CompTIA Network+ Certification

This 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. It also addresses the content described in the exam objectives for the CompTIA Network+ certification. If you are pursuing a CompTIA technical certification path, obtaining the CompTIA® A+® certification is an excellent first step to take before preparing for the CompTIA Network+ N10-007 examination.

Length Days: 5 | Length Hours: 40

Prerequisites

- CompTIA A+ Certification
- Using Microsoft Windows 10

To ensure your success in this course, you will need basic Windows end-user computer skills.

In order to obtain the Network+ certification students must pass the CompTIA® Network+® (Exam N10-007).

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 N10-007). A typical student taking the CompTIA® Network+® (Exam N10-007) 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.

Course Objectives

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

You will:

- Identify basic network theory concepts and major network communications methods.
- Describe bounded network media.
- Describe unbounded network media.
- Identify the major types of network implementations.
- Identify TCP/IP addressing and data delivery methods.
- Analyze routing and switching technologies.
- Identify the components of a TCP/IP implementation.
- Analyze network security.
- Implement network security.
- Identify the components of a WAN implementation.
- Identify the components used in cloud computing and virtualization.
- Identify the components of a remote network implementation.
- Manage networks.
- Troubleshoot network issues.

Course Outline

1 - Network Theory

- Network Types
- Network Standards and the OSI Model
- Data Transmission Methods

2 - Bounded Network Media

- Copper Media
- Fiber Optic Media
- Bounded Network Media Installation

3 - Unbounded Network Media

- Wireless Networking
- Wireless Network Devices and Components
- Implement Wireless Technology
- Internet of Things

4 - Network Implementations

- Physical Network Topologies
- Logical Network Topologies
- Ethernet Networks
- Network Devices

5 - TCP/IP Addressing and Data Delivery

- The TCP/IP Protocol Suite
- IPv4 Addressing
- Default IP Addressing Schemes
- Create Custom IP Addressing Schemes
- IPv6 Addressing

6 - Routing and Switching

- Switching
- Network Packet Routing
- Static and Dynamic IP Routing
- VLANs

7 - TCP/IP Implementation

- Configure IP Addresses
- Naming Services
- TCP/IP Utilities
- Common TCP/IP Protocols

8 - Network Security Analysis

- Introduction to Network Security
- Network Security Policies
- Physical Security
- Common Network Attacks

9 - Network Security Implementation

- Authentication
- Access Control
- Port, Service, and Protocol Security
- Wireless Network Security
- Patches and Updates
- Mitigation Techniques

10 - WAN Infrastructure

- WAN Basics
- WAN Connectivity Methods
- WAN Transmission Technologies
- VoIP

11 - Cloud and Virtualization Techniques

- Virtualization Technologies
- Network Storage Technologies
- Cloud Computing

12 - Remote Networking

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

13 - Network Management

- Monitor Networks
- Document the Network
- Establish Baselines
- Optimize Network Performance
- Ensure Business Continuity

14 - Troubleshooting Network Issues

- Network Troubleshooting Methodology
- Network Troubleshooting Tools
- Troubleshoot Wired Connectivity and Performance Issues
- Troubleshoot Wireless Connectivity and Performance Issues
- Troubleshoot Network Service Issues