Course Ou

CompTIA Network+ (



24 Mar 2024

Contents

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: Computer Network Fundamentals

   Chapter 3: The OSI Reference Model

   Chapter 4: Network Components

   Chapter 5: Ethernet Technology

   Chapter 6: IPv4 and IPv6 Addresses

   Chapter 7: Routing IP Packets

   Chapter 8: Wide Area Networks (WANs)

   Chapter 9: Wireless Technologies

   Chapter 10: Network Optimization

   Chapter 11: Command-Line Tools

   Chapter 12: Network Management

   Chapter 13: Network Security

   Chapter 14: Network Policies and Best Practices

   Chapter 15: Network Troubleshooting

   Videos and How To

9. Practice Test

   Here's what you get

   Features

10. Performance Based labs

    Lab Tasks

    Here's what you get

11. Post-Assessment

1. Course Objective

Get certified for the CompTIA Network+ certification exam with the CompTIA Network+ N10-007 course and lab. The lab is cloud-based, device-enabled, and can easily be integrated with an LMS. The CompTIA Network+ study guide provides complete coverage of the N10-007 exam and includes topics such as network policies; network components; Ethernet technology; WANs; routing IP packets; IPv4 and IPv6 addresses, and many more.

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.

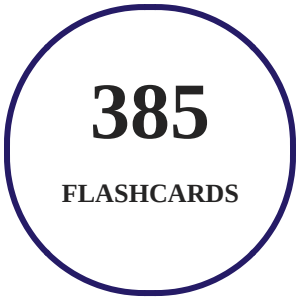
3. Quizzes

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.



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

Chapter 2: Computer Network Fundamentals

- Defining a Network
- Networks Defined by Geography
- Networks Defined by Topology
- Wireless Topologies
- Networks Defined by Resource Location
- Real-World Case Study

- Summary
- Review All the Key Topics

Chapter 3: The OSI Reference Model

- The Purpose of Reference Models
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 4: Network Components

- Media
- Network Infrastructure Devices
- Specialized Network Devices
- Virtual Network Devices
- Voice over IP Protocols and Components
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 5: Ethernet Technology

- Principles of Ethernet
- Ethernet Switch Features
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 6: IPv4 and IPv6 Addresses

- Binary Numbering
- IPv4 Addressing
- Assigning IPv4 Addresses
- Subnetting
- IP Version 6
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 7: Routing IP Packets

- Basic Routing Processes
- Sources of Routing Information
- Routing Protocol Characteristics
- Routing Protocol Examples
- Address Translation
- Multicast Routing
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 8: Wide Area Networks (WANs)

- WAN Properties
- WAN Technologies
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 9: Wireless Technologies

- Introducing Wireless LANs

- Deploying Wireless LANs
- Securing Wireless LANs
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 10: Network Optimization

- High Availability
- QoS Technologies
- Case Study: SOHO Network Design
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 11: Command-Line Tools

- Windows Commands
- UNIX Commands
- Real-World Case Study

- Summary
- Review All the Key Topics

Chapter 12: Network Management

- Maintenance Tools
- Network Documentation
- Monitoring Resources and Reports
- Remote Access Methods
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 13: Network Security

- Security Fundamentals
- Categories of Network Attacks
- Defending Against Attacks
- Remote-Access Security
- Firewalls
- Virtual Private Networks

- Intrusion Detection and Prevention
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 14: Network Policies and Best Practices

- Policies
- Best Practices
- Real-World Case Study
- Summary
- Review All the Key Topics

Chapter 15: Network Troubleshooting

- Troubleshooting Basics
- Physical Layer Troubleshooting
- Data Link Layer Troubleshooting
- Network Layer Troubleshooting
- Wireless Troubleshooting

- Specialized Networks
- Real-World Case Study
- Troubleshooting Scenarios
- Summary
- Review All the Key Topics

Videos and How To

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

200	21:53
VIDEOS	HOURS

11. Practice Test

Here's what you get

132	2	126
PRE-ASSESSMENTS QUESTIONS	FULL LENGTH TESTS	POST-ASSESSMENTS QUESTIONS

Features

uCertify provides video training courses that contain videos and test set questions based on the exam. These courses are interactive and engaging and the learners can view the content at their own pace, in their own time, and on any device. Learners can easily track the engagement levels so they immediately know which course components are easy to understand and which are more difficult. Test set in the courses closely follow the exam objectives and are designed to simulate real exam conditions.

