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Videos and How To
9. Practice Test
   Here's what you get
   Features
10. Post-Assessment

www.uCertify.com
1. **Course Objective**

Cisco 100-101: Interconnecting Cisco Networking Devices Part 1 - ICND1 v2.0 course enables you to receive hands-on experience regarding the configuration and basic troubleshooting of Cisco routers and switches. By performing tasks in a real Cisco environment, you will improve your practical knowledge and skills on the various exam subjects. You will perform practical exercises regarding VLAN configuration and trunks, switch and router configuration, configuring IP services, troubleshooting ACLs, troubleshooting switch related technologies and far more.

The course is retired, to access the updated version please visit: [www.ucertify.com/exams/Cisco/ICND1-100-105.html](http://www.ucertify.com/exams/Cisco/ICND1-100-105.html)

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. **Exercises**

There is no limit to the number of times learners can attempt these. Exercises come with detailed remediation, which ensures that learners are confident on the topic before proceeding.

4. **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.

5. 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.

6. 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.
7. **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.

8. **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.

9. **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.

10. **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
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**

- Cisco CCENT/CCNA ICND1 100-101 Official Cert Gu...
- About the Author
- Dedication
- Acknowledgments
- Icons Used in This Book
- Command Syntax Conventions
- About the Book and the Exams
- The Exams That Help You Achieve CCENT and CCNA
• Types of Questions on the Exams

• What's on the CCNA Exam(s)?

• Getting Started

Chapter 2: The TCP/IP and OSI Networking Models

• Foundation Topics

• Perspectives on Networking

• TCP/IP Networking Model

• OSI Networking Model

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Definitions of Key Terms

• Review Questions

Chapter 3: Fundamentals of Ethernet LANs

• Foundation Topics

• An Overview of LANs

• Building Physical Ethernet Networks with UTP
• Sending Data in Ethernet Networks

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Memory Tables

• Definitions of Key Terms

• Review Questions

Chapter 4: Fundamentals of WANs

• Foundation Topics

• Leased Line WANs

• Ethernet as a WAN Technology

• Accessing the Internet

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Memory Tables

• Definitions of Key Terms
Chapter 5: Fundamentals of IPv4 Addressing and Routing

• Foundation Topics

• Overview of Network Layer Functions

• IPv4 Addressing

• IPv4 Routing

• IPv4 Routing Protocols

• Other Network Layer Features

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Memory Tables

• Definitions of Key Terms

• Review Questions

Chapter 6: Fundamentals of TCP/IP Transport and Applications

• TCP/IP Layer 4 Protocols: TCP and UDP
TCP/IP Applications

Chapter Summary

Review All the Key Topics

Memory Tables

Definitions of Key Terms

Review Questions

Chapter 7: Part I Review

Answer Part Review Questions

Review Key Topics

Create Terminology Mind Maps

Part I Review Mind Map Solution

Chapter 8: Building Ethernet LANs with Switches

Foundation Topics

LAN Switching Concepts

Design Choices in Ethernet LANs

Review Activities

Chapter Summary
Chapter 9: Installing and Operating Cisco LAN Switches

- Foundation Topics
- Accessing the Cisco Catalyst 2960 Switch CLI
- Configuring Cisco IOS Software
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Command References
- Review Questions

