

## **CompTIA Network+ Certification (5 Days)**

### **Overview**

In this course, students will describe the major networking technologies and systems of modern networks, and be able to configure, manage, and troubleshoot modern networks. This course will help the student prepare for the N10-006 exam and certification.

### **Who Should Attend**

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.

### **Course Objectives**

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.

### **Prerequisite(s) or equivalent knowledge**

CompTIA A+ Certification  
Windows 8 Transition from Windows 7  
Using Microsoft Windows 8

## Outline

- 1 - Network Theory
  - Networking Overview
  - Network Standards and the OSI Model
  - Network Types
  - Identify Network Configurations
  - Data Transmission Methods
- 2 - Bounded Network Media
  - Copper Media
  - Fiber Optic Media
  - Bounded Network Media Installation
  - Noise Control
- 3 - Unbounded Network Media
  - Wireless Networking
  - Wireless Network Devices and Components
  - Install a Wireless Network
- 4 - Network Implementations
  - Physical Network Topologies
  - Logical Network Topologies
  - Ethernet Networks
  - Network Devices
  - VLANs
- 5 - TCP/IP Addressing and Data Delivery
  - The TCP/IP Protocol Suite
  - IPv4 Addressing
  - Default IP Addressing Schemes
  - Create Custom IP Addressing Schemes
  - IPv6 Address Implementation
  - Delivery Techniques
- 6 - Routing
  - Enable Static Routing
  - Implement Dynamic IP Routing
- 7 - TCP/IP Services
  - Assign IP Addresses
  - Domain Naming Services
  - TCP/IP Commands
  - Common TCP/IP Protocols
- 8 - WAN Infrastructure
  - WAN Basics

- WAN Connectivity Methods
- WAN Transmission Technologies
- Unified Communication Technologies
- 9 - Cloud and Virtualization Technologies
  - Virtualization
  - SAN Implementations
  - Cloud Computing
- 10 - Network Security Basics
  - Introduction to Network Security
  - Vulnerabilities
  - Threats and Attacks
  - Authentication Methods
  - Encryption Methods
- 11 - Preventing Security Breaches
  - Physical Security Controls
  - Network Access Controls
  - Install and Configure Firewalls
  - Harden Networks
  - Intrusion Detection and Prevention
  - Educate Users
- 12 - Responding to Security Incidents
  - Incident Management and Response
  - Basic Forensic Concepts
- 13 - Remote Networking
  - Remote Network Architectures
  - Remote Access Networking Implementations
  - Virtual Private Networking
  - VPN Protocols
- 14 - Network Management
  - Network Monitoring
  - Configuration Management Documentation
  - Network Performance Optimization
- 15 - Troubleshooting Network Issues
  - Network Troubleshooting Models
  - Network Troubleshooting Utilities
  - Hardware Troubleshooting Tools
  - Common Connectivity Issues
  - Troubleshoot Security Configuration Issues
  - Troubleshoot Security Issues