

uCertify

Course Outline

CCNA 200-301 Official Cert Guide, Volume 1



16 Sep 2024

1. Pre-Assessment
2. Exercises, Quizzes, Flashcards & Glossary
Number of Questions
3. Expert Instructor-Led Training
4. ADA Compliant & JAWS Compatible Platform
5. State of the Art Educator Tools
6. Award Winning Learning Platform (LMS)
7. Chapter & Lessons
Syllabus
Chapter 1: Introduction
Chapter 2: Introduction to TCP/IP Networking
Chapter 3: Fundamentals of Ethernet LANs
Chapter 4: Fundamentals of WANs and IP Routing
Chapter 5: Using the Command-Line Interface
Chapter 6: Analyzing Ethernet LAN Switching
Chapter 7: Configuring Basic Switch Management
Chapter 8: Configuring and Verifying Switch Interfaces
Chapter 9: Implementing Ethernet Virtual LANs
Chapter 10: Spanning Tree Protocol Concepts
Chapter 11: RSTP and EtherChannel Configuration
Chapter 12: Perspectives on IPv4 Subnetting
Chapter 13: Analyzing Classful IPv4 Networks
Chapter 14: Analyzing Subnet Masks
Chapter 15: Analyzing Existing Subnets
Chapter 16: Subnet Design
Chapter 17: Operating Cisco Routers
Chapter 18: Configuring IPv4 Addresses and Static Routes
Chapter 19: IP Routing in the LAN

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Chapter 21: Troubleshooting IPv4 Routing
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Chapter 23: Implementing Basic OSPF Features
Chapter 24: Implementing Optional OSPF Features
Chapter 25: OSPF Neighbors and Route Selection
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Chapter 27: IPv6 Addressing and Subnetting
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Chapter 31: CCNA 200-301 Official Cert Guide, Volume 1, Second Edition Exam Updates
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Chapter 42: Appendix J: LAN Troubleshooting
Chapter 43: Appendix K: Variable-Length Subnet Masks
Chapter 44: Exam Set 1
Chapter 45: Exam Set 2
Chapter 46: Exam Set 3 and 4

Videos and How To

8. Practice Test

Here's what you get

Features

9. Performance Based labs

Lab Tasks

Here's what you get

1. 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.

2. 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.

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EXERCISES

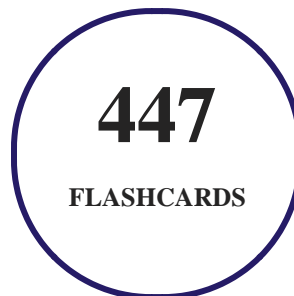
3. Quiz

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.



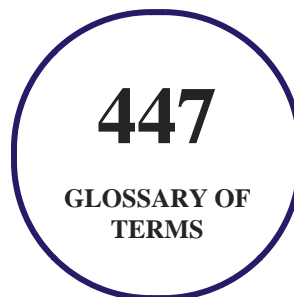
4. flashcards

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

- Cisco Certifications and the CCNA
- Course Features
- Course Organization, Lessons, and Appendices

- About Building Hands-On Skills

Chapter 2: Introduction to TCP/IP Networking

- Perspectives on Networking
- TCP/IP Networking Model
- Data Encapsulation Terminology
- Review All the Key Topics

Chapter 3: Fundamentals of Ethernet LANs

- An Overview of LANs
- Building Physical Ethernet LANs with UTP
- Building Physical Ethernet LANs with Fiber
- Sending Data in Ethernet Networks
- Review All the Key Topics

Chapter 4: Fundamentals of WANs and IP Routing

- Wide-Area Networks
- IP Routing
- Other Network Layer Features

- Review All the Key Topics

Chapter 5: Using the Command-Line Interface

- Accessing the Cisco Catalyst Switch CLI
- Configuring Cisco IOS Software
- Review All the Key Topics
- Command References