Chapter 10: Configuring Ethernet Switching
• Foundation Topics

• Configuration of Features in Common with Routers

• LAN Switch Configuration and Operation

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Memory Tables

• Definitions of Key Terms

• Command References

• Review Questions

• ICND1 Simulator Exercises

Chapter 11: Implementing Ethernet Virtual LANs

• Foundation Topics

• Virtual LAN Concepts

• VLAN and VLAN Trunking Configuration and Verification

• Review Activities

• Chapter Summary
Review All the Key Topics

Memory Tables

Definitions of Key Terms

Command Reference to Check Your Memory

Review Questions

ICND1 Simulator Exercises

Chapter 12: Troubleshooting Ethernet LANs

Foundation Topics

Perspectives on Network Verification and Troubleshooting

Analyzing LAN Topology Using Cisco Discovery Protocol

Analyzing Switch Interface Status

Predicting Where Switches Will Forward Frames

Analyzing VLANs and VLAN Trunks

Review Activities

Chapter Summary

Review All the Key Topics

Memory Tables
• Definitions of Key Terms

• Command References

• Review Questions

• ICND1 Simulator Exercises

Chapter 13: Part II Review

• Answer Part Review Questions

• Review Key Topics

• Create Command Mind Map by Category

• Part II Review Mind Map Solution

Chapter 14: Perspectives on IPv4 Subnetting

• Foundation Topics

• Introduction to Subnetting

• Analyze Subnetting and Addressing Needs

• Make Design Choices

• Plan the Implementation

• Review Activities

• Chapter Summary
Chapter 15: Analyzing Classful IPv4 Networks

- Foundation Topics
- Classful Network Concepts
- Practice with Classful Networks
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Practice
- Answers to Earlier Practice Problems
- Answers to Practice Problem 7 (From Table 12-4)
- Answers to Practice Problem 8 (From Table 12-4)
Answers to Practice Problem 9 (From Table 12-4)

Review Questions

Chapter 16: Analyzing Subnet Masks

- Foundation Topics
- Subnet Mask Conversion
- Identifying Subnet Design Choices Using Masks
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Practice
- Answers to Earlier Practice Problems
- Review Questions

Chapter 17: Analyzing Existing Subnets

- Foundation Topics
Defining a Subnet

Analyzing Existing Subnets: Binary

Analyzing Existing Subnets: Decimal

Practice Analyzing Existing Subnets

Review Activities

Chapter Summary

Review All the Key Topics

Memory Tables

Definitions of Key Terms

Practice

Answers to Earlier Practice Problems

Review Questions

ICND1 Simulator Exercises

Chapter 18: Part III Review

Answer Part Review Questions

Review Key Topics

Create Terminology Mind Map
Chapter 19: Operating Cisco Routers

- Foundation Topics
- Installing Cisco Routers
- Enabling IPv4 Support on Cisco Routers
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Command References
- Review Questions
- ICND1 Simulator Exercises

Chapter 20: Configuring IPv4 Addresses and Routes

- Foundation Topics
- IP Routing
Chapter 21: Learning IPv4 Routes with OSPFv2

- Foundation Topics
- Comparing Dynamic Routing Protocol Features
- Understanding the OSPF Link-State Routing Protocol
- OSPF Configuration
- Review Activities
- Chapter Summary
Chapter 22: Configuring and Verifying Host Connectivity

- Foundation Topics
- Configuring Routers to Support DHCP
- Verifying Host IPv4 Settings
- Testing Connectivity with ping, traceroute, and telnet
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Definitions of Key Terms
- Command Reference to Check Your Memory
- Review Questions
• ICND1 Simulator Exercises

Chapter 23: Part IV Review

• Answer Part Review Questions

• Review Key Topics

• Create Command Mind Map by Category

• Part IV Review Mind Map Solution

Chapter 24: Subnet Design

• Foundation Topics

• Choosing the Mask(s) to Meet Requirements

• Finding All Subnet IDs

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Definitions of Key Terms

• Practice

• Answers to Practice Choosing Subnet Masks
Answers to Practice Finding All Subnet IDs

Review Questions

ICND1 Simulator Exercises

Chapter 25: Variable-Length Subnet Masks

Foundation Topics

VLSM Concepts and Configuration

Finding VLSM Overlaps

Adding a New Subnet to an Existing VLSM Design

Review Activities

Chapter Summary

Review All the Key Topics

Memory Tables

Definitions of Key Terms

Appendix H Practice Problems

Answers to Practice Finding VLSM Overlaps

Answers to Practice Adding VLSM Subnets

Review Questions
ICND1 Simulator Exercises

Chapter 26: Route Summarization
Chapter 27: Part V Review
- Answer Part Review Questions
- Review Key Topics
- Create Process Mind Map
- Part V Review Mind Map Solution

