uCertify

Course Outline

CCNA 200-301 Official Cert Guide, Volume 2

04 Aug 2025

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: Fundamentals of Wireless Networks

   Chapter 3: Analyzing Cisco Wireless Architectures

   Chapter 4: Securing Wireless Networks

   Chapter 5: Building a Wireless LAN

   Chapter 6: Introduction to TCP/IP Transport and Applications

   Chapter 7: Basic IPv4 Access Control Lists

   Chapter 8: Named and Extended IP ACLs

   Chapter 9: Applied IP ACLs

   Chapter 10: Security Architectures

   Chapter 11: Securing Network Devices

   Chapter 12: Implementing Switch Port Security

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   Chapter 16: Quality of Service (QoS)

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   Chapter 18: SNMP, FTP, and TFTP

   Chapter 19: LAN Architecture

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Chapter 21: Cloud Architecture

Chapter 22: Introduction to Controller-Based Networking

Chapter 23: Cisco Software-Defined Access (Cisco SD-Access)

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Chapter 25: Understanding Ansible and Terraform

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Chapter 31: Appendix D: Practice for Lesson 6: Basic IPv4 Access Control Lists

Videos and How To

8. Practice Test

   Here's what you get

   Features

9. Live labs

   Lab Tasks

   Here's what you get

10. Post-Assessment

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.

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 Appendixes
- About Building Hands-On Skills

Chapter 2: Fundamentals of Wireless Networks

- Comparing Wired and Wireless Networks
- Wireless LAN Topologies
- Other Wireless Topologies
- Wireless Bands and Channels
- Review All the Key Topics

Chapter 3: Analyzing Cisco Wireless Architectures

- Autonomous AP Architecture
- Cloud-based AP Architecture
- Split-MAC Architectures

- Comparing Cisco Wireless LAN Controller Deployments
- Review All the Key Topics

Chapter 4: Securing Wireless Networks

- Anatomy of a Secure Connection
- Wireless Client Authentication Methods
- Wireless Privacy and Integrity Methods
- WPA, WPA2, and WPA3
- Review All the Key Topics

Chapter 5: Building a Wireless LAN

- Connecting a Cisco AP
- Accessing a Cisco WLC
- Connecting a Cisco WLC
- Configuring a WLAN
- Review All the Key Topics

Chapter 6: Introduction to TCP/IP Transport and Applications

- TCP/IP Layer 4 Protocols: TCP and UDP

- TCP/IP Applications
- Review All the Key Topics

Chapter 7: Basic IPv4 Access Control Lists

- IPv4 Access Control List Basics
- Standard Numbered IPv4 ACLs
- Review All the Key Topics
- Command References

Chapter 8: Named and Extended IP ACLs

- Named ACLs and ACL Editing
- Extended IP Access Control Lists
- Review All the Key Topics
- Command References

Chapter 9: Applied IP ACLs

- ACLs and Network Infrastructure Protocols
- Comparing ACLs in IOS and IOS XE
- Review All the Key Topics

- Command References

Chapter 10: Security Architectures

- Security Terminology
- Common Security Threats
- Controlling and Monitoring User Access
- Developing a Security Program to Educate Users
- Review All the Key Topics

Chapter 11: Securing Network Devices

- Securing IOS Passwords
- Firewalls and Intrusion Prevention Systems
- Review All the Key Topics
- Command References

Chapter 12: Implementing Switch Port Security

- Port Security Concepts and Configuration
- Port Security Violation Modes
- Review All the Key Topics

- Command References

Chapter 13: DHCP Snooping and ARP Inspection

- DHCP Snooping
- Dynamic ARP Inspection
- Review All the Key Topics
- Command References

Chapter 14: Device Management Protocols

- System Message Logging (Syslog)
- Network Time Protocol (NTP)
- Analyzing Topology Using CDP and LLDP
- Review All the Key Topics
- Command References

Chapter 15: Network Address Translation

- Network Address Translation Concepts
- NAT Configuration and Troubleshooting
- Review All the Key Topics

- Command References

Chapter 16: Quality of Service (QoS)

- Introduction to QoS
- Classification and Marking
- Queuing
- Shaping and Policing
- Congestion Avoidance
- Review All the Key Topics

