

CompTIA Network+ (Exam N10-006)

Course Description

Overview:

The *CompTIA® Network+® (Exam N10-006)* 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. If you are pursuing a CompTIA technical certification path, the CompTIA® A+® certification is an excellent first step to take before preparing for the CompTIA Network+ certification.

The *CompTIA® Network+® (Exam N10-006)* course can benefit you in two ways. It can assist you if you are preparing to take the CompTIA Network+ examination (Exam N10-006). Also, if your job duties include network troubleshooting, installation, or maintenance, or if you are preparing for any type of network-related career, it provides the background knowledge and skills you will require to be successful.

Course Objectives:

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

You will:

- Identify basic network theory concepts and major network communications methods.
- Describe bounded network media.
- Identify unbounded network media.
- Identify the major types of network implementations.
- Identify TCP/IP addressing and data delivery methods.
- Implement routing technologies.
- Identify the major services deployed on TCP/IP networks.
- Identify the infrastructure of a WAN implementation.
- Identify the components used in cloud computing and virtualization.
- Describe basic concepts related to network security.
- Prevent security breaches.
- Respond to security incidents.
- Identify the components of a remote network implementation.
- Identify the tools, methods, and techniques used in managing a network.
- Describe troubleshooting of issues on a network.

Course Content

Lesson 1: Network Theory

- Topic A:** Networking Overview
- Topic B:** Network Standards and the OSI Model
- Topic C:** Network Types
- Topic D:** Identify Network Configurations
- Topic E:** Data Transmission Methods

Lesson 2: Bounded Network Media

- Topic A:** Copper Media
- Topic B:** Fiber Optic Media
- Topic C:** Bounded Network Media Installation
- Topic D:** Noise Control

Lesson 3: Unbounded Network Media

- Topic A:** Wireless Networking
- Topic B:** Wireless Network Devices and Components
- Topic C:** Install a Wireless Network

Lesson 4: Network Implementations

- Topic A:** Physical Network Topologies
- Topic B:** Logical Network Topologies
- Topic C:** Ethernet Networks
- Topic D:** Network Devices
- Topic E:** VLANs

Lesson 5: TCP/IP Addressing and Data Delivery

- Topic A:** The TCP/IP Protocol Suite
- Topic B:** IPv4 Addressing
- Topic C:** Default IP Addressing Schemes
- Topic D:** Create Custom IP Addressing Schemes
- Topic E:** IPv6 Address Implementation
- Topic F:** Delivery Techniques

Lesson 6: Routing

Topic A: Enable Static Routing

Topic B: Implement Dynamic IP Routing

Lesson 7: TCP/IP Services

Topic A: Assign IP Addresses

Topic B: Domain Naming Services

Topic C: TCP/IP Commands

Topic D: Common TCP/IP Protocols

Lesson 8: WAN Infrastructure

Topic A: WAN Basics

Topic B: WAN Connectivity Methods

Topic C: WAN Transmission Technologies

Topic D: Unified Communication Technologies

Lesson 9: Cloud and Virtualization Technologies

Topic A: Virtualization

Topic B: SAN Implementations

Topic C: Cloud Computing

Lesson 10: Network Security Basics

Topic A: Introduction to Network Security

Topic B: Vulnerabilities

Topic C: Threats and Attacks

Topic D: Authentication Methods

Topic E: Encryption Methods

Lesson 11: Preventing Security Breaches

Topic A: Physical Security Controls

Topic B: Network Access Controls

Topic C: Install and Configure Firewalls

Topic D: Harden Networks

Topic E: Intrusion Detection and Prevention

Topic F: Educate Users

Lesson 12: Responding to Security Incidents

Topic A: Incident Management and Response

Topic B: Basic Forensic Concepts

Lesson 13: Remote Networking

Topic A: Remote Network Architectures

Topic B: Remote Access Networking Implementations

Topic C: Virtual Private Networking

Topic D: VPN Protocols

Lesson 14: Network Management

Topic A: Network Monitoring

Topic B: Configuration Management Documentation

Topic C: Network Performance Optimization

Lesson 15: Troubleshooting Network Issues

Topic A: Network Troubleshooting Models

Topic B: Network Troubleshooting Utilities

Topic C: Hardware Troubleshooting Tools

Topic D: Common Connectivity Issues

Topic E: Troubleshoot Security Configuration Issues

Topic F: Troubleshoot Security Issues