uCertify

Course Outline

CNA ICND2 200-105 Routing and Switching Official Cert Guide

02 May 2024

1. Course Objective
2. Pre-Assessment
3. Exercises, Quizzes, Flashcards & Glossary

   Number of Questions
4. Expert Instructor-Led Training
5. ADA Compliant & JAWS Compatible Platform
6. State of the Art Educator Tools
7. Award Winning Learning Platform (LMS)
8. Chapter & Lessons

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   Chapter 1: Introduction

   Chapter 2: Your Study Plan

   Chapter 3: Implementing Ethernet Virtual LANs

   Chapter 4: Spanning Tree Protocol Concepts

   Chapter 5: Spanning Tree Protocol Implementation

   Chapter 6: LAN Troubleshooting

   Chapter 7: VLAN Trunking Protocol

   Chapter 8: Miscellaneous LAN Topics

   Chapter 9: Understanding OSPF Concepts

   Chapter 10: Implementing OSPF for IPv4

   Chapter 11: Understanding EIGRP Concepts

   Chapter 12: Implementing EIGRP for IPv4

   Chapter 13: Troubleshooting IPv4 Routing Protocols

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   Chapter 16: Private WANs with Ethernet and MPLS

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Chapter 20: Quality of Service (QoS)
Chapter 21: IPv4 Routing in the LAN
Chapter 22: Implementing HSRP for First-Hop Routing
Chapter 23: Troubleshooting IPv4 Routing
Chapter 24: IPv6 Routing Operation and Troubleshooting
Chapter 25: Implementing OSPF for IPv6
Chapter 26: Implementing EIGRP for IPv6
Chapter 27: IPv6 Access Control Lists
Chapter 28: Network Management
Chapter 29: Cloud Computing
Chapter 30: SDN and Network Programmability
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Videos and How To

9. Practice Test

   Here's what you get

   Features

10. Post-Assessment

1. Course Objective

Start your prep for the Cisco CCNA ICND2 200-105 certification exam with the CCNA ICND2 200-105 Routing and Switching Official Cert Guide. The course all the objectives of the Cisco CCNA ICND2 200-105 certification exam and provides the knowledge and skills for implementing Ethernet Virtual LANs, spanning tree protocol implementation, LAN troubleshooting, implementing OSPF for IPv4, basic IPv4 access control lists, and more with the interactive lessons, test-prep, quizzes, exercises, and other resources.

2. Pre-Assessment

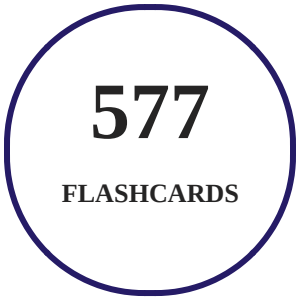
Pre-Assessment lets you identify the areas for improvement before you start your prep. It determines what students know about a topic before it is taught and identifies areas for improvement with question assessment before beginning the course.

3. Quizzes

Quizzes test your knowledge on the topics of the exam when you go through the course material. There is no limit to the number of times you can attempt it.

4. flashcards

Flashcards are effective memory-aiding tools that help you learn complex topics easily. The flashcard will help you in memorizing definitions, terminologies, key concepts, and more. There is no limit to the number of times learners can attempt these. Flashcards help master the key concepts.



5. Glossary of terms

uCertify provides detailed explanations of concepts relevant to the course through Glossary. It contains a list of frequently used terminologies along with its detailed explanation. Glossary defines the key terms.

6. Expert Instructor-Led Training

uCertify uses the content from the finest publishers and only the IT industry's finest instructors. They have a minimum of 15 years real-world experience and are subject matter experts in their fields. Unlike a live class, you can study at your own pace. This creates a personal learning experience and gives you all the benefit of hands-on training with the flexibility of doing it around your schedule 24/7.

