

 uCertify

# Course Outline

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**CCNA ICND2 200-105 Routing and  
Switching Official Cert Guide**



16 Jan 2020



Lesson



Practice test

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## 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.

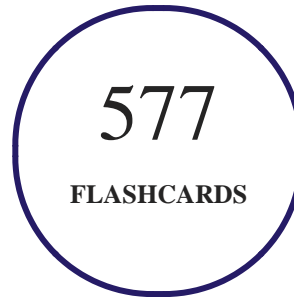
## 3. Quizzes

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.

148  
QUIZZES

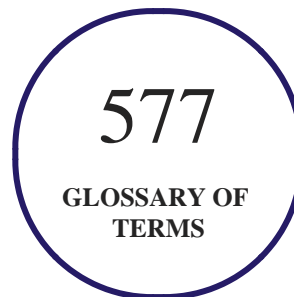
## 4. Flashcards

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 assignments. 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 5 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

## 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  
VIDEOS

54  
MINUTES

## 11. Practice Test

uCertify provides full length practice tests. These tests closely follow the exam objectives and are designed to simulate real exam conditions. Each course has a number of test sets consisting of hundreds of items to ensure that learners are prepared for the certification exam.

### Here's what you get

94  
PRE-ASSESSMENTS QUESTIONS

97  
POST-ASSESSMENTS QUESTIONS

## Features

### Full Remediation

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.

### Learn, Test and Review Mode

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.

Have Any Query? We Are Happy To Help!

### GET IN TOUCH:

■ Contact No

■ Email: [sales@ucertify.com](mailto:sales@ucertify.com)

■ [www.uCertify.com](http://www.uCertify.com)