Chapter 17: First Hop Redundancy Protocols

- First Hop Redundancy Protocols
- Hot Standby Router Protocol
- VRRP and GLBP Concepts
- Review All the Key Topics

Chapter 18: SNMP, FTP, and TFTP

- Simple Network Management Protocol
- FTP and TFTP

- Review All the Key Topics
- Command References

Chapter 19: LAN Architecture

- Analyzing Campus LAN Topologies
- Ethernet Physical Media and Standards
- Small Office/Home Office
- Power over Ethernet (PoE)
- Review All the Key Topics

Chapter 20: WAN Architecture

- Metro Ethernet
- Multiprotocol Label Switching (MPLS)
- Internet VPNs
- Review All the Key Topics

Chapter 21: Cloud Architecture

- Server Virtualization
- Cloud Computing Services

- WAN Traffic Paths to Reach Cloud Services
- Understanding Cloud Management
- Review All the Key Topics

Chapter 22: Introduction to Controller-Based Networking

- SDN and Controller-Based Networks
- Examples of Network Programmability and SDN
- Comparing Traditional Versus Controller-Based Networks
- Review All the Key Topics

Chapter 23: Cisco Software-Defined Access (Cisco SD-Access)

- Cisco SD-Access Fabric, Underlay, and Overlay
- Cisco Catalyst Center and Cisco SD-Access Operation
- Cisco Catalyst Center as a Network Management Platform
- Artificial Intelligence (AI), Machine Learning (ML), and Operational Management
- Review All the Key Topics

Chapter 24: Understanding REST and JSON

- REST-Based APIs

- Data Serialization and JSON
- Review All the Key Topics

Chapter 25: Understanding Ansible and Terraform

- Device Configuration Challenges and Solutions
- Ansible and Terraform Basics
- Review All the Key Topics

Chapter 26: CCNA 200-301 Official Cert Guide, Volume 2, Second Edition, Exam Updates

- The Purpose of This Lesson
- News About the Next CCNA Exam Release
- Updated Technical Content

Chapter 27: Final Review

- Advice About the Exam Event
- Exam Review

Chapter 28: Appendix A: Numeric Reference Tables

Chapter 29: Appendix B: Exam Topics Cross-Reference

- CCNA 200-301 Exam Topic Order
- Book Lessons, with Exam Topics Covered in Each

Chapter 30: Appendix C: Topics from Previous Editions

- Troubleshooting with IPv4 ACLs
- Implementing HSRP
- NTP Addendum
- Metro Ethernet
- MPLS VPNs

Chapter 31: Appendix D: Practice for Lesson 6: Basic IPv4 Access Control Lists

- Practice Problems

Videos and How To

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

22	03:01
VIDEOS	HOURS

11. Practice Test

Here's what you get

90	2	98
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. 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

Analyzing Cisco Wireless Architectures

- Configuring Autonomous Access Points

Introduction to TCP/IP Transport and Applications

- Transferring Files with HTTP
- Finding the Web Server Using DNS

Basic IPv4 Access Control Lists

- Configuring Standard Numbered ACLs

Named and Extended IP ACLs

- Configuring Named ACL
- Configuring Extended Numbered ACLs

Applied IP ACLs

- Creating an ACL and Verifying the Result

Security Architectures

- Performing Reconnaissance Attacks
- Performing a Dictionary Attack
- Simulating a DoS Attack
- Spoofing a MAC Address
- Performing the MITM Attack
- Performing a Social Engineering Attack

Securing Network Devices

- Securing the IOS Password

Implementing Switch Port Security

- Configuring Port Security

DHCP Snooping and ARP Inspection

- Performing Dynamic ARP Inspection

Device Management Protocols

- Configuring Syslog
- Configuring NTP
- Configuring and Verifying LLDP
- Configuring and Verifying CDP

Network Address Translation

- Configuring NAT
- Configuring PAT

SNMP, FTP, and TFTP

- Managing Cisco IOS Images with FTP/TFTP

WAN Architecture

- Creating a Remote Access VPN

Here's what you get

24	24	01:21
LIVE LABS	VIDEO TUTORIALS	HOURS

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.

You can’t stay away! Get

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