



Interconnecting Cisco Networking Devices Part 2 (ICND2)v1.0

Associated Certifications : CCNA
Duration : 5 days, Classroom

Prerequisites

ICND1

Course Content

This course focuses on providing the skills and knowledge necessary to install, operate, and troubleshoot a small to medium-size branch office Enterprise network, including configuring several switches and routers, connecting to a WAN and implementing network security.

Course Objectives

- Review how to configure and troubleshoot a small network.
- Expand the switched network from a small LAN to a medium-sized LAN with multiple switches, supporting VLANs, trunking, and spanning tree.
- Describe routing concepts as they apply to a medium-sized network and discuss considerations when implementing routing on the network.
- Configure, verify, and troubleshoot OSPF.
- Configure, verify, and troubleshoot EIGRP.
- Determine how to apply ACLs based on network requirements, and to configure, verify, and troubleshoot ACLs on a medium-sized network.
- Describe when to use NAT or PAT on a medium-sized network, and configure NAT or PAT on routers.
- Identify and implement the appropriate WAN technology based on network requirements.

Course Outline

Module 1 - Small Network Implementation
Module 2 - Medium-Sized Switched Network Construction
Module 3 - Medium-Sized Routed Network Construction
Module 4 - Single Area OSPF Implementation
Module 5 - EIGRP Implementation
Module 6 - Access Control Lists
Module 7 - Address Space Management
Module 8 - LAN Extension to a WAN

Who Should Attend

- Channel Partner / Reseller
- Customer
- Employee



640-816 ICND2: Interconnecting Cisco Networking Devices - Part 2

Exam Number	: 640-816 ICND2
Associated Certifications	: CCNA
Duration	: 75 minutes (45-55 questions)
Available Languages	: English
Register for Exam	: Pearson VUE

Exam Description

The 640-816 Interconnecting Cisco Networking Devices Part 2 (ICND2) is the exam associated with the Cisco Certified Network Associate certification. Candidates can prepare for this exam by taking the Interconnecting Cisco Networking Devices Part 2 (ICND2) v1.0 course. This exam tests a candidate's knowledge and skills required to successfully install, operate, and troubleshoot a small to medium size enterprise branch network. The exam covers topics on VLSM and IPv6 addressing; extending switched networks with VLANs; configuring, verifying and troubleshooting VLANs; the VTP, RSTP, OSPF and EIGRP protocols; determining IP routes; managing IP traffic with access lists; NAT and DHCP; establishing point-to-point connections; and establishing Frame Relay connections.

Exam Topics

The following topics are general guidelines for the content likely to be included on the Interconnecting Cisco Networking Devices Part 2 exam. However, other related topics may also appear on any specific delivery of the exam. In order to better reflect the contents of the exam and for clarity purposes, the guidelines below may change at any time without notice.

Configure, verify and troubleshoot a switch with VLANs and interswitch communications

- Describe enhanced switching technologies (including: VTP, RSTP, VLAN, PVSTP, 802.1q)
- Describe how VLANs create logically separate networks and the need for routing between them
- Configure, verify, and troubleshoot VLANs
- Configure, verify, and troubleshoot trunking on Cisco switches
- Configure, verify, and troubleshoot interVLAN routing
- Configure, verify, and troubleshoot VTP
- Configure, verify, and troubleshoot RSTP operation
- Interpret the output of various show and debug commands to verify the operational status of a Cisco switched network
- Implement basic switch security (including: port security, unassigned ports, trunk access, etc.)

Implement an IP addressing scheme and IP Services to meet network requirements in a medium-size Enterprise branch office network

- Calculate and apply a VLSM IP addressing design to a network
- Determine the appropriate classless addressing scheme using VLSM and summarization to satisfy addressing requirements in a LAN/WAN environment
- Describe the technological requirements for running IPv6 (including: protocols, dual stack, tunneling, etc)
- Describe IPv6 addresses
- Identify and correct common problems associated with IP addressing and host configurations

Configure and troubleshoot basic operation and routing on Cisco devices

- Compare and contrast methods of routing and routing protocols

- Configure, verify and troubleshoot OSPF
- Configure, verify and troubleshoot EIGRP
- Verify configuration and connectivity using ping, traceroute, and telnet or SSH
- Troubleshoot routing implementation issues
- Verify router hardware and software operation using SHOW & DEBUG commands
- Implement basic router security

Implement, verify, and troubleshoot NAT and ACLs in a medium-size Enterprise branch office network

- Describe the purpose and types of access control lists
- Configure and apply access control lists based on network filtering requirements
- Configure and apply an access control list to limit telnet and SSH access to the router
- Verify and monitor ACL's in a network environment
- Troubleshoot ACL implementation issues
- Explain the basic operation of NAT
- Configure Network Address Translation for given network requirements using CLI
- Troubleshoot NAT implementation issues

Implement and verify WAN links

- Configure and verify Frame Relay on Cisco routers
- Troubleshoot WAN implementation issues
- Describe VPN technology (including: importance, benefits, role, impact, components)
- Configure and vary PPP connection between Cisco routers