

## CompTIA Network+

**Length:** 5 Days

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

**Overview:** 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.

**At Course Completion:**

- 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 CONTENT

### 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
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