

# CompTIA Network+ Certification Training (N10-009)

## Course Overview

With CompTIA Network+, you can unlock a diverse range of career paths, from network administration and support to cybersecurity, creating opportunities for advancement and specialization in the rapidly evolving IT industry. CompTIA Network+ is a global IT certification validating candidates have the core skills necessary to establish, maintain, troubleshoot, and secure networks in any environment, regardless of technology and platform.

## Course Objectives

This course can prepare you for the CompTIA Network+ (Exam N10-009) certification examination and a job role in network administration.

On course completion, you will be able to do the following:

- Deploy and troubleshoot Ethernet networks.
- Support IPv4 and IPv6 networks.
- Configure and troubleshoot routers.
- Support network services and applications.
- Ensure network security and availability.
- Deploy and troubleshoot wireless networks.
- Support WAN links and remote access methods.
- Support organizational procedures and site security controls.
- Summarize cloud and datacenter architecture.

## Target Student

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.

## Course Prerequisites

To ensure your success in this course, you should have basic IT skills comprising nine to 12 months' experience. CompTIA A+ certification, or the equivalent knowledge, is strongly recommended.

## Associated Certifications

Network+

# Table of Contents

## Module 1: Explaining Network Topologies

- Lesson 1.1: Networking Overview
- Lesson 1.2: OSI Model Concepts Lesson 1.3: SOHO Networks
- Lesson 1.4: Troubleshooting Methodology

## Module 2: Supporting Cabling and Physical Installations

- Lesson 2.1: Ethernet
- Lesson 2.2: Copper Cables and Connectors
- Lesson 2.3: Wiring Implementation
- Lesson 2.4: Fiber Optic Cables and Connectors
- Lesson 2.5: Physical Installation Factors
- Lesson 2.6: Cable Troubleshooting

## Module 3: Configuring Interfaces and Switches

- Lesson 3.1: Network Interfaces
- Lesson 3.2: Ethernet Switches
- Lesson 3.3: Switch Port Configuration
- Lesson 3.4: Switch Troubleshooting

## Module 4: Configuring Network Addressing

- Lesson 4.1: Internet Protocol Basics
- Lesson 4.2: IP Version 4 Addressing
- Lesson 4.3: IP Version 4 Subnetting
- Lesson 4.4: IP Troubleshooting Tools
- Lesson 4.5: IP Version 6
- Lesson 4.6: IP Troubleshooting

## Module 5: Configuring Routing and Advanced Switching

- Lesson 5.1: Routing Technologies
- Lesson 5.2: Dynamic Routing Technologies
- Lesson 5.3: Network Address Translation
- Lesson 5.4: Firewalls
- Lesson 5.5: Enterprise Network Topologies
- Lesson 5.6: Virtual Lans
- Lesson 5.7: Routing and VLAN Troubleshooting

## Module 6: Implementing Network Services

- Lesson 6.1: Transport and Application Layer Protocols
- Lesson 6.2: Dynamic Host Configuration Protocol
- Lesson 6.3: APIPA and SLAAC
- Lesson 6.4: DHCP Relay and Troubleshooting
- Lesson 6.5: Domain Name System
- Lesson 6.6: DNS Troubleshooting

## Module 7: Explaining Application Services

- Lesson 7.1: Application Security and Time Synchronization
- Lesson 7.2: Web, File/Print, and Database
- Lesson 7.3: Email and Voice Services
- Lesson 7.4: Disaster Recovery and Hight Availability

## Module 8: Supporting Network Management

Lesson 8.1: Organizational Policies and Documentation

Lesson 8.2: Host Discovery and Monitoring

Lesson 8.3: Simple Network Management Protocol

Lesson 8.4: Event Management Lesson 8.5: Packet Capture and Analysis

Lesson 8.6: Traffic Monitoring

## Module 9: Explaining Network Security Concepts

Lesson 9.1: Security Concepts

Lesson 9.2: Network Threats and Attacks

Lesson 9.3: Spoofing Attacks

Lesson 9.4: Rogue System Attacks

Lesson 9.5: Social Engineering

## Module 10: Applying Networks Security Features

Lesson 10.1: Authentication

Lesson 10.2: Authorization and Account Management

Lesson 10.3: Network Hardening

Lesson 10.4: Switch Security

Lesson 10.5: Network Security Rules

## Module 11: Supporting Network Security Design

Lesson 11.1: Zone-Based Security

Lesson 11.2: Internet of Things

Lesson 11.3: Physical Security

## Module 12: Configuring Wireless Networks

Lesson 12.1: Wireless Concepts and Standards

Lesson 12.2: Enterprise Wireless Network Design

Lesson 12.3: Wireless Security

Lesson 12.4: Wireless Troubleshooting

## Module 13: Comparing Remote Access Methods

Lesson 13.1: WAN and Internet Connectivity

Lesson 13.2: Virtual Private Networks

Lesson 13.3: Remote Management

## Module 14: Summarizing Cloud Concepts

Lesson 14.1: Datacenter and Storage Networks

Lesson 14.2: Cloud Concepts

Lesson 14.3: Cloud Networking

Lesson 14.4: Modern Network Environments