Hands-On
CCENT Prep
ICND1

Course Description

This Hands-On CCENT preparation course is the NEW delivery method to help students pass their 1st exam toward multi-level certifications, the ICND1 is the first part in the two-part updated Cisco ICND curriculum.

This course is part of the following Certifications

Cisco Certified Entry Networking Technician (CCENT)
Cisco Certified Network Associate (CCNA)
Cisco Certified Network Professional (CCNP)
CCIE Voice (CCIEV Voice)
CCIE Security (CCIES Security)

ICND1 training course is your starting point for Cisco certifications, preparing you for Exam 640-822 ICND1 and CCENT certification.

This course will focus on providing the skills and knowledge necessary to install, operate, and troubleshoot a small branch office Enterprise network, including configuring a switch, a router, and connecting to a WAN and implementing network security. A Student should be able to complete configuration and implementation of a small branch office network under supervision.

Students will gain practical understanding of the operation of TCP/IP networks built with Cisco hardware. They will also learn the commands and techniques used to troubleshoot host connections, interact with Cisco switches and routers, backup and restore configuration files, and manage network equipment, by participating in Live Hands-On labs throughout this training.

Students Will Learn

- **Describe how networks function, identifying major components, function of network components and the Open System Interconnection (OSI) reference model**
- **Using the host-to-host packet delivery process, describe issues related to increasing traffic on an Ethernet LAN and identify switched LAN technology solutions to Ethernet networking issues**
- **Describes the reasons for extending the reach of a LAN and the methods that can be used with a focus on RF wireless access**
- **Describes the reasons for connecting networks with routers and how routed networks transmit data through networks using TCP/IP**
- **Describe the function of Wide Area Networks (WANs), the major devices of WANs, and configure PPP encapsulation, static and dynamic routing, PAT and RIP routing**
- **Use the command-line interface to discover neighbors on the network and managing the router's startup and configuration**

Target Audience

Network technicians who configure and support internetworks and/or management and salespeople who need a working knowledge fo modern networking.

Prerequisites

To fully benefit from the ICND 1 course students should have basic computer skills, Windows navigation skills, Internet usage skills, and email usage skills.

Course Outline

Module 1 - Exploring Network Functions, LANs and Cisco IOS

- Exploring the Functions of Networking
- Securing the network
- Host-to-Host Communications Model
- Understanding the TCP/IP Internet Layer
- Understanding the TCP/IP Transport Layer
- Exploring the Packet Delivery Process
- Understanding Ethernet
- Connecting an Ethernet LAN
- and more...

Module 2 - LAN Switching and Wireless LAN Switching (WLAN)

- Understanding the Challenges of Shared LANs

- Solving Network Challenges with Switched LAN Technology
- Exploring the Packet Delivery Process
- Operating Cisco IOS
- Starting a switch
- Understanding Switch Security
- Maximizing the benefits of Switching
- Troubleshooting Switch issues
- Exploring Wireless Networking
- Understanding WLAN Security
- Implementing a WLAN
- and more...

Module 3 - LAN Routing and Cisco Router Security

- Exploring the functions of Routing
- Understanding Binary basics
- Constructing a Network Addressing Scheme
- Starting a Cisco Router
- Configuring a Cisco Router
- Exploring the Packet Delivery Process
- Understanding Cisco Router Security
- Using Cisco SDM
- Using a Cisco Router as a DHCP Server
- Accessing Remote Devices
- and more...

Module 4 - Wide Area Networking (WAN)

- Understanding WAN Technologies
- Enabling the Internet Connection
- Enabling Static Routing
- Configuring Serial Encapsulation
- and more...

Module 5 - RIP and Cisco Device Management

- Enabling RIP
- Discovering Neighbors on the Network
- Managing Cisco Router Startup and Configuration
- Managing Cisco Devices
- and more...

Delivery Method

Hands-On Instructor-Led with numerous Hands-On labs and activities throughout the training.

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

5 Days