uCertify

Course Outline

CCNP Enterprise Advanced Routing (300-410)

06 Jul 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

   Syllabus

   Chapter 1: Introduction

   Chapter 2: IPv4/IPv6 Addressing and Routing Review

   Chapter 3: EIGRP

   Chapter 4: Advanced EIGRP

   Chapter 5: Troubleshooting EIGRP for IPv4

   Chapter 6: EIGRPv6

   Chapter 7: OSPF

   Chapter 8: Advanced OSPF

   Chapter 9: Troubleshooting OSPFv2

   Chapter 10: OSPFv3

   Chapter 11: Troubleshooting OSPFv3

   Chapter 12: BGP

   Chapter 13: Advanced BGP

   Chapter 14: BGP Path Selection

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   Chapter 16: Route Maps and Conditional Forwarding

   Chapter 17: Route Redistribution

   Chapter 18: Troubleshooting Redistribution

Chapter 19: VRF, MPLS, and MPLS Layer 3 VPNs

Chapter 20: DMVPN Tunnels

Chapter 21: Securing DMVPN Tunnels

Chapter 22: Troubleshooting ACLs and Prefix Lists

Chapter 23: Infrastructure Security

Chapter 24: Device Management and Management Tools Troubleshooting

Chapter 25: Final Preparation

Videos and How To

9. Practice Test

   Here's what you get

   Features

10. Live labs

    Lab Tasks

    Here's what you get

11. Post-Assessment

1. Course Objective

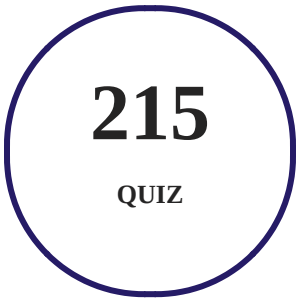
Gain the skills required to pass the Cisco CCNP certification exam with the CCNP Enterprise Advanced Routing (300-410) course and lab. The lab comes with a well-organized component library for every task. The course and labs provide complete coverage of the 300-410 ENARSI exam objectives and help you gain the knowledge required for implementation and troubleshooting advanced routing technologies and services, including layer 3, VPN services, infrastructure security, services, and automation.

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. 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

- Goals and Methods
- Who Should Read This Course?
- Strategies for Exam Preparation
- How This Course Is Organized
- Certification Exam Topics and This course

Chapter 2: IPv4/IPv6 Addressing and Routing Review

- IPv4 Addressing

- DHCP for IPv4
- IPv6 Addressing
- IPv6 SLAAC, Stateful DHCPv6, and Stateless DHCPv6
- Packet-Forwarding Process
- Routing Information Sources
- Static Routes
- Trouble Tickets
- Review All Key Topics
- Command Reference to Check Your Memory

Chapter 3: EIGRP

- EIGRP Fundamentals
- EIGRP Configuration Modes
- Path Metric Calculation
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 4: Advanced EIGRP

- Failure Detection and Timers
- Route Summarization
- WAN Considerations
- Route Manipulation
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 5: Troubleshooting EIGRP for IPv4

- Troubleshooting EIGRP for IPv4 Neighbor Adjacencies
- Troubleshooting EIGRP for IPv4 Routes
- Troubleshooting Miscellaneous EIGRP for IPv4 Issues
- EIGRP for IPv4 Trouble Tickets
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 6: EIGRPv6

- EIGRPv6 Fundamentals

- Troubleshooting EIGRPv6 Neighbor Issues
- Troubleshooting EIGRPv6 Routes
- Troubleshooting Named EIGRP
- EIGRPv6 and Named EIGRP Trouble Tickets
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 7: OSPF

- OSPF Fundamentals
- OSPF Configuration
- The Designated Router and Backup Designated Router
- OSPF Network Types
- Failure Detection
- Authentication
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 8: Advanced OSPF

- Link-State Advertisements
- OSPF Stubby Areas
- OSPF Path Selection
- Summarization of Routes
- Discontiguous Network
- Virtual Links
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 9: Troubleshooting OSPFv2

- Troubleshooting OSPFv2 Neighbor Adjacencies
- Troubleshooting OSPFv2 Routes
- Troubleshooting Miscellaneous OSPFv2 Issues
- OSPFv2 Trouble Tickets
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 10: OSPFv3

- OSPFv3 Fundamentals
- OSPFv3 Configuration
- OSPFv3 LSA Flooding Scope
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 11: Troubleshooting OSPFv3

- Troubleshooting OSPFv3 for IPv6
- OSPFv3 Trouble Tickets
- Troubleshooting OSPFv3 Address Families
- OSPFv3 AF Trouble Ticket
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 12: BGP

- BGP Fundamentals
- Basic BGP Configuration

- Understanding BGP Session Types and Behaviors
- Multiprotocol BGP for IPv6
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 13: Advanced BGP

