [Cisco TSHOOT 1.0: Troubleshooting FHRPs and Performance Issues](#)
- [Cisco TSHOOT 1.0: Network Layer Connectivity, OSPF, and EIGRP](#)
- [Cisco TSHOOT 1.0: Route Redistribution, BGP, and Performance Issues](#)
- [Cisco TSHOOT 1.0: Maintaining and Troubleshooting Network Security Solutions](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting Performance Problems on Switches](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting Wireless Integration](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting Voice over IP Integration](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting Video Integration](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting NAT and PAT](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting DHCP](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting IPv6, OSPFv3, and RIPng](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting Network Applications Services](#)
- [Cisco TSHOOT 1.0 eLT: Troubleshooting Branch Office and Remote Worker Problems](#)

SWITCH 1.0: Implementing Cisco IP Switched Networks

- [Cisco SWITCH 1.0: Analyzing Campus Network Designs](#)
- [Cisco SWITCH 1.0: Implementing VLANs in Campus Networks](#)
- [Cisco SWITCH 1.0: Implementing Spanning-Tree](#)
- [Cisco SWITCH 1.0: Inter-VLAN Routing](#)
- [Cisco SWITCH 1.0: Highly Available Networks](#)
- [Cisco SWITCH 1.0: Configuring Layer 3 High Availability](#)
- [Cisco SWITCH 1.0: Minimizing Service Loss and Data Theft](#)
- [Cisco SWITCH 1.0: Accommodating Voice and Video in Campus Networks](#)
- [Cisco SWITCH 1.0: Integrating Wireless LANs into a Campus Network](#)

Certifications:

This course prepares students to take the **Cisco Certified Network Associate and Cisco Certified Net** price of the course includes **ONLY** the Cisco Certified Network Associate certification exam.

System Requirements:

Internet Connectivity Requirements:

- Cable and DSL internet connections are recommended.

Hardware Requirements:

- Minimum Pentium 400 Mhz CPU or G3 Macintosh. 1 GHz or greater CPU recommended.
- 256MB RAM minimum. 1 GB RAM recommended.
- 800x600 video resolution minimum. 1025x768 recommended.
- Speakers/Headphones to listen to Dialogue steaming audio sessions.
- A microphone to speak in Dialogue streaming audio sessions.

Operating System Requirements:

- Windows Vista, 7, 8, 8.1
- Mac OSX 10 or higher.
- OpenSUSE Linux 9.2 or higher.

Web Browser Requirements:

- Google Chrome is recommended.
- Firefox 13.x or greater.
- Internet Explorer 6.x or greater.
- Safari 3.2.2 or greater.

Software Requirements:

- Adobe Flash Player 6 or greater.
- Oracle Java 7 or greater.
- Adobe Reader 7 or greater.

Web Browser Settings:

- Accept Cookies<./li>
- Disable Pop-up Blocker.

**Outlines are subject to change, as courses and materials are updat