

## [CT-Network+]: CompTIA® Network+® (Exam N10-007)

Length : 5 Days  
Delivery Method : Instructor-led (Classroom)

### Course Overview

The CompTIA® Network+® (Exam N10-007) course builds on participants existing user-level knowledge and experience with personal computer operating systems and networks to present the fundamental skills and concepts that participants will need to use on the job in any type of networking career. It also addresses the content described in the exam objectives for the CompTIA Network+ certification. If participants are pursuing a CompTIA technical certification path, obtaining the CompTIA® A+® certification is an excellent first step to take before preparing for the CompTIA Network+ examination.

The CompTIA® Network+® (Exam N10-007) course can benefit participants in several ways:

- If participants are preparing for any type of network-related career, it provides the background knowledge and skills participants will require to be successful.
- It contains information and procedures that can help participants if participant's job duties include network troubleshooting, installation, or maintenance.
- It can assist participants in preparing for the CompTIA Network+ examination (Exam N10-007).

### Audience Profile

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 (Exam N10-007). A typical participants taking the CompTIA® Network+® (Exam N10-007) course should have a minimum of nine months of professional computer support experience as a PC or help desk technician. Networking experience is helpful but not mandatory; A+ certification or equivalent skills and knowledge is helpful but not mandatory.

### At Course Completion

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

- Identify basic network theory concepts and major network communications methods
- Describe bounded network media
- Describe unbounded network media
- Identify the major types of network implementations

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- Identify TCP/IP addressing and data delivery methods
- Analyze routing and switching technologies
- Identify the components of a TCP/IP implementation
- Analyze network security
- Implement network security
- Identify the components of a WAN implementation
- Identify the components used in cloud computing and virtualization
- Identify the components of a remote network implementation
- Manage networks
- Troubleshoot network issues

### Pre-Requisites

To ensure participants success in this course, participants will need basic Windows end-user computer skills. To meet this prerequisite, participants can take the following Logical Operations course, or have equivalent experience:

- Using Microsoft® Windows® 10

### Course Outline

#### Module 1: Network Theory

##### Lessons

- Network Types
- Network Standards and the OSI Model
- Data Transmission Methods

#### Module 2: Bounded Network Media

##### Lessons

- Given Copper Media
- Fiber Optic Media
- Bounded Network Media Installation

#### Module 3: Unbounded Network Media

##### Lessons

- Wireless Networking
- Wireless Network Devices and Components
- Implement Wireless Technology
- Internet of Things

#### Module 4: Network Implementations

##### Lessons

- Physical Network Topologies

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- Logical Network Topologies
- Ethernet Networks
- Network Devices

## **Module 5: TCP/IP Addressing and Data Delivery**

### **Lessons**

- The TCP/IP Protocol Suite
- IPv4 Addressing
- Default IP Addressing Schemes
- Create Custom IP Addressing Schemes
- IPv6 Addressing

## **Module 6: Routing and Switching**

### **Lessons**

- Switching
- Network Packet Routing
- Static and Dynamic IP Routing
- VLANs

## **Module 7: TCP/IP Implementation**

### **Lessons**

- Configure IP Addresses
- Naming Services
- TCP/IP Utilities
- Common TCP/IP Protocols

## **Module 8: Network Security Analysis**

### **Lessons**

- Introduction to Network Security
- Network Security Policies
- Physical Security
- Common Network Attacks

## **Module 9: Network Security Implementation**

### **Lessons**

- Authentication
- Access Control
- Port, Service, and Protocol Security
- Wireless Network Security
- Patches and Updates
- Mitigation Techniques

## **Module 10: WAN Infrastructure**

### **Lessons**

- WAN Basics
- WAN Connectivity Methods

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- WAN Transmission Technologies
- VoIP

## **Module 11: Cloud and Virtualization Techniques**

### **Lessons**

- Virtualization Technologies
- Network Storage Technologies
- Cloud Computing

## **Module 12: Remote Networking**

### **Lessons**

- Remote Network Architectures
- Remote Access Network Implementations
- Virtual Private Networking

## **Module 13: Network Management**

### **Lessons**

- Monitor Networks
- Document the Network
- Establish Baselines
- Optimize Network Performance
- Ensure Business Continuity

## **Module 14: TCP/IP Addressing and Data Delivery**

### **Lessons**

- Network Troubleshooting Methodology
- Network Troubleshooting Tools
- Troubleshoot Wired Connectivity and Performance Issues
- Troubleshoot Wireless Connectivity and Performance Issues
- Troubleshoot Network Service Issues

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