

CompTIA Network+

Length: 5 Days

Overview:

The student will describe the major networking technologies, systems, skills, and tools in use in modern networks. Taking this course will help the student prepare for the N10-005 exam and 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 N10-005), 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. A typical student taking the CompTIA® Network+® (Exam N10-005) course should have a minimum of nine months or more 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.

At Course Completion:

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.

Course Content

NETWORK THEORY

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

NETWORK COMMUNICATIONS METHODS

Data Transmission Methods
Media Access Methods

Signaling Methods

NETWORK MEDIA AND HARDWARE

Bounded Network Media
Unbounded Network Media
Noise Control
Network Connectivity Devices

NETWORK IMPLEMENTATIONS

Ethernet Networks
Wireless Networks

NETWORKING MODELS

The OSI Model

The TCP/IP Model

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

TCP/IP SERVICES

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

LAN INFRASTRUCTURE

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

WAN INFRASTRUCTURE

WAN Transmission Technologies
WAN Connectivity Methods
Voice over Data Transmission
Top

REMOTE NETWORKING

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

SYSTEM SECURITY

Computer Security Basics
System Security Tools
Authentication Methods
Encryption Methods

NETWORK SECURITY

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

NETWORK SECURITY THREATS AND ATTACKS

Network-Based Security Threats and Attacks
Apply Threat Mitigation Techniques

Educate Users

NETWORK MANAGEMENT

Network Monitoring
Configuration Management Documentation
Network Performance Optimization

NETWORK TROUBLESHOOTING

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