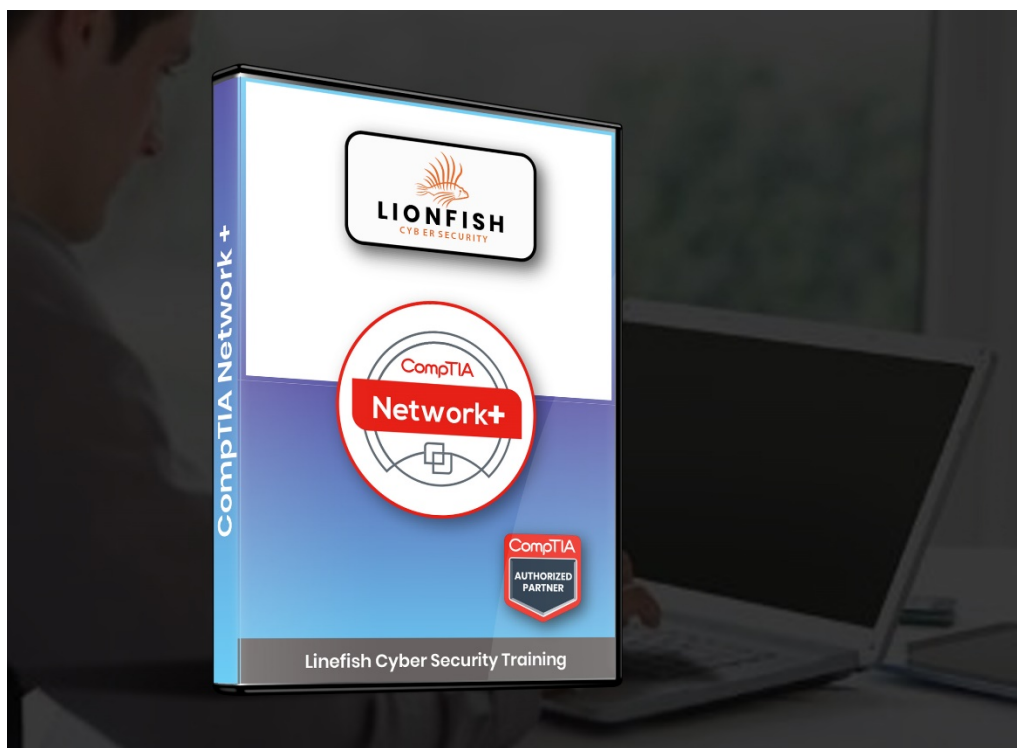


Lionfish Cyber Security Course Syllabus:

CompTIA Network+

Interactive and entertaining talk-show style format presented by industry leading experts.

- 40+ hours of virtual training, practice exams, labs, and study.
- Receive a Certificate of completion
- Presented by highly qualified, industry leading experts
- 12 Months Access (*Unless indicated otherwise*)
- * The CompTIA bundle comes with online Labs and practice exams.





Description

CompTIA Network+ demonstrates that students can design, configure, manage, and troubleshoot wireless devices. Network concepts, security, and troubleshooting are all crucial elements of this certification exam.

Curriculum Overview

The Network+ Certification Study Guide will teach you the fundamental principles of installing, configuring, and troubleshooting network technologies and help you to progress a career in network administration.

After taking this course, you will be able to:

- Describe the features of different network protocols and products for LANs, WANs, and wireless networks
- Understand the functions and features of TCP/IP addressing and protocols
- Identify threats to network security and appropriate countermeasures and controls
- Install and configure network cabling and appliances
- Manage, monitor, and troubleshoot networks

Objectives

- Network architectures
- Network Installation
- Remote connectivity
- Wireless networking
- Managing risk
- Cabling and topology
- Advanced networking devices
- Virtualization and cloud computing



Prerequisites

- Configure and support PC, laptop.
- Know basic network terminology and functions (such as Ethernet, TCP/IP, switches, routers).
- Configure and manage users, groups, and shared resources in a simple SOHO network.
- Understand the use of basic access control measures, such as authentication, security policy, encryption, and firewalls.
- Understand TCP/IP addressing, core protocols and troubleshooting tools.

Target Audience

- who has worked for nine months as a Network Technician
- IT professional
- Interested in a Networking career.

