

Course Outline

CompTIA® Network+®

Duration: 5 days (30 hours)

Learning 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.

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 (Exam N10-006). A typical student taking the CompTIA® Network+® (Exam N10-006) 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.

Prerequisites:

To ensure your success in this course, you will need basic Windows end-user computer skills. To meet this prerequisite, you can take either of the following LogicalCHOICE courses, or have equivalent experience:

- Using Microsoft® Windows® 8
- Microsoft® Windows® 8 Transition from Windows® 7
- In addition, we highly recommend that you hold the CompTIA A+ certification, or have equivalent skills and knowledge. You may want to take the LogicalCHOICE course CompTIA® A+®: A Comprehensive Approach (Exams 220-801 and 220-802) to gain those skills and knowledge.

Topics Covered:

- 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