



IT Certification and Career Paths

640-816 ICND2

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640-816

Interconnecting Cisco Networking Devices Part 2

Exam Number	640-816 ICND2 Last day to test: September 30, 2013
Associated Certifications	CCNA Routing and Switching
Duration	75 Minutes (40-50 questions)
Available Languages	English, Japanese, Spanish, French, Portuguese
Register	Pearson VUE
Exam Policies	Read current policies and requirements
Exam Tutorial	Review type of exam questions

New version of ICND1 Exam Is Now Available
Beginning October 1, 2013, the [200-101 ICND2](#) exam will be the only exam available for registration. Candidates who register for the 200-101 ICND2 exam should prepare using [200-101 ICND2 exam topics](#).

Basics
Exam Topics
Recommended Training
Additional Resources

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

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