Syllabus

CompTIA Network+ (N10-007)	
#	Episode Name
1	Promo
2	Introduction
Chapter 1 - Network Models	
1	What is a Model?
2	OSI Model vs. TCP/IP Model
3	Walking Through OSI and TCP/IP
4	Meet the Frame
5	The MAC Address
6	Broadcast vs. Unicast
7	Introduction to IP Addressing
8	Packets and Ports
Chapter 2 - Cabling and Topology	
1	Network Topologies
2	Coaxial Cabling

- 3 Twisted Pair Cabling
- 4 Cat Ratings
- 5 Fiber Optic Cabling
- 6 Fire Ratings
- 7 Legacy Network Connections

Chapter 3 - Ethernet Basics

- 1 What is Ethernet?
- 2 Ethernet Frames
- 3 Early Ethernet
- 4 The Daddy of Ethernet: 10BaseT
- 5 Terminating Twisted Pair
- 6 Hubs vs. Switches

Chapter 4 - Modern Ethernet

- 1 100BaseT
- 2 Connecting Switches
- 3 Gigabit Ethernet and 10-Gigabit Ethernet
- 4 Transceivers
- 5 Connecting Ethernet Scenarios

Chapter 5 - Installing a Physical Network

- 1 Introduction to Structured Cabling
- 2 Terminating Structured Cabling
- 3 Equipment Room
- 4 Alternative Distribution Panels
- 5 Testing Cable
- 6 Troubleshooting Structured Cabling, Part 1
- 7 Troubleshooting Structured Cabling, Part 2
- 8 Using a Toner and Probe
- 9 Wired Connection Scenarios

Chapter 6 - TCP/IP Basics

- 1 Introduction to IP Addressing and Binary
- 2 Introduction to ARP
- 3 Subnet Masks
- 4 Classful Addressing
- 5 Subnetting with CIDR
- 6 More CIDR Subnetting Practice
- 7 Dynamic and Static IP Addressing
- 8 Rogue DHCP Servers
- 9 Special IP Addresses
- 10 IP Addressing Scenarios

Chapter 7 - Routing



- 1 Introducing Routers
- 2 Understanding Ports
- 3 Network Address Translation
- 4 Implementing NAT
- 5 Forwarding Ports
- 6 Tour of a SOHO Router
- 7 SOHO vs. Enterprise
- 8 Static Routes
- 9 Dynamic Routing
- 10 RIP
- 11 OSPF
- 12 BGP

Chapter 8 - TCP/IP Applications

- 1 TCP and UDP
- 2 ICMP and IGMP
- 3 Handy Tools
- 4 Introduction to Wireshark
- 5 Introduction to netstat
- 6 Web Servers
- 7 FTP
- 8 E-mail Servers and Clients
- 9 Securing E-mail
- 10 Telnet and SSH
- 11 Network Time Protocol
- 12 Network Service Scenarios

Chapter 9 - Network Naming

- 1 Understanding DNS
- 2 Applying DNS
- 3 The HOSTS File
- 4 Net Command
- 5 Windows Name Resolution
- 6 Dynamic DNS
- 7 DNS Troubleshooting

Chapter 10 - Securing TCP/IP

- 1 Making TCP/IP Secure
- 2 Symmetric Encryption
- 3 Asymmetric Encryption
- 4 Cryptographic Hashes
- 5 Identification
- 6 Access Control

- 7 AAA
- 8 Kerberos/EAP
- 9 Single Sign-On
- 10 Certificates and Trust
- 11 Certificate Error Scenarios

Chapter 11 - Advanced Networking Devices

- 1 Understanding IP Tunneling
- 2 Virtual Private Networks (VPNs)
- 3 Introduction to VLANs
- 4 InterVLAN Routing
- 5 Interfacing with Managed Switches
- 6 Switch Port Protection
- 7 Port Bonding
- 8 Port Mirroring
- 9 Quality of Service
- 10 IDS vs. IPS
- 11 Proxy Servers
- 12 Load Balancing
- 13 Device Placement Scenarios

Chapter 12 - IPv6

- 1 Intro to IPv6
- 2 IPv6 Addressing
- 3 IPv6 in Action
- 4 IPv4 and IPv6 Tunneling