7. ADA Compliant & JAWS Compatible Platform

uCertify course and labs are ADA (Americans with Disability Act) compliant. It is now more accessible to students with features such as:

- Change the font, size, and color of the content of the course
- Text-to-speech, reads the text into spoken words
- Interactive videos, how-tos videos come with transcripts and voice-over
- Interactive transcripts, each word is clickable. Students can clip a specific part of the video by clicking on a word or a portion of the text.

JAWS (Job Access with Speech) is a computer screen reader program for Microsoft Windows that reads the screen either with a text-to-speech output or by a Refreshable Braille display. Student can easily navigate uCertify course using JAWS shortcut keys.

8. State of the Art Educator Tools

uCertify knows the importance of instructors and provide tools to help them do their job effectively. Instructors are able to clone and customize course. Do ability grouping. Create sections. Design grade scale and grade formula. Create and schedule assessments. Educators can also move a student from self-paced to mentor-guided to instructor-led mode in three clicks.

9. Award Winning Learning Platform (LMS)

uCertify has developed an award winning, highly interactive yet simple to use platform. The SIIA CODiE Awards is the only peer-reviewed program to showcase business and education technology's finest products and services. Since 1986, thousands of products, services and solutions have been recognized for achieving excellence. uCertify has won CODiE awards consecutively for last 7 years:

- **2014**
    1. Best Postsecondary Learning Solution

- **2015**
    1. Best Education Solution

2. Best Virtual Learning Solution
3. Best Student Assessment Solution
4. Best Postsecondary Learning Solution
5. Best Career and Workforce Readiness Solution
6. Best Instructional Solution in Other Curriculum Areas
7. Best Corporate Learning/Workforce Development Solution

- **2016**
    1. Best Virtual Learning Solution
    2. Best Education Cloud-based Solution
    3. Best College and Career Readiness Solution
    4. Best Corporate / Workforce Learning Solution
    5. Best Postsecondary Learning Content Solution
    6. Best Postsecondary LMS or Learning Platform
    7. Best Learning Relationship Management Solution

- **2017**
    1. Best Overall Education Solution
    2. Best Student Assessment Solution
    3. Best Corporate/Workforce Learning Solution
    4. Best Higher Education LMS or Learning Platform

- **2018**
    1. Best Higher Education LMS or Learning Platform
    2. Best Instructional Solution in Other Curriculum Areas
    3. Best Learning Relationship Management Solution

- **2019**
    1. Best Virtual Learning Solution
    2. Best Content Authoring Development or Curation Solution
    3. Best Higher Education Learning Management Solution (LMS)

- **2020**

1. Best College and Career Readiness Solution
2. Best Cross-Curricular Solution
3. Best Virtual Learning Solution

10. Chapter & Lessons

uCertify brings these textbooks to life. It is full of interactive activities that keeps the learner engaged. uCertify brings all available learning resources for a topic in one place so that the learner can efficiently learn without going to multiple places. Challenge questions are also embedded in the chapters so learners can attempt those while they are learning about that particular topic. This helps them grasp the concepts better because they can go over it again right away which improves learning.

Learners can do Flashcards, Exercises, Quizzes and Labs related to each chapter. At the end of every lesson, uCertify courses guide the learners on the path they should follow.

Syllabus

Chapter 1: Introduction

- About the Exams
- Book Features
- Book Organization, Lessons, and Appendixes
- Reference Information
- PCPT Exam Databases with This Book
- About Mind Maps
- About Building Hands-On Skills

- For More Information

Chapter 2: Your Study Plan

- A Brief Perspective on Cisco Certification Exams
- Five Study Plan Steps
- Things to Do Before Starting the First Lesson

Chapter 3: Implementing Ethernet Virtual LANs

- Virtual LAN Concepts
- VLAN and VLAN Trunking Configuration and Verification
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 4: Spanning Tree Protocol Concepts

- Spanning Tree Protocol (IEEE 802.1D)
- Rapid STP (IEEE 802.1w) Concepts
- Optional STP Features
- Lesson Summary

- Review All the Key Topics

Chapter 5: Spanning Tree Protocol Implementation

- Implementing STP
- Implementing Optional STP Features
- Implementing RSTP
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 6: LAN Troubleshooting