Chapter 6: Analyzing Ethernet LAN Switching

- LAN Switching Concepts
- Verifying and Analyzing Ethernet Switching
- Review All the Key Topics
- Command References

Chapter 7: Configuring Basic Switch Management

- Securing the Switch CLI
- Enabling IPv4 for Remote Access
- Miscellaneous Settings Useful in the Lab
- Review All the Key Topics

- Command References

Chapter 8: Configuring and Verifying Switch Interfaces

- Configuring Switch Interface Speed and Duplex
- Managing Switch Interface Configuration
- Analyzing Switch Interface Status and Statistics
- Review All the Key Topics
- Command References

Chapter 9: Implementing Ethernet Virtual LANs

- Virtual LAN Concepts
- VLAN and VLAN Trunking Configuration and Verification
- Troubleshooting VLANs and VLAN Trunks
- Review All the Key Topics
- Command References

Chapter 10: Spanning Tree Protocol Concepts

- STP and RSTP Basics
- Details Specific to STP (and Not RSTP)

- Rapid STP Concepts
- Optional STP Features
- Review All the Key Topics

Chapter 11: RSTP and EtherChannel Configuration

- Understanding RSTP Through Configuration
- Identifying Optional STP Features
- Configuring Layer 2 EtherChannel
- Review All the Key Topics
- Command References

Chapter 12: Perspectives on IPv4 Subnetting

- Introduction to Subnetting
- Analyze Subnetting and Addressing Needs
- Make Design Choices
- Plan the Implementation
- Review All the Key Topics

Chapter 13: Analyzing Classful IPv4 Networks

- Classful Network Concepts
- Practice with Classful Networks
- Review All the Key Topics

Chapter 14: Analyzing Subnet Masks

- Subnet Mask Conversion
- Identifying Subnet Design Choices Using Masks
- Review All the Key Topics

Chapter 15: Analyzing Existing Subnets

- Defining a Subnet
- Analyzing Existing Subnets: Binary
- Analyzing Existing Subnets: Decimal
- Practice Analyzing Existing Subnets
- Review All the Key Topics

Chapter 16: Subnet Design

- Choosing the Mask(s) to Meet Requirements
- Finding All Subnet IDs

- Review All the Key Topics

Chapter 17: Operating Cisco Routers

- Installing Cisco Routers
- Enabling IPv4 Support on Cisco Router Interfaces
- Review All the Key Topics
- Command References

Chapter 18: Configuring IPv4 Addresses and Static Routes

- IP Routing
- Configuring IP Addresses and Connected Routes
- Configuring Static Routes
- Review All the Key Topics
- Command References

Chapter 19: IP 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

- VLAN Routing on a Router's LAN Switch Ports
- Review All the Key Topics
- Command References

Chapter 20: IP Addressing on Hosts

- Dynamic Host Configuration Protocol
- Identifying Host IPv4 Settings
- Review All the Key Topics
- Command References

Chapter 21: Troubleshooting IPv4 Routing

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

Chapter 22: Understanding OSPF Concepts

- Comparing Dynamic Routing Protocol Features

- OSPF Concepts and Operation
- OSPF Areas and LSAs
- Review All the Key Topics

Chapter 23: Implementing Basic OSPF Features

- Implementing OSPFv2 Using network Commands
- Implementing OSPFv2 Using Interface Subcommands
- Review All the Key Topics
- Command References

Chapter 24: Implementing Optional OSPF Features

- OSPF Network Types
- Additional Optional OSPFv2 Features
- Review All the Key Topics
- Command References

Chapter 25: OSPF Neighbors and Route Selection

- OSPF Neighbor Relationships
- Route Selection

- Review All the Key Topics
- Command References

Chapter 26: Fundamentals of IP Version 6

- Introduction to IPv6
- IPv6 Addressing Formats and Conventions
- Review All the Key Topics

Chapter 27: IPv6 Addressing and Subnetting

- Global Unicast Addressing Concepts
- Unique Local Unicast Addresses
- Review All the Key Topics

