

Hands-On

CCNA ICND1 and ICND2

Cisco Certified Network Associate Exam Preparation



Course Description

This powerful Hands-On CCNA Training course covers fundamental and practical information needed to have a solid base of knowledge and skills that IT and Cisco networking professionals can build upon.

This course is targeted for those who are pursuing an IT or Cisco Certification and meets all the requirements for the Cisco CCNA Certification exam. BTS provides a very practical Hands-On delivery method which gives students confidence to implement what they have been taught.

You will more easily understand the networking and data communication concepts essential in the industry as demonstrated using a live network in this course. You will configure networked PCs to connect to the Cisco-based classroom network to get real-world experience by participating in hands-on labs throughout this course.

Students Will Learn

- All CCNA exam objectives are covered and mastered during class these include but are not limited to the following
- Understanding Cisco IOS (Internetworking Operating System) commands for configuring and managing Cisco networking devices
- Understanding Cisco configuration techniques (backing up and restoring configuration files from remote locations)
- Understanding routing protocols (such as RIP & IGRP) and how they function as well as configuration and management of such protocols
- IP addressing, subnetting, and assignment
- Interface and subinterface configuration
- WAN topics such as Frame Relay, PPP, HDLC and DDR
- Connectivity to a WAN switch for Frame Relay.
- VLANs
- LAN segmentation (bridges, switches and routers)
- Spanning Tree Protocol (STP)
- Access lists and filtering
- And much more...

Target Audience

Individuals who need an essential understanding of data communications and networking concepts and standards.

Individuals who want a strong foundation in LAN technology, TCP/IP, applications, and protocols in a practical hands-on environment.

Individuals who want to learn the concepts and gain knowledge and required Hands-On skills to successfully implement Cisco routers and switches in their organizations network.

Individuals requiring a fundamental knowledge base and experience to apply in their daily work environment as well as towards achieving their Cisco Certification(s).

Prerequisites

This course is designed for existing and aspiring network professionals (PC technicians/ Systems Administrators / Network Administrators / Systems Engineers). If you have any of the following certifications, you are most likely ready to take this course. A+, Network + or equivalent knowledge of, is highly recommended.

Course Outline

Module 1 - Basic Router Setup

- Intro to Class
- Basic Router Setup
- Basic Router Setup LAB
- Basic Router Setup Test & Review
- Managing a Cisco Internetwork
- OSI Model
- OSI Model Test & Review

Module 2 - OSI & Module 3 - Routing and Switching

- IP Subnetting, VLSM and NAT (can be earlier)
- IP Subnetting and VLSM Test & Review
- Static Routing and Dynamic Routing
- RIP & IGRP Routing
- RIP & IGRP Routing LAB

Module 4 - Advanced Routing & Module 5 - Security

- EIGRP & OSPF Routing
- Advanced Routing LAB

- Advanced Routing LAB
- Advanced Routing Test & Review

Module 6 - WAN Connectivity

- Switching and VLANs
- Switching and VLANs Test & Review
- Managing Traffic with Access Lists
- Security
- Security Test & Review

Module 7 - Review Day

- Point to Point Connections
- ISDN and Frame-relay
- WAN Connectivity Test & Review
- WAN Test & Review
- All sections Review

Notes

Partial list of Hands-On Labs

Basic router setup - power on/logon
Password and hostname setup
Logon banner change
View router memory (all types)
Copying and backing up router configuration files
Changing router registry settings
Using maintenance mode (detailed password recovery lab included)
Backing up and replacing the Cisco IOS (Operating system)
Viewing version information
Analyzing memory configuration
Using setup mode
Viewing and understanding CDP information
Configure and verify static host mappings
Telnet connections
Web interface for remote switch configuration
Enabling IP routing
Configuring and using the 'loopback' interface with IP
Analyze the IP routing table
Configuring static routes

- Configuring floating static routes
- Analyze the arp cache
- Install and configure RIP routing protocol
- Install and configure IGRP and/or EIGRP routing protocol
- Install and configure OSPF routing protocol
- Controlling routing updates - Use of 'passive' command
- Create and apply security access lists
- Applying access lists to interfaces and/or lines
- Identifying common security problems related to access lists
- Install and configure point-to-point HDLC connection
- Configuring PPP encapsulation protocol for WAN connections
- Configuring CHAP protocol for PPP connections
- Configuring frame-relay connections to telecom equipment
- Configuring frame-relay serial sub-interfaces
- Troubleshooting WAN connectivity problems
- Final lab exam (review all topics above and prepare for test simulations)

Note This is a partial list of labs students will perform in class. Extra advanced labs are also included, time permitting and at the instructors discretion. Students will also be required to have additional review and study assignments outside of classroom hours and during this training and a highly recommended 2 week study and exam preparation time prior to taking the exam.

Delivery Method

CCIE Instructor led with numerous "Hands-On demonstrations and exercises.

Equipment Requirements

(This apply's to our hands-on courses only)

BTS always provides equipment to have a very successful Hands-On course. BTS also encourages all attendees to bring their own equipment to the course. This will provide attendees the opportunity to incorporate their own gear into the labs and gain valuable training using their specific equipment.

Course Length

10 Days