

CompTIA Network+ Certification

Who Should Attend

This course is intended for entry-level computer support professionals with a basic knowledge of computer hardware, software, and operating systems to prepare for the CompTIA® Network+® (Exam N10-007), or 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. Tier 1 & 2 Support Personnel seeking IAT-1 certification to fulfill the DoD 8570.1 Directive.

Course Objectives

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

- Identify the basic network theory concepts.
- Identify the major network communications methods.
- Describe network media and hardware components.
- Identify the major types of network implementations.
- Identify the components of a TCP/IP network implementation.
- Identify TCP/IP addressing and data delivery methods.
- Identify the major services deployed on TCP/IP networks.
- Identify the components of a LAN implementation.
- Identify the infrastructure of a WAN implementation.
- Identify the components of a remote network implementation.
- Identify the major issues and methods to secure systems on a network.
- Identify the major issues and technologies in network security.
- Identify network security threats and attacks.
- Identify the tools, methods, and techniques used in managing a network.
- Describe troubleshooting of issues on a network.

Agenda

1 - Network Theory

- Networking Terminology
- Network Categories
- Standard Network Models
- Physical Network Topologies
- Logical Network Topologies

2 - Network Communications Methods

- Data Transmission Methods
- Media Access Methods
- Signaling Methods

3 - Network Media and Hardware

- Bounded Network Media
- Unbounded Network Media
- Noise Control
- Network Connectivity Devices

4 - Network Implementations

- Ethernet Networks
- Wireless Networks

5 - Networking Models

- The OSI Model
- The TCP/IP Model

6 - TCP/IP Addressing and Data Delivery

- The TCP/IP Protocol Suite
- IP Addressing
- Default IP Addressing Schemes
- Create Custom IP Addressing Schemes
- Implement IPv6 Addresses
- Delivery Techniques

7 - TCP/IP Services

- Assign IP Addresses
- Domain Naming Services
- TCP/IP Commands
- Common TCP/IP Protocols
- TCP/IP Interoperability Services

8 - LAN Infrastructure

- Switching
- Enable Static Routing
- Implement Dynamic IP Routing
- Virtual LANs
- Plan a SOHO Network

9 - WAN Infrastructure

- WAN Transmission Technologies
- WAN Connectivity Methods
- Voice over Data Transmission

10 - Remote Networking

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

11 - System Security

- Computer Security Basics
- System Security Tools
- Authentication Methods
- Encryption Methods

12 - Network Security

- Network Perimeter Security
- Intrusion Detection and Prevention
- Protect Network Traffic Using IPSec

13 - Network Security Threats and Attacks

- Network-Based Security Threats and Attacks
- Apply Threat Mitigation Techniques
- Educate Users

14 - Network Management

- Network Monitoring
- Configuration Management Documentation
- Network Performance Optimization

15 - Network Troubleshooting

- Network Troubleshooting Models
- Network Troubleshooting Utilities
- Hardware Troubleshooting Tools
- Common Connectivity Issues