- Route Summarization
- BGP Route Filtering and Manipulation
- BGP Communities
- Maximum Prefix
- Configuration Scalability
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 14: BGP Path Selection

- Understanding BGP Path Selection
- BGP Best Path

- BGP Equal-Cost Multipath
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 15: Troubleshooting BGP

- Troubleshooting BGP Neighbor Adjacencies
- Troubleshooting BGP Routes
- Troubleshooting BGP Path Selection
- Troubleshooting BGP for IPv6
- BGP Trouble Tickets
- MP-BGP Trouble Ticket
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 16: Route Maps and Conditional Forwarding

- Conditional Matching
- Route Maps
- Conditional Forwarding of Packets

- Trouble Tickets
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 17: Route Redistribution

- Redistribution Overview
- Protocol-Specific Configuration
- Reference in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 18: Troubleshooting Redistribution

- Troubleshooting Advanced Redistribution Issues
- Troubleshooting IPv4 and IPv6 Redistribution
- Redistribution Trouble Tickets
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 19: VRF, MPLS, and MPLS Layer 3 VPNs

- Implementing and Verifying VRF-Lite
- An Introduction to MPLS Operations
- An Introduction to MPLS Layer 3 VPNs
- Reference in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 20: DMVPN Tunnels

- Generic Routing Encapsulation (GRE) Tunnels
- Next Hop Resolution Protocol (NHRP)
- Dynamic Multipoint VPN (DMVPN)
- DMVPN Configuration
- Spoke-to-Spoke Communication
- Problems with Overlay Networks
- DMVPN Failure Detection and High Availability
- IPv6 DMVPN Configuration
- References in This Lesson
- Review All Key Topics

- Use the Command Reference to Check Your Memory

Chapter 21: Securing DMVPN Tunnels

- Elements of Secure Transport
- IPsec Fundamentals
- IPsec Tunnel Protection
- References in This Lesson
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 22: Troubleshooting ACLs and Prefix Lists

- Troubleshooting IPv4 ACLs
- Troubleshooting IPv6 ACLs
- Troubleshooting Prefix Lists
- Trouble Tickets
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 23: Infrastructure Security

- Cisco IOS AAA Troubleshooting
- Troubleshooting Unicast Reverse Path Forwarding (uRPF)
- Troubleshooting Control Plane Policing (CoPP)
- IPv6 First-Hop Security
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 24: Device Management and Management Tools Troubleshooting

- Device Management Troubleshooting
- Management Tools Troubleshooting
- Review All Key Topics
- Use the Command Reference to Check Your Memory

Chapter 25: Final Preparation

- Advice About the Exam Event

11. Practice Test

Here's what you get

85	2	85
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

IPv4/IPv6 Addressing and Routing Review

- Enabling and Verifying SLAAC on a Router
- Configuring and Verifying DHCPv6 on a Router
- Configuring IPv6 Static Routes

EIGRP

- Configuring EIGRP
- Configuring the Passive EIGRP Interface

Advanced EIGRP

- Configuring the EIGRP Stub Router
- Configuring EIGRP Route Filtering

Troubleshooting EIGRP for IPv4

- Troubleshooting EIGRP

EIGRPv6

- Configuring EIGRPv6

OSPF

- Configuring OSPF
- Configuring the OSPF Loopback Network

Advanced OSPF

- Showing the LSA Types 1 to 5 and the Type 7
- Configuring OSPF Virtual Links

Troubleshooting OSPFv2

- Troubleshooting OSPFv2 Routes

OSPFv3

- Configuring OSPFv3

BGP

- Configuring BGP
- Configuring and Viewing IPv6 BGP

Advanced BGP

- Configuring the BGP Distribute List
- Configuring the BGP Prefix List Filter

BGP Path Selection

- Configuring the BGP Weight Manipulation
- Troubleshooting BGP Routes

Troubleshooting BGP

- Configuring the BGP AS_Path

Route Maps and Conditional Forwarding

- Configuring Local PBR

Route Redistribution

- Configuring EIGRP Redistribution
- Configuring OSPF Redistribution
- Configuring BGP Redistribution

Troubleshooting Redistribution

- Configuring EIGRP AD Manipulation
- Configuring the OSPF Customized AD

VRF, MPLS, and MPLS Layer 3 VPNs

- Configuring VRF-lite and Verifying the Connection with the ping Command

DMVPN Tunnels

- Configuring GRE
- Configuring and Viewing DMVPN Phase 1

Securing DMVPN Tunnels

- Troubleshooting IPv4 ACLs

Troubleshooting ACLs and Prefix Lists

- Troubleshooting IPv6 ACL

Infrastructure Security

- Preparing SSH in a Router
- Configuring Class Map for CoPP

Device Management and Management Tools Troubleshooting

- Configuring SNMPv3
- Configuring SNMPv2c
- Configuring NetFlow

Here's what you get

38	38	02:24
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.

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