- Troubleshooting STP
- Troubleshooting Layer 2 EtherChannel
- Analyzing the Switch Data Plane Forwarding
- Troubleshooting VLANs and VLAN Trunks
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 7: VLAN Trunking Protocol

- VLAN Trunking Protocol (VTP) Concepts
- VTP Configuration and Verification
- VTP Troubleshooting
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 8: Miscellaneous LAN Topics

- Securing Access with IEEE 802.1x
- AAA Authentication
- DHCP Snooping
- Switch Stacking and Chassis Aggregation
- Lesson Summary
- Review All the Key Topics

Chapter 9: Understanding OSPF Concepts

- Comparing Dynamic Routing Protocol Features

- OSPF Concepts and Operation
- OSPF Area Design
- Lesson Summary
- Review All the Key Topics

Chapter 10: Implementing OSPF for IPv4

- Implementing Single-Area OSPFv2
- Implementing Multiarea OSPFv2
- Additional OSPF Features
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 11: Understanding EIGRP Concepts

- EIGRP and Distance Vector Routing Protocols
- EIGRP Concepts and Operation
- Lesson Summary
- Review All the Key Topics

Chapter 12: Implementing EIGRP for IPv4

- Core EIGRP Configuration and Verification
- EIGRP Metrics, Successors, and Feasible Successors
- Other EIGRP Configuration Settings
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 13: Troubleshooting IPv4 Routing Protocols

- Perspectives on Troubleshooting Routing Protocol Problems
- Interfaces Enabled with a Routing Protocol
- Neighbor Relationships
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 14: Implementing External BGP

- BGP Concepts

- eBGP Configuration and Verification
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 15: Implementing Point-to-Point WANs

- Leased-Line WANs with HDLC
- Leased-Line WANs with PPP
- Troubleshooting Serial Links
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 16: Private WANs with Ethernet and MPLS

- Metro Ethernet
- Multiprotocol Label Switching (MPLS)
- Lesson Summary
- Review All the Key Topics

Chapter 17: Private WANs with Internet VPN

- Internet Access and Internet VPN Fundamentals
- GRE Tunnels and DMVPN
- PPP over Ethernet
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 18: Basic IPv4 Access Control Lists

- IPv4 Access Control List Basics
- Standard Numbered IPv4 ACLs
- Practice Applying Standard IP ACLs
- Lesson Summary
- Review All the Key Topics
- Additional Practice for This Lesson’s Processes
- Command References
- Answers to Earlier Practice Problems

Chapter 19: Advanced IPv4 Access Control Lists

- Extended Numbered IP Access Control Lists
- Named ACLs and ACL Editing
- Troubleshooting with IPv4 ACLs
- Lesson Summary
- Review All the Key Topics
- Command References
- Answers to Earlier Practice Problems

Chapter 20: Quality of Service (QoS)

- Introduction to QoS
- Classification and Marking
- Congestion Management (Queuing)
- Shaping and Policing
- Congestion Avoidance
- Lesson Summary
- Review All the Key Topics

Chapter 21: IPv4 Routing in the LAN

- VLAN Routing with Router 802.1Q Trunks
- VLAN Routing with Layer 3 Switch SVIs
- VLAN Routing with Layer 3 Switch Routed Ports
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 22: Implementing HSRP for First-Hop Routing

- FHRP and HSRP Concepts
- Implementing HSRP
- Troubleshooting HSRP
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 23: Troubleshooting IPv4 Routing

- Problems Between the Host and the Default Router
- Problems with Routing Packets Between Routers
- Lesson Summary

- Review All the Key Topics

Chapter 24: IPv6 Routing Operation and Troubleshooting

- Normal IPv6 Operation
- Troubleshooting IPv6
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 25: Implementing OSPF for IPv6

- OSPFv3 for IPv6 Concepts
- OSPFv3 Configuration
- OSPFv3 Verification and Troubleshooting
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 26: Implementing EIGRP for IPv6

