
Interconnecting Cisco Network Devices pt2

Duration: 5 Days Course Code: ICND2

Overview:

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. A Student should be able to complete configuration and implementation of a small to medium sized branch office network under supervision.

Target Audience:

This course is intended for System Engineers who will install, operate and troubleshoot a small to medium-sized branch office Enterprise network.

Objectives:

- **After you complete this course you will be able to:**
 - 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
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Prerequisites:

Attendees should meet the following prerequisites:

- Attended [ICND1](#) Interconnecting Cisco Network Devices Part 1
- Equivalent work experience.

Testing and Certification:

Recommended preparation for exam(s):

- [640-816 ICND2](#) Introduction to Cisco Network Devices Part 2
- OR**
- [640-802 CCNA](#) - This is a composite exam consisting of both ICND1 & ICND2

Note: Successful completion of both ICND1 (640-822) and ICND2 (640-816) exams results in award of the Cisco Certified Network Administrator (CCNA) certification

Follow-on-Courses:

Delegates who complete a CCNA in Routing and Switching have a variety of options open to them. The correct path is likely to depend on their job role and career aspirations. For those delegates that have a support role we would recommend broadening their technology skills by looking at the CCNA Concentrations that are available in Voice, Security and Wireless. Further information on these courses can be found below:

- IINS - Implementing Cisco IOS Network Security
- IUWNE - Implementing Unified Wireless Networking Essentials
- IIUC - Implementing Cisco IOS Unified Communications

For delegates wishing to focus on specific technologies at a more advanced level we would recommend looking at the following:

- CCNP - Cisco Certified Network Professional
- CCIP - Cisco Certified Internetwork Professional
- CCSP - Cisco Certified Security Professional
- CCVP - Cisco Certified Voice Professional

Content:

Small Network Implementation

- Introducing the Review Lab

Medium-Sized Switched Network Construction

- Implementing VLANs and Trunks
- Improving Performance with Spanning Tree
- Routing Between VLAN's
- Securing the Expanded Network
- Troubleshooting Switched Networks

Medium-Sized Routed Network Construction

- Reviewing Routing Operation
- Implementing VLSM

Single Area OSPF Implementation

- Implementing OSPF
- Troubleshooting OSPF

EIGRP Implementation

- Implementing EIGRP
- Troubleshooting EIGRP

Access Control Lists

- Introducing ACL operation
- Configuring and troubleshooting ACL's.

Address Space Management

- Scaling the Network with NAT and PAT
- Transitioning to IPv6

LAN Extension into a WAN

- Introducing VPN Solutions
- Establishing a Point-to-Point WAN Connection with PPP
- Establishing a WAN Connection with Frame Relay
- Troubleshooting Frame Relay WANs

Labs

- Lab 1-1: Implementing a Small Network (Review Lab)
- Lab 2-1: Configuring Expanded Switched Networks
- Lab 2-2: Troubleshooting Switched Networks
- Lab 4-1: Implementing OSPF
- Lab 4-2: Troubleshooting OSPF
- Lab 5-1: Implementing EIGRP
- Lab 5-2: Troubleshooting EIGRP
- Lab 6-1: Implementing and Troubleshooting ACLs
- Lab 7-1: Configuring NAT and PAT
- Lab 7-2: Implementing IPv6
- Lab 8-1: Establishing a Frame Relay WAN
- Lab 8-2: Troubleshooting Frame Relay WANs

Additional Information:

Re-Certification

ICND2 is part of the Cisco CCNA Routing and Switching Certification and is valid for three years.

To recertify, pass the ICND2 exam, or pass the current CCNA exam, or pass a CCNA Concentration exam (wireless, security, voice), or pass the current CCDA exam, or pass any 642 - XXX professional level or Cisco Specialist exam (excluding Sales Specialist exams), or pass a current CCIE or CCDE written exam.

Further Information:

For More information, or to book your course, please call us on Head Office 01189 123456 / Northern Office 01924 377489

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