

Introduction to Cisco Networking Technologies

(4 day Instructor-Led Course)

Course Description

Introduction to Cisco Networking Technologies (INTRO) is recommended training for individuals seeking an understanding and knowledge of networking fundamentals including the Open Systems Interconnect (OSI) seven-layer model concepts; terminology and technologies. The course also provides learners with the basic skills and knowledge to configure a Cisco IOS router for network connectivity. It is recommended training for individuals seeking certification as a Cisco Certified Network Associate (CCNA)

Who Should Attend

This course is intended for:

- Individuals new to networking
- System Engineers

Prerequisites

In order to successfully complete this course, students should have:

- A+ Certification or familiarity with computers and operating systems

What You Will Accomplish

At the end of the course, students will be able to:

- Classify devices and functions their layer in the OSI model the purpose, use, structure, and definitions of the layers of the OSI model
- Choose the appropriate data communications transmission method (serial/parallel) and explain how encapsulation and de-encapsulation works for that transmission method
- Construct a point-to-point Ethernet LAN
- Show the sequence of steps used by IP Protocol operations to determine addresses
- Match issues related to increasing traffic on an Ethernet LAN to typical LAN environment
- Solve Ethernet networking issues using switched LAN technology
- Identify the specific Ethernet network interface (for e.g., EO, EI) by which a packet is forwarded on an Ethernet LAN
- Construct a topology and network addressing scheme
- Determine the type of transport protocol (TCP or UDP) and IP application used
- Define the fundamental technologies involved in a WAN environment
- Match the types of WAN media to their appropriate characteristics
- Use the available configuration tools to establish connectivity to the appropriate network device in order to complete the initial device configuration

What You Will Receive

Each student receives:

the Introduction to Cisco Networking Technologies (Cisco Press)

Certification Preparation

This course will prepare students for the Cisco Intro Exam #640-821

Follow-Up Courses

- Interconnecting Cisco network Devices (ICND)

Course Outline: Intro to Cisco Networking Technologies	
<p>Introduction to Networking</p> <ul style="list-style-type: none"> ▪ Understand computing basics ▪ Understand PC and Network Components ▪ Use Binary, Decimal and Hexadecimal numbering ▪ Understand OSI and TCP/IP Networking Models ▪ Understand network devices and topologies <p>Introduction to Networking Types</p> <ul style="list-style-type: none"> ▪ Configure Local Area Networks ▪ Configure Wide Area Networks <p>Introduction to Network Media</p> <ul style="list-style-type: none"> ▪ Understand Media Types ▪ Use LAN and WAN cabling <p>Introduction to Switching Fundamentals</p> <ul style="list-style-type: none"> ▪ Understand Shared-Bus Topology ▪ Understand Switched-Connections and Multiplayer Switching ▪ Use virtual LANS <p>Understand TCP/IP</p> <ul style="list-style-type: none"> ▪ Understand Transport and Network Layers ▪ Establish a TCP connection ▪ Understand Routing Basics ▪ Use Network Addressing ▪ Understand IP sub-netting and calculation ▪ Understand routing and routing protocols 	<p>Use WAN Technology</p> <ul style="list-style-type: none"> ▪ Introduction to dialup technologies, leased line, packet switched (Frame Relay or ATM), DSL and Cable Modems <p>Use Wireless Technology</p> <ul style="list-style-type: none"> ▪ Understand wireless technology concepts ▪ Introduction to wireless networking <p>Use Optical Networking</p> <ul style="list-style-type: none"> ▪ Understand Optical Networking ▪ Introduction to optical fibers, transmission and multiplexing <p>Introduction to Voice, Video and Data</p> <ul style="list-style-type: none"> ▪ Introduction to Converged Networks ▪ Introduction to AVVID ▪ Understand quality of service issues ▪ Introduction to Voice-over-Data technologies <p>Operate and Configure Cisco® IOS Devices</p> <ul style="list-style-type: none"> ▪ Operate IOS Software ▪ Start a switch ▪ Start a router ▪ Configure a router <p>Manage Your Network Environment</p> <ul style="list-style-type: none"> ▪ Discover neighbors on the network ▪ Get information about remote devices ▪ Configure and manage router startup ▪ Manage IOS devices