Chapter 28: Basic IPv4 Access Control Lists

- Foundation Topics
- IPv4 Access Control List Basics
- Standard Numbered IPv4 ACLs
- Practice Applying Standard IP ACLs
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Definitions of Key Terms
- Appendix J Practice Problems
- Command Reference to Check Your Memory
- Answers to Earlier Practice Problems
- Review Questions
Chapter 29: Advanced IPv4 ACLs and Device Security

- Foundation Topics
- Extended Numbered IP Access Control Lists
- Named ACLs and ACL Editing
- Router and Switch Security
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Definitions of Key Terms
- Command Reference to Check Your Memory
- Answers to Earlier Practice Problems
- Review Questions
- ICND1 Simulator Exercises

Chapter 30: Network Address Translation

- Foundation Topics
- Perspectives on IPv4 Address Scalability
• Network Address Translation Concepts

• NAT Configuration and Troubleshooting

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Memory Tables

• Definitions of Key Terms

• Command Reference to Check Your Memory

• Review Questions

• ICND1 Simulator Exercises

Chapter 31: Part VI Review

• Answer Part Review Questions

• Review Key Topics

• Create Command Mind Map by Category

• Part VI Review Mind Map Solution

Chapter 32: Fundamentals of IP Version 6
• Foundation Topics

• Introduction to IPv6

• IPv6 Addressing Formats and Conventions

• Review Activities

• Chapter Summary

• Review All the Key Topics

• Memory Tables

• Definitions of Key Terms

• Additional Practice with IPv6 Address Abbreviations

• Answers to Earlier Practice Problems

• Review Questions

Chapter 33: IPv6 Addressing and Subnetting

• Foundation Topics

• Global Unicast Addressing Concepts

• Unique Local Unicast Addresses

• Review Activities

• Chapter Summary
Chapter 34: Implementing IPv6 Addressing on Routers

- Foundation Topics
- Implementing Unicast IPv6 Addresses on Routers
- Special Addresses Used by Routers
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Additional Practice with IPv6 Address Abbreviations
- Command Reference to Check Your Memory
- Answers to Earlier Practice Problems
Chapter 35: Implementing IPv6 Addressing on Hosts

- Foundation Topics
- The Neighbor Discovery Protocol
- Dynamic Configuration of Host IPv6 Settings
- Verification of Host IPv6 Connectivity
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Command Reference to Check Your Memory
- Review Questions
- ICND1 Simulator Exercises

Chapter 36: Implementing IPv6 Routing

- Foundation Topics
- Connected and Local IPv6 Routes
- Static IPv6 Routes
- Dynamic Routes with OSPFv3
- Review Activities
- Chapter Summary
- Review All the Key Topics
- Memory Tables
- Definitions of Key Terms
- Command Reference to Check Your Memory
- Review Questions
- ICND1 Simulator Exercises

Chapter 37: Part VII Review

- Answer Part Review Questions
- Review Key Topics
- Create IPv6 Addressing Mind Map
- Create IPv6 Configuration and Verification Command Mind Map
- Part VII Review Mind Map Solutions
Chapter 38: Final Review

- Advice About the Exam Event
- Learn the Question Types Using the Cisco Certification Exam Tutorial
- Think About Your Time Budget Versus Numbers of Questions
- A Suggested Time-Check Method
- Miscellaneous Pre-Exam Suggestions
- Exam-Day Advice
- Exam Review
- Practice Subnetting and Other Math-Related Skills
- Take Practice Exams
- Find Knowledge Gaps Through Question Review
- Practice Hands-On CLI Skills
- Other Study Tasks
- Final Thoughts

Chapter 39: Appendix A: Numeric Reference Tables

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

**12. 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**

- **48** Pre-Assessments Questions
- **2** Full Length Tests
- **52** 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.

13. 📊 **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.