Each pre and post assessment comes with interactive questions which help users in better understanding of the subject matter.

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

- Identifying network components
- Identifying network categories
- Connecting Devices in Bus Topology
- Identifying network topologies
- Understanding wireless topologies
- Connecting Devices in a Peer- To- Peer Architecture
- Identifying Clients and Servers
- Identifying OSI layers
- Identifying abbreviations for various Internet layer protocols
- Identifying TCP/IP protocol layers
- Describing OSI layers
- Identifying TCP/IP layers
- Identifying OSI layer functions
- Connecting a computer system to the network
- Identifying types of cable and connector
- Identifying twisted-pair cable connectors
- Identifying cable configuration types
- Connecting a Router to the Laptop
- Connecting a hub to a switch
- Connecting the hub with different devices using USB cables
- Creating a virtual switch

- Connecting the DHCP server and laptop to the VLAN
- Obtaining IP address information from a DHCP server
- Creating DNS domains
- Installing a NIC
- Connecting to a server using Remote Desktop Connection
- Identifying protocols and devices
- Identifying Fast Ethernet standards
- Connecting Patch Cables between the Patch Panel and Switch Ports
- Understanding STP Port Cost
- Capturing packet using Wireshark
- Converting a Decimal Number to Binary
- Understanding types of addresses
- Connecting a Workstation to the LAN and Configuring IPv4 Properties
- Obtaining Automatic Private IP Addressing
- Configuring Automatic Private IP Addressing
- Configuring IPv4 address
- Adding DNS server
- Using a Subnet Calculator
- Identifying steps for calculating subnets
- Understanding types of IPv6 data flows
- Configuring and testing IPv6 addresses
- Adding and removing an IPv6 address
- Identifying administrative distances
- Identifying routing protocols
- Describing Network Address Translation
- Identifying NAT IP addresses
- Understanding IGMP
- Identifying WAN connection types
- Creating a dial-up connection
- Identifying MPLS network elements
- Connecting Cable Internet Access for your Network
- Adding static routes in RRAS
- Connecting a Wireless Router to a Laptop
- Identifying WLANs
- Troubleshooting AP

- Configuring SSID
- Connecting to a Password Protected Network
- Configuring Windows 10 Wireless Settings
- Understanding network architecture
- Understanding QoS configuration
- Connecting systems to the Internet through a router
- Understanding the arp command
- Understanding ipconfig commands
- Analyzing network paths with tracert
- Using the nbtstat command
- Using the netstat command
- Using the nslookup command
- Checking IP connectivity between two network devices
- Deleting the route
- Adding the route
- Using dig command
- Using host command
- Configuring and verifying interface's IP address configuration
- Using traceroute command
- Using netstat command
- Using ping command
- Adding a static route
- Adding a static ARP entry with the arp command
- Deleting a static ARP entry with the arp command
- Checking the Internet speed
- Identifying Syslog severity levels
- Viewing TCP frame details using Network Monitor
- Viewing the logs
- Filtering entries in Event Viewer
- Identifying sequence of asymmetric encryption
- Identifying the Denial of Service Attack
- Identifying network attacks
- Scanning using nmap
- Running the Nessus vulnerability scan
- Identifying Bluetooth devices attacks

- Identifying types of firewall
- Configuring Windows firewall settings
- Turning on Windows Firewall
- Setting Up a DMZ on a SOHO Router
- Creating a remote access VPN connection
- Understanding IPsec VPN
- Identifying detection methods
- Changing Passwords for the Router
- Troubleshooting a network
- Diagnosing a network problem
- Troubleshooting physical link layer issues
- Identifying physical layer issues
- Troubleshooting data link layer issues
- Understanding data structures
- Diagnosing Networking Issues
- Identifying error in net connection

Here's what you get

107	52	04:20
PERFORMANCE BASED LAB	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.