Chapter 13 - Remote Connectivity

- 1 Telephony Technologies
- 2 Optical Carriers
- 3 Packet Switching
- 4 Connecting with Dial-up
- 5 Digital Subscriber Line (DSL)
- 6 Connecting with Cable Modems
- 7 Connecting with Satellites
- 8 ISDN and BPL
- 9 Remote Desktop Connectivity
- 10 Advanced Remote Control Systems

Chapter 14 - Wireless Networking

- 1 Introduction to 802.11
- 2 802.11 Standards
- 3 Power Over Ethernet (PoE)
- 4 Antennas



- 5 Wireless Security Standards
- 6 Implementing Wireless Security
- 7 Threats to Your Wireless Network
- 8 Retro Threats
- 9 Wi-Fi Protected Setup (WPS)
- 10 Enterprise Wireless
- 11 Installing a Wireless Network
- 12 Wireless Scenarios
- 13 More Wireless Scenarios

Chapter 15 - Virtualization and Cloud Computing

- 1 Virtualization Basics
- 2 Cloud Ownership
- 3 Cloud Implementation
- 4 Your First Virtual Machine
- 5 NAS and SAN
- 6 Platform as a Service (PaaS)
- 7 Software as a Service (SaaS)
- 8 Infrastructure as a Service (IaaS)

Chapter 16 - Mobile Networking

- 1 Cellular Technologies
- 2 Mobile Connectivity
- 3 Deploying Mobile Devices
- 4 Mobile Access Control

Chapter 17 - Building a Real-World Network

- 1 Network Types
- 2 Network Design
- 3 Power Management
- 4 Unified Communications
- 5 Network Documentation
- 6 Contingency Planning
- 7 Predicting Hardware Failure
- 8 Backups

Chapter 18 - Managing Risk

- 1 What is Risk Management?
- 2 Security Policies
- 3 Change Management
- 4 User Training
- 5 Standard Business Documentation
- 7 Mitigating Network Threats

8 High Availability

Chapter 19 - Protecting Your Network

- 1 Denial of Service
- 2 Malware
- 3 Social Engineering
- 4 Access Control
- 5 Man-in-the-Middle
- 6 Introduction to Firewalls
- 7 Firewalls
- 8 DMZ
- 9 Hardening Devices
- 10 Physical Security Controls
- 11 Testing Network Security
- 12 Network Protection Scenarios

Chapter 20 - Network Monitoring

- 1 SNMP
- 2 Documenting Logs
- 3 System Monitoring
- 4 SIEM

Chapter 21 - Network Troubleshooting

- 1 Network Troubleshooting Theory

Prepare for the CompTIA Network+ exam with the excellent TotalTester practice tests. The 800+ questions mirror the questions you'll see on the real exam; enabling you to practice on test questions and assess your skill and knowledge of the material. Get certified the best way, the TotalTester way!

- Applies to the current N10-007 exam
- Includes over 800 questions
- Requires Windows, macOS, Chrome OS, or Linux (iOS and Android not supported)
- Single-user license

TotalTester Features

Testing Modes

- Practice Mode: tests with hints and study references
- Exam Mode: just like the real thing, no help, just you and the questions
- Results graded by topic for easy review



Customized Tests

- Filter questions by chapter in the associated book or by exam objectives
- Choose whether or not to include hints and study references
- Choose the number of questions on your practice test
- Set your own time limit

Test History

- See the date you took each test
- View final score for each test
- See number of questions answered correctly by chapter or objective
- Review each question, see your answer, the correct answer, and explanations

TotalSims CompTIA Network+ interactive simulations

Overview

Prepare for the CompTIA Network+ exam with the excellent TotalSims performance-based learning tool. The 150+ simulations mirror the performance-based questions you'll see on the real exam. TotalSims enable you to practice on test questions and assess your skill and knowledge of the material. Get certified the best way, the TotalSims way!

- Applies to the current N10-007 exam
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-

TotalSims Features

TotalSims for the CompTIA Network+ certification exams include **150+ interactive simulations**, presented via four effective learning tools. Prepare for CompTIA's performance-based certification exam questions.

- **Show!** operating system and application training demonstrations
- **Click!** interactive graphical Windows exercises
- **Type!** interactive command-line Windows exercises
- **Challenge!** interactive configuration and identification exercises



Sample Certificate when you have completed each course.



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Lionfish Cyber Security has partnered with Instructor Mike Myers & Total Seminars to bring you best in class training, Labs and Practice exams.