Chapter 28: Implementing IPv6 Addressing on Routers

- Implementing Unicast IPv6 Addresses on Routers
- Special Addresses Used by Routers
- Review All the Key Topics
- Command References

Chapter 29: Implementing IPv6 Addressing on Hosts

- The Neighbor Discovery Protocol
- Dynamic Configuration of Host IPv6 Settings
- Troubleshooting Host IPv6 Addressing
- Review All the Key Topics
- Command References

Chapter 30: Implementing IPv6 Routing

- Connected and Local IPv6 Routes
- Static IPv6 Network Routes
- Static Default, Host, and Floating Static IPv6 Routes
- Troubleshooting Static IPv6 Routes
- Review All the Key Topics
- Command References

Chapter 31: CCNA 200-301 Official Cert Guide, Volume 1, Second Edition Exam Updates

- The Purpose of This Lesson
- News about the Next CCNA Exam Release

- Updated Technical Content

Chapter 32: Glossary

Chapter 33: Appendix A: Numeric Reference Tables

Chapter 34: Appendix B: Exam Topics Cross-Reference

- CCNA 200-301 Exam Topic Order
- Course Lesson Order Versus CCNA 200-301 Exam Topics

Chapter 35: Appendix C: Practice for Lesson 12: Analyzing Classful IPv4 Networks

- Practice Problems

Chapter 36: Appendix D: Practice for Lesson 13: Analyzing Subnet Masks

- Mask Conversion Problems
- Mask Analysis Problems

Chapter 37: Appendix E: Practice for Lesson 14: Analyzing Existing Subnets

- Practice Problems

Chapter 38: Appendix F: Practice for Lesson 15: Subnet Design

- Mask Design Practice Problems
- Practice Finding All Subnet IDs

Chapter 39: Appendix G: Practice for Lesson 25: Fundamentals of IP Version 6

- Address Abbreviating and Expanding Problems
- Calculating the IPv6 Prefix Problems

Chapter 40: Appendix H: Practice for Lesson 27: Implementing IPv6 Addressing on Routers

- EUI-64 and Solicited Node Multicast Problems

Chapter 41: Appendix I: Topics from Previous Editions

- IPv4 Address Types
- Bandwidth and Clock Rate on Serial Interfaces
- Implementing DHCP
- Using traceroute to Isolate the Problem to Two Routers
- Default Routes with SLAAC on Router Interfaces

Chapter 42: Appendix J: LAN Troubleshooting

- Troubleshooting STP

- Troubleshooting Layer 2 EtherChannel
- Analyzing the Switch Data Plane Forwarding

Chapter 43: Appendix K: Variable-Length Subnet Masks

- VLSM Concepts and Configuration
- Finding VLSM Overlaps
- Adding a New Subnet to an Existing VLSM Design

Chapter 44: Exam Set 1

- Questions

Chapter 45: Exam Set 2

- Questions

Chapter 46: Exam Set 3 and 4

- Questions

11. Practice Test

Here's what you get



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. Performance Based Labs

uCertify's performance-based labs are simulators that provides virtual environment. Labs deliver hands on experience with minimal risk and thus replace expensive physical labs. uCertify Labs are cloud-based, device-enabled and can be easily integrated with an LMS. Features of uCertify labs:

- Provide hands-on experience in a safe, online environment
- Labs simulate real world, hardware, software & CLI environment
- Flexible and inexpensive alternative to physical Labs
- Comes with well-organized component library for every task
- Highly interactive - learn by doing
- Explanations and remediation available
- Videos on how to perform

Lab Tasks

Here's what you get

13. Live Labs

The benefits of live-labs are:

- Exam based practical tasks
- Real equipment, absolutely no simulations
- Access to the latest industry technologies
- Available anytime, anywhere on any device
- Break and Reset functionality
- No hardware costs

Lab Tasks

Here's what you get

GET IN TOUCH:

www.uCertify.com