- EIGRP for IPv6 Configuration

- EIGRP for IPv6 Verification and Troubleshooting
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 27: IPv6 Access Control Lists

- IPv6 Access Control List Basics
- Configuring Standard IPv6 ACLs
- Configuring Extended IPv6 ACLs
- Other IPv6 ACL Topics
- Lesson Summary
- Review All the Key Topics
- Command References
- Answers to Earlier Practice Problems

Chapter 28: Network Management

- Simple Network Management Protocol
- IP Service Level Agreement

- SPAN
- Lesson Summary
- Review All the Key Topics
- Command References

Chapter 29: Cloud Computing

- Cloud Computing Concepts
- WAN Traffic Paths to Reach Cloud Services
- Virtual Network Functions and Services
- Lesson Summary
- Review All the Key Topics

Chapter 30: SDN and Network Programmability

- SDN and Network Programmability Basics
- Examples of Network Programmability and SDN
- Cisco APIC-EM Path Trace ACL Analysis Application
- Lesson Summary
- Review All the Key Topics

Chapter 31: Final Review

- Advice About the Exam Event
- Exam Review

Chapter 32: Appendix A: Numeric Reference Tables

Chapter 33: Appendix B: CCNA ICND2 200-105 Exam Updates

- Always Get the Latest at the Book’s Product Page
- Technical Content
- The APIC-EM Path Trace ACL Analysis Tool

Chapter 34: Appendix C: Practice for Chapter 16: Basic IPv4 Access Control Lists

- Practice Problems
- Answers to Earlier Practice Problems

Chapter 35: Appendix D: Learning IPv4 Routes with RIPv2

- RIP and Routing Protocol Concepts
- Core RIPv2 Configuration and Verification
- Optional RIPv2 Configuration and Verification

- Troubleshooting RIPv2
- Review All the Key Topics
- Command References

Chapter 36: Appendix E: Understanding Frame Relay Concepts

- Frame Relay Overview
- Frame Relay Addressing
- Network Layer Addressing with Frame Relay
- Review All the Key Topics

Chapter 37: Appendix F: Implementing Frame Relay

- Frame Relay Configuration and Verification
- Frame Relay Troubleshooting
- Review All the Key Topics
- Command Reference to Check Your Memory

Chapter 38: Appendix G: IPv4 Troubleshooting Tools

- “Do I Know This Already?” Quiz
- Problem Isolation Using the ping Command

- Problem Isolation Using the traceroute Command
- Telnet and SSH
- Review All the Key Topics

Chapter 39: Appendix H: Topics from Previous Editions

- Dial Access with Modems and ISDN
- Gateway Load Balancing Protocol (GLBP)
- HSRP Tracking
- (OSPFv2) Link-State Advertisements
- (OSPFv3) Link-State Advertisements
- IPv6 Routing Protocols as Discussed in This Book

Chapter 40: Appendix I: Exam Topic Cross Reference

- ICND2 200-105 Exam Topics in Numeric Order
- Mapping of Book Lessons to ICND2 200-105 Exam Topics
- CCNA R&S Exam Topics with ICND2 Subset Noted

Videos and How To

uCertify course includes videos to help understand concepts. It also includes How Tos that help learners in accomplishing certain tasks.

4	54
VIDEOS	MINUTES

11. Practice Test

Here's what you get

94	2	97
PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	POST-ASSESSMENTS QUESTIONS

Features

Each question comes with detailed remediation explaining not only why an answer option is correct but also why it is incorrect.

Unlimited Practice

Each test can be taken unlimited number of times until the learner feels they are prepared. Learner can review the test and read detailed remediation. Detailed test history is also available.

Each test set comes with learn, test and review modes. In learn mode, learners will attempt a question and will get immediate feedback and complete remediation as they move on to the next question. In test mode, learners can take a timed test simulating the actual exam conditions. In review mode, learners can read through one item at a time without attempting it.

12. Post-Assessment

After completion of the uCertify course Post-Assessments are given to students and often used in conjunction with a Pre-Assessment to measure their achievement and the effectiveness of the exam.

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