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## COMPTIA NETWORK PLUS (N10-007)

### Who Should Attend

CompTIA Network+ helps develop a career in IT infrastructure covering troubleshooting, configuring and managing networks. Candidates for the Network Plus Certification should be A+ Certified and have 9-12 months networking experience.

Jobs that use Network+ include: Junior Network Administrator, Network Field Technician, Help Desk Technician, System Engineer, Network Analyst and many more.

### Course Objectives

Upon successful completion of this course, students will be able to:

- Design and implement functional networks
- Configure, manage, and maintain essential network devices
- Use devices such as switches and routers to segment network traffic and create resilient networks
  - Identify benefits and drawbacks of existing network configurations
  - Implement network security, standards, and protocols
  - Troubleshoot network problems
  - Support the creation of virtualized networks

### Course Outline

#### **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