

CompTIA Network+ Certification (Exam N10-007)

Overview

This course builds on your existing user-level knowledge and experience with personal computer operating systems and networks to present the fundamental skills and concepts that you will need to use on the job in any type of networking career. This course can benefit you in two ways. If you intend to pass the CompTIA Network+ (Exam N10-007) certification examination, this course can be a significant part of your preparation. But certification is not the only key to professional success in the field of computer security. Today's job market demands individuals with demonstrable skills, and the information and activities in this course can help you build your computer security skill set so that you can confidently perform your duties in any network-related role.

Prerequisites

- CompTIA A+ Certification
- Using Microsoft Windows 10

Prerequisite Comments

To ensure your success in this course, you will need basic Windows end-user computer skills.

In order to obtain the Network+ certification students must pass the CompTIA® Network+® (Exam N10-007).

Target Audience

This course is intended for entry-level computer support professionals with a basic knowledge of computer hardware, software, and operating systems who wish to increase their knowledge and understanding of networking concepts and acquire the required skills to prepare for a career in network support or administration, or who wish to prepare for the CompTIA Network+ certification. CompTIA Network+ is the first certification IT professionals specializing in network administration and support should earn. Network+ is aimed at IT professionals with job roles such as network administrator, network technician, network installer, help desk technician, and IT cable installer.

This course is also designed for students who are seeking the CompTIA Network+ certification and who want to prepare for the CompTIA Network+ N10-007 Certification Exam.

Course Objectives

In this course, you will describe the major networking technologies and systems of modern networks and configure, manage, and troubleshoot modern networks.

You will:

Explain the OSI and TCP/IP Models.

Explain properties of network traffic.

Install and configure switched networks.

Configure IP networks.
Install and configure routed networks.
Configure and monitor ports and protocols.
Explain network application and storage issues.
Monitor and troubleshoot networks.
Explain network attacks and mitigations.
Install and configure security devices.
Explain authentication and access controls.
Deploy and troubleshoot cabling solutions.
Implement and troubleshoot wireless technologies.
Compare and contrast WAN technologies.
Use remote access methods.
Identify site policies and best practices.

Course Outline

1 - Explaining the OSI and TCP/IP Models

Topic A: Explain OSI Model Layers
Topic B: Explain the TCP/IP Suite

2 - Explaining Properties of Network Traffic

Topic A: Explain Media Types and Access Methods
Topic B: Deploy Ethernet Standards
Topic C: Configure and Monitor Network Interfaces

3 - Installing and Configuring Switched Networks

Topic A: Install and Configure Hubs and Bridges
Topic B: Install and Configure Switches
Topic C: Compare and Contrast Network Topologies
Topic D: Compare and Contrast Network Types

4 - Configuring IP Networks

Topic A: Configure IPv4 Addressing Components
Topic B: Test IP Interfaces with Command Line Tools
Topic C: Configure IPv4 Subnets
Topic D: Configure Private and Public IPv4 Addressing Schemes
Topic E: Configure IPv6 Addressing Components
Topic F: Configure DHCP Services

5 - Installing and Configuring Routed Networks

Topic A: Explain Characteristics of Routing
Topic B: Install and Configure Routers

6 - Configuring and Monitoring Ports and Protocols

Topic A: Explain the Uses of Ports and Protocols
Topic B: Use Port Scanners and Protocol Analyzers
Topic C: Explain the Use of Name Resolution Services
Topic D: Configure DNS and IPAM Services

7 - Explaining Network Application and Storage Services

Topic A: Explain the Uses of Network Applications
Topic B: Explain the Uses of Voice Services and Advanced Networking Devices
Topic C: Explain the Uses of Virtualization and Network Storage Services
Topic D: Summarize the Concepts of Cloud Services

8 - Monitoring and Troubleshooting Networks

Topic A: Monitor Network Interfaces and Logs
Topic B: Explain Network Troubleshooting Methodology
Topic C: Troubleshoot Common Network Services Issues

9 - Explaining Networking Attacks and Mitigations

Topic A: Summarize Common Networking Attacks
Topic B: Explain the Characteristics of VLANs
Topic C: Explain the Characteristics of NAT and Port Forwarding

10 - Installing and Configuring Security Devices

Topic A: Install and Configure Firewalls and Proxies
Topic B: Explain the Uses of IDS/IPS and UTM

11 - Explaining Authentication and Access Controls

Topic A: Explain Authentication Controls and Attacks
Topic B: Explain the Uses of Authentication Protocols and Directory Services
Topic C: Explain the Uses of Port Security and NAC
Topic D: Implement Network Device Hardening
Topic E: Explain Patch Management and Vulnerability Scanning Processes

12 - Deploying and Troubleshooting Cabling Solutions

Topic A: Deploy Structured Cabling Systems
Topic B: Deploy Twisted Pair Cabling Solutions
Topic C: Test and Troubleshoot Twisted Pair Cabling Solutions
Topic D: Deploy Fiber Optic Cabling Solutions

13 - Implementing and Troubleshooting Wireless Technologies

Topic A: Install and Configure Wireless Technologies
Topic B: Troubleshoot Wireless Performance Issues
Topic C: Secure and Troubleshoot Wireless Connectivity

14 - Comparing and Contrasting WAN Technologies

Topic A: Compare and Contrast WAN Core Service Types
Topic B: Compare and Contrast WAN Subscriber Service Types
Topic C: Compare and Contrast WAN Framing Service Types
Topic D: Compare and Contrast Wireless and IoT WAN Technologies

15 - Using Remote Access Methods

Topic A: Use Remote Access VPNs
Topic B: Use Remote Access Management Methods

16 - Identifying Site Policies and Best Practices

Topic A: Manage Networks with Documentation and Diagrams
Topic B: Summarize the Purposes of Physical Security Devices
Topic C: Compare and Contrast Business Continuity and Disaster Recovery Concepts
Topic D: Identify Policies and Best Practices

Related Courses, Certifications, Exams

- Using Microsoft Windows 10
- CompTIA A+ Certification (Exams 220-1101 and 220-1102)
- CompTIA Security+ Certification (Exam SY0-501)
- CompTIA Network+
- N10-007 - CompTIA Network+