

Module Title : Interconnecting Cisco Networking Devices, Part 1 (ICND1) 3.0

Duration : 5 days

Prerequisites

Before taking the ICND1 course, learners should be familiar with:

- Basic computer literacy Basic Internet usage skills
- Basic PC operating system navigation skills
- Basic IP address knowledge

Course Content

This course will enable students to understand QoS, virtualization and cloud services, and network programmability related to WAN, access and core segments. It will provide the foundational understanding of network layers 1-3 that are applicable to core routing and switching plus other advanced technologies. Several topics have been added including; understanding the interactions and network functions of firewalls, wireless controllers and access points, along with additional focus on IPv6 and basic network security. The configuration commands are introduced through examples and supported with lab exercises. A full suite of labs have been developed using the virtual IOS environment with flexible topologies that reinforce concepts with hands-on, guided discovery and challenge labs that align to each lesson module. Upon completing this course, you will be able to meet these objectives:

- Describe network fundamentals and build simple LANs
- Establish Internet connectivity
- Manage network device security
- Expand small to medium sized networks with WAN connectivity
- Describe IPv6 basics

Course Outline

Module 1: Building a Simple Network

- Exploring the Functions of Networking
- Understanding the Host-to-Host Communication Model
- Introducing LANs
- Operating Cisco IOS Software
- Starting a Switch
- Understanding Ethernet & Switch Operation
- Troubleshooting Common Switch Media Issues

Module 2: Establishing Internet connectivity

- Understanding the TCP/IP Internet Layer
- Understanding IP Addressing & Subnets
- Understanding the TCP/IP Transport Layer
- Exploring the Functions of Routing
- Configuring a Cisco Router
- Exploring the Packet Delivery Process
- Enabling Static Route
- Learning the Basics of ACL
- Enabling Internet Connectivity

Module 3: Summary Challenge

- Establish Internet Connectivity
- Troubleshooting Internet Connectivity

Module 4: Building a Medium-Sized Network

- Implementing VLANs & Trunks
- Routing Between VLANs
- Using a Cisco IOS Network Device as a DHCP Server
- Implementing RIPv2

Module 5: Network Device Management & Security

- Securing Administrative Access
- Implementing Device Hardening
- Configuring System Message Logging
- Managing Cisco Devices
- Licensing

Module 6: Summary Challenge

- Implementing a Medium-Sized Network
- Troubleshooting a Medium-Sized Network

Module 7: Introducing IPv6

- Introducing Basic IPv6
- Understanding IPv6 Operation
- Configuring IPv6 Static Routes

Who Should Attend

- Channel Partners
